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CHECK LIST OF THE FISHES

and fishlike vertebrates

OF NORTH AND MIDDLE AMERICA

north of the northern boundary

of Venezuela and Colombia

By David Starr Jordan, Barton Warren Evermann,
and Howard Walton Clark

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UNITED STATES DEPARTMENT OF THE INTERIOR
DOUGLAS MCKAY, *Secretary*

FISH AND WILDLIFE SERVICE
JOHN L. FARLEY, *Director*

Since publication of this Check List in 1930, a few major taxonomic revisions have been made. Examples are revisions of the western Atlantic Scorpaenidae, the Carangidae, and the Merlucciidae by Ginsburg; of *Brevoortia* by Hildebrand; of Centrarchidae by Hubbs and Bailey; and of Petromyzonidae by Hubbs and Troutman. There is no prospect of a complete revision of the Check List, however, and because it will continue to be a valuable reference for ichthyologists and fishery conservation workers it is reissued in its original form.

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CHECK LIST OF THE FISHES AND FISHLIKE VERTEBRATES OF NORTH AND MIDDLE AMERICA NORTH OF THE NORTHERN BOUNDARY OF VENEZUELA AND COLOMBIA [1]

By

DAVID STARR JORDAN, BARTON WARREN EVERMANN, and HOWARD WALTON CLARK

INTRODUCTION

The present memoir comprises a list of all the fishes and fishlike vertebrates known to occur in the waters of north and middle America; more specifically all of continental America north of the Isthmus of Panama, and the outlying islands including the West Indies, the Greater and the Lesser Antilles, Greenland, Iceland, and the islands off the Pacific coast of Central America, Mexico, the United States, and Alaska. The salt-water species on the northern coasts of Colombia and Venezuela have been included. Those of the Galapagos, the Sea of Okhotsk, and the west coast of Kamchatka are not included. Oceanic species in general within the 1,000-fathom curve have been admitted, although it is not always easy to draw the line.

The majority of the species included will be found described in Fishes of North and Middle America, a 4-volume work by Jordan and Evermann published in 1896 to 1900 as Bulletin 47 of the United States National Museum. No other general work restricted to this continent and containing descriptions of all known species has been written. On that work was based the Check List of 1896 by Jordan and Evermann, of which the present Check List may be regarded as a revision.

In the present list are given, in as natural sequence as our present knowledge permits, (1) the names of all species and subspecies that the authors admit as valid, (2) as many of the vernacular or common names for each species as have been readily obtainable, (3) the known geographic distribution of each species, (4) the reference to the original description of the species, and (5) the reference to every real synonym. If a species has been described as new but once, there will, of course, be but one reference (as, for example, *Photocorynus spiniceps* on p. 509); if it has been described as new six times there will be six references (as, for example, *Eupomotis gibbosus* on p. 302). Thus, this work is really a check list of all the scientific names that have ever been applied to any American fish.

As 4,139 species and subspecies are admitted as valid, and as there are more than 3,000 real synonyms, it appears that each American fish has been described as new about two times on an average.

The first attempt at a Synopsis of the Fishes of North America was published by David Humphreys Storer in the Memoirs of the Ameri-

[1] Appendix X to the Report of the U. S. Commissioner of Fisheries for 1928. B. F. Doc. 1055.

can Academy of Arts and Sciences of Boston in 1846. That work enumerates 739 species distributed in 221 genera. As the fishes of the Rocky Mountain region, Mexico, the Pacific coast, and the West Indies were then scarcely known, this list was very incomplete and the nomenclature naturally was imperfect.

After an elaborate survey of the Pacific coast fish fauna in 1880, David Starr Jordan and the late Charles Henry Gilbert published a Synopsis of the Fishes of North America (1882), including all species known north of the Mexican boundary. The 1,340 species names in that synopsis were arranged in 487 genera; a few other species appeared in the appendix.

Jordan's Catalogue of the Fishes Known to Inhabit the Waters of

the deep sea, of most of the continents, and of fossil beds. The unexampled explorations of Eigenmann in South America belong to this period, as also the records of Boulenger of the fishes of South Africa and the varied researches of Regan in the rich material of the British Museum. In this period the faunas of Australia, Japan, and Siberia have been studied critically and successfully. Our knowledge of fossil fishes is assuming definite form through the work of Woodward, Zittel, Hay, Errol Ivor White, and others who have given vertebrate paleontology, as related to ichthyology, a constructive turn.

We may again emphasize the distinction between the ancient and modern periods in animal taxonomy. Beginning with 1758, the date of Linnæus's Systema Naturæ, for 60 years a genus was usually regarded merely as a convenient pigeonhole into which species were thrown. With Cuvier's Règne Animal (1817) came the conception of arrangement "according to organization," or comparative anatomy. With Darwin's Origin of Species, 40 years later (1859), zoologists began, though slowly at first, to realize that a classification must be more than an inventory; that its basis must be genetic, and that the problems involved in natural grouping are vastly more complex than even great morphologists like Cuvier and Agassiz had realized. To paraphrase a sentence of Elliott Coues, "genera and species are but larger and smaller twigs of a tree, which we try to arrange as nearly as possible in accordance with nature's ramifications." This view, applied to taxonomy, involves the extensive subdivision of accepted genera, many of which were in the highest degree unnatural. Subdivision as practiced in the present paper may go too far in some cases, but our material must be analyzed first before we can group its parts in natural synthesis. No system of naming can progress beyond the knowledge on which it rests. We may emphasize here a statement attributed to Aristotle that "one should never expect a degree of accuracy which the subject matter does not permit."

Each tendency in evolution, large or small, diverging from the main current, should properly stand as a separate genus.

The problem of subspecies among fishes is especially incomplete and confused. Most of the marine species are clearly definable and not often subject to intergradations. Among the fresh-water forms, all sorts of modifications occur. A species, in general, is a definable group of related individuals that have run the gauntlet of life and have endured. Among our river fishes we find species of different types. There are numerous cases of species of compact though often wide distribution, in which all individuals are, to all appearances, similar. Examples of this type are the common perch (*Perca fluviatilis*), the common sucker (*Catostomus commersonii*), and the minnows (*Ericymba buccata* and *Exoglossum maxillingua*). Other forms, which we have elsewhere called geminate or twin species, may be distinct enough, having a few tangible characters of difference in spite of general resemblance. These, for the most part, are set apart from each other by barriers, their distinctness proportional to the efficiency of the barrier. Their origin may be due to the crossing of these barriers by individuals from the mass of their kind, thus acquiring a different environment with a different type of selection. Illustrations of geminate species set off by isolation may be found in abundance, as among the trout of western America, and other species,

especially in the Panama region, where many geminate species are found on each side of the Isthmus, which has split its species from their mates since Miocene times. The Miocene fossil fishes of California are largely geminate in origin, twins or parents of species now appearing on the coast. In most cases such forms are clearly distinct but to all appearance ancestral, the existing distinctions apparently due to varying incidents of selection in varying environment. Geminate species rarely inhabit the same region, though exceptions are known, attributable to reinvasion.

In many cases the distinctions between geminate forms are not complete, intergradations occurring along the line of the barriers or at different sections in climatic range. Types thus connected are known as subspecies. Subspecies are often nascent species; but in most cases a large amount of material is necessary before subspecies can be separated from geminate species. Among fresh-water fishes, each river basin shows some features of distinction, large or small, as does each oceanic island with regard to marine fishes. In most families of American river fishes studies of species have not been extensive enough to establish facts of intergradation. While in birds, reptiles, and mammals the subspecies are usually well defined and named, among the fishes this is still largely a matter of guesswork. Many authors base the recognition of subspecies not on actual intergradation but on guesses based on degrees of probability, a practice we have not followed. It has seemed to us better to regard related forms as distinct species until intergradation has been shown.

We find also among river fishes, and sometimes among marine forms (as in Lutianus), occasional individuals that to all appearance are hybrids. These are marked by a distinct blending of specific traits. They are extremely rare, however, often known only from a single example. A few hybrids are known or suspected among certain minnows, sunfishes, and darters. The best-known hybrids thus far recorded in America occur among the Centrarchidæ, or sunfishes, in which group they have been studied critically by Mr. Hubbs. Two common species (*Apomotis cyanellus* and *Eupomotis gibbosus*) figure particularly as probable parents. Hybrids may give rise to distinct species, but no example of this is known among our fishes.

Among fishes there are also occasional monstrosities, freaks, or "mutations," in which certain traits may be absent or exaggerated. Whether such qualities may be inherited is not known. If so, it is likely that they would soon be swamped by breeding with the mass unless especially protected by segregation. It does not appear that any species of fishes have arisen by mutation or from hybridization, though the latter possibility is greater than the former.

We may observe that compilations such as the present paper should constitute an exercise in modesty. Such work can never be made absolutely complete nor free from errors. It deals with the observations and thoughts of great minds, as also with a degree of ignorrance, carelessness, and perversity, by which names have been multiplied without corresponding extension of ideas. Synonymy (the use of different names for the same group) in general represents the lack of exact knowledge or else a failure (often unavoidable) to deal justly with the work of others. It is, therefore, as has been said by Doctor Coues, often "a burden and disgrace to science."

Only those who have had experience in cataloguing, in a similar way, the species in some large group of animals or plants can appreciate the difficulties involved. In the first place, in order to make the list complete by the inclusion of all valid names and all real synonyms it was necessary to make a careful search of all ichthyological literature. It is too much to expect that we have been entirely successful in this search; some names probably have been overlooked. The verification of the thousands of references as to the publication, volume, page, date, spelling, and type locality, was even more exacting and arduous; but most difficult of all were the multitude of taxonomic problems involved. In many cases existing knowledge is not adequate for final settlement. It is not improbable that some of our decisions as to the taxonomic relationships of certain species and the validity of others may not meet the approval of all of our coworkers, but that is inevitable where knowledge is incomplete.

The present senior author, as a lifelong teacher of biology, may be pardoned a personal reference. Himself a student of Agassiz and Gill of the earlier period, he has had the honor of being also a friend, to some extent a protégé, of Baird, Günther, Vaillant, Lütken, Hilgendorf, and Cope. In addition, he has numbered among his own students many of those active in systematic ichthyology during the late modern period. Among these are James Francis Abbott, Willis Stanley Blatchley, Charles Harvey Bollman, Alembert Winthrop Brayton, Charles Victor Burke, Howard Walton Clark*, Herbert Edson Copeland, Frank Cramer, George Bliss Culver, Bradley Moore Davis, Mary Cynthia Dickerson, Charles Lincoln Edwards, Carl H. Eigenmann, Rosa Smith Eigenmann, Barton Warren Evermann, Bert Fesler, Morton William Fordice, Henry Weed Fowler, Charles Henry Gilbert, James Zaccheus Gilbert, David Kop Goss, Ulysses Simpson Grant IV, Arthur White Greeley, Joseph Grinnell, Harold Hannibal, Edmund Heller, Albert William Christian Theodore Herre, Jennie Horning, Carl Leavitt Hubbs, Elizabeth G. Hughes, Oliver Peebles Jenkins, Eric Knight Jordan, Philip Henry Kirsch, Richard Crittenden McGregor, Ernest Alexander McGregor, Charles Leslie McKay, Seth Eugene Meek, Charles William Metz, Heraclio R. Montalban, George Sprague Myers, Edward William Nelson, Robert Newland, Masamitsu Oshima, Keinosuke Otaki, Charles J. Pierson, Cora D. Reeves, Robert Earl Richardson, Cloudsley Rutter*, Norman Bishop Scofield, Alvin Seale, Michitaro Sindo, Tage Skogsberg, Robert Evans Snodgrass John Otterbein Snyder, Edwin Chapin Starks, Joseph Swain, Shigeh Tanaka, Lionel William Wiedey, Wilbur Wilson Thoburn, Josepl C. Thompson, William Francis Thompson, Deogracias Villiamin Villadolid, Yojiro Wakiya, Frank Walter Weymouth, Thomas Marion Williams, and Albert Jefferson Woolman.*

Those marked with an asterisk have also been students of Doctor Evermann, as have also the following: Frederick Morton Chamberlain, Ulysses Orange Cox, Samuel Frederick Hildebrand, Chancey Juday, William Converse Kendall, Clarence Hamilton Kennedy, William J. Moenkhaus, John Treadwell Nichols, Lewis Radcliffe, Josiah Thomas Scovell, and Alfred Cleveland Weed.

Many of these have made important contributions to our knowledge of fishes.

The preparation of this Check List has extended over a period of more than 20 years. It was begun in 1906 by the senior authors,

who worked upon it from time to time, as their other duties permitted, until 1925, when they were joined by the junior author, who thereafter gave most of his time to the work until its completion. The senior authors also have devoted much of their time to it since 1925.

During the progress of the work the authors have endeavored to consult and utilize every record bearing on the fish fauna of America. In addition to this they have received invaluable assistance and suggestions from virtually every present-day student of American fishes, among whom special mention should be made of the late Dr. Charles Henry Gilbert and Prof. John Otterbein Snyder of Stanford University, Dr. William Converse Kendall of the United States Bureau of Fisheries, Dr. Carl Leavitt Hubbs of the University of Michigan, George Sprague Myers of Stanford University, Barton Appler Bean of the United States National Museum, William Francis Thompson of the International Fisheries Commission, Dr. Arthur W. Henn of the Carnegie Museum, John Treadwell Nichols and Dr. E. W. Gudger of the American Museum of Natural History, and many others. To all these we express our indebtedness and grateful appreciation. For clerical assistance of one kind or another, particularly in looking up and verifying references, we are greatly indebted to Miss Jessie E. Drayton, Harry J. Christoffers, and Henry D. Aller, of the United States Bureau of Fisheries. Without the assistance so generously given by these and others, this memoir could hardly have been completed.

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STANFORD UNIVERSITY,
CALIFORNIA ACADEMY OF SCIENCES,
January 4, 1928.

Class I. LEPTOCARDII. Lancelets

Order A. CIRROSTOMI. Cirrostomes

Family 1. BRANCHIOSTOMIDÆ. Lancelets

Genus 1. BRANCHIOSTOMA Costa.

Branchiostoma Costa, Cenni Zoologici Napol., 49, 1834 (*B. lubricum* Costa=*lanceolatus* Pallas).

Amphioxus Yarrell, Hist. Brit. Fishes, 1836, 468 (*Limax lanceolatus* Pallas).

Amphioxides [2] Gill, Amer. Nat., XXIX, 1895, 458 (*Branchiostoma pelagicum* Günther).

1. **Branchiostoma virginiæ** [3] Hubbs. *Virginia lancelet.*
   Shallow waters, burying itself in the sand, from Chesapeake Bay to Florida; Beaufort, Cape Lookout, etc.
   Branchiostoma virginiæ Hubbs, Occ. Papers Mus. Zool. Univ. Mich., No. 105, 8, July 6, 1922, Sewall's Point, Va.

2. **Branchiostoma floridæ** Hubbs. *Florida lancelet.*
   Coasts of Florida; Tampa, Pensacola, Cape Romans, St. Martin's Reef, Snapper Banks, etc.
   Branchiostoma floridæ Hubbs, Occ. Papers Mus. Zool. Univ. Mich., No. 105, 7, July 6, 1922, Tampa Bay, Fla.

3. **Branchiostoma bermudæ** Hubbs. *Bermuda lancelet.*
   Bermuda Islands.
   Branchiostoma bermudæ Hubbs, Occ. Papers Mus. Zool. Univ. Mich., No. 105, 9, July 6, 1922, Bermuda.

4. **Branchiostoma caribæum** [4] Sundevall. *West Indian lancelet.*
   West Indies.
   Branchiostoma caribæum Sundevall, Vet. Akad. Förhandl., XI, 1853, 12, St. Thomas.

5. **Branchiostoma californiense** Gill. *California lancelet; California amphioxus.*
   Pacific coast of America from San Diego Bay southward to San Luis Gonzales Bay, Gulf of California; reported also from Panama. Abundant in shallow water, buried in the sand.
   Branchiostoma californiense Gill, in Andrews, Studies Biol. Lab. Johns Hopkins Univ., V, 1893, 235, San Diego.

Family 2. EPIGONICHTHYIDÆ

Genus 2. ASYMMETRON Andrews.

Asymmetron Andrews, Studies Biol. Lab. Johns Hopkins Univ., V, 1893, 237 (*A. lucayanum* Andrews).

6. **Asymmetron lucayanum** Andrews. *Bahama lancelet; Bahama amphioxus.*
   West Indies; Bemini and Nassau, Bahamas; Culebra Island; Humacao, Porto Rico; south to Brazil. Common.
   Asymmetron lucayanum Andrews, Studies Biol. Lab. Johns Hopkins Univ., V, 1893, 237, Bemini, Bahamas.

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[2] Based on larvæ showing no buccal cirri, found in the open sea near Hawaii.
[3] Until the recent studies of Hubbs, this species was wrongly identified with the European form (*B. lanceolatum*), which, however, does not occur in America.
[4] Represented on the coast of Brazil (Rio Janeiro, etc.) by *B. platæ* Hubbs.

Class II. CYCLOSTOMI. Lampreys

Order B. HYPEROTRETA. Hagfishes

Family 3. MYXINIDÆ. Hagfishes

Genus 3. MYXINE Linnæus.

Myxine Linnæus, Syst. Nat., ed. X, 1758, 650 (*M. glutinosa* L.).
Gastrobranchus Bloch, Ichth., XII, 1797, 51, tab. 413 (*G. cœcus* Bloch).
Murænoblenna Lacépède, Hist. Nat. Poiss., V, 1803, 647 (*M. olivacea* Lacépède).
Anopsus Rafinesque, Anal. Nat., 1815, 93 (*M. olivacea* Lacépède).

7. **Myxine limosa** Girard. *Hagfish; Borer; Sucker; Slimefish.*
Newfoundland, south to Cape Cod; Grand Manan Island, New Brunswick; replacing in the western Atlantic the European *M. glutinosa* L.; not abundant.
Myxine limosa Girard, Proc. Acad. Nat. Sci. Phila., X, 1858, 224, Grand Manan.

Family 4. EPTATRETIDÆ. Borers

Genus 4. POLISTOTREMA Gill.

Polistotrema Gill, Proc. U. S. Nat. Mus., IV, 1881, 30 (*Gastrobranchus dombey* Cuvier).

8. **Polistotrema stoutii** (Lockington). *California hagfish; Lamperina.*
Coast of California; common in Monterey Bay; Eel River, Humboldt Co., Calif., and other streams of northern California; San Francisco Bay.
Bdellostoma stoutii Lockington, Amer. Nat., XII, December, 1878, 793, Eel River, Calif.

9. **Polistotrema deani** Evermann and Goldsborough.
Alaska to Santa Barbara, Calif., in deep water.
Polistotrema deani Evermann and Goldsborough, Bull. U. S. Bur. Fish., XXVI, 1906, 225, fig. 1, *Albatross* station 4238 in Behm Canal off Nose Point in 229 to 231 fathoms.
Polistotrema curtiss-jamesii Townsend and Nichols, Bull. Amer. Mus. Nat. Hist., LII, 1925, 4, off California, lat. 34° to 36° in 440 to 585 fathoms.

Order C. HYPEROARTIA. Lampreys

Family 5. PETROMYZONIDÆ. Lampreys

Genus 5. PETROMYZON Linnæus.

Petromyzon (Artedi) Linnæus, Syst. Nat., ed. X, 1758, 230 (*P. marinus* L.).
Ammocœtes Duméril in Cuvier, Régne Anim., ed. I, 1817, 119, variant spelling of *Ammocœtus*, a name given to a larval form (*branchialis*).
Bathymyzon Gill, Proc. U. S. Nat. Mus., VI, 1883, 25 (*Bathymyzon bairdii* Gill); probably an old example that has lost teeth.
Oceanomyzon Fowler, Proc. Acad. Nat. Sci. Phila., LIX, 1907, 461 (*O. wilsoni* Fowler); like the preceding, supposed by Creaser and Hubbs to be an old individual from the Gulf Stream.

10. **Petromyzon marinus** Linnæus. *Great sea lamprey; Lamprey eel; Sucker; Lamprey; River lamprey; Green lamprey; Shad lamprey; Nine-eyes.*
Atlantic coasts of Europe and America, southward in America to Chesapeake Bay; abundant northward; ascending streams to spawn.
Petromyzon marinus Linnæus, Syst. Nat., ed. X, 1758, 230, European seas.
Petromyzon americanus LeSueur, Trans. Amer. Phil. Soc. Phila., I, 1818, 383, coast of Massachusetts.
Petromyzon nigricans LeSueur, loc. cit., 385, Massachusetts; small example from fresh water.
Ammocœtes bicolor LeSueur, loc. cit., 386, Northampton, Mass. (larva).
? *Petromyzon* (*Bathymyzon*) *bairdii* Gill, Proc. U. S. Nat. Mus., VI, 1883, 254, Gulf Stream, north lat. 40° 02′, west long. 68° 50′ 30″, in 547 fathoms.
? *Oceanomyzon wilsoni* Fowler, Proc. Acad. Nat. Sci. Phila., LIX, 1907, 461; open sea.

11. Petromyzon marinus dorsatus Wilder. *Lake lamprey; Mud lamprey.*
Landlocked in Cayuga Lake and other lakes of western and central New York.
Petromyzon marinus dorsatus Wilder, in Jordan and Gilbert, Synop. Fishes North Amer., 1883, 869, Cayuga Lake, N. Y.

Genus 6. ICHTHYOMYZON Girard. *River lampreys.*
Ichthyomyzon Girard, Pac. R. R. Surv., X, 1858, 381 (*Petromyzon argenteus* Kirtland).
Scolecosoma Girard, loc. cit., 385 (*Ammocœtes concolor* Kirtland); larva of *argenteus.*

12. Ichthyomyzon concolor (irtland). *Silver lamprey.*
Great Lakes; upper Mississippi Valley; tributaries of Hudson Bay; south to Arkansas and Louisiana.
Petromyzon argenteus Kirtland, Zool. Ohio, 170, 1838, 197, Big Miami River, Ohio; name preoccupied.
Ammocœtes concolor Kirtland, Jour. Bost. Soc. Nat. Hist., III, 1840, 473, plate, Mahoning River; Scioto River; larva.
Petromyzon bdellium Jordan, Cat. Fishes North Amer., 1885, 4; after Kirtland.
Ichthyomyzon castaneus Girard, Pac. R. R. Surv., X, 1858, 381, Galena, Minn.
Ichthyomyzon hirudo Girard, loc. cit., 382, Fort Smith, Ark.

Genus 7. REIGHARDINA Creaser and Hubbs.
Reighardina Creaser and Hubbs, Occ. Papers Mus. Zool. Univ. Mich., No. 120, 1922, 4 (*Ichthyomyzon fossor* Reighard and Cummins = *Ammocœtes unicolor* DeKay).

13. Reighardina unicolor (DeKay).
Ammocœtes unicolor DeKay, N. Y. Fauna: Fishes, 1842, 383, pl. 79, fig. 250; Lake Champlain.
Ammocœtes borealis Agassiz, Lake Superior, 1850, 252, Michigan River, Mich.
Ichthyomyzon fossor Reighard and Cummins, Occ. Papers Mus. Zool. Univ. Mich., 31, 1916, 1 to 12, pl. 1, 2, Michigan.

Genus 8. LETHENTERON Creaser and Hubbs.
Lethenteron Creaser and Hubbs, Occ. Papers Mus. Zool. Univ. Mich., No. 120, 1922, 6 (*Lampetra wilderi* Gage = *Petromyzon appendix* DeKay).

14. Lethenteron appendix (DeKay). *Small black lamprey; Brook lamprey.*
New York to Iowa, in tributaries of the Great Lakes and of the Ohio and Mississippi, south to Virginia.
Petromyzon nigrum Rafinesque, Ichth. Ohiensis, 1820, 84, falls of Ohio River; name preoccupied.
Petromyzon appendix DeKay, N. Y. Fauna: Fishes, 1842, 381, pl. 64, fig. 211, Providence; Hudson Bay.
Lampetra wilderi Gage, in Jordan and Evermann, Fishes North and Mid. Amer., 1896, 13, Cayuga Lake, N. Y.

Genus 9. TETRAPLEURODON Creaser and Hubbs.
Tetrapleurodon Creaser and Hubbs, Occ. Papers Mus. Zool. Univ. Mich., No. 120, 1922, 9 (*Lampetra spadicea* Bean).

15. Tetrapleurodon spadiceus (Bean). *Mexican lamprey.*
Known only from the Rio Lerma, near Guanajuato, and from Lago de Chapala, Mexico.
Lampetra spadicea Bean, Proc. U. S. Nat. Mus., X, 1887, 374, Pl. XX, fig. 6, Rio Lerma, Guanajuato, Mexico.

Genus 10. ENTOSPHENUS Gill.
Entosphenus Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 331 (*Petromyzon tridentatus* Gairdner).

16. **Entosphenus tridentatus** (Gairdner). *Three-toothed lamprey; Western lamprey.*
Pacific coast of America, from southern California to Unalaska; ascending streams even to the headwaters of the Columbia for spawning purposes.
Petromyzon tridentatus Gairdner, in Richardson, Fauna Bor.-Amer., 1836, 293, falls of the Willamette River, Oreg.
Petromyzon lividus Girard, Pac. R. R. Surv., X, 1858, Pt. 4, Fishes, 379, Willamette River, Oreg.
Petromyzon astori Girard, loc. cit., 380, Astoria, Oreg.
Ammocœtes cibarius Girard, loc. cit., 383 (larva).

17. **Entosphenus ciliatus** (Ayres).
Streams of northern California.
Petromyzon ciliatus Ayres, Proc. Calif. Acad. Nat. Sci., I, 1855, 43, San Francisco.
Petromyzon epihexodon Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 331, Fort Reading, Calif.

Genus 11. LAMPETRA (Bonnaterre) Gray. *Brook lampreys.*
Lampetra Bonnaterre, Enc. Meth., 1788; no paging; no type, used for all.
Lampreda Rafinesque, Anal. Nat., 1815, 94 (no species named; no description.
Pricus Rafinesque, loc. cit. (no species named); no description.
Lampetra Gray, Proc. Zool. Soc. Lond., 1851, 236 (*Petromyzon fluvialis* L.).

18. **Lampetra ayresii** (Günther). *Western lamprey.*
Pacific coast of North America from the Fraser River southward to the Sacramento; very close to *L. fluviatilis* of Europe.
Petromyzon plumbeus Ayres, Proc. Calif. Acad. Nat. Sci., I, 1854, 27, San Francisco; name preoccupied.
Petromyzon ayresii Günther, Cat., VIII, 1870, 505, San Francisco; substitute for *plumbeus* Ayres, preoccupied.

19. **Lampetra borealis** (Girard). *Arctic lamprey.*
Streams of northern Alaska and Kamchatka.
Petromyzon borealis Girard, Pac. R. R. Surv., X, 1858, Pt. 4, Fishes, 377, Great Slave Lake; not *Ammocœtes borealis* Agassiz.
Ammocœtes aureus Bean, Proc. U. S. Nat. Mus., IV, 1881, 159, Yukon River.

Genus 12. OKKELBERGIA Creaser and Hubbs.
Okkelbergia Creaser and Hubbs, Occ. Papers Mus. Zool. Univ. Mich., No. 120, 1922, 8 (*Petromyzon lamotteni* LeSueur).

20. **Okkelbergia lamotteni** (LeSueur).
Petromyzon lamotteni LeSueur, New York Fauna: Fishes, 1842, 382, pl. 79, fig. 249; no locality.
Ammocœtes æpyptera C. C. Abbott, Proc. Acad. Nat. Sci. Phila., XII, 1860, 327 (type redescribed by Fowler, *ibid.*, 1901, 328; 1907, 466).

Class III. ELASMOBRANCHII. (Selachii, Plagiostomata, Chondropterygii, Antacca). Sharks; Skates and rays; Chimæras

Subclass SELACHII. Sharks

Order D. CESTRACIONTES

Suborder PROARTHRI

Family 6. HETERODONTIDÆ. Bullhead sharks

Genus 13. GYROPLEURODUS Gill.
Gyropleurodus Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 331 and 489 (*Cestracion francisci* Girard).
Tropidodus Gill, loc. cit., 489 (*Cestracion pantherinus* Valenciennes= *Cestracion quoyi* Fréminville).

21. **Gyropleurodus francisci** (Girard). *Bullhead shark.*
Coast of California; abundant south of Point Conception.
Cestracion francisci Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 196, Monterey Bay, Calif.

Order E. NOTIDANI. (Diplospondyli)

Suborder OPISTHARTHRI

Family 7. HEXANCHIDÆ. Cow sharks

Genus 14. HEXANCHUS Rafinesque.
Hexanchus Rafinesque, Caratteri, etc., 1810, 14 (*Squalus griseus* Bonnaterre).
Notidanus Cuvier, Règne Anim., ed. 1, 1817, 128 (*Squalus griseus* L.).
Monopterhinus Blainville, Faune Française, 1828, 77 (*Squalus griseus* Gmelin).

22. **Hexanchus griseus** (Bonnaterre). *Cow shark; Caffa bota.*
Mediterranean to Scotland; Cuba.
Squalus griseus Bonnaterre, Ichth. R. 1788, 9; Mediterranean; after *le griset* Bonnaterre.
Squalus griseus Gmelin, Syst. Nat., I, 1795, 1789; after Broussonet.

23. **Hexanchus corinus** Jordan and Gilbert. *Shovel-nosed shark.*
Pacific coast of America; Monterey Bay to Puget Sound.
Hexanchus corinus Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880 (December 21), 352, Neah Bay, Wash., and Soquel, Calif.

Genus 15. NOTORYNCHUS Ayres.
Notorynchus Ayres, Proc. Calif. Acad. Nat. Sci., I, 1855, 73 (*Notorynchus maculatus* Ayres).

24 **Notorynchus maculatus**[5] Ayres.
Pacific coast of the United States, from Monterey Bay northward to Washinton; common northward, especially in Humboldt and San Francisco Bays.
Notorynchus maculatus Ayres, Proc. Calif. Acad. Nat. Sci., I, 1855, 72, San Francisco Bay.
Notorhynchus borealis Gill, Proc. Acad. Nat. Sci. Phila., XVI, 1864, 150, Nisqually, Wash.

Order F. EUSELACHII

Suborder GALEI. True sharks

Family 8. SCYLLIORHINIDÆ. Cat sharks

Genus 16. SCYLLIORHINUS Blainville. *Roussettes.*
Catulus Valmont, Dict. Raisonnée, IV, 1768, 451 (*C. saxatilis* Valmont= *Squalus stellaris* L.); non binominal.
Catulus Smith, Proc. Zool. Soc. Lond., 1837, 85 (*Scyllium capense* Smith); name preoccupied by *Catulus* Kniphof, 1759, a genus of insects.
Scylliorhinus Blainville, Jour. Phys., 1816, 263 (*Squalus canicula* L., as restricted); spelled *Scyliorhinus* by Garman.
Scyllium Cuvier, Règne Anim., ed. I, 1817, 124 (*Squalus canicula* L., as restricted).

25. **Scylliorhinus retifer** (Garman).
Gulf Stream in deep water; occasionally off South Atlantic coast.
Scyllium retiferum Garman, Bull Mus. Comp. Zool., VIII, 1881, 233, off coast of Virginia in deep water.

26. **Scylliorhinus cephalus** (Gilbert).
Gulf of California and southward in deep water.
Catulus cephalus Gilbert, Proc. U. S. Nat. Mus., XV, 1891, 541, deep water near the Revillagigedo Islands and in the Gulf of California.

Genus 17. CEPHALOSCYLLIUM Gill.
Cephaloscyllium Gill, Ann. Lyc. Nat. Hist. N. Y., VII, 1861, 407, 412 (*Scyllium laticeps* A. Duméril).

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[5] Regarded by Garman as identical with *N. platycephalus* (Tenore) of the Mediterranean.

27. **Cephaloscyllium uter** (Jordan and Gilbert). *Swell shark.*
Monterey to San Diego; very abundant in Santa Barbara channel.
Catulus uter Jordan and Gilbert, in Jordan and Evermann, Fishes North and Mid. Amer., 1896, 25; Monterey, San Diego, and Santa Barbara Channel.

Genus 18. APRISTURUS Garman.
Apristurus Garman, Plagiostomia, Mem. Mus. Comp. Zool., XXXVI, 1913, 96 (*Scylliorhinus indicus* Brauer).

28. **Apristurus brunneus** (Gilbert).
Gulf of California and northward in deep water; Monterey Bay; Puget Sound; Hood Canal.
Catulus brunneus Gilbert, Proc. U. S. Nat. Mus., XIV, 1891, 542, Gulf of California.

29. **Apristurus profundorum** (Goode and Bean).
North Atlantic, in deep water.
Scylliorhinus profundorum Goode and Bean, Oceanic Ichth., 1896, 17, Gulf Stream.

Genus 19. PRISTIURUS (Bonaparte) Müller and Henle.
Pristiurus Bonaparte, Prospetto del Systema d'Ittiologia Generale, 1831, 121 (*Galeus melanostomus* Rafinesque); name only; defined in Iconographia della Fauna Italica, 1841 (no paging).
Pristiurus Müller and Henle, Mag. Nat. Hist., III, Jan., 1838, 341 (*Galeus melanostomus* Rafinesque).
Pristidurus Bonaparte, Mem. Soc. Sci. Neufchâtel, II, 1839, 11, variant spelling.

30. **Pristiurus xaniurus** (Gilbert).
Pacific coast of southern and Lower California; abundant in deep water.
Catulus xaniurus Gilbert, Proc. U. S. Nat. Mus., XIV, 1891, 540, off southern and Lower California in 184 to 684 fathoms.

31. **Pristiurus aræ** Nichols.
Off the coast of Florida.
Pristiurus aræ Nichols, Amer. Mus. Novit., No. 256, March 12, 1927, 1, off the coast of Florida.

Family 9. GINGLYMOSTOMIDÆ. Nurse sharks

Genus 20. GINGLYMOSTOMA Müller and Henle.
Ginglymostoma Müller and Henle, Wiegmann's Archiv, I, 1837, 396 (*Squalus cirratus* Gmelin).

32. **Ginglymostoma cirratum** (Gmelin). *Nurse shark; Gata.*
West Indies and the west coast of Mexico; Cape Verde Islands; occasional on our South Atlantic coast.
Squalus cirratus Gmelin, Syst. Nat., I, 1492, 1788, American seas; after Broussonet.
Squalus punctatus Bloch and Schneider, Syst. Ichth., 1801, 134, Cuba; after Gata Hispanus of Parra.
Squalus punctulatus Bloch and Schneider, loc. cit., 549, Cayenne.
Squalus argus Bancroft, Zool. Jour., V, 1832, 82, West Indies.
Ginglymostoma fulvum Poey, Memorias, II, 1861, 342, Habana; young.
Ginglymostoma caboverdianus Capello, Jour. Sci. Math. Phys. Nat. Lisbon, 1867, 167, Cape Verde Islands.

Family 10. PSEUDOTRIAKIDÆ

Genus 21. PSEUDOTRIAKIS Capello.
Pseudotriakis Capello, Jour. Sci. Math. Phys. Nat. Lisbon, IV, 1867, 321 (*Pseudotriakis microdon* Capello).

33. **Pseudotriakis microdon** Capello. *Peixe carago.*
Portugal; Amagansett, Long Island.
Pseudotriakis microdon Capello, Jour. Sci. Math. Phys. Nat. Lisbon, 1868, 321, pl. 5, fig. 1, Portugal.

Family 11. CARCHARIIDÆ. Gray sharks

Genus 22. CYNIAS Gill.

Cynias Gill, Proc. U. S. Nat. Mus., XXVI, 1903, 960 (*Squalus canis* Mitchill); embryos without placental attachment.

Mustelus Valmont de Bomare, Dict. Raisonnée, ed. II, 1768, 786 (*Galeus asterias* Valmont = *Squalus canis* Mitchill; not given as a scientific name but as Latin vernacular).

34. Cynias canis [6] (Mitchill). *Dog shark; Dogfish; Smooth dogfish; Blue dog.*
Cape Cod to Cuba; abundant on the Atlantic coast of both continents.
Squalus canis Mitchill, Trans. Lit. Phil. Soc. N. Y., 1815, 486, New York.
Mustelus asterias Cloquet, Dict. Raisonnée, 1820, 407, Europe.
Mustellus stellatus Risso, Europ. Mérid., III, 1826, 1126, Nice.
Mustelus plebejus Bonaparte, Fauna Italica, Pesci, Fascl., Tome III, 1834, 43, pl. 132, Italy.

35. Cynias lunulatus (Jordan and Gilbert). *Gato.*
West coast of Mexico; common in Gulf of California.
Mustelus lunulatus Jordan and Gilbert, Proc. U. S. Nat. Mus., V, 1882, 108, Mazatlan, Mexico.

Genus 23. MUSTELUS Linck.

Mustelus Linck, Magazin für Neueste aus Physik und Naturgeschichte, 1790, 31 (*Squalus mustelus* Linnæus); not of Valmont de Bomare.

Galeus [7] Rafinesque, Caratteri, 1801, 13 (*Squalus mustelus* L., as restricted by Jordan and Gilbert).

Mustelus Leach, Observ. Squalus, 1813, 62 (*Squalus mustelus* L.).

Mustelus Cuvier, Règne Anim., ed. I, 1817, 128 (*Squalus mustelus* Cuv.).

Pleuracromylon Gill, Proc., Acad. Nat. Sci. Phila., XVI, 1864, 148, (*Mustelus lævis* Risso); embryo attached by a placenta.

36. Mustelus mustelus (Linnæus). *Smooth hound; Boce dulce.*
Southern Europe; occasional in America, lately taken on coast of New Jersey.
Squalus mustelus Linnæus, Syst. Nat., ed. X, 1758, 235, Europe.
Mustelus lævis Risso, Europ. Mérid., 1826, 327, Nice; and of European writers generally.
Galeus mustelus Rafinesque, Caratteri, 1910.

37. Mustelus californicus Gill.
California, north to Cape Mendocino.
Mustelus californicus Gill, Proc. Acad. Nat. Sci. Phila., XVI, 1864, 148, San Francisco.

38. Mustelus dorsalis Gill.
Panama and neighboring waters, north to Gulf of California.
Mustelus dorsalis Gill, Proc. Acad. Nat. Sci. Phila., XVI, 1864, 149, Panama.
Mustelus mento Cope, Proc. Amer. Phil. Soc., XVII, 1877, 47, Pacific Ocean at Pacasmayo, Peru.

Genus 24. RHINOTRIACIS Gill.

Rhinotriacis Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 486 (*Rhinotriacis henlei* Gill).

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[6] The European synonymy of *Mustelus mustelus* and *Cynias canis* is in a state of great confusion, as few of the earlier writers recognized any difference between the two species externally very much alike.

[7] The genus *Galeus* of Rafinesque was based on species with spiracles, differing from *Squalus* by the presence of an anal fin. One new species is described, *Galeus melastomus*, later type of Bonaparte's genus *Pristiurus*; but on the same page and the next page Rafinesque speaks of other species—*Galeus vulpecula*, *G. catulus*, and *G. mustelus*. It is plain that *Squalus galeus* L. was his intended type, after the general custom of writers who elevated species to the rank of genus; but he does not mention that species in the paper nor in his Indice, and as *Squalus galeus* was therefore not available as type, Jordan and Gilbert selected *Squalus mustelus* for that purpose, thus making *Galeus* Rafinesque a synonym of *Mustelus* Leach, rather than to displace *Pristiurus*. Apparently this procedure was allowable, unless some earlier author had chosen either *Pristiurus melastomus* or *Scylliorhinus catulus* (*canicula*) for that purpose.

39. Rhinotriacis henlei Gill.
Coast of California from Humboldt Bay to Monterey; rather rare.
Rhinotriacis henlei Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 486, San Francisco.

Genus 25. TRIAKIS Müller and Henle.
Triakis Müller and Henle, Mag. Nat. Hist., II, 1838, 36 (*Triakis scyllium*); corrected to *Triacis* by authors.

40. Triakis semifasciatum Girard. *Cat shark; Leopard shark.*
Cape Mendocino to San Diego; common.
Triakis semifasciatum Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 196, Presidio de San Francisco.
Mustelus felis Ayres, Proc. Calif. Acad. Nat. Sci., 1854, 17, San Francisco.

Genus 26. GALEORHINUS Blainville.
Galeorhinus Blainville, Bull. Soc. Philom., 1816, 121 (*Squalus galeus* L.; restricted by Gill).
Eugaleus Gill, Proc. Acad. Nat. Sci. Phila., XVI, 1864, 148 (*Squalus galeus* L.); the first species named by Blainville being *Squalus mustelus*, for which reason Garman uses *Galeorhinus* as the name of the genus here called *Mustelus*.

41. Galeorhinus zyopterus Jordan and Gilbert. *Oil shark; Soupefin shark.*
Coast of southern and Lower California, from San Francisco to Cedros Island; very abundant.
Galeorhinus zyopterus Jordan and Gilbert, Synop. Fishes North Amer., 1883, 871, San Pedro, Calif.

Genus 27. TRIÆNODON Müller and Henle.
Triænodon Müller and Henle, Plagiostomen, 1841, 55 (*Carcharias obesus* Rüppell).

42. Triænodon obesus (Rüppell).
Tropical Pacific; reported from Cocos Island.
Carcharias obesus Rüppell, Neue Wirbel., Fisch., 1835, 64, pl. 18, fig. 2, Djidda, Arabian Coast of Red Sea.

Genus 28. GALEOCERDO Müller and Henle.
Galeocerdo Müller and Henle, Plagiostomen, 1838, 59 (*Galeocerdo tigrinus* Müller and Henle).
Boreogaleus Gill, Ann. Lyc. Nat. Hist. N. Y., VII, 1861, 411 (*Squalus arcticus* Faber).

43. Galeocerdo arcticus (Faber). *Spotted shark; Leopard shark; Tiger shark; Tigrone.*
Tropical seas; occasionally to Iceland, Cape Cod, and San Diego.
Squalus arcticus Faber, Fische Islands, 1829, 17, Iceland and neighboring seas.
Galeocerdo tigrinus Müller and Henle, Plagiostomen, 1838, 59, Pondicherry.
Galeus maculatus Ranzani, De Novis Speciebus Piscium, Dissert. Prima, in Novi Com. Acad. Boron., IV, 1840, 68, Brazil.

Genus 29. HEMIGALEUS Bleeker.
Hemigaleus Bleeker, Verh. Bot. Gen., XIV, 1852, 45 (*Hemigaleus microstoma* Bleeker); not *Hemigalea*, an earlier genus of mammals.

44. Hemigaleus pectoralis Garman.
Coast of New England, probably in the Gulf Stream.
Hemigaleus pectoralis Garman, Bull. Mus. Comp. Zool., XLIV, 1906, 203, "Aquarial Gardens," the fishes in which were taken off Massachusetts and Rhode Island.

Genus 30. SCOLIODON Müller and Henle.
Scoliodon Müller and Henle, Wiegmann's Archiv, I, 1837, 398 (*Scoliodon laticaudus* Müller and Henle.

45. Scoliodon terræ-novæ (Richardson). *Sharp-nosed shark; Newfoundland shark.*
Cape Cod to Florida; very common southward along the Atlantic coast.
Squalus (*Carcharias*) *terræ-novæ* Richardson, Fauna Bor.-Amer., III, 1836, 289, Newfoundland; an error, probably for Florida.
Squalus punctatus Mitchill, Trans. Lit. Phil. Soc. N. Y., I, 1815, 483, New York; not of Bloch and Schneider.

46. Scoliodon lalandi (Müller and Henle).
West Indies to Brazil.
Carcharias lalandi Müller and Henle, Plagiostomen, 1838, 30, Rio Janeiro; Martinique; Guadeloupe.

47. Scoliodon porosus (Poey).
Cuba.
Squalus porosus Poey, Memorias, II, 1861, 339, tab. 19, L. 11, 12, Habana.

48. Scoliodon longurio (Jordan and Gilbert).
Pacific coast of Mexico.
Carcharias longurio Jordan and Gilbert, Proc. U. S. Nat. Mus., V, 1882, 106, Mazatlan, Mexico.

Genus 31. APRIONODON Gill.
Aprion Müller and Henle, Plagiostomen, 1838-1841, 31 (*Carcharias isodon* Müller and Henle); preoccupied.
Aprionodon Gill, Ann. Lyc. Nat. Hist. N. Y., VII, 1862, 411 (*Aprionodon punctatus* Gill; not *Squalus punctatus* Mitchill = *Carcharias isodon* Müller and Henle).

49. Aprionodon isodon (Müller and Henle).
Atlantic Ocean; recorded from New York, Virginia, and Cuba; probably rare.
Carcharius isodon Müller and Henle, Plagiostomen, 1838, 32, New York.
Carcharius punctatus Günther, Cat., VIII, 1870, New York; not *Squalus punctatus* Mitchill, which is *Scoliodon terræ-novæ*.

Genus 32. CARCHARIAS Rafinesque. *Gray shark; Requin.*
Carcharias Rafinesque, Caratteri, 1810, 10 (*Squalus carcharias* L. intended, but *Carcharias taurus* the only species mentioned).
Carcharhinus Blainville, Bull. Soc. Philom., 1816, 264 (*Squalus commersonii* Blainville, apparently the same as *Carcharias lamia* Rafinesque).
Carcharias Cuvier, Règne Anim., ed. I, 1817, 125 ("*Squalus carcharias*," *Carcharias lamia* intended); not of Rafinesque.
Eulamia Gill, Ann. Lyc. Nat. Hist. N. Y., VII, 1861, 401 (*Carcharias lamia* Rafinesque; *Squalus commersonii* Blainville being intended = *Carcharias lamia* Rafinesque was *Carcharodon carcharias* Rafinesque, the specific name being a substitute for *Squalus carcharias* L.).
Platypodon Gill, loc. cit. (*Carcharias menisorrah* Müller and Henle).
Isogomphodon Gill, loc. cit. (*Carcharias oxyrhynchus* Müller and Henle).
Lamiopsis Gill, loc. cit. (*Carcharias temmincki* Müller and Henle).
Isoplagiodon Gill, loc. cit. (*Carcharias sorrah* Müller and Henle).

50. Carcharias commersonii (Blainville). *Cub shark; Requïn; Requiem; Lamia; Common gray shark.*
Tropical parts of the Atlantic; common northward to the Florida Keys and in the Mediterranean; rarely straying northward to New York in the Gulf Stream.
Squalus commersonii Blainville, Bull. Soc. Philom., 1816, 121, Mediterranean.
Carcharias lamia Risso, Europ. Mérid., III, 1826, 19, Nice; not of Rafinesque.
Squalus longimanus Poey, Memorias, II, 1861, 338, Cuba.

51. Carcharias lamiella Jordan and Gilbert. *Bay shark.*
San Diego Bay and southward along the Mexican coast.
Carcharias lamiella Jordan and Gilbert, Proc. U. S. Nat. Mus., V, 1882, 110, San Diego; regarded by Garman as identical with *C. commersonii* of the Atlantic.

52. Carcharias platyrhynchus (Gilbert).
Magdalena Bay, Lower California, to Galapagos Islands and the Revillagigedo Islands.
Eulamia platyrhynchus Gilbert, Proc. U. S. Nat. Mus., XIV, 1891, 543, Clarion Island; Magdalena Bay; regarded by Garman as identical with *C. commersonii*.

53. Carcharias platyodon (Poey). *Cub shark.*
Cuba to Texas; abundant in the Gulf of Mexico.
Squalus platyodon Poey, Memorias, II, 1861, 336, Habana.
Squalus obtusus Poey, loc. cit., 337, Habana.

54. **Carcharias milberti** Valenciennes. *Small blue shark; White shark.*
Cape Cod to Florida; not rare; recorded from the Mediterranean.
Carcharias (*Prionodon*) *milberti* Valenciennes, in Müller and Henle, Plagiostomen, 1838, 38, New York.
Carcharias cæruleus DeKay, N. Y. Fauna: Fishes, 1842, 49, New York.
Lamna caudata DeKay, loc. cit., 354, Brenton Reef, R. I.

55. **Carcharias obscurus** (LeSueur). *Dusky shark.*
North and Middle Atlantic; frequently on our coast.
Squalus obscurus LeSueur, Jour. Acad. Nat. Sci. Phila., I, 1818, 223, New York.
Carcharias falcipinnis Lowe, Proc. Zool. Soc. Lond., 1839, 90, Madeira.
Prionodon obvelatus Valenciennes, Poiss. Îles Canaries, 1839, 103, Canaries.

56. **Carcharias azureus** Gilbert and Starks.
Carcharias azureus Gilbert and Starks, Mem. Calif. Acad. Sci., IV, 1904, 11, Pl. II, fig. 5, Panama.

57. **Carcharias nicaraguensis** (Gill and Bransford). *Nigrone; Fresh-water shark.*
Lake Nicaragua (landlocked); also in the Bay of Panama.
Eulamia nicaraguensis Gill and Bransford, Proc. Acad. Nat. Sci. Phila., XXIX, 1877, 190, Lake Nicaragua.

58. **Carcharias henlei** Valenciennes.
Coast of Brazil, northward to Guiana.
Carcharias henlei Valenciennes, in Müller and Henle, Plagiostomen, 1838, 46, Cayenne.
Carcharias porosus Ranzani, De Novis Speciebus Piscium, Dissert Prima., in Novi Com. Acad. Bonon., IV, 1840, 70, Brazil.

59. **Carcharias cerdale** (Gilbert).
Abundant at Panama.
Carcharhinus cerdale Gilbert, in Jordan and Evermann, Fishes North and Mid. Amer., III, 1898, 2746, Panama; united by Garman with *C. menisorrah* from the East Indies.

60. **Carcharias falciformis** Bibron. *Cazon de playa (wharf) shark.*
Cuba and neighboring waters.
Carcharias falciformis Bibron, in Müller and Henle, Plagiostomen, 1838, 47, Cuba.
Squalus tiburo Poey, Memorias, II, 1861, 331, Habana.

61. **Carcharias remotus** Valenciennes.
West Indies and Brazil.
Carcharias remotus Valenciennes, in Duméril, Hist. Nat Poiss., I, 1865, 374.
Platypodon perezi Poey, Anal. Soc. Española Hist. Nat., V, 194, pl. 9, figs. 2, 3, Cuba.

62. **Carcharias acronotus** (Poey).
Cuba.
Squalus acronotus Poey, Memorias, II, 1861, 335, Cuba.

63. **Carcharias velox** (Gilbert).
Panama.
Carcharhinus velox Gilbert, in Jordan and Evermann, Fishes North and Mid. Amer., 1898, 2747, Panama.

64. **Carcharias oxyrhynchus** Müller and Henle.
Surinam.
Carcharias oxyrhynchus Müller and Henle, Plagiostomen, 1838, 41, Surinam.

65. **Carcharias limbatus** Müller and Henle. *Carconetta.*
Tropical seas north to Florida; a stray example taken at Woods Hole, Mass.
Carcharias (*Prionodon*) *limbatus* Müller and Henle, Plagiostomen, 1838, 49, Martinique.
Isogomphodon maculipinnis Poey, Repertorio, I, 1866, 191, Cuba.
Carcharias (*Prionodon*) *müllerii* Steindachner, Sitzungs. Kais. Akad. Wiss. Wien, LVI, 1867, 356, West Indies.
Carcharias microps Lowe, Proc. Zool. Soc. Lond., 1840, 38, Madeira.
Prionodon cucuri Castelnau, Anim. Amer. Sud. Poiss., 1855, 99, Bahia.

66. Carcharias æthalorus Jordan and Gilbert.
Mazatlan to Panama.
Carcharias æthalorus Jordan and Gilbert, Proc., U. S. Nat. Mus., V, 1882, 104, Mazatlan; regarded by Garman as inseparable from *C. limbatus*.

67. Carcharias natator (Meek and Hildebrand).
Gulf of Panama.
Carcharhinus natator Meek and Hildebrand, Marine Fishes of Panama, Field Mus. Nat. Hist., Zool., XV, Pt. I, Dec. 20, 1923, 40, pl. 1, fig. 1, Panama City fish market.

68. Carcharias fronto Jordan and Gilbert. *Tiburon.*
Pacific coast of Mexico.
Carcharias fronto Jordan and Gilbert, Proc. U. S. Nat. Mus., V, 1882, 102, Mazatlan. Regarded by Garman as inseparable from *C. milberti*.

Genus 33. HYPOPRION Müller and Henle.[8]
Hypoprion Müller and Henle, Plagiostomen, 1838, 34 (*Carcharias macloti* Müller and Henle).
Hypoprionodon Gill, Ann. Lyc. Nat. Hist. N. Y., VII, 1861, 401 (*Carcharias hemiodon* Valenciennes).

69. Hypoprion brevirostris Poey.
West Indies, north to Charleston and Pensacola.
Hypoprion brevirostris Poey, Repertorio, II, 1868, 451, Tab. 4, Cuba.

70. Hypoprion signatus Poey.
Cuba.
Hypoprion signatus Poey, Synop., 1868, 452, Cuba.
Hypoprion longirostris Poey, Enumeratio, 1876, 199, Cuba.

Genus 34. PRIONACE[9] **Cantor.**
Galeus Valmont de Bomare, Dict. Raisonnée, I, 1768, 371, "Cagnot bleu, *Galeus glaucus* Valmont"; Latin vernacular.
Prionodon Müller and Henle, Plagiostomen, 1838, 36 (*Squalus glaucus* L.); name preoccupied.
Prionace Cantor, Malayan Fishes, 1850, 399, substitute for *Prionodon* (*Squalus glaucus* Linnæus).
Cynocephalus Gill, Ann. Lyc. Nat. Hist. N. Y., VII, 1861, 401 (*Squalus glaucus* L.); after Klein, whose names are not binomial.

71. Prionace glauca (Linnæus). *Great blue shark.*
A large shark of the warm seas, occasionally taken on our coasts, both Atlantic and Pacific.
Squalus glaucus Linnæus, Syst. Nat., ed. X, 1758, 235, Seas of Europe.
Squalus cæruleus Blainville, Faune Française, 1828, 91, Mediterranean.
Squalus hirundinaceus Valenciennes, in Müller and Henle, Plagiostomen, 1838, 37, Brazil.

Family 12. SPHYRNIDÆ. Hammer-headed sharks

Genus 35. RENICEPS Gill.
Reniceps Gill, Ann. Lyc. Nat. Hist. N. Y., VII, 1862, 403 (*Squalus tiburo* Linnæus).

72. Reniceps tiburo (Linnæus). *Shovelhead shark; Bonnethead shark.*
Atlantic Ocean, abundant from Long Island southward; Pacific Ocean ranging from Mazatlan and Bay of Panama to China.
Squalus tiburo Linnæus, Syst. Nat., ed. X, 1758, 234, America.

Genus 36. PLATYSQUALUS Swainson.
Platysqualus Swainson, Class. Anim., II, 1839, 318 (*Zygæna tudes* Cuvier, in Valenciennes); misnamed *Zygæna tiburo*.

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[8] Müller and Henle's Systematische Beschreibung der Plagiostomen was published from 1838 to 1841. Garman, probably correctly, gives this and other genera of sharks the date of 1841. Some of them appeared earlier in periodicals.

[9] The reasons for not accepting the names of Valmont de Bomare in scientific nomenclature are given by Jordan and Evermann, Genera of Fishes, I, p. 27. These names (*Galeus, Vulpecula, Catulus*, and *Mustelus*) are binomial only by accident, and not accepted by the author himself as generic in his list of genera (1791) These are, however, accepted by Garman (Plagiostomia, 1913).

73. Platysqualus tudes (Cuvier).
Gulf of California to Bay of Panama; West Indies; Mediterranean Sea and Indian Ocean.
Zygæna tudes Cuvier, in Valenciennes, Mém. Mus. Hist. Nat., IX, 1822, 225, Nice; after *Pantouflier* of Risso.

Genus 37. SPHYRNA Rafinesque.
Sphyrna Rafinesque, Indice, 1810, 60 (*Squalus zygæna* Linnæus).
Cestrorhinus Blainville, Jour. Phys., 1816, 264 (*Squalus zygæna* Linnæus).
Zygæna Cuvier, Règne Anim., ed. I, 1817, 127 (*Squalus zygæna* Linnæus); name preoccupied.
Sphyrichthys Thienemann, Lehrbuch der Zoologie, III, 1828, 408 (*Squalus zygæna* Linnæus).
Eusphyra Gill, Ann. Lyc. Nat. Hist. N. Y., VII, 1861, 412 (*Squalus zygæna* Linnæus).
Cestracion Garman, Plagiostomen, 1813, 133 (*Squalus zygæna* L.); after Klein; not binomial; not of Cuvier.

74. Sphyrna zygæna (Linnæus). *Hammerhead shark; Hammerhead; Shovelnose shark.*
Cape Cod and Point Conception southward; Bay of Panama and Mazatlan in Pacific; and across to Hawaii and Japan; abundant.
Squalus zygæna Linnæus, Syst. Nat., ed. X, 1758, 234, Europe; America.
Zygæna malleus Valenciennes, Mém. Mus. Hist. Nat., IX, 1822, 223, pl. 11, fig. 1.
Zygæna lewini Lord, in Griffith, Animal Kingdom, X, 1834, 640, pl. 50, New Holland.
Zygæna subarcuata Storer, Proc. Bost. Soc. Nat. Hist., III, 1848, 71, Cape Cod.

Family 13. RHINEODONTIDÆ. Whale sharks

Genus 38. RHINEODON Smith.
Rhincodon Smith, Zool. Jour. Lond., No. XVI, 1829, 443 (*R. typicus* Smith); misprint for *Rhineodon*.
Micristodus Gill, Proc. Acad. Nat. Sci. Phila., XVII, 1865, 177 (*M. punctatus* Gill).
Rhinodon and *Rhincodon* of authors.

75. Rhineodon typicus Smith. *Whale shark; Mhor; Chagrin; Tiburon ballenas; Tint reva; East Indian basking shark.*
Coast of Florida; Gulf of California; Cape of Good Hope; Japan to China; India; rare but widely diffused.
Rhincodon typicus Smith, Zool. Jour. Lond., No. XVI, 1829, 443, 444, Table Bay, Cape of Good Hope.
Micristodus punctatus Gill, Proc. Acad. Nat. Sci. Phila., XVII, 1865, 177, Gulf of California.

Family 14. ALOPIIDÆ. Thresher sharks

Genus 39. ALOPIAS Rafinesque.
Vulpecula Valmont de Bomare, Dict. Raisonnée, III, 1768, 740 (*V. marina* Valmont); Latin vernacular not intended as a generic name.
Alopias Rafinesque, Caratteri, 1810, 12 (*Alopias macrourus* Rafinesque = *Alopecias vulpes* Günther).
Alopecias Müller and Henle, Plagiostomen, 1838, 74, amended orthography.

76. Alopias vulpinus (Bonnaterre). *Thresher; Fox shark; Swingletail; Longtail shark; Fish shark; Sea fox; Sea ape; Pez zorro; Pesca pavone.*
Mediterranean, Atlantic, and Pacific.
Vulpecula marina Valmont, Dict. Raisonnée, III, 740; not eligible.
Squalus vulpinus Bonnaterre, Tableau Encycl. Ichth., 1788, 9, Mediterranean; after Pennant.
Squalus vulpes Gmelin, Syst. Nat., I, 1789, 1496, Mediterranean; after Pennant.
Alopias macrourus Rafinesque, Caratteri, 1810, 12, Sicily.
Galeus vulpecula Rafinesque, Caratteri, 1810, 15; passing notice.

Family 15. ODONTASPIDÆ. Sand sharks

Genus 40. ODONTASPIS Agassiz.
Odontaspis Agassiz, Poiss. Fossiles, III, 1836, 87 (*Squalus ferox* Risso).

77. Odontaspis littoralis (Mitchill). *Sand shark; Shovelnose shark; Horned dogfish; Picked dogfish; Dogfish; Bone-dog; Skittle-dog; Hoe.*
Atlantic coast between Cape Cod and Cape Hatteras; regarded by Garman as not separable from *Carcharias taurus* Rafinesque of the Mediterranean.
Squalus americanus Mitchill, Trans. Lit. and Phil. Soc. N. Y., I, 1815, 483, New York; not of Shaw.
Squalus littoralis and *Squalus macrodus* Mitchill, Amer. Month. Mag., II, 1818, 328, New York.
Carcharias griseus Ayres, Bost. Jour. Nat. Hist., IV, 1843, 288, Long Island.

Family 16. LAMNIDÆ. Mackerel sharks; Man-eaters

Genus 41. LAMNA Cuvier. *Porbeagles.*
Lamna Cuvier, Règne Anim., ed. I, 1817, 126 (*Squalus cornubicus* Gmelin).
Lamia Risso, Europ. Mérid., III, 1826, 123 (*Squalus cornubicus* Gmelin); name preoccupied.
Selanonius Fleming, Brit. Anim., 1828, 169 (*Selanonius walkeri* Fleming = *Squalus cornubicus* Gmelin).

78. Lamna nasus (Bonnaterre). *Porbeagle; Mackerel shark; Salmon shark.*
North Atlantic and North Pacific; abundant in central and southeast Alaska.
Squalus nasus Bonnaterre, Tableau Encycl., Ichth., 1788, 10, shores of Cornwall.
Squalus cornubicus Gmelin, Syst. Nat., I, 1789, 1497, shores of Cornwall.
Squalus pennanti Walbaum, Artedi Pisc., 1792, 517, Cornwall; after Pennant.
Squalus monensis Shaw, Gen. Zool., V, 1804, 350, Anglesea.
Selanonius walkeri Fleming, Brit. Anim., 1828, 169, Lochfyne, Argyleshire.

Genus 42. ISURUS Rafinesque.
Isurus Rafinesque, Caratteri, 1810, 11 (*Isurus oxyrinchus* Rafinesque).
Oxyrhina Agassiz, Poiss. Fossiles, III, 1836, 276 (*Isurus spallanzani* Rafinesque = *Isurus oxyrinchus* Rafinesque).
Isuropsis Gill, Ann. Lyc. Nat. Hist. N. Y., VII, 1862, 398, 409 (*I. dekayi* Gill).

79. Isurus punctatus (Storer). *Mackerel shark.*
Atlantic coast of United States; common.
Lamna punctata Storer, Rept. Fishes Mass., 1839, 185, pl. 3, fig. 2, Massachusetts.
Oxyrhina dækayi Gill, Cat. Fish. E. Coast N. Amer., Suppl. Proc. Acad. Nat. Sci. Phila., XIII, 1861, 60, after Storer; name misprint for *dekayi*.

80. Isurus tigris (Atwood). *Mackerel shark; Mackerel porbeagle; Dentuda.*
Cape Cod to West Indies; not generally common except in the Gulf of Mexico.
Lamna punctata DeKay, N. Y. Fauna: Fishes, 1842, 352, New York; not *Squalus punctatus* Mitchill.
Isuropsis dekayi Gill, Ann. Lyc. Nat. Hist. N. Y., VII, 1862, 409; after DeKay; not *Oxyrhina dekayi* Gill, 1861.
Carcharias tigris Atwood, Proc. Bost. Soc. Nat. Hist., XII, 1869, 268, Provincetown, Mass.

81. Isurus oxyrinchus Rafinesque. *Mackerel shark; Pesce tondo; Cane de mare.*
Mediterranean Sea and neighboring parts of the Atlantic; occasional on the Atlantic coast of America.
Isurus oxyrinchus Rafinesque, Caratteri, 1810, 12, Palermo.
Isurus spallanzani Rafinesque, Indice, 1810, 60, Sicily; after Spallanzani.
Oxyrhina gomphodon Müller and Henle, Plagiostomen, 1838, 68, Atlantic Ocean.
Squalus rostratus Macri, Mem. Ac. Sci. Napoli, I, 1819, 55, Tab. 1, fig. 2, Naples.

Genus 43. CARCHARODON [10] **Smith.** *Man-eater sharks; Great white sharks.*
Carcharodon Andrew Smith, in Müller and Henle, Mag. Nat. Hist., II, second article, January, 1838, 37 (*Carcharodon capensis* Smith= *Squalus carcharias* Linnæus).

82. Carcharodon carcharias (Linnæus). *Man-eater shark; Great white shark.*
Temperate and tropical parts of Atlantic and Pacific; occasionally on our coasts, north to New York and Monterey Bay. A dangerous shark.
Squalus carcharias Linnæus, Syst. Nat., ed. X, 1758, 235, Europe; after Artedi.
Carcharias lamia Rafinesque, Indice, 1810, 44, after Linnæus; not of Risso and later authors.
Carcharodon verus Agassiz, Poiss. Fossiles, III, 1838, 91.
Carcharodon rondeleti Müller and Henle, Plagiostomen, 1838, 70, Mediterranean Sea and Atlantic Ocean.
Carcharodon Smith, in Bonaparte, Mem. Soc. Sci. Neufchâtel. II, 1839, 9 (errata), New York and Monterey Bay.
Carcharias atwoodi Storer, Proc. Bost. Soc. Nat. Hist., III, 1848, 72, Provincetown.
Carcharodon capensis Smith, Ills. Zool. S. Africa, Pisces, 1849, pl. 4, Cape of Good Hope.

Family 17. CETORHINIDÆ. Basking sharks

Genus 44. CETORHINUS Blainville.
Cetorhinus Blainville, Bull. Soc. Philom., 1810, 169 (*Squalus gunneri* Blainville=*Squalus maximus* Gunner).
Selache Cuvier, Règne Anim., ed. I, 1817, 129 (*Squalus maximus* Gunner).
Polyprosopus Couch, Hist. Brit. Fishes, I, 1862, 67 (*Squalus rashleighanus* Couch=*Squalus maximus* Gunner).

83. Cetorhinus maximus (Gunner). *Basking shark; Pèlèrin; Elephant shark; Bone shark; Sailfish; Sunfish; Hoe-mother; Capidoli or oilfish.*
Arctic seas, straying southward to Portugal, Virginia, and California.
Squalus maximus Gunner, Trondhjem Skrift., III, 1765, 33, coast of Norway.
Squalus gunneri Blainville, Bull. Sci. Philom., 1810, 256; after Gunner.
Squalus pelegrinus Blainville, loc. cit., 257, Europe.
Squalus homianus Blainville, loc. cit., 257, Europe.
Cetorhinus shavianus Blainville, loc. cit., 264, Europe.
Squalus isodus Saverino Macri, Mem. della R. Ac. Sci. Napoli, I, 1819, 55, pls. 1 and 2, Naples.
Squalus elephas LeSueur, Jour. Acad. Nat. Sci. Phila., II, 1821, 343, New Jersey.
Squalus rashleighanus Couch, Trans. Linn. Soc., XIV, 1825, 91, Cornwall.
Squalus cetaceus Gronow, Cat. Fishes, 1854, 6, Norway.
Polyprosopus macer Couch, Hist. Brit. Fishes, I, 1877, 68, England.

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[10] As to the authorship of the name *Carcharodon*, we have this information from the late Allan R. McCulloch, of the Australian Museum:
"The name *Carcharodon* is not used by Smith. The earliest reference to it is that of Müller and Henle, as quoted above. These authors saw Smith's specimens (p. 33) and perhaps heard his paper read at the Zoological Society in September, 1837. They, therefore, quoted the name as of Smith. But Smith's paper was not published until February 13, 1838, he having read Müller and Henle's paper about a month previously, in which *Carcharodon* appeared, and he evidently withdrew it with names he refers to in his paper." (In lit. June 28, 1920.)

Order G. TECTOSPONDYLI.[11] Tectospondylous sharks

Suborder SQUALOIDEI. (Sharks without anal fin)

Family 18. SQUALIDÆ. Dogfishes

Genus 45. SQUALUS Linnæus.
Squalus (Artedi) Linnæus, Syst. Nat., ed. X, 1758, 233 (includes all sharks; *Squalus acanthias* Linnæus made type by subsequent writers, following Rafinesque, 1810).
Acathorhinus Blainville, Jour. Phys., 1816, 263 (*Squalus acanthias* Linnæus).
Acanthias Risso, Europ. Mérid., III, 1826, 131 (*Squalus acanthias* Linnæus).

84. Squalus acanthias Linnæus. *Spiny dogfish; Cod shark; Codfish shark; Thornback shark; Picked dogfish; Bone-dog; Dogfish; Skittle-dog.*
North Atlantic, on both coasts and about Cuba; abundant along shores of Northern and Middle States.
Squalus acanthias Linnæus, Syst. Nat., ed. X, 1758, 233, coast of Europe.
Acanthias vulgaris Risso, Europ. Mérid., III, 1826, 131, Nice.
Acanthias americanus Storer, Synop. N. Amer. Fishes, in Mem. Am. Acad., II, 1846, 506, Massachusetts.

85. Squalus suckleyi (Girard). *California dogfish; Dogfish.*
Pacific coast of America, from Santa Barbara to the Aleutian Islands; abundant in southeast and middle Alaska, through to Kamchatka.
Spinax (*Acanthias*) *suckleyi* Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 196, Fort Steilacoom, Wash.

Genus 46. CENTROSCYMNUS Bocage and Capello.
Centroscymnus Bocage and Capello, Proc. Zool. Soc. Lond., 1864, 263 (*C. cœlolepis* Bocage and Capello).

86. Centroscymnus cœlolepis Bocage and Capello.
Coast of Portugal and neighboring parts of the Atlantic; Gloucester, Mass., and Nova Scotia Banks.
Centroscymnus cœlolepis Bocage and Capello, Proc. Zool. Soc. Lond., 1864, 263, Portugal.

Genus 47. CENTROSCYLLIUM Müller and Henle.
Centroscyllium Müller and Henle, Plagiostomen, 1838, 191 (*Spinax fabricii* Reinhardt).

87. Centroscyllium fabricii (Reinhardt).
Greenland seas; Gloucester and the Nova Scotia Banks.
Spinax fabricii Reinhardt, Dansk. Vidensk. Selsk. Forhandl., III, 1828, XVI, Greenland.

Genus 48. ETMOPTERUS Rafinesque.
Etmopterus Rafinesque, Caratteri, 1810, 14 (*Etmopterus aculeatus* Rafinesque=*Squalus spinax* L.).
Acanthidium Lowe, Proc. Zool. Soc. Lond., 1839, 91 (*Acanthidium pusillum* Lowe, as restricted by Jordan and Evermann, 1896; restricted by Garman, 1912, to *A. calcea*, a species of *Deania* Jordan and Snyder).

88. Etmopterus hillianus (Poey).
West Indies; Cuba; St. Kitts.
Spinax hillianus Poey, Memorias, II, 1861, 340, Cuba.

Family 19. SOMNIOSIDÆ. Sleeper sharks

Genus 49. SOMNIOSUS LeSueur.
Somniosus LeSueur, Jour. Acad. Nat. Sci. Phila., I, 1818, 222 (*Somniosus brevipinna* LeSueur=*Squalus microcephalus* Bloch and Schneider.)
Læmargus Müller and Henle, Plagiostomen, 1838, 93 (*Squalus borealis* Scoresby=*Squalus microcephalus* Bloch and Schneider).
Leiodon Wood, Proc. Bost. Soc. Nat. Hist., II, 1847, 174 (*Leiodon echinatum* Wood=*Squalus microcephalus* Bloch and Schneider).
Rhinocymnus Gill, Proc. Acad. Nat. Sci. Phila., XVI, 1864, 264 (*Scymnus rostratus* Risso).

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[11] We group together under this name those sharks that, like the rays, lack the anal fin and that have also simplified or degenerate vertebræ, in which the hard material is arranged in rings without radiation.

89. Somniosus microcephalus (Bloch and Schneider). *Sleeper shark; Nurse shark.*
Arctic seas, south to Cape Cod, Oregon, San Francisco Bay, and France.
Squalus microcephalus Bloch and Schneider, Syst. Ichth., 1801, 135, northern seas.
Somniosus brevipinna LeSueur, Jour. Acad. Nat. Sci. Phila., I, 1818, 222, Massachusetts.
Squalus borealis Scoresby, Arct. Reg., I, 1820, 538, pl. 15, Arctic.
Squalus norwegianus Blainville, Faune Française, 1828, 61, Norway.
Squalus glacialis Faber, Natur der Fische Islands, 1829, 23, Iceland.

Family 20. ECHINORHINIDÆ. Bramble sharks

Genus 50. ECHINORHINUS Blainville.
Echinorhinus Blainville, Bull. Soc. Philom., 1816, 121 (*Squalus spinosus* Gmelin).
Goniodus Agassiz, Poiss. Fossiles, III, 1836, 183 (*Squalus spinosus* Gmelin).

90. Echinorhinus brucus (Bonnaterre). *Bramble shark.*
Atlantic coasts of Europe, America, and Africa; scarce in the western Atlantic.
Squalus brucus Bonnaterre, Tableau Encycl., Ichth., II, 1788, 1500, "the ocean."
Squalus spinosus Gmelin, Syst. Nat., 1789, 1500, "the ocean."
Echinorhinus obesus Smith, Ills. Zool. So. Africa, Fishes, 1845, Pl. I, Cape of Good Hope.

Suborder SQUATINOIDEI

Family 21. SQUATINIDÆ. Angel sharks

Genus 51. SQUATINA Duméril.
Squatina Valmont de Bomare, Dict. Raisonnée, I, 1768, 117; not eligible.
Rhina Klein, Neuer Schauplatz, II, 1776, 587; non-binominal.
Squatina Duméril, Zool. Analyt., 1806, 102 (*Squatina angelus* Duméril= *Squalus squatina* Linnæus).
Rhina Rafinesque, Caratteri, 1810, 14 (*Squalus squatina* L.)

91. Squatina duméril [12] LeSueur. *Angelfish; Monkfish.*
Atlantic coast of United States; Newport, R. I.
Squatina duméril LeSueur, Jour. Acad. Nat. Sci. Phila., I, 1818, 225, pl. 10, probably Florida.

92. Squatina squatina (Linnæus). *Monkfish; Angelfish; Squato; Shark ray; Monkeyfish; Kingston; Fiddlefish; Little bullhead shark.*
Atlantic on both coasts, north to southern England and Cape Cod.
Squalus squatina Linnæus, Syst. Nat., ed. X, 1758, 233, coasts of Europe.
Squatina lævis Cuvier, Règne Anim., ed. I, 1817, 131; after Linnæus.
Squatina vulgaris Risso, Ichth. Nice, 1810, 45, Nice.
Squatina fimbriata Müller and Henle, Plagiostomen, 1838, 101, Mediterranean Sea.
Squatina oculata Bonaparte, Faun. Ital., Pesc., XXVIII, 1840, Fasci. 147, pl. 143, Italy
Squatina lewis Couch, Trans. Linn. Soc. Lond., XIV., 1825, 90, Cornwall.

93. Squatina californica Ayres. *California angel shark.*
Pacific coast of America, from southeastern Alaska southward; not rare on coast of California.
Squatina californica Ayres, Proc. Calif. Acad. Nat. Sci., II, 1859, 29, San Francisco.

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[12] As this species has not been distinguished generally from its near relative, *Squatina squatina* L., it is possible that all western Atlantic records belong to it.

Order H. BATOIDEI. Rays

Suborder SARCURA. Thick-tailed rays

Family 22. PRISTIDÆ. Sawfishes

Genus 52. PRISTIS Linck.
Pristis Klein, Neuer Schauplatz, VII, 1779, 403; non-binominal.
Pristis Linck, Mag. Neueste Physik und Naturgeschichte, 1790, 31 (*Squalus pristis* L.).
Pristis Latham, Trans. Linn. Soc. Lond., II, 1794, 276 (*Squalus pristis* L.).

94. Pristis pectinatus Latham. *Common sawfish; Pez sierra.*
Tropical Atlantic, north to West Indies and Florida; occasionally at Cape May and Grassy Sound.
Pristis pectinatus Latham, Trans. Linn. Soc. Lond., II, 1794, 278, "in the ocean."
Pristis granulosa Bloch and Schneider, Syst. Ichth., 1801, 352, Habana; after Parra.
Pristis mississippiensis Rafinesque, Ichth. Ohiensis, 1820, 86, lower Mississippi.
Pristis megalodon Duméril, Elasmobranchs, 1870, 476, pl. 9, Cayenne.
Pristis acutirostris Duméril, loc. cit., 479, Martinique.
Pristis occa Duméril, loc. cit., 479, locality unknown.

95. Pristis zephyreus [13] Jordan and Starks. *Pez de espada.*
Tropical seas entering rivers, north to Mazatlan on the Pacific coast.
Pristis zephyreus Jordan and Starks, Fishes of Sinaloa, in Proc. Calif. Acad. Sci., V, 1895, 383, Mazatlan, Mexico; regarded by Garman as inseparable from *Pristis microdon* Latham.

Family 23. RHINOBATIDÆ. Guitarfishes

Genus 53. RHINOBATOS Linck. *Guitarfishes.*
Rhinobatus Klein, Neuer Schauplatz, II, 1776, 593 (*Rhinobatos seu= Squatina raja*; non-binominal).
Rhinobatos Linck, Magazin Neuestes, 1790, 32; type not specified.
Rhinobatus Bloch and Schneider, Syst. Ichth., 1801, 353 (*Rhinobatus rhinobatus*).
Syrrhina Müller and Henle, Plagiostomen, 1838, 113 (*Rhinobatus columna= Rhinobatos rhinobatus*).
Glaucostegus Bonaparte, Catalogo Metodico, 1846, 14 (*Rhinobatus rhinobatus*).

96. Rhinobatos horkeli (Müller and Henle).
Brazil north to Windward Islands; St. Eustatius.
Rhinobatus horkeli Müller and Henle, Plagiostomen, 1838, 122, pl. 41.

97. Rhinobatos lentiginosus (Garman). *Guitarro.*
Atlantic from Charleston, S. C., to Yucatan.
Rhinobatus lentiginosus Garman, Bull. Mus. Comp. Zool., VI, 1880, 168, coast of Florida.

98. Rhinobatos percellens (Walbaum). *Fiddlerfish; Puraque.*
West Indies to Jamaica and southern Brazil.
Raja percellens Walbaum, Artedi Pisc., 1792, 525, Brazil; after *Puraque* Marcgrave.
Rhinobatus electricus Bloch and Schneider, Syst. Ichth., 1801, 356, Brazil.
Rhinobatus undulatus Ölfers, Torpedo, 1831, 22, Brazil.
Rhinobatus glaucostictus Ölfers, loc. cit., 1831, 22, Brazil.
Rhinobatus marcgravii Henle, Ueber Narcine, 1834, 34, Brazil.

99. Rhinobatos stellio (Jordan and Rutter).
West Indies.
Rhinobatus stellio Jordan and Rutter, Proc., Acad. Nat. Sci. Phila., XLIX, 1897, 91, Kingston, Jamaica.

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[13] The African species, *P. perrotteti* Valenciennes, probably does not occur in America.

100. Rhinobatos spinosus (Günther).
Mexico.
Rhinobatus spinosus Günther, Cat., VIII, 1870, 518, Mexico.

101. Rhinobatos productus (Ayres). *Guitarfish.*
San Francisco to San Diego.
Rhinobatus producta Ayres, in Girard, Proc., Acad. Nat. Sci. Phila., VII, 1854, 196, Presidio of Monterey, Calif.

102. Rhinobatos glaucostigma (Jordan and Gilbert). *Guitarro.*
Gulf of California and southward.
Rhinobatus glaucostigma Jordan and Gilbert, Proc. U. S. Nat. Mus., VI, 1883, 210, Mazatlan.

103. Rhinobatos leucorhynchus (Günther).
Panama and vicinity.
Rhinobatus leucorhynchus Günther, Proc. Zool. Soc. Lond., 1866, 604, Panama.

Genus 54. ZAPTERYX Jordan and Gilbert.
Zapteryx Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880, 53 (*Platyrhina exasperata* Jordan and Gilbert).

104. Zapteryx exasperatus (Jordan and Gilbert).
San Diego Bay; abundant.
Platyrhina exasperata Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880, 32, San Diego.
Trigonorhina alveata Garman, Bull. Mus. Comp. Zool., VI, 1880, 169, San Diego.

105. Zapteryx xyster Jordan and Evermann.
Panama.
Zapteryx xyster Jordan and Evermann, Fishes North and Mid. Amer., 1896, 65, Panama.

Family 24. PLATYRHINIDÆ

Genus 55. PLATYRHINOIDIS Garman.
Platyrhinoidis Garman, Proc. U. S. Nat. Mus., III, 1880, 522 (*Platyrhina triseriata* Jordan and Gilbert).

106. Platyrhinoidis triseriatus (Jordan and Gilbert).
Coast of California, from Point Conception southward.
Platyrhina triseriata Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880, 36, Santa Barbara, Calif.

Family 25. RAJIDÆ. Skates and rays

Genus 56. RAJA Linnæus.
Raja (Artedi) Linnæus, Syst. Nat., ed. X, 1758, 231 (*Raja batis* Linnæus).
Dipturus Rafinesque, Caratteri, 1810, 16 (*Raja batis* L.).
Platopterus Rafinesque, Anal. Nat. 1815, 93 (*Raja batis* L.).
Dasybatus Blainville, Jour. Phys. 1816, 260 (*communis*).
Propterygia Otto, Nova Acta Acad. Cæs. Leop. Carol. Nat. Curios., 1824, 777 (*hyposticta;* monstrous example with fins not adnate to head).
Læviraja Bonaparte, Faun. Ital., XXV, 1839, 130 (*oxyrhynchus*).
Hieroptera Fleming, Edinburgh New Philos. Jour., XXVI, 1841, 236 (*H. abredonensis* Flem. = *R. clavata* L.).
Batis Bonaparte, Cat. Metod., 1846, 12 (*radula;* no description).
Raia of various authors; merely change of spelling.
Amblyraja Malm, Goteborg og Bohuslan's Fauna, 1877, 607 (*Raia circularis* Malm = *Raia radiata* Donovan).
Lencoraja Malm, loc. cit., 609 (*Raja fullonica* L.).
Alpharaia Leigh-Sharpe,[14] Jour. Morph., XXXIX, 1924, 568 (*Raja circularis* Couch).

[14] Mr. Leigh-Sharpe (Jour. Morphology, XXXIX, December, 1924) divides the genus Raja into nine "pseudogenera" on the morphology of the genital organs. To settle the question of the standing of pseudogenera, Jordan (in Copeia, 1925) accepts all as subgenera. Most of those not named above (*Epsilonraia, Zetaria, Etaria, Thetaria,* and *Iotaria*), outside of our limits, may prove valid genera.

Betaraia Leigh-Sharpe, loc. cit., 568 (*Raja clavata* Linnæus, a synonym of *Heiroptera* Fleming).
Gammaraia Leigh-Sharpe, loc. cit., 568 (*Raja batis* Linnæus, a synonym of *Raja* Linnæus).
Deltaraia Leigh-Sharpe, loc. cit., 568 (*Raja radiata* Linnæus, a synonym of *Amblyraja* Malm).

107. **Raja lævis** Mitchill. *Barndoor skate; Winter skate; Peck-nosed skate.*
Massachusetts to Florida, common northward.
Raja lævis Mitchill, Amer. Month. Mag., II, 1817, 327, New York; name perhaps preoccupied by eligible authors (Gronow, 1763; Valmont, 1765; Duhamel, 1782).
Raja stabuliforis Garman, Plagiostomia, Mem. Mus. Comp. Zool., XXXVI, 1913, 341, Pl. XXII, fig. 2, Pl. XLIV, figs. 4–6, New England coast (substitute for *lævis*, regarded as preoccupied, a matter to be questioned).

108. **Raja radiata** Donovan.
Northern Iceland, southward on both coasts.
Raia radiata Donovan, Hist. Brit. Fish., V, 1820, pl. 114, Great Britain.

109. **Raja scabrata** Garman.
Raia scabrata Garman, Plagiostomia, Mem. Mus. Comp. Zool., XXXVI, 1913, 340, pl. 21, pl. 44, figs. 1–3, Massachusetts Bay. Long confused with *Raja radiata*.

110. **Raja granulata** Gill.
Banks of Newfoundland.
Raia granulata Gill, in Goode and Bean, Bull. Essex Inst., XI, 1879, 28, La Have Bank.

111. **Raja fyllæ** Lütken.
Davis Straits, Greenland.
Raja fyllæ Lütken, Vid. Medd. Naturh. Foren. Kjøbenhavn, 1887, 1, pl. 1, Davis Straits.

112. **Raja eglanteria** Bosc. *Skate; Brier ray; Possum ray; Sea possum; Bobtailed skate; Clear-nosed skate; Summer skate.*
Cape Cod, southward to Florida; rather common.
Raia eglanteria Bosc, in Lacépède, Hist. Nat. Poiss., II, 1800, 104, Charleston, S. C.
Raia desmarestia LeSueur, Jour. Acad. Nat. Sci. Phila., IV, 1824, 100, Florida.
Raia chantenay LeSueur, loc. cit., 106, America.
Raia americana DeKay, N. Y. Fauna: Fishes, 1842, 368, pl. 66, fig. 215, Staten Island.

113. **Raja erinacea** Mitchill. *Hedgehog ray; Common skate; Little skate; Tobaccobox; Prickly skate; Summer skate.*
Nova Scotia to the Carolinas; very abundant from Virginia to Maine.
Raia erinacea Mitchill, Amer. Jour. Sci. Arts, IX, 1825, 290, pl. 6, New York.

114. **Raja diaphanes** Mitchill. *Clear ray.*
East Coast of United States.
Raia ocellata Mitchill, Trans. Lit. Phil. Soc. N. Y., 1, 1803, 877, New York; not of Russell.
Raia diaphanes Mitchill, loc. cit., 478, New York.

115. **Raja senta** Garman.
Banks of Newfoundland to Cape Cod; in deep water.
Raja senta Garman, Proc. U. S. Nat. Mus., VIII, 1885, 43, Cape Cod Bay; La Have Bank.

116. **Raja microtrachys** Osburn and Nichols.
Off west coast of Lower California.
Raja microtrachys Osburn and Nichols, Bull. Amer. Mus. Nat. Hist., XXXV, 1917, 142, fig. 1, off Guadalupe Island in deep water.

117. **Raja ackleyi** Garman.
Yucatan Banks.
Raja ackleyi Garman, Bull. Mus. Comp. Zool., VIII, 1881, 234, Yucatan Banks.

118. Raja ornata Garman.
Coast of South Carolina and Florida.
Raja ornata Garman, Bull. Mus. Comp. Zool., VIII, 1881, 235, off South Carolina.

119. Raja plutonia Garman.
Deep water off South Carolina.
Raja plutonia Garman, Bull. Mus. Comp. Zool., VIII, 1881, 236, off South Carolina.

120. Raja rhina Jordan and Gilbert.
Monterey to Alaska; not rare.
Raja rhina Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880, 251, Monterey; San Francisco.

121. Raja parmifera Bean.
Common on coast of Alaska; Bristol Bay.
Raja parmifera Bean, Proc. U. S. Nat. Mus., IV, 1881, 157, Unalaska.

122. Raja aleutica Gilbert.
Unalaska, Aleutian Islands.
Raja aleutica Gilbert, Rept. U. S. Fish Com., XIX, 1893 (1895), 397, pl. 21, Sannak Pass, Aleutian Islands, in 81 fathoms.

123. Raja rosispinis Gill and Townsend.
Bering Sea.
Raia rosispinis Gill and Townsend, Proc. Biol. Soc. Wash., XI, 1897, 231, Bering Sea.
Raia obtusa Gill and Townsend, loc. cit., 231, Bering Sea.

124. Raja interrupta Gill and Townsend.
Raia interrupta Gill and Townsend, Proc. Biol. Soc. Wash., XI, 1897, 232, Bering Sea.

125. Raja binoculata Girard. *Big skate of California.*
Pacific coast; abundant from Monterey to Sitka.
Raja binoculata Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 196, San Francisco.
Raia cooperi Girard, Pac. R. R. Surv., X, Pt. 4, Fishes, 1858, 372, Shoalwater Bay, Wash.

126. Raja stellulata Jordan and Gilbert.
Coast of California and northward to Unalaska.
Raja stellulata Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880, 133, Monterey Bay.

127. Raja inornata Jordan and Gilbert. *Common skate (California.)*
Coast of California; very abundant from San Diego to Cape Mendocino.
Raja inornata Jordan and Gilbert, Proc., U. S. Nat. Mus., III, 1880, 457, San Francisco.
Raia jordani Garman, loc. cit., VIII, 1885, 43, San Francisco.
Raia inornata inermis Jordan and Gilbert, loc. cit., IV, 1881, 74, Santa Barbara.

128. Raja montereyensis Gilbert.
Monterey Bay.
Raja montereyensis Gilbert, Proc., U. S. Nat. Mus., XLVIII, 1915, 307, Monterey Bay off Santa Cruz, Calif., in 26 to 28 fathoms.

129. Raja equatorialis Jordan and Bollman.
West coast of Colombia, between Panama and Galapagos Islands.
Raja equatorialis Jordan and Bollman, Proc. U. S. Nat. Mus., XII, 1889, 150, off Colombia.

130. Raja trachura Gilbert.
Santa Barbara Islands; south of Shumagin Islands, Central Alaska.
Raja trachura Gilbert, Proc. U. S. Nat. Mus., XIV, 1891, 539, off Santa Barbara, at *Albatross* station 2923 in 822 fathoms.

131. Raja abyssicola Gilbert.
Queen Charlotte Island, British Columbia, in deep water.
Raja abyssicola Gilbert, Rept. U. S. Fish Com., XIX, 1893 (1895), 396, pl. 20, off Queen Charlotte Island, at *Albatross* station 3342 in 1,588 fathoms.

Genus 57. DACTYLOBATUS Bean and Weed.
Dactylobatus Bean and Weed, Proc. U. S. Nat. Mus., XXVI, 1909, 459 (*D. armatus* Bean and Weed).

132. Dactylobatus armatus Bean and Weed.
Deep water off South Carolina.
Dactylobatus armatus Bean and Weed, Proc. U. S. Nat. Mus., XXXVI, 1911, 459, off Charleston in 270 fathoms.

Suborder NARCACIONTES

Family 26. TORPEDINIDÆ. Electric rays

Genus 58. TETRANARCE[15] Gill. *Great torpedo.*
Tetranarce Gill, Ann. Lyc. Nat. Hist. N. Y., VII, 1862, 387 (*Torpedo occidentalis* Storer); misprinted *Tetronarce.*
Gymnotorpedo Fritsch, Arch. Anal. Phys., 1886, 365 (*Torpedo occidentalis* Storer).

133. Tetranarce occidentalis (Storer). *Electricfish; Crampfish; Torpedo; Numbfish.*
Atlantic coast of United States, Cape Cod to Cuba; not very common.
Torpedo occidentalis Storer, Amer. Jour. Sci. Arts, XLV, 1843, 165, pl. 3, Massachusetts. Garman regards this species as inseparable from *Torpedo nobiliana* Bonaparte of the Mediterranean.

134. Tetranarce californica (Ayres). *California torpedo; Crampfish.*
Coast of California; not recorded from south of Monterey; recently reported from Cape Flattery, Wash.
Torpedo californica Ayres, Proc. Calif. Acad. Nat. Sci., I, 1855, 74, San Francisco.

Genus 59. NARCINE Henle.
Narcine Henle, Ueber Narcine, 1834, 31 (*Torpedo brasiliensis* von Ölfers).
Syrraxis Jourdain, in Bonaparte, Fauna Italica, fasc. 160, 1841 (*Narcine indica* Henle).
Cyclonarce Gill, Ann. Lyc. Nat. Hist. N. Y., VII, 1861, 387 (*Raia timlei* Schneider).
Gonionarce Gill, loc. cit., 387 (*Narcine indica* Henle).

135. Narcine brasiliensis (Ölfers). *Torpedofish; Small electric ray; Trembler.*
West Indies and Brazil, occasionally northward to Key West and the coast of North Carolina.
Torpedo brasiliensis von Ölfers, Torpedo, 1831, 19, tab. 2, fig. 4, Brazil.
Torpedo bancrofti Griffith, Anim. King., X, 1834, 649, Pl. XXXIV, Jamaica.
Narcine nigra Duméril, Revue Zool., 272, 1852, Brazil.
Torpedo pictus Gronow, Cat. Fishes, 13, 1854, Antilles.
Narcine brasiliensis corallina Garman, Bull. Mus. Comp. Zool., VIII, 1881, 234, Florida.
Narcine umbrosa Jordan, Proc. U. S. Nat. Mus., VII, 1884, 105, Key West.

136. Narcine entemedor Jordan and Starks. *Entemedor.*
Pacific coast of tropical America; Mazatlan, La Paz, Panama.
Narcine entemedor Jordan and Starks, Fishes of Sinaloa, Proc. Calif. Acad. Sci., V, 1895, 387, Mazatlan, Mexico.

Genus 60. DISCOPYGE Heckel.
Discopyge Heckel, in Tschudi, Fauna Peruana, 1846, 32 (*D. tschudii* Tschudi).

137. Discopyge ommata Jordan and Gilbert.
Panama; rare.
Discopyge ommata Jordan and Gilbert, Proc. U. S. Nat. Mus., XII, 1889, 151, Panama.

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[15] In the Old World genus *Torpedo* Forskål, as then understood, the spiracles are provided with a frieze of filaments, at least in joints. In *Tetranarce* these are absent. The following is the synonymy of *Torpedo:*
Torpedo Forskål, Fauna Arabica, 1775, 16, in part (*Raja torpedo* L., confused with *Malapterurus electricus*, the electric catfish of the Nile).
Narcacion Klein, Neuer Schauplatz, IV, 1777, 726, nonbinomial (*Raja torpedo* L.).
Fimbriotorpedo Fritsch, loc. cit., 365 (*Torpedo marmorata* Risso = *Raja torpedo* L.).

Suborder MASTICURA. Whip-tailed rays

Family 27. DASYATIDÆ. Stingrays

Genus 61. PASTINACHUS Rüppell.

Pastinachus Rüppell, Atlas, Reise Nord Africa, 1828, 82 (*Raia sephen* Forskål); tail rounded above, with a keel below.

Hypolophus Müller and Henle, Plagiostomen, 1838, 170 (*Raia sephen* Forskål).

138. Pastinachus centrourus (Mitchill). *Stingaree; Stingray; Devilfish; Pigeon stingray; Clam-cracker.*

Coast of Maine to Cape Hatteras, abundant; the same or a related species in the Mediterranean.

Raja centroura Mitchill, Trans. Lit. Phil. Soc. N. Y., I, 1815, 479, New York.

139. Pastinachus schmardæ (Werner).

West Indies.

Dasyatis schmardæ Werner, Zool. Jahrb., XXI, 1904, 298, Jamaica.

140. Pastinachus torrei (Garman). *Sabina; Lebisa.*

West Indies.

Dasyatis torrei Garman, Plagiostomia, Mem. Mus. Comp. Zool., XXXVI, 1913, 386, Tunas de Zaza, Cuba.

Genus 62. DASYATIS Rafinesque. *Stingrays*

Dasybatus Klein, Neuer Schauplatz, I, 1775, 191; not binomial.

Dasyatis Rafinesque, Caratteri, 1810, 16 (*Dasyatis ujo* Rafinesque=*Raja pastinaca* L.).

Uroxis Rafinesque, Indice, 1810, 61 (*U. ujo* Rafinesque).

Trigonobatus Blainville, Jour. Phys., 1816, 261 (*T. vulgaris* Blainville=*Pastinaca* L.).

Trygon Adanson, in Cuvier, Règne Anim., ed. I, 1817, 135 (*Raja pastinaca* L.).

Pastinaca Swainson, Class. Anim., 1839, 319 (*Pastinaca olivacea* Swainson).

Pastinaca DeKay, N. Y. Fauna: Fishes, 1842, 372 (*Raja pastinaca* L.).

Dasibatis Garman, corrected spelling.

141. Dasyatis longus (Garman).

Gulf of California to Panama: Galapagos.

Trygon longa Garman, Bull. Mus. Comp. Zool., VI, 1880, 170, Acapulco, Mexico.

142. Dasyatis hastatus (DeKay). *Whip stingray; Kit; Stingaree.*

West Indies to Brazil, north to Florida, North Carolina and Rhode Island.

Pastinaca hastata DeKay, N. Y. Fauna: Fishes, 1842, 373, pl. 65, fig. 214, Rhode Island.

143. Dasyatis guttatus (Schneider).

Surinam to Brazil; recorded from Granada.

Raia guttata Schneider, Syst. Ichth., 1801, 361, no locality given.

Trygon gymnura J. Müller, in Erdmann's Reise um die Erde, 1830, 25, taf. 13, Brazil.

Raja tuberculata Lacépède, Hist. Nat. Poiss., II, 1800, 106, pl. 4, fig. 1, Cayenne; not of Bonnaterre.

Genus 63. AMPHOTISTIUS Garman.

Amphotistius Garman, Plagiostomia, Mem. Mus. Comp. Zool., 1913, 375 (*Trygon sinensis* Steindachner); tail with a distinct fold above and below.

144. Amphotistius say (LeSueur). *Southern stingray.*

New Jersey to Brazil, common in Florida; occasionally northward to New York.

Raja say LeSueur, Jour. Acad. Nat. Sci. Phila., I, 1817, 42, New Jersey.

145. Amphotistius sabinus (LeSueur).
Streams and estuaries of Florida; abundant on both coasts.
Trygon sabina LeSueur, Jour. Acad. Nat. Sci. Phila., IV, 1824, 109, Florida.
Trygon osteosticta Müller, in Erdmann's Reise um die Erde, 1830, 25, pl. 14, Brazil.

146. Amphotistius dipterurus (Jordan and Gilbert).
Bay of San Diego and southward; locally abundant.
Dasybatis dipterurus Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880, 31, San Diego; identified by Garman with *Dasyatis brevis* Garman, from Peru.

Genus 64. PTEROPLATEA Müller and Henle.
Pteroplatea Müller and Henle, Plagiostomen, 1838, 168 (*Raja altavela* L.)

147. Pteroplatea altavela (Linnæus)
Tropical Atlantic, occasionally northward to Mediterranean and in Gulf Stream; Beaufort, N. C.; Woods Hole, Mass.; taken at Penzance Point in Buzzards Bay (Nichols).
Raja altavela Linnæus, Syst. Nat., ed. X, 1758, 232, no locality.
Dasyatis attavilla Rafinesque, Indice, 1810, 49, Sicily.
Pteraplatea canariensis Valenciennes, Ichth. Canaries, 1843, 100, pl. 23, fig. 9, Canary Islands.
Pteraplatea valenciennei A. Duméril, Elasmobranches, 1865, 612, no locality.
Pteroplatea vaillanti Rochebrune, Bull. Sci. Philom., IV, 1880, 159, no locality.

148. Pteroplatea micrura (Schneider). *Butterfly ray.*
Rhode Island to Brazil.
Raia micrura Schneider, Syst. Ichth., 1801, 360, Surinam.
Raia maclura LeSueur, Jour. Acad. Nat. Sci. Phila., I, 1817, 41, Rhode Island.

149. Pteroplatea marmorata Cooper.
Coast of California, from Point Conception southward to Cedros Island; common.
Pteroplatea marmorata Cooper, Proc. Calif. Acad. Nat. Sci., III, 1863, 112, fig. 25, San Diego.

150. Pteroplatea crebripunctata Peters. *Manta raia colorado; Manta raia.*
Gulf of California, southward along the west coast of Mexico; common.
Pteroplatea crebripunctata Peters, Monatsber. Akad. Wiss. Berlin, 1869, 703, Mazatlan.
Pteroplatea rava Jordan and Starks, in Jordan, Fishes of Sinaloa, Proc. Calif. Acad. Sci., Ser. 2, V, 1895, 390, Mazatlan, Mexico.

Genus 65. UROBATIS Garman.
Urobatis Garman, Plagiostomia, Mem. Mus. Comp. Zool., XXXVI, 1913, 401 (*Leiobatus sloani* Blainville).

151. Urobatis sloani (Blainville). *Maid.*
West Indies, generally common; occasionally northward; once (perhaps doubtfully) recorded from New Jersey.
Leiobatus sloani Blainville, Bull. Sci. Philom., 1816, 121, Jamaica; after *Pastinaca marina* Sloan.
Raja jamaicensis Cuvier, Règne Anim., ed. I, 1817, 137, Jamaica.
Trygonobatus torpedinus Desmarest, Prem. Dec. Ichth., I, 1823, 6, Cuba.

152. Urobatis vermiculatus (Garman).
West Indies.
Urobatis sloani vermiculatus Garman, Plagiostomia, Mem. Mus. Comp. Zool., XXXVI, 1913, 802, Progreso, Yucatan.

153. Urobatis halleri (Cooper). *Round stingray.*
Coast of California, from Point Conception southward.
Urolophus halleri Cooper, Proc. Calif. Acad. Nat. Sci., III, 1863, 95, San Diego.

154. Urobatis umbrifer (Jordan and Starks).
West coast of Mexico.
Urolophus umbrifer Jordan and Starks, in Jordan, Fishes Sinaloa, Proc. Calif. Acad. Sci., Ser. 2, V, 1895, 389, Mazatlan, Mexico; regarded by Garman as inseparable from *Urobatis halleri*.

155. Urobatis nebulosus (Garman).
Gulf of California to Panama.
Urolophus nebulosus Garman, Proc. U. S. Nat. Mus., VIII, 1885, 41, Colima, Mexico.

156. Urobatis concentricus Osburn and Nichols.
Gulf of California.
Urobatis concentricus Osburn and Nichols, Bull. Amer. Mus. Nat. Hist., XXXV, 1916, 144, fig. 2, Esteban Island, Gulf of California.

Genus 66. UROTRYGON Gill.
Urotrygon Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 173 (*Urotrygon mundus* Gill).

157. Urotrygon mundus Gill.
West coast of Mexico.
Urotrygon mundus Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 173, Panama.
Urolophus asterias Jordan and Gilbert, Proc. U. S. Nat. Mus., V, 1882, 579, Mazatlan; Panama.
Urolophus rogersi Jordan and Starks, in Jordan, Fishes of Sinaloa, Proc. Calif. Acad. Sci., Ser. 2, V, 1895, 388, Mazatlan.

158. Urotrygon goodei (Jordan and Bollman.)
Panama and vicinity.
Urolophus goodei Jordan and Bollman, Proc. U. S. Nat. Mus., XII, 1889, 151, near Panama.

159. Urotrygon aspidurus (Jordan and Gilbert).
Panama.
Urolophus aspidurus Jordan and Gilbert, Bull. U. S. Fish Com., IV, 1881, 307, Panama.

Family 28. AËTOBATIDÆ. Eagle rays

Genus 67. STOASODON Cantor.
Aëtobatis Müller and Henle, Plagiostomen, 1841, 180 (*Raia narinari* Euphrasen); not *Aëtobatus* Blainville.
Stoasodon Cantor, Cat. Malayan Fishes, 1850, 434 (*Raia narinari* Euphrasen).
Goniobatis Agassiz, Proc. Bost. Soc. Nat. Hist., VI, 1859, 385 (*flagellum*).

160. Stoasodon narinari (Euphrasen). *Spotted stingray; Bishop ray; Obispo; Lady ray.*
Tropical seas; north on the Atlantic coast to Virginia; Pacific coast, Gulf of California to Panama.
Raia narinari Euphrasen, Vedensk. Akad. Nya Handl., XI, 1790, 217, Brazil.
Raia flagellum Bloch and Schneider, Syst. Ichth., 1801, 361, Coromandel.
Myliobatis eeltenkee Rüppell, Neu. Wirb., 1835, 70, Red Sea.
Goniobatis macroptera McClelland, Calcutta Jour. Nat. Hist., I, 1841, 60, Bengal.
Aëtobatus laticeps Gill, Ann. Lyc. Nat. Hist. N. Y., VIII, 1865, 137, California.

Genus 68. PTEROMYLÆUS Garman.
Pteromylæus Garman, Plagiostomia, Mem. Mus. Comp. Zool., XXXVI, 1913, 437 (*Myliobatis asperrimus* Gilbert).

161. Pteromylæus asperrimus (Gilbert).
Panama.
Myliobatis asperrimus Gilbert, in Jordan and Evermann, Fishes North and Mid. Amer., 1898, 2754, Panama.

Genus 69. AËTOBATUS[16] **Blainville.** *Eagle rays.*
Aëtobatus Blainville, Jour. Phys., LXXXIII, 1816, 261 (*Raia aquila* as *Aëtobatus vulgaris* Blainville).
Myliobatis Duméril in Cuvier, Règne Anim., ed. I, 1817, 137 (*Raia aquila*).
Holorhinus Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 331 (*Rhinoptera vespertilio* Girard = *Myliobatus californicus* Gill).

162. Aëtobatus fréminvillii (LeSueur). *Stingaree; Sharp-nosed ray; Long-tailed stingray.*
Cape Cod to Brazil.
Myliobatis freminvillii LeSueur, Jour. Acad. Nat. Sci. Phila., IV, 1824, 111, Rhode Island.
Myliobatis bispinosus Storer, Proc. Bost. Soc. Nat. Hist., I, 1841, 53, Massachusetts.
Myliobatis acuta Ayres, loc. cit., I, 1842, 65, Brookhaven, Long Island, N. Y.

163. Aëtobatus goodei (Garman).
Central America to Brazil; Rio Grande do Sul.
Myliobatis goodei Garman, Proc. U. S. Nat. Mus., VIII, 1885, 39, Central America.

164. Aëtobatus californicus (Gill). *California stingray; Batfish.*
California from Cape Medocino southward.
Rhinoptera vespertilio Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 137, Tomales Bay; not *Myliobatis vespertilio* Bleeker.
Myliobatis californicus Gill, Ann. Lyc. Nat. Hist. N. Y., VIII, 1865, 137; after Girard.

Family 29. RHINOPTERIDÆ

Genus 70. RHINOPTERA Kuhl.
Rhinoptera Kuhl in Cuvier, Règne Anim. ed. II, II, 1829, 401 (*Myliobatis marginatus* Goeffroy).
Zygobatis Agassiz, Poiss. Fossiles, III, 1836, 79 (*Z. jussieui* Agassiz).
Mylorhina Gill, Ann. Lyc. Nat. Hist. N. Y., VII, 1865, 136 (*Rhinoptera lalandi* Müller and Henle).
Micromesus Gill, loc. cit., 136 (*Rhinoptera adspersa* Müller and Henle).

165. Rhinoptera bonasus Mitchill. *Cowfish; Cow-nosed ray.*
Cape Cod to Florida.
Rhinoptera bonasus Mitchill, Trans. Lit. Phil. Soc. N. Y., I, 1815, 479, New York; description inadequate.
Raia quadriloba LeSueur, Jour. Acad. Nat. Sci. Phila., I, 1817, 44, New Jersey.

166. Rhinoptera steindachneri Evermann and Jenkins. *Gabilan.*
Gulf of California.
Rhinoptera steindachneri Evermann and Jenkins, Proc. U. S. Nat. Mus., XIV, 1891, 130, pl. 1, fig. 1, Guaymas, Sonora, Mexico.

167. Rhinoptera encenadæ Rosa Smith.
Todos Santos Bay, Lower California.
Rhinoptera encenadæ Rosa Smith, Proc. U. S. Nat. Mus., IX, 1886, 220, Enseñada de Todos Santos, Lower California. Jaw only.

Family 30. MOBULIDÆ. Sea devils

Genus 71. MOBULA Rafinesque.
Mobula Rafinesque, Indice, 1810, 61 (*M. auriculata* = *Squalus edentulus* Brunnich).
Apterurus Rafinesque, Indice, 1810, 62 (*A. fabroni* Rafinesque).
Cephalopterus Risso, Ichth. Nice, 1810, 14 (*Raja giorna* Lacépède); not of Goeffroy St. Hilaire, 1809, a genus of birds.
Dicerobatus Blainville, Bull. Soc. Philom., 1816, 116 (*Raja mobular* Lacépède).
Pterocephala Swainson, Nat. Hist. Fish., Amphib., etc., II, 1839, 321, (*Raja giorna* Lacépède).

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[16] Müller and Henle correctly referred *Aëtobatus* Blainville to the type of *Raja aquila*, spelling the name, however, as *Aëtobatis*. They then created a new genus, *Aëtobatis* for *Raia narinari*, an arrangement without warrant.

168. Mobula hypostoma (Bancroft).
Jamaica.
Cephalopterus hypostomus Bancroft, Proc. Comm. Zool. Soc., 1830, 134, Jamaica.

169. Mobula olfersi (Müller and Henle). *Small devilfish.*
Cape Lookout, N. C., to Brazil.
Cephalopterus olfersi Müller and Henle, Abhandl. Akad. Wiss. Berlin, 1834, 311, Brazil; regarded by Garman as identical with *M. thypostoma.*

Genus 72. CERATOBATIS Boulenger.
Ceratobatis Boulenger, Ann. Mag. Nat. Hist., XX, 1897, 227 (*C. robertsi* Boulenger).

170. Ceratobatis robertsi Boulenger.
Jamaica.
Ceratobatis robertsi Boulenger, Ann. Mag. Nat. Hist., XX, 1897, 227, Jamaica.

Genus 73. MANTA Bancroft.
Manta Bancroft, Zool. Jour., IV, 1828–29, 444 (*Cephalopterus manta* Bancroft=*Raia birostris* Walbaum, 1792).
Ceratoptera Müller and Henle, Syst. Beschr., Plagiostmen, 1838, 186 (*Cephaloptera vampyrus* Mitchill).
Brachioptilon Newman, Zoologist, 1849, 74 (*B. hamiltoni*).
Diabolichthys Holmes, Proc. Elliott Soc. Nat. Hist., I, 1856, 39 (*D. elliotti* Holmes).

171. Manta birostris (Walbaum). *Sea devil; Devilfish; Manta; Blanketfish.*
Tropical waters of America; north to New Jersey and San Diego; not rare on the Florida coast.
Raia birostris Walbaum, Artedi Pisc., 1792, 535, after *Diabolus marinus* Willughby, etc.
Raia manatia Schneider, Syst. Ichth., 1801, 364, tropical America.
Raia fimbriata Lacépède, Hist. Nat. Poiss., IV, 1803, 677, Gulf Stream.
Cephalopterus vampyrus Mitchill, Ann. Lyc. Nat. Hist. N. Y., I, 1823, 23, Delaware Bay.
Cephalopterus giorna LeSueur, Jour. Acad. Nat. Sci. Phila., IV, 1824, 115, Georgia.
Cephaloptera manta or *Manta americana* Bancroft, Zool. Jour., IV, 1828, 444, Jamaica.
Cephaloptera johni Müller and Henle, Syst. Beschr. Plagiostomen, 1838, 186, West Indies.
Diabolichthys elliotti Holmes, Proc. Elliott Soc. Nat. Hist., I, 1856, 39, Charleston, S. C.

172. Manta hamiltoni (Newman).
San Diego; Gulf of California to Panama, not rare; not known to be distinct from *Manta birostris.*
Brachioptilon hamiltoni Newman, Zoologist, 1849, 74, Gulf of California.

Subclass HOLOCEPHALI. Chimæras

Order I. CHIMÆROIDEI. Chimæroids

Family 31. CHIMÆRIDÆ. Chimæras

Genus 74. CHIMÆRA Linnæus. *Elephantfishes.*
Chimæra Linnæus, Syst. Nat., ed. X, 1758, 236 (*C. monstrosa* Linnæus).

173. Chimæra monstrosa Linnæus.
Deep waters of the Atlantic; off Portugal and off the American coast from Cape Cod northward.
Chimæra monstrosa L., Syst. Nat., ed. X, 1758, 236, Atlantic.
Chimæra mediterranea Risso, Europ. Mérid., III, 1826, 168, Nice.
Chimæra cristata Faber, Natur. der Fische Islands, 1829, 45, Iceland.
Calloryhnchus centrina and *Callorhynchus atlanticus* Gronow, Cat. Fishes, 15, 16, 1854.

Genus 75. BATHYALOPEX Collett.
Bathyalopex Collett, Arch. Math. Natur., XXXIII, 1901, 125 (*Chimæra mirabilio* Collett).

174. Bathyalopex plumbeus (Gill).
Gulf Stream in deep water.
Chimæra plumbea Gill, Bull. Phil. Soc. Wash., Dec., 1877, 182, La Have Bank, lat. 42° 40′ N., long. 63° 23′ W., in 350 fathoms.

175. Bathyalopex abbreviatus (Gill).
Chimæra abbreviata Gill, Proc. U. S. Nat. Mus., VI, 1883, 254, at 40° N., long. 67° W., in 1,290 fathoms.

Genus 76. PSYCHICHTHYS Fowler.
Psychichthys Fowler, Proc. Acad. Nat. Sci. Phila., LIX, 1907, 419 (*Hydrolagus waitei* Fowler).

176. Psychichthys affinis (Capello).
Open sea, from Cape Cod to Portugal.
Chimæra affinis Capello, Jour. Soc. Math., Lisbon, IV, 1868, 314, Portugal in deep water.

Genus 77. HYDROLAGUS Gill.
Hydrolagus Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 331 (*Chimæra colliei* Lay and Bennett).

177. Hydrolagus colliei (Lay and Bennett). *Ratfish; Elephantfish.*
Pacific coast, Monterey to Alaska; abundant in cold water at no great depth.
Chimæra colliei Lay and Bennett, Beechey's Voy., Zool., 1839, 71, North Pacific.

Family 32. RHINOCHIMÆRIDÆ

Genus 78. HARRIOTTA Goode and Bean.
Harriotta Goode and Bean, Proc. U. S. Nat. Mus., XVII, 1895, 471 (*H. raleighana* Goode and Bean).
Anteliochimæra Tanaka, Jour. Coll. Sci., Imp. Univ. Tokyo, XXVIII, art. 8, 1909, Japan (*A. chætirhamphus* Tanaka).

178. Harriotta raleighana Goode and Bean.
Deep water off the north Atlantic coast of the United States.
Harriotta raleighana Goode and Bean, Proc. U. S. Nat. Mus., XVII, 1894 (Jan. 26, 1895), 472, pl. 19, Gulf Stream at 39° N., 70° W.

179. Harriotta curtiss-jamesi Townsend and Nichols.
Deep water off Lower California.
Harriotta curtis-jamesi Townsend and Nichols, Bull. Amer. Mus. Nat. Hist., LII, 1925, 6, fig. 2, off Lower California, lat. 26°, in 645 fathoms.

Class IV. PISCES. True fishes

Subclass ACTINOPTERI

Order J. GLANIOSTOMI

Family 33. ACIPENSERIDÆ. Sturgeons

Genus 79. ACIPENSER[17] **Linnæus.** *Sturgeons.*
Acipenser Linnæus, Syst. Nat., ed. X, 1758, 237 (*A. sturio* L.).
Ichthocolla Geoffroy, Descr. de 719 Plantes, etc., 1767, 399 (presumably *A. huso* L.).
Sterleta Güldenstädt, Nov. Com. Sci. Petropol., XVI, 1772, 533 (*A. ruthenus* L.).
Sturio Rafinesque, Indice, 1810, 41 (*Sturio vulgaris* Rafinesque=*A. sturio* L.).
Sterletus Rafinesque, Ichth. Ohiensis, 1820, 80 (*A. serotinus* Rafinesque=*A. fulvescens* Rafinesque).

[17] This group ultimately may need subdivision into distinct genera, but none of the many proposed is adequately defined.

Helops Brandt and Ratzeburg, Medizinische Zoologie, II, 1833, 3, 349 (*A. stellatus* Pallas = *A. halops* Pallas).
Sterletus Brandt and Ratzeburg, loc. cit., 349 (*A. ruthenus* L.).
Sturio Müller, Anab. Myxinoiden, 1835, 77 (*A. sturio* L.).
Antaceus Heckel and Fitzinger, Ann. Wiener Mus., I, 1836, 293 (*A. schypa* Eichwald).
Lioniscus Heckel and Fitzinger, loc. cit., 370 (*A. glabra* Fitzinger).
Sterletus Bonaparte, Cat. Metod., 1845, 21 (*A. vultharius* L.).
Ellops Gistel, Naturg. Thierreichs, IX, 1848 (*A. helops* Pallas).
Schipa Brandt, Bull. Acad. Sci. Petersb., VII, 1850, 113 (*A. schypa* Eichwald).

180. Acipenser transmontanus Richardson. *White sturgeon; Oregon sturgeon; Sacramento sturgeon.*
Pacific coast of North America, from Monterey to Alaska; once abundant, now nearly extinct; largest of the sturgeons, reaching a weight of 1,000 pounds. A record sturgeon, *Acipenser transmontanus*, taken at Astoria, weighed 1,900 pounds.
Acipenser transmontanus Richardson, Fauna Bor.-Amer., III, 1836, 278, Fort Vancouver.
Acipenser brachyrhynchus Ayres, Proc. Calif. Acad. Nat. Sci., I, 1854, 15, San Francisco.
Acipenser aleutensis Fitzinger and Heckel, Ann. Wien. Mus. Naturg., 1836, Aleutian Islands, after Pallas.
Acipenser caryi Duméril, Nouv. Arch. Mus., III, 1867, 169, San Francisco.
Acipenser ayresi Duméril, loc. cit., 171, San Francisco.
Acipenser putnami Duméril, loc. cit., 178, San Francisco.

181. Acipenser oxyrhynchus Mitchill. *Common sturgeon.*
New York to Carolina, once abundant along the shores; very close to the common sea sturgeon of Europe (*Acipenser sturio* L.), but with fewer lateral plates and rougher ossification; the two perhaps identical.
Acipenser oxyrhynchus Mitchill, Trans Lit. Phil. Soc. N. Y., I, 1814, 462, New York.
Acipenser mitchilli Duméril, Nouv. Arch. Mus., III, 1867, New York.
Acipenser kennicotti Duméril, loc. cit., James River.
Acipenser girardi Duméril, loc. cit., Maryland.
Acipenser macrorhinus Duméril, loc. cit., New York.
Acipenser milberti Duméril, loc. cit., New York.
Acipenser bairdi Duméril, loc., cit., Maryland.
Acipenser storeri Duméril, loc. cit., Boston.
Acipenser holbrooki Duméril, loc. cit., Charleston.
Acipenser lecontei Duméril, loc. cit., New York.

182. Acipenser brevirostris LeSueur. *Short-nosed sturgeon.*
Cape Cod to Florida.
Acipenser brevirostrum LeSueur, Trans. Amer. Phil. Soc., I, 1818, 290, Atlantic coast.
Acipenser microrhynchus Duméril, Hist. Nat. Poiss., II, 1870, 105 and 164, New York.
Acipenser lesueuri Valenciennes, in Duméril, loc. cit., 105 and 166, Atlas, pl. 16, figs. 1 and 1a, New York.
Acipenser dekayi Duméril, loc. cit., 105 and 168, New York.

183. Acipenser acutirostris Ayres. *Green sturgeon.*
Pacific coast of America, ascending rivers from Monterey northward; not rare.
Acipenser acutirostris Ayres, Proc., Calif. Acad. Nat. Sci., I, 1854, 14, San Francisco.
Acipenser medirostris Ayres, loc. cit., 15, San Francisco.
Acipenser (Antaceus) agassizii Duméril, Nouv. Arch. Mus. Paris, III, 1867, 181, Pl. XI, figs. 2, 2a, 2b, San Francisco.
Acipenser (Antaceus) alexandri Duméril, loc. cit., 183, Pl. XV, figs. 1, 1a, 1b, San Francisco.
Acipenser (Antaceus) oligopeltis Duméril, loc. cit., 184, Pl. XV, figs. 2, 2a, 2b, San Francisco.

184. Acipenser fulvescens Rafinesque. *Lake sturgeon; Ohio sturgeon; Red sturgeon.*

Mississippi Valley, Great Lakes and northward, ascending rivers, but not entering the sea; varying much with age.

Acipenser fulvescens Rafinesque, Amer. Month. Mag., I, August, 1817, 288, Great Lakes.

Acipenser rubicundus LeSueur, Trans. Amer. Phil. Soc., I, 1818, 388, Lakes Ontario, Erie, and all the upper lakes.

Acipenser maculosus LeSueur, loc. cit., 393, Ohio River; young.

Accipenser serotinus Rafinesque, Ichth. Ohiensis, 1820, 80, Ohio River.

Accipenser ohiensis Rafinesque, loc. cit., 81, Ohio River.

Accipenser macrostomus Rafinesque, loc. cit., 81, Ohio River.

Dinectus truncatus Rafinesque, loc. cit., 82; erroneous, based on a drawing by Audubon.

Acipenser rupertianus Richardson, Fauna Bor.-Amer., III, 1836, 311, Albany River, Rupert Land.

Acipenser lævis Agassiz, Lake Superior, 1850, 267; Lake Superior.

Acipenser carbonarius Agassiz, loc. cit., 271, Lake Superior.

Acipenser rhynchæus Agassiz, loc. cit., 276, Lake Superior.

Acipenser liopeltis Günther, Cat. Fishes, VIII, 1870, 341, Mississippi.

Acipenser (Huso) copei Duméril, Hist. Nat. Poiss., 1870, 105 and 108, supposedly upper Missouri.

Acipenser (Huso) rauchi Duméril, loc. cit., 105 and 118, Osage River, Mo.

Acipenser (Huso) richardsoni Duméril, loc. cit., 105 and 120, upper Mississippi.

Acipenser (Huso) anasimos Duméril, loc. cit., 105 and 122, Missouri River at St. Louis.

Acipenser (Huso) paranasimos Duméril, loc. cit., 105 and 124, Huntsville, Ala.

Acipenser (Huso) anthracinus Duméril, loc. cit., 105 and 126, Lake Erie.

Acipenser (Huso) megalaspis Duméril, loc. cit., 105 and 133, Lake Champlain.

Acipenser (Huso) lamarii Duméril, loc. cit., 105 and 139, Mississippi River or Lake Erie.

Acipenser (Huso) atclaspis Duméril, loc. cit., 105 and 141, Saskatchewan River.

Acipenser (Huso) rafinesquii Duméril, loc. cit., 105 and 143, Ohio River.

Acipenser (Huso) rosarium Duméril, loc. cit., 105 and 152, Atlas, pl. 17, figs. 2 and 2a, upper Mississippi or Lake Erie.

Acipenser (Huso) platyrhinus Duméril, loc. cit., 105 and 154, upper Mississippi or Lake Erie.

Acipenser (Huso) kirtlandi Duméril, loc. cit., 105 and 161, Lake Erie.

Acipenser (Huso) nertinianus Duméril, loc. cit., 105 and 162, Michigan.

Acipenser (Antaceus) cincinnati Duméril, loc. cit., 220 and 228, Ohio River.

Acipenser (Antaceus) buffalo Duméril, loc. cit., 220 and 231, Lake Erie, Buffalo.

Genus 80. SCAPHIRHYNCHUS Heckel. *Shovelnose sturgeons.*

Scaphirhynchus Heckel, Ann. Wien. Mus. Naturg., I, 1835, 71 (*S. rafinesquei* Heckel = *Acipenser platorynchus* Rafinesque); not *Scaphorhynchus* Maximilian, a genus of birds.

Scaphirhynchops Gill, Trans. Amer. Phil. Soc., V, 1863, 12, 178 (*Acipenser platorynchus* Rafinesque).

185. Scaphirhynchus platorynchus (Rafinesque). *Shovelnose sturgeon; Switchtail; Hackleback; Sand sturgeon.*

Mississippi Valley; common in the larger streams.

Acipenser platorynchus Rafinesque, Ichth. Ohiensis, 1820, 80, Ohio River.

Genus 81. PARASCAPHIRHYNCHUS Forbes and Richardson.

Parascaphirhynchus Forbes and Richardson, Bull. Ill. Lab. Nat. Hist., VII, 1905, 38 (*P. albus* Forbes and Richardson).

186. Parascaphirhynchus albus Forbes and Richardson. *White shovelnose sturgeon; White sturgeon.*

Mississippi River; rare.

Parascaphirhynchus albus Forbes and Richardson, Bull. Ill. Lab. Nat. Hist., VII, 1905, 38, Mississippi River at Grafton, Ill.

Order K. SELACHOSTOMI

Family 34. POLYODONTIDÆ. Paddlefishes

Genus 82. POLYODON Lacépède.

Polyodon Lacépède, Bull., Soc. Philom., 1797, 49 (*P. folium* Lacépède).
Spathularia Shaw, Gen. Zool., V, 1804, 362 (*S. reticulata*=*Squalus spathula* Walbaum).
Platirostra LeSueur, Jour. Acad. Nat. Sci. Phila., I, 1817 (1818), 228 (*P. edentula*).
Planirostra Rafinesque, Ichth. Ohiensis, 1820, 83 (*P. edentula*).
Proceros Rafinesque, loc. cit., 87 (*P. maculatus*).

187. Polyodon spathula (Walbaum). *Paddlefish; Spoonbill cat; Duckbill cat; Spadefish.*

Mississippi Valley and south in the larger streams, reaching a weight of 173 pounds; rare in Lake Erie.
Squalus spathula Walbaum, Artedi Pisc., 1792, 522; after *Spathula* Rosier, Jour. Phys., 1774, 384, pl. 2; no locality given.
Polyodon feuille Lacépède, Hist. Nat. Poiss., I, 1798, 402, locality unknown.
Polyodon folium Bloch and Schneider, Syst. Ichth., 1801, 457; after Lacépède.
Spatularia reticulata Shaw, Gen. Zool., V, 1804, 362, after Lacépède.
Platirostra edentula LeSueur, Jour. Acad. Nat. Sci. Phila., I, 1817, 227, Ohio River.
Acipenser lagenarius Rafinesque, Ichth. Ohiensis, 1820, 86, Ohio River.
Proceros maculatus Rafinesque, loc. cit., 87, Mississippi River at St. Genevieve, Mo.
Proceros vittatus Rafinesque, loc. cit., 1820, 86, 87, Lake Ontario.

Order L. HOLOSTEI

Suborder GINGLYMODI

Family 35. LEPISOSTEIDÆ. Gar pikes

Genus 83. LEPISOSTEUS Lacépède. *Gar pikes.*

Lepisosteus Lacépède, Hist. Nat. Poiss., V, 1803, 331 (*L. gavialis* Lacépède=*Esox osseus* Linnæus).
Sarchirus Rafinesque, Jour. Acad. Nat. Sci. Phila., I, 1818, 419 (*S. vittatus* Rafinesque).
Lepidosteus Agassiz; corrected spelling.

188. Lepisosteus osseus (Linnæus). *Long-nosed gar; Billfish; Common gar pike; Ohio gar; Ohio garfish; Billy gar.*

Maryland to Florida and Louisiana, in coastwise streams; also (*huronensis*) Great Lakes and the Mississippi Valley; the most abundant of the gars.
Esox osseus Linnæus, Syst. Nat., ed. X, 1758, 313, after Artedi; based on *Acus maxima squamosa viridis*, the green gar fish of Catesby, 1738, pl. 30, Virginia.
Lepisosteus gavialis Lacépède, Hist. Nat. Poiss., V, 1803, 333, "lakes and rivers of both Indies."
Lepisosteus longirostris Rafinesque, Ichth. Ohiensis, 1820, 74, Muskingum River, Ohio; head.
Macrognathus loricatus Gronow, Cat. Fishes, 1854, 148, after Linnæus.
Lepidosteus crassus Cope, Proc. Acad. Nat. Sci. Phila., XVII, 1865, Bombay Hook, Delaware River.
Lepidosteus louisianensis Duméril, Hist. Nat. Poiss., 1870, 343, New Orleans.
Lepisosteus huronensis Richardson, Fauna Bor.-Amer., III, 1836, 237, Penitanguishene, Lake Huron.
?*Sarchirus vittatus* Rafinesque, loc. cit., 69, Ohio River; young; not identifiable.
?*Sarchirus argenteus* Rafinesque, loc. cit., 86, Ohio River; young; not identifiable.
Lepidosteus semiradiatus Agassiz, Poiss. Fossiles, II, 1836, 2, pl. 2.

Lepisosteus bison DeKay, New York Fauna: Fishes, 1842, 271, Buffalo, N. Y.
Lepisosteus lineatus Thompson, Hist. Vermont, 1842, 145, Lake Champlain.
Lepidosteus leptorhynchus Girard, Pac. R. R. Surv., X, pt. 4, Fishes, 1858, 351, Devil River, Tex.
Lepidosteus otarius Cope, Proc. Acad. Nat. Sci. Phila., XVII, 1865, 86 "Platte River near Fort Riley"; but Fort Riley was on the Kansas River.
Lepidosteus milberti Duméril, Hist. Nat. Poiss., 1870, 323 and 328, New York.
Lepidosteus harlani Duméril, loc. cit., 323 and 329, Wabash River.
Lepidosteus smithi Duméril, loc. cit., 323 and 330, upper Mississippi.
Lepidosteus ayresi Duméril, loc. cit., 323, 331, Wabash River.
Lepidosteus copei Duméril, loc. cit., 323, 332, northern North America.
Lepidosteus lesueurii Duméril, loc. cit., 323, 335, Wabash River.
Lepidosteus elizabeth Duméril, loc. cit., 323, 336, no locality.
Lepidosteus troosti Duméril, loc. cit., 323, 339, United States.
Lepidosteus piquotianus Duméril, loc. cit., 323, 340, Lake Erie.
Lepidosteus thompsoni Duméril, loc. cit., 323, 342, Upper Mississippi.
Lepidosteus lamarii Duméril, loc. cit., 323, 337, northern North America.
?*Lepidosteus clintonii* Duméril, loc. cit., 323, 338, no locality.
Lepidosteus horatii Duméril, loc. cit., 323, 341, northern North America.

Genus 84. CYLINDROSTEUS Rafinesque. *Short-nosed gars.*
Cylindrosteus Rafinesque, Ichth. Ohiensis, 1820, 72 (*Lepisosteus platostomus* Rafinesque).

189. Cylindrosteus platostomus (Rafinesque).
Mississippi Valley and Great Lakes; common.
Lepisosteus platostomus Rafinesque, Ichth. Ohiensis, 1820, 72, Ohio River.[15]
Lepisosteus oxyurus Rafinesque, loc. cit., 73, Ohio River.
Lepisosteus albus Rafinesque, loc. cit., 73, Ohio River.
Lepidosteus grayi, Agassiz, Poiss. Fossiles, II, 1836, 2, Louisiana.
Lepisosteus (*Cylindrosteus*) *oculatus* Winchell, Proc. Acad. Nat. Sci. Phila., XVI, 1864, 183, Huron River, Mich.
Cylindrosteus zadockii Duméril, Hist. Nat. Poiss., II, 1870, 348, 353, Upper Mississippi.
Cylindrosteus rafinesquii Duméril, loc. cit., 348, 352, United States.

190. Cylindrosteus scabriceps Fowler.
Lower Missouri River.
Cylindrosteus scabriceps Fowler, Proc. Acad. Nat. Sci. Phila., LXII, 1910, 607, Pl. XXXVIII. figs. 8, 9, Leavenworth, Kans.; a doubtful species.

191. Cylindrosteus agassizii Duméril.
Missouri Basin.
Cylindrosteus agassizii Duméril, Hist. Nat. Poiss., II, 1870, 351, St. Louis.
Cylindrosteus productus Cope, Proc. Acad. Nat. Sci. Phila., XVII, 1865, 86, San Antonio, Tex.

192. Cylindrosteus castelnaudii Duméril.
Florida and Louisiana.
Cylindrosteus castelnaudii Duméril, Hist. Nat. Poiss., II, 1870, 355, Lake Lafayette, Florida.
Cylindrosteus bartoni Duméril, loc. cit., 356, New Orleans.
Lepidosteus latirostris Girard, Pac. R. R. Surv., X, pl. 4, Fishes, 1858, 352, Rio Pecos, Tex.

193. Cylindrosteus megalops Fowler.
Florida.
Cylindrosteus megalops Fowler, Proc. Acad. Nat. Sci. Phila., LXII, 1910, 609, Pl. XXXVIII, figs. 15,16, Bayport, Fla.; a doubtful species.

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[15] Many other tributary streams mentioned.

Genus 85. ATRACTOSTEUS Rafinesque. *Alligator gars.*

Litholepis Rafinesque, Amer. Month. Mag., III, 1818, 447 (*L. adamantinus* Rafinesque), based on a fancy painting by Audubon of an imaginary fish.

Atractosteus Rafinesque, Ichth. Ohiensis, 1820, 72 (*Lepisosteus ferox* Rafinesque).

194. Atractosteus spatula (Lacépède). *Mississippi alligator gar.*

Lower Mississippi Valley in the larger streams, reaching a length of 5 feet or more.

Lepisosteus spatula Lacépède, Hist. Nat. Poiss., V, 1803, 333, no locality.

Lepisosteus (*Atractosteus*) *ferox* Rafinesque, Ichth. Ohiensis, 1820, 73. Ohio River.

Lepidosteus (*Atractosteus*) *berlandieri* Girard, Pac. R. R. Surv., X, pt. 4, Fishes, 1858, 353, Tamaulipas.

Atractosteus lucius Duméril, Hist. Nat. Poiss., 1870, 364, Tampico, Mexico.

195. Atractosteus tristœchus (Bloch and Schneider). *Cuban alligator gar; Manjuari.*

Rivers of Cuba.

Esox tristœchus Bloch and Schneider, Syst. Ichth., 1801, 395, Cuba, after Manjuari of Para.

Lepidosteus manjuari Poey, Memorias, I, 1860, 273, Cuba.

196. Atractosteus tropicus Gill.

Central America; Nicaragua.

Atractosteus tropicus Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 172, streams near Panama.

Order M. HALECOMORPHI

Family 36. AMIIDÆ. Bowfins

Genus 86. AMIA Linnæus.

Amia Linnæus, Syst. Nat., ed. XII, 1766, 500 (*A. calva*); not of Gronow, 1763, which is a nonbinomial name for *Apogon*.

Amiatus Rafinesque, Anal. Nat., 1815, 88 (*A. calva*); substitute for *Amia* regarded as too short for symmetry.

197. Amia calva Linnæus. *Bowfin; John A. Grindle; Mudfish; Lawyer; Poisson de marais; Choupiquel* (Louisiana).

Great Lakes, Mississippi Valley to Virginia, Florida, and Texas, in lakes and sluggish streams.

Amia calva Linnæus, Syst. Nat., ed. XII, 1766, 500, Charleston, S. C.

Amia ocellicauda Richardson, Fauna Bor.-Amer., III, 1836, 236, Lake Huron, male.

Amia occidentalis DeKay, New York Fauna: Fishes, 1842, 269, St. Marys River, Mich.

Amia marmorata Cuvier and Valenciennes, Hist. Nat. Poiss., XIX, 1846, 412, New Orleans.

Amia ornata LeSueur, in Cuvier and Valenciennes, loc. cit., 420, Chibault, Mississippi River.

Amia viridis LeSueur, loc. cit., 421, New Orleans.

Amia canina Cuvier and Valenciennes, loc. cit., 424, Lake Erie; after Kirtland.

Amia lentiginosa Cuvier and Valenciennes, loc. cit., 426; after Bonnaterre; no locality.

Amia subcærulea Cuvier and Valenciennes, loc. cit., 427, New Orleans.

Amia cinerea Cuvier and Valenciennes, loc. cit., 430, Charleston, S. C.

Amia reticulata LeSueur, loc. cit., 431, Wabash River.

Amia thompsoni Duméril, loc. cit., II, 1870, 419, Lake Champlain.

Amia piquotii Duméril, loc. cit., 1870, 423. upper Mississippi.

Superorder TELEOSTEI. Bony fishes

Order N. ISOSPONDYLI (Physostomi; Malacopterigii). Soft-rayed fishes

Suborder ELOPOIDEA

Family 37. ELOPIDÆ. Tenpounders

Genus 87. ELOPS Linnæus.
Elops Linnæus, Syst. Nat., ed. XII, 1766, 518 (*E. saurus*).
Mugilomorus Lacépède, Hist. Nat. Poiss., V, 1803, 398 (*M. anna-carolina*).
Trichonotus Rafinesque, Anal. Nat., 1815, 88 (*Mugilomorus anna-carolina*); substitute for *Mugilomorus*, considered objectionable.

198. Elops saurus Linnæus. *Tenpounder; John Mariggle; Bonyfish; Bonefish; Big-eyed herring; Matajuelo real; Lisa francesa.*
Tropical Atlantic; West Indies, north to Long Island; common.
Elops saurus Linnæus, Syst. Nat., ed. XII, 1766, 518, Carolinas.
Argentina carolina Linnæus, loc. cit., 519, Carolinas.
Mugilomorus anna-carolina Lacépède, Hist. Nat. Poiss., V, 1803, 398, South Carolina.
Elops inermis Mitchill, Trans. Lit. Phil. Soc. N. Y., I, 1815, 445, New York.

199. Elops hawaiensis Regan. *Awa.*
Hawaii and Pacific coast of Mexico north to Gulf of California; Hawaii.
Elops hawaiensis Regan, Ann. Mag. Nat. Hist., 9th ser., III, 1909, 39, Hawaii.

Family 38. MEGALOPIDÆ. Tarpons

Genus 88. TARPON Jordan and Evermann. *Grande écaille.*
Tarpon Jordan and Evermann, Fishes North and Mid. Amer., 1896, 409 (*Megalops atlanticus* Cuvier and Valenciennes).

200. Tarpon atlanticus (Cuvier and Valenciennes). *Tarpon; Tarpum; Grande écaille; Silverfish; Sabalo; Savanilla.*
Long Island to Brazil; abundant off Florida, breeding in the West Indies.
Megalops atlanticus Cuvier and Valenciennes, Hist. Nat. Poiss., XIX, 1846, 398, Guadeloupe; San Domingo; Martinique; Porto Rico.
Megalops elongatus Girard, Proc. Acad. Nat. Sci. Phila., X, 1858, 224, Long Island.

Suborder ALBULOIDEI

Family 39. ALBULIDÆ. Ladyfishes

Genus 89. ALBULA (Gronow) Bloch and Schneider. *Ladyfishes.*
Conorhynchus Nozeman, Act. Select., III, 1757, 382; non-binomial.
Albula Gronow, Zoophyl., 1763, 102; non-binomial.
Albula Bloch and Schneider, Syst. Ichth., 1801, 432 (*A. conorhynchus* = *Esox vulpes* L.).
Butyrinus Lacépède, Hist. Nat. Poiss., V, 1803, 45 (*B. banana* = *Esox vulpes* L.).
Glossodus Cuvier, in Agassiz, Spix, Pisc. Brasil., 1829, 48 (*A. forskâli* = *Esox vulpes* L.).

201. Albula vulpes (Linnæus). *Ladyfish; Bonefish; Macabi; Sanducha; Bananafish.*
Tropical seas, ranging northward to San Diego; Long Island and southern Japan; perhaps more than one species included.
Unbarana Marcgrave, Hist. Brazil, 1648, Brazil.
Vulpes bahamensis Catesby, Nat. Hist. Carolinas, etc., 1737, Pl. II, fig. 1, Bahamas; non-binomial.
Esox vulpes Linnæus, Syst. Nat., ed. X, 1758, 313, Bahamas; based on the bonefish, *Vulpes bahamensis* of Catesby.

Argentina glossodonta Forskål, Descr. Anim., 1775, 68, Djidda, Arabia.
Macabi Parra, Diff. Piezas Cuba, 1787, 88, pl. 35, fig. 1, Cuba; based on *Unbarana* of Marcgrave.
Synodus argenteus Bloch and Schneider, Syst. Ichth., 1801, 398, Asia.
Clupea brasiliensis Bloch and Schneider, loc. cit., 427, Brazil.
Albula conorhynchus Bloch and Schneider, loc. cit., 432, Antilles; after Gronow and Plumier; called *Albula plumieri* on plate 86.
Amia immaculata Bloch and Schneider, loc. cit., Central America; after *Macabi* of Parra.
Butyrinus banana Lacépède, Hist. Nat. Poiss., V, 1803, 46, Ile de France.
Clupea macrocephala Lacépède, loc. cit., 426, Martinique; on a drawing by Plumier.
Glossodus forskâli Agassiz, in Spix, Pisc. Brasil., 1829, 49, Bahia; called *Engraulis sexicus* and *Engraulis bahiensis* on plates 22 and 24.
Albula parræ Cuvier and Valenciennes, Hist. Nat. Poiss., XIX, 1846, 339, Martinique; Bahia; Rio de Janeiro.
Albula goreensis Cuvier and Valenciennes, loc. cit., 342, Gorea.
Albula neoguinaica Cuvier and Valenciennes, loc. cit., 350, New Guinea.
Albula seminuda Cuvier and Valenciennes, loc. cit., 351, New Guinea.
Albula erythrocheilus Cuvier and Valenciennes, loc. cit., 352, Friendly Islands.
Albula forsteri Cuvier and Valenciennes, loc. cit., 354, Tahiti.
Albula rostrata Gronow, Cat. Fishes, 1854, 189, American Ocean.

Genus 90. DIXONINA Fowler.
Dixonina Fowler, Proc. Acad. Nat. Sci. Phila., LXII, 1910, 651 (*D. nemoptera* Fowler).

202. Dixonina nemoptera Fowler.
San Domingo, West Indies.
Dixonina nemoptera Fowler, Proc. Acad. Nat. Sci. Phila., LXII, 1910, 652, San Domingo.

Suborder CLUPEOIDEI

Family 40. CHANIDÆ. Milkfishes

Genus 91. CHANOS Lacépède.
Chanos Lacépède, Hist. Nat. Poiss., V, 1803, 395 (*C. arabicus*).
Lutodeira Van Hasselt, in Rüppell, Atlas Reise Nord Africa, 1828, 17 (*L. indica* Rüppell = *Mugil chanos* L.)
Ptycholepis Gray, in Dieffenbach's Travels in New Zealand, II, about 1842, 218 (*Mugil salmoneus* Forster).

203. Chanos cyprinella Cuvier and Valenciennes. *Milkfish; Sabalo; Awa; Chani; Anged.*
Gulf of California to Panama and Hawaii; replaced in the western Pacific by *Chanos chanos* Forskål.
Chanos cyprinella Cuvier and Valenciennes, Hist. Nat. Poiss., XIX, 1846, 194, 198, Hawaiian Islands.

Family 41. HIODONTIDÆ. Mooneyes

Genus 92. HIODON LeSueur. *Mooneyes.*
Hiodon LeSueur, Jour. Acad. Nat. Sci. Phila., I, 1818, 334 (*H. tergisus* LeSueur).
Glossodon Rafinesque, Amer. Month. Mag., II, September, 1818, 354 (*G. harengoides*).
Hyodon, corrected orthography.

204. Hiodon tergisus LeSueur. *Mooneye; Toothed herring.*
Great Lakes and Mississippi Valley, north to Assiniboine River.
Hiodon tergisus LeSueur, Jour. Acad. Nat. Sci. Phila., I, 1818, 364, Ohio River.
Glossodon harengoides Rafinesque, Amer. Month. Mag., II, September, 1818, 354, Ohio River.
Glossodon heterurus Rafinesque, loc. cit., 354, Falls of Ohio River.
Hiodon clodalis LeSueur, loc. cit., Ohio River at Pittsburgh.
Hyodon vernalis Rafinesque, Ichth. Ohiensis, 1820, 42, Ohio River.

205. Hiodon selenops Jordan and Bean. *Southern mooneye; Southern toothed herring.*
Tennessee, Cumberland, and Alabama Rivers.
Hyodon selenops Jordan and Bean, Bull. U. S. Nat. Mus., X, 1877, 67, Chattanooga, Tenn.

Genus 93. AMPHIODON Rafinesque. *Goldeyes.*
Amphiodon Rafinesque, Jour. Phys., Paris, 1819, 421, Ohio River (*A. alosoides;* misprinted *alveoides*).
Elattonistius Gill and Jordan, Bull. U. S. Nat. Mus., X, 1877, 68 (*Hyodon chrysopsis* Richardson = *Amphiodon alosoides* Rafinesque).

206. Amphiodon alosoides Rafinesque. *Goldeye; La Quesche; Naccaysh.*
Ohio River and north to Saskatchewan; abundant and much valued in Manitoba.
Amphiodon alosoides (misprinted *alveoides*) Rafinesque, Jour. Phys., Paris, 1819, 421, Ohio River.
Hyodon amphiodon Rafinesque, Ichth. Ohiensis, 1820, 42, Ohio River near the falls.
Hyodon chrysopsis Richardson, Fauna Bor.-Amer., III, 1836, 232, Cumberland House, Saskatchewan River.
Cyprinus (*Abramis?*) *smithii* Richardson, loc. cit., 110, Richelieu River.

Family 42. CLUPEIDÆ. Herrings

Genus 94. CLUPEA Linnæus. *Herrings.*
Clupea Linnæus, Syst. Nat., ed. X, 1758, 317 (*C. harengus* L.).
Rogenia Cuvier and Valenciennes, Hist. Nat. Poiss., XX, 1847, 340 (*R. alba,* "the whitebait," the young of *harengus*).

207. Clupea harengus Linnæus. *Common herring.*
North Atlantic Ocean, south on our coast to Sandy Hook; Massachusetts; New Hampshire.
Clupea harengus Linnæus, Syst. Nat., ed. X, 1758, 317, seas of Europe.
Clupea membras Pallas, Zoogr. Rosso.-Asiat., III, 1811, 211, Baltic Sea.
Clupea halec Mitchill, Trans. Lit. Phil. Soc. N. Y., I, 1815, 451, New York.
Clupea vittata Mitchill, loc. cit., 456, New York.
Clupea cærulea Mitchill, loc. cit., 457, New York.
Clupea elongata LeSueur, Jour. Acad. Nat. Sci. Phila., I, 1817, 234, Massachusetts.
Clupea leachi Yarrell, Zool. Jour., V, 1829, 277, pl. 12, England.
Clupea minima Peck, in Storer, Rept. Fish. Mass., 1839, 113, New Hampshire.
Clupea lineolata Cuvier and Valenciennes, Hist. Nat. Poiss., XX, 1847, 256, locality unknown.
Rogenia alba Cuvier and Valenciennes, loc. cit., 340, England; the young form known as whitebait.

208. Clupea pallasii Cuvier and Valenciennes. *California herring.*
Pacific coast, from Kamchatka to San Diego.
Clupea harengus var. Pallas, Zoogr. Rosso.-Asiat., III, 1811, 209, Kamchatka.
Clupea pallasii Cuvier and Valenciennes, Hist. Nat. Poiss., XX, 1847, 253, Kamchatka; based on Pallas's specimens.
Clupea mirabilis Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 138, San Francisco.
Spratelloides bryoporus Cope, Proc. Amer. Phil. Soc., XIII, 1873, 25, Sitka; young.

Genus 95. POMOLOBUS Rafinesque. *Alewives.*
Pomolobus Rafinesque, Ichth. Ohiensis, 38, 1820 (*P. chrysochloris* Rafinesque).
Alausella Gill, Proc. Acad. Nat. Sci. Phila., XIII, 1861, 36 (*Clupea parvula* Mitchill = *Clupea mediocris* Mitchill).

Subgenus ALAUSELLA Gill.

209. Pomolobus pseudoharengus (Wilson). *Alewife; Branch herring; Gaspereau; Wall-eyed herring; Big-eyed herring; Sawbelly; Ellwife; Bang.*
Atlantic coast of the United States; Lake Ontario and landlocked in the "Finger Lakes" of New York.
Clupea pseudoharengus Wilson, in Rees's Encycl., IX, about 1811, probably Philadelphia.
Clupea vernalis Mitchill, Rept. Fish. N. Y., 1814, 22, and Trans., Lit. Phil. Soc. N. Y., I, 1815, 454, New York.
Clupea megalops Rafinesque, Amer. Month. Mag., 1818, 206, Delaware River.
Meletta venosa Cuvier and Valenciennes, Hist. Nat. Poiss., XX, 1847, 374, New York.
Pomolobus pseudoharengus lacustris Jordan, Man. Vert., ed. I, 1876, 265, Cayuga Lake, New York; specimens landlocked.

210. Pomolobus mediocris (Mitchill). *Hickory shad; Hickory jack; Fall herring; Tailor herring; Mattowacca.*
Atlantic coast of United States from Maine to Florida.
Clupea mediocris Mitchill, Trans. Lit. Phil. Soc. N. Y., I, 1815, 450, New York.
Clupea mattowacca Mitchill, loc. cit., 451, pl. 5, fig. 8, New York.
? *Clupea parvula* Mitchill, loc. cit., 452, New York.
? *Clupea pusilla* Mitchill, loc. cit., 452, New York.
Clupea fasciata LeSueur, Jour. Acad. Nat. Sci. Phila., I, 1818, 233, Massachusetts.
Clupea virescens DeKay, New York Fauna: Fishes, 1842, 242, New York.
Alosa lineata Storer, Proc., Bost. Soc. Nat. Hist., II, 1847, 242, Massachusetts.

211. Pomolobus æstivalis (Mitchill). *Glut herring; Blueback; Black-belly; Summer herring; Kyack; Sawbelly.*
Atlantic coast.
Clupea æstivalis Mitchill, Trans. Lit. Phil. Soc. N. Y., I, 1815, 456, New York.
Alosa cyanoroton Storer, Hist. Fish. Mass., 1867, 161, Provincetown, Mass.

Subgenus POMOLOBUS Rafinesque.

212. Pomolobus chrysochloris Rafinesque. *Skipjack; Blue herring; Nailrod.*
Gulf of Mexico and Mississippi Valley; ascending streams, and introduced through the canals into Lake Erie and Lake Michigan.
Pomolobus chrysochloris Rafinesque, Ichth. Ohiensis, 1820, 38, Ohio River.
Meletta sueurii Cuvier and Valenciennes, Hist. Nat. Poiss., XX, 1847, 375, Wabash River.

Genus 96. ALOSA Linck. *Shad.*
Alosa Linck, Mag. Neuestes Phys. Naturgesch., 1790, 35 (scarcely defined; type not specified; *Clupea alosa* L.=*Alosa* Cuvier).
Alosa Cuvier, Régne Anim., ed. II, 1829, 319 (*Clupea alosa* L.).
Alausa Cuvier and Valenciennes, Hist. Nat. Poiss., XX, 1847, 389 (*Clupea alosa* L.).

213. Alosa sapidissima (Wilson). *Common shad; American shad; North River shad; Potomac shad; Connecticut River shad.*
Atlantic coast of United States, from Miramachi River to Florida; from Monterey northward on the Pacific coast, as an introduced species.
Clupea sapidissima Wilson, in Rees's New Cyclopedia, IXg., neither pagination nor date, but prior to 1812; no locality, but probably Philadelphia.
Clupea indigena Mitchill, Trans. Lit Phil. Soc. N. Y., I, 1815, 454, New York.
Alosa præstabilis DeKay, New York Fauna: Fishes, 1842, 255, pl. 15, fig. 4, New York.

214. Alosa ohiensis Evermann. *Ohio shad.*
Mississippi River basin; Ohio River.
Alosa ohiensis Evermann, Rept. U. S. Fish Com., XXVII, 1901 (1902), 277, fig. 2, Ohio River at the falls.

215. Alosa alabamæ Jordan and Evermann. *Alabama shad.*
Gulf coast of United States; ascending streams.
Alosa alabamæ Jordan and Evermann, Rept. U. S. Fish Com., XXI, 1895 (1896), 203, Black Warrior River, Tuscaloosa, Ala.

Genus 97. SARDINIA Poey. *True sardines.*
Sardinia Poey, Memorias, II, 1861, 311 (*S. pseudohispanica* Poey; not of Jordan and Evermann, which is *Sardinella anchovia* Cuvier and Valenciennes).
Sardina Antipa, Denkschr. Akad. Wiss. Wien, LXVIII, 1905 (*Clupea pilchardus* L.).

216. Sardinia cærulea (Girard). *California sardine.*
Pacific coast, from Puget Sound to Magdalena Bay; very abundant.
Meletta cærulea Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 138, San Francisco.
Alausa californica Gill, loc. cit., XIV, 1862, 281, California.

217. Sardinia anchovia (Cuvier and Valenciennes). *Sardinia de España.*
West Indies, north to Cuba.
Sardinella anchovia Cuvier and Valenciennea, Hist. Nat. Poiss., XX, 1847, 269, Rio Janeiro; Martinique.
Sardina [19] *pseudohispanica* Poey, Memorias, II, 1861, 311, Cuba.

Genus 98. SARDINELLA Cuvier and Valenciennes. *Smooth-headed sardines.*
Sardinella Cuvier and Valenciennes, Hist. Nat. Poiss., XX, 1847, 261, (*S. aurita* Cuvier and Valenciennes).

218. Sardinella aurita Cuvier and Valenciennes. *Smooth sardine; Sardina de España.*
Woods Hole to Florida; recorded from France; usually in rather deep water.
Sardinella aurita Cuvier and Valenciennes, Hist. Nat. Poiss., XX, 1847, 261, coast of France.

Genus 99. HARENGULA Cuvier and Valenciennes. *Scaled sardines.*
Harengula Cuvier and Valenciennes, Hist. Nat. Poiss., XX, 1847, 280 (*H. latula* Cuvier and Valenciennes).

219. Harengula sardina Poey. *Sardina de Ley.*
West Indian fauna, north to Key West.
Harengula sardina Poey, Memorias, II, 1860, 310, Cuba.
Harengula callolepis Goode, Proc. U. S. Nat. Mus., II, 1879, 152, Bermuda.

220. Harengula macropthalmus (Ranzani). *Sardina Escamuda; White-bill; Pinceo.*
West Indies, Florida to Brazil.
Clupea macropthalma Ranzani, Nov. Com. Acad. Sci. Bonon., V, 1842, 320, Brazil.
Harengula humeralis Cuvier and Valenciennes, Hist. Nat. Poiss., XX, 1847, 293, Rio Janeiro; Bahia; Guadeloupe; San Domingo.
Alausa striata Cuvier and Valenciennes, loc. cit; XX, 1847, 429, Guadeloupe; Bahia.
Alosa bishopi Müller and Troschel, in Schomburgk, Hist. Barbados, 1848, 675, Barbados.

221. Harengula clupeola Cuvier and Valenciennes. *Cailleu.*
West Indies.
Harengula clupeola Cuvier and Valenciennes, Hist. Nat. Poiss., XX, 1847, 289, Guadeloupe Island, West Indies.

222. Harengula maculosa Cuvier and Valenciennes.
West Indies.
Harengula maculosa Cuvier and Valenciennes, Hist. Nat. Poiss., XX, 1847, 292, Martinique.
Alosa apicalis Müller and Troschel, in Schomburgk, Hist. Barbados, 1848, 675, Barbados.

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[19] Recent examination of Poey's type by Alvin Seale shows that this fish is a *Sardinia* apparently identical with *Clupea anchovia* Cuvier and Valenciennes, not the *Sardinella pseudohispanica* of Jordan and Evermann, which apparently is the same as *Sardinella aurita* Cuvier and Valenciennes.

223. Harengula pensacolæ Goode and Bean.
Florida.
Harengula pensacolæ Goode and Bean, Proc. U. S. Nat. Mus., II, 1879, 152, Pensacola, Fla.

224. Harengula thrissina (Jordan and Gilbert).
Gulf of California.
Clupea thrissina Jordan and Gilbert, Proc. U. S. Nat. Mus., V, 1882, 353, Cape San Lucas.

Genus 100. LILE Jordan and Evermann.
Lile Jordan and Evermann, Fishes North and Mid. Amer., 1896, 431 (*Clupea stolifera* Jordan and Gilbert).

225. Lile stolifera (Jordan and Gilbert).
Gulf of California to Panama; Mazatlan, Mexico.
Clupea stolifera Jordan and Gilbert, Proc. U. S. Nat. Mus., IV, 1881, 339, Mazatlan.

Genus 101. OPISTHONEMA Gill. *Thread herring.*
Opisthonema Gill, Proc. Acad. Nat. Sci. Phila., XIII, 1861, 37 (*Clupea thrissa* Broussonet = *Megalops oglina* LeSueur); not of Osbeck.

226. Opisthonema oglinum (LeSueur). *Thread herring; Machuelo; Cailleu tassart; Sprat.*
West Indies, ranging regularly north to Florida and Carolina; Longport, N. J.; Newport, R. I.; Fortress Monroe.
Clupea thrissa Broussonet, Ichthyologie, fasc. I, 1782, Carolina; Jamaica; not of Osbeck, 1757, which is a Chinese species of *Clupanodon*.
Megalops oglina LeSueur, Jour. Acad. Nat. Sci. Phila., I, 1817, 359, Newport, R. I.
Megalops notata LeSueur, loc. cit., 359, Guadeloupe.
Chatoëssus signifer DeKay, N. Y. Fauna: Fishes, 1842, 264, New York.
Chatoëssus eumorphus Gosse, Naturalist's Sojourn in Jamaica, 1851, 290, Jamaica.

227. Opisthonema libertate (Günther). *Sardina machete.*
Pacific coast of Mexico and Central America.
Meletta libertate Günther, Proc. Zool. Soc. Lond., 1866, 603, Libertad, Central America.

Genus 102. BREVOORTIA Gill. *Menhadens.*
Brevoortia Gill, Proc. Acad. Nat. Sci. Phila., XIII, 1861, 37 (*Alosa menhaden* Storer = *Clupea tyrannus* Latrobe).

228. Brevoortia tyrannus (Latrobe). *Menhaden; Mossbunker; Bonyfish; Whitefish; Bugfish; Fatback; Pogy.*
Nova Scotia to West Indies; abundant.
Clupea tyrannus Latrobe, Trans. Amer. Phil. Soc. Phila., V, 1802, 77, pl. 1, Chesapeake Bay.
Clupea menhaden Mitchill, Trans. Lit. Phil. Soc. N. Y., I, 1815, 453, New York.
Clupea neglecta Rafinesque, Amer. Month. Mag., 1818, 206, Long Island.
Clupea carolinensis Gronow, Cat. Fishes, 1854, 140, South Carolina.

229. Brevoortia tyrannus brevicaudata Goode. *Short-tailed menhaden.*
South Atlantic north to Connecticut.
Brevoortia tyrannus brevicaudata Goode, Proc. U. S. Nat. Mus., I, 1878, 34, Noank, Conn.

230. Brevoortia patronus Goode. *Gulf menhaden.*
Gulf of Mexico; coast of Texas.
Brevoortia patronus Goode, Proc. U. S. Nat. Mus., I, 1878, 39, Brazos Santiago, Tex.

Genus 103. ILISHA Gray.
Platygaster Swainson, Class. Anim., II, 1839, 294 (*Clupea africana* Bloch); name preoccupied.
Ilisha Gray, in Richardson, Ichthy. China, in Proc. Brit. Assoc., 1845 (1846), 306 (*I. abnormis*); no description.
Pellona Cuvier and Valenciennes, Hist. Nat. Poiss., XX, 1847, 300 (*P. orbignyana* = *Pristigaster flavipinnis* Valenciennes).

231. Ilisha caribbæa Meek and Hildebrand.
Caribbean Sea.
Ilisha caribbæa Meek and Hildebrand, Marine Fishes of Panama, Pt. 1, Field Mus. Nat. Hist., Zool., XV, Dec. 20, 1923, 191, Pl. X, fig. 1, Porto Bello, Panama.

Genus 104. CHIROCENTRODON Günther.
Chirocentrodon Günther, Cat., VII, 1868, 463 (*C. tæniatus* Günther).
Medipellona Jordan and Seale, Mem. Mus. Comp. Zool., LXVII, No. 11, May, 1926, 417 (*Pellona bleekeriana* Poey).

232. Chirocentrodon tæniatus Günther.
Jamaica.
Chirocentrodon tæniatus Günther, Cat., VII, 1868, 463, Jamaica.

233. Chirocentrodon bleekeriana (Poey). *Anchoa pelada.*
Matanzas, Cuba.
Pellona bleekeriana Poey, Repertorio, II, 1867, 242, Matanzas, Cuba.

Genus 105. OPISTHOPTERUS Gill.
Opisthopterus Gill, Proc. Acad. Nat. Sci. Phila., XII, 1861, 38 (*Pristigaster tartoon* Cuvier and Valenciennes).

234. Opisthopterus dovii (Günther).
Panama.
Pristigaster dovii Günther, Cat., VII, 1861, 461, Panama.

235. Opisthopterus macrops (Günther).
Panama.
Pristigaster macrops Günther, Proc. Zool. Soc. Lond., 1866, 603, Panama.

Genus 106. PLIOSTEOSTOMA Norman.
Pliosteostoma Norman, Ann. Mag. Nat. Hist., XI, 1923, 21 (*Pristigaster lutipinnis* Jordan and Gilbert).

236. Pliosteostoma lutipinnis (Jordan and Gilbert).
Pacific coast of Mexico.
Pristigaster lutipinnis Jordan and Gilbert, Proc. U. S. Nat. Mus., IV, 1881, 340, Mazatlan, Mexico.

Genus 107. ODONTOGNATHUS Lacépède.
Odontognathus Lacépède, Hist. Nat. Poiss., II, 1799, 221 (*O. mucronatus*).
Gnathobolus Bloch and Schneider, Syst. Ichth., 1801, 556 (*Odontognathus mucronatus* Lacépède.).

237. Odontognathus mucronatus Lacépède.
Coast of Guiana.
Odontognathus mucronatus Lacépède, Hist. Nat. Poiss., 1799, 221, pl. 7, fig. 2, Cayenne.

238. Odontognathus panamensis (Steindachner).
Panama.
Pristigaster (*Odontognathus*) *panamensis* Steindachner, Ichth. Beitr., V, 1876, 24, Panama.

Genus 108. PRISTIGASTER Cuvier.
Pristigaster Cuvier, Règne Anim., ed. I, 1817, 176 (type not named; later fixed as *P. cayanus* Cuvier).

239. Pristigaster cayanus Cuvier.
Coast of Guiana and northern Brazil.
Pristigaster cayanus Cuvier, Règne Anim., ed. I, 1817, pl. 10, fig. 3, Cayenne.
Pristigaster martii Agassiz, in Spix, Pisc. Brasil., 1829, 55, Brazil.
Pristigaster phaëton Cuvier and Valenciennes, Hist. Nat. Poiss., XX, 1847, 338, mouth of Amazon.

Family 43. DUSSUMIERIIDÆ. Round herrings

Genus 109. JENKINSIA Jordan and Evermann.
Jenkinsia Jordan and Evermann, Fishes North and Mid. Amer., 1896, 418 (*Dussumieria stolifera* Jordan and Gilbert).

240. Jenkinsia stolifera (Jordan and Gilbert).
Gulf of Mexico from Florida to Yucatan.
Dussumieria stolifera Jordan and Gilbert, Proc. U. S. Nat. Mus., VII, 1884, 25, Key West, Fla.

241. Jenkinsia lamprotænia (Gosse).
Jamaica.
Clupea lamprotænia Gosse, Naturalist's Sojourn in Jamaica, 1851, 291, pl. 1, fig. 2, Jamaica.

Genus 110. HALECULA Jordan.
Halecula Jordan, Fossil Fishes of the Calif. Miocene, VIII, 1925, (*Etrumeus acuminatus* Gilbert).

242. Halecula acuminata (Gilbert).
Gulf of California.
Etrumeus acuminatus Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 56, Gulf of California at *Albatross* station 3012 in 22 fathoms.

Genus 111. ETRUMEUS Bleeker.
Etrumeus Bleeker, Verh. Bat. Gen. Japan, XXV, 1853, 58, (*Clupea micropus* Temminck, and Schlegel, a Japanese species).
Perkinsia Rosa Smith Eigenmann, Amer. Nat., XXV, 1891, 153 (*P. othonops* R. S. Eigenmann).

243. Etrumeus sadina (Mitchill). *Round herring.*
Cape Cod to Gulf of Mexico.
Clupea sadina Mitchill, Trans. Lit. Phil. Soc. N. Y., I, 1815, 457, New York.
Alosa teres DeKay, New York Fauna: Fishes, 1842, 262, New York.

244. Etrumeus micropus Temminck and Schlegel.
Coast of Japan; Hawaii; found once off Point Loma in California.
Etrumeus micropus Temminck and Schlegel, Fauna Japonica, Poiss., 1850, 236, pl. 107, fig. 2, Japan.
Perkinsia othonops Rosa Smith Eigenmann, Amer. Nat., XXV, 1891, 153, Point Loma, San Diego, Calif.

Family 44. DOROSOMIDÆ. Gizzard shad

Genus 112. DOROSOMA Rafinesque. Gizzard shads.
Dorosoma Rafinesque, Ichth. Ohiensis, 1820, 39 (*D. notata* Rafinesque).
Chatoëssus Cuvier, Règne Anim., ed. 2, II, 1829, 320; in part (includes *Opisthonema*, etc.; restricted by Cuvier and Valenciennes to *Megalops cepediana* LeSueur).

245. Dorosoma cepedianum (LeSueur). *Gizzard shad; Hickory shad.*
Cape Cod to Texas, entering all streams and variously landlocked.
Megalops cepediana LeSueur, Jour. Acad. Nat. Sci. Phila., I, 1818, Delaware and Chesapeake Bays.
Clupea heterura Rafinesque, Amer. Month. Mag., 1818, 354, Ohio River.
Dorosoma notata Rafinesque, Ichth. Ohiensis, 1820, 39, Ohio River.
Chatoëssus ellipticus Kirtland, Rep. Zool. Ohio, 1839, 169, Ohio River.
Dorosoma insociabilis Abbot, Proc. Acad. Nat. Sci. Phila., XII, 1860, 365, Sturgeon Pond, Trenton, N. J.

246. Dorosoma cepedianum exile Jordan and Gilbert.
Streams of Texas.
Dorosoma cepedianum exile Jordan and Gilbert, Proc. U. S. Nat. Mus., V, 1882, 585, Galveston, Tex.

Genus 113. SIGNALOSA Evermann and Kendall.
Signalosa Evermann and Kendall, Bull. U. S. Fish Com., XVII, 1897 (Feb. 9, 1898), 127 (*S. atchafalayæ* Evermann and Kendall).

247. Signalosa atchafalayæ Evermann and Kendall.
Coast of Louisiana and southward.
? *Chatoëssus mexicanus* Günther, Cat., VII, 1868, 409, Mexico.
Signalosa atchafalayæ Evermann and Kendall, Bull. U. S. Fish Com., XVII, 1897 (Feb. 9, 1898), 127, pl. 7, fig. 4, Atchafalaya River, Melville, La.

248. Signalosa atchafalayæ vanhyningi Weed.
Near Gainesville, Fla.
Signalosa atchafalayæ vanhyningi Weed, Field Mus. Nat. Hist., Zool., XII, October, 1925, 145, Prairie Creek 6 miles southeast of Gainesville, Fla.

249. Signalosa mexicana (Günther).
New Orleans to Central America.
Chatoëssus mexicanus Günther, Cat., VII, 1868, 409, Mexico.

250. Signalosa mexicana campi Weed.
Streams about Brownsville, Tex.
Signalosa mexicana campi Weed, Field Mus. Nat. Hist., Zool., XII, October, 1925, 143, Resaca de la Guerra, near Brownsville, Tex.

251. Signalosa petenensis (Günther).
Lake Peten.
Meletta petenensis Günther, Proc. Zool. Soc. Lond., 1866, 603, Lake Peten, Yucatan.

Family 45. ENGRAULIDÆ. Anchovies

Genus 114. ENGRAULIS Cuvier. *Anchovies.*
Engraulis Cuvier, Règne Anim., ed. I, 1817, 174 (*Clupea encrasicholus* L.).
Encrasicholus Fleming, Brit. Anim., 1828, 183 (*Clupea encrasicholus* L.).

252. Engraulis mordax Girard. *California anchovy.*
Pacific coast of America, from Vancouver Island to Lower California.
Engraulis mordax Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 138, and in Pac. R. R. Surv., X, pt. 4, Fishes, 1858, 334, Shoalwater Bay, Wash.

253. Engraulis nanus Girard. *Bay anchovy.*
San Francisco Bay; not known elsewhere.
Engraulis nanus Girard, Pac. R. R. Surv., X, pt. 4, Fishes, 1858, 335, San Francisco.

Genus 115. ANCHOVIELLA[20] Fowler. *American anchovies.*
Anchoviella Fowler, Proc. Acad. Nat. Sci. Phila., LXIII, 1911, 211 (*Engraulis perfasciatus* Poey).
Anchoa Jordan and Evermann, Proc. Calif. Acad. Sci., 4th Ser., XV, April 27, 1927, 502 (*Engraulis compressus* Girard).

Subgenus ANCHOVIELLA Fowler.

254. Anchoviella perfasciata (Poey). *Grubber broadhead.*
Florida Keys to Jamaica.
Engraulis perfasciatus Poey, Memorias, II, 1861, 313, Cuba.

255. Anchoviella miarchus (Jordan and Gilbert).
Pacific coast of America, from Mazatlan to Panama.
Stolephorus miarchus Jordan and Gilbert, Proc. U. S. Nat. Mus., IV, 1881, 344, Mazatlan; perhaps a larval form.

256. Anchoviella exigua (Jordan and Gilbert).
Pacific coast of Mexico at Mazatlan.
Stolephorus exiguus Jordan and Gilbert, Proc. U. S. Nat. Mus., IV, 1881, 343, Mazatlan.

257. Anchoviella perthecata (Goode and Bean).
Pensacola, Fla.
Stolephorus perthecatus Goode and Bean, Proc. U. S. Nat. Mus., V, 1882, 434, Pensacola, Fla.

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[20] *Anchoviella* differs from *Stolephorus* Lacépède and related Old World genera in the entire absence of ventral scales. The many species cover a variety of forms; *rostralis* and *spinifer* with its relatives being perhaps generically distinct from *perfasciatus*, *epsetus*, and related forms, having many more gillrakers; these latter species constitute the subgenus *Anchova*, the others the subgenus *Anchoviella* Fowler.

258. Anchoviella epsetus (Bonnaterre). *Striped anchovy; Manjua; Anchovy fry.*
Cape Cod to Brazil.
Piquitinga Marcgrave, Hist. Brasil., 1648, 159, Brazil.
Menidia Browne, Hist. Jamaica, 1756, 441, Jamaica; nonbinomial.
Esox epsetus Bonnaterre, Tabl. Ichth., 1788, 175, Jamaica; after Browne.
Atherina brownii Gmelin, Syst. Nat., 1789, 1397, Jamaica; after Browne.
Engraulis tricolor Agassiz, in Spix, Pisc. Brasil., 1829, 51, Bahia, Pará.
Engraulis lemniscatus Cuvier, Règne Anim., ed, 2, II, 1829, 323, Brazil; after *Piquitinga* of Marcgrave.
Stolephorus hiulcus Goode and Bean, Proc. U. S. Nat. Mus., II, 1879, 343, Clearwater Harbor, Fla.; depth 5½; A, 22.

259 Anchoviella cubana (Poey). *Bocon.*
Cuba and Porto Rico.
Engraulis cubanus Poey, Synopsis, 1868, 420, Cuba.

260. Anchoviella ischana (Jordan and Gilbert).
Pacific coast of America, from Mazatlan to Panama.
Stolephorus ischanus Jordan and Gilbert, Proc. U. S. Nat. Mus., IV, 1881, 340, Mazatlan.
Stolephorus starksi Gilbert and Pierson, Fishes of Panama, in Jordan and Evermann, Fishes North and Mid. Amer., 1898, 2813, Panama.

261. Anchoviella cultrata (Gilbert).
Santa Margarita Island, Lower California.
Stolephorus cultratus Gilbert, Proc. U. S. Nat. Mus., XIV, 1891, 544, Santa Margarita Island, Lower California.

262. Anchoviella delicatissima (Girard).
San Diego Bay and southward on coast of Lower California.
Engraulis delicatissimus Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 154, and Pac. R. R. Surv., X, Pt. 4, Fishes, 1858, 335, San Diego.

263. Anchoviella helleri Hubbs.
Gulf of California.
Anchoviella helleri Hubbs, Proc. Biol. Soc., Wash., XXXIV, Mar. 31, 1921, 47, San Felipe Bay, gulf coast of Lower California.

264. Anchoviella chœrostoma (Goode). *Hogmouth fry.*
Bermuda Islands; common in Hamilton Harbor.
Engraulis chœrostomus Goode, Amer. Jour. Sci. Arts, August, 1874, 125, Bermuda.

265. Anchoviella argyrophana (Cuvier and Valenciennes).
Gulf Stream; Woods Hole, Mass.
Engraulis argyrophanus Cuvier and Valenciennes, Hist. Nat. Poiss., XXI, 1848, 49, equatorial Atlantic.
Stolephorus eurystole Swain and Meek, Proc. Acad. Nat. Sci. Phila., XXXVI, 1884, 34. Woods Hole, Mass.

266. Anchoviella curta (Jordan and Gilbert).
Mazatlan, Mexico.
Stolephorus curtus Jordan and Gilbert, Proc. U. S. Nat. Mus., IV, 1881, 343, Mazatlan, Mexico.

267. Anchoviella mitchilli (Cuvier and Valenciennes).
Cape Cod to Texas on sandy shores, entering rivers; common.
Engraulis mitchilli Cuvier and Valenciennes, Hist. Nat. Poiss., XXI, 1848, 50, New York; Carolina; Lake Ponchartrain.
Engraulus louisiana LeSueur, in Cuvier and Valenciennes, Hist. Nat. Poiss., XXI, 1848, 51, Lake Ponchartrain, La.
Engraulis duodecim Cope, Trans. Amer. Phil. Soc., 1866, 405, Beasley's Point, N. J. (dorsal fin said to be entirely anterior to the long and deeply concave anal, which is not true in *S. mitchilli;* the description otherwise agrees).

268. Anchoviella lucida (Jordan and Gilbert). Sardina.
Mazatlan, Mexico.
Stolephorus lucidus Jordan and Gilbert, Proc. U. S. Nat. Mus., IV, 1881, 341, Mazatlan.

269. Anchoviella naso (Gilbert and Pierson).
Panama; common.
Stolephorus naso Gilbert and Pierson, in Jordan and Evermann, Fishes North and Mid. Amer., 1898, 2813, Panama.

270. Anchoviella robertsi (Jordan and Rutter).
West Indies.
Stolephorus robertsi Jordan and Rutter, Proc. Acad. Nat. Sci. Phila., XLIX, 1897, 95, Jamaica.

271. Anchoviella astilbe (Jordan and Rutter).
West Indies.
Stolephorus astilbe Jordan and Rutter, Proc. Acad. Nat. Sci. Phila., XLIX, 1897, 95, Jamaica.

272. Anchoviella scofieldi (Jordan and Culver).
Astillero at Mazatlan; not very abundant.
Stolephorus scofieldi Jordan and Culver, in Jordan, Fishes of Sinaloa, Proc. Calif. Acad. Sci., 3d Ser., V, 1895, 410, Mazatlan, Mexico.

273. Anchoviella lyolepis (Evermann and Marsh).
Porto Rico.
Stolephorus lyolepis Evermann and Marsh, Bull. U. S. Fish Com., XX, 1900 (Dec. 29), 89, fig. 13, Culebra Island, Porto Rico.

274. Anchoviella branchiomelas (Eigenmann).
North coast of Colombia.
Stolephorus branchiomelas Eigenmann, Proc. Am. Phil. Soc., LVI, 1917, 682, mouth of Rio Dagua, Colombia.

275. Anchoviella arenicola (Meek and Hildebrand).
Panama.
Anchovia arenicola Meek and Hildebrand, Marine Fishes of Panama, in Field Mus. Nat. Hist., Zool., XV, 1923, 201, Pl. XIII, fig. 1, Taboga Island, Panama.

276. Anchoviella scitula (Fowler).
Coast of California; San Diego.
Anchovia scitula Fowler, Proc. Acad. Nat. Sci. Phila., LXIII, 1911, 211, fig. 2, San Diego, Calif.

277. Anchoviella parva (Meek and Hildebrand).
Colon.
Anchovia parva Meek and Hildebrand, Marine Fishes of Panama, in Field Mus. Nat. Hist., Zool., XV, 1923, 202, Pl. X, fig. 2, Porto Bello, Panama.

278. Anchoviella elongata (Meek and Hildebrand).
Canal Zone.
Anchovia elongata Meek and Hildebrand, Marine Fishes of Panama, in Field Mus. Nat. Hist., Zool., XV, 1923, 198, Pl. XII, fig. 2, Mindi Cut, Canal Zone.

279. Anchoviella cayorum (Fowler).
Florida Keys.
Anchovia chœrostoma cayorum Fowler, Proc. Acad. Nat. Sci. Phila., LVII, 1906, 85, fig. 4, Hailer's Rock, Florida Keys.

280. Anchoviella platyargyrea (Fowler).
West Indies.
Anchovia platyargyrea Fowler, Proc. Acad. Nat. Sci. Phila., LXIII, 1911, 216, fig. 4, St. Martin's, West Indies.

281. Anchoviella lepidentostole (Fowler).
Coast of Surinam.
Anchovia lepidentostole Fowler, Proc. Acad. Nat. Sci. Phila., LXIII, 1911, 214, fig. 3, Surinam.

282. Anchoviella guianensis (Eigenmann).
Coast of Guiana.
Stolephorus guianensis Eigenmann, Mem. Carnegie Mus., V, 1912, 448, Pl. LXII, fig. 5, Bartica Rocks, British Guiana; misspelled *Stoleferus* in plate.

283. Anchoviella trinitatis (Fowler).
British West Indies.
Anchovia trinitatis Fowler, Proc. Acad. Nat. Sci. Phila., LXVII, 1915, 527, fig. 3, Port of Spain, Trinidad, British West Indies.

284. Anchoviella filifera (Fowler).
British West Indies.
Anchovia filifera Fowler, Proc. Acad. Nat. Sci. Phila., LXVII, 1915, 534, fig. 2, Port of Spain, Trinidad, British West Indies.

285. Anchoviella abbotti (Fowler).
British West Indies.
Anchovia abbotti Fowler, Proc. Acad. Nat. Sci. Phila., LXVII, 1915, 522, fig. 1, Port of Spain, Trinidad, British West Indies.

Subgenus ANCHOA Jordan and Evermann.

286. Anchoviella compressa (Girard).
Point Conception to Lower California.
Engraulis compressus Girard, Pacr R. R. Surv., X, 1858, 336, San Diego.

287. Anchoviella spinifera (Cuvier and Valenciennes).
Coast of Guiana; recorded from Panama by Steindachner, probably an error.
Engraulis spinifer Cuvier and Valenciennes, Hist. Nat. Poiss., XXI, 1848, 39, Cayenne.

288. Anchoviella rastralis (Gilbert and Pierson).
Panama; abundant.
Stolephorus rastralis Gilbert and Pierson, in Jordan and Evermann, Fishes North and Mid. Amer., 1898, 2811, Panama.

289. Anchoviella mundeola (Gilbert and Pierson).
Panama; abundant.
Stolephorus mundeolus Gilbert and Pierson, in Jordan and Evermann, Fishes North and Mid. Amer., 1898, 2812, Panama.

290. Anchoviella panamensis (Steindachner).
Panama.
Engraulis panamensis Steindachner, Ichth. Beitr., IV, 1875, 39, Panama.

291. Anchoviella eigenmannia (Meek and Hildebrand).
Panama.
Anchovia eigenmannia Meek and Hildebrand, Marine Fishes of Panama, in Field Mus. Nat. Hist., Zool., XV, 1923, 20, Taboga Island, Canal Zone.

Genus 116. ANCHOVIA Jordan and Evermann.
Anchovia Jordan and Evermann, Fishes North and Mid. Amer., 1896, 449, (*Engraulis macrolepidotus* Kner and Steindachner).

292. Anchovia macrolepidota (Kner and Steindachner). *Sardina bocona.*
Gulf of Mexico to Panama.
Engraulis macrolepidotus Kner and Steindachner, Abhandl. Bayer. Akad. Wiss., X, 1864, 21, Pl. III, fig. 2, Rio Bayano, Panama.

293. Anchovia clupeoides (Swainson). *Hechudo; Grubber broadhead.*
Coast of Cuba and southward; common, ascending streams.
Engraulis clupeoides Swainson, Nat. Hist. Fish., II, 1839, 388, Pernambuco.
Stolephorus surinamensis Bleeker, Nederl. Tijdschr. Dierk., 1866, 178, Surinam.
Engraulis productus Poey, Repertorio, 1866, 380, Cuba.

Genus 117. AMPLOVA Jordan and Seale.
Amplova Jordan and Seale, Copeia, No. 141, 1925, 31 (*Stolephorus brevirostrum* Meek and Hildebrand; not *Engraulis brevirostris*, Günther, also a species of *Amplova*).

294. Amplova balboæ Jordan and Seale.
Panama.
Amplova balboæ Jordan and Seale, Copeia, No. 141, Apr. 30, 1925, 31, substitute for *Stolephorus brevirostrum* Meek and Hildebrand.

Anchovia brevirostrum Meek and Hildebrand, Field Mus. Nat. Hist., Zool., XV, 1923, Pt. I, 198, Pl. XV, fig. 1; not *Engraulis brevirostris* Günther from Brazil, also a species of *Amplova*.

Genus 118. CETENGRAULIS Günther.
Cetengraulis Günther, Cat., VII, 1868, 383 (*Engraulis edentulus* Cuvier).

295. Cetengraulis edentulus (Cuvier). *Bocon; Tarpon fry.*
West Indies to Brazil; common in Cuba.
Sprat Sloane, Hist. Jamaica, II, 1727, 282, Jamaica; after Sloane.
Engraulis edentulus Cuvier, Règne Anim., ed. 2, II, 1829, 323, Jamaica.
Engraulis brevis Poey, Repertorio, I, 1866, 379, Cuba.

296. Cetengraulis gilberti (Evermann and Marsh).
Coast of Porto Rico.
Stolephorus gilberti Evermann and Marsh, Rept. U. S. Fish Com., XXV, 1899 (Dec. 19), 352, Palo Seco near San Juan, Porto Rico.

297. Cetengraulis garmani (Evermann and Marsh). *Porto Rican anchovy.*
Porto Rico.
Stolephorus garmani Evermann and Marsh, Rept. U. S. Fish Com., XXV, 1899, (Dec. 19), 352, Puerto Real, Porto Rico.

298. Cetengraulis mysticetus (Günther).
Pacific coast of tropical America.
Engraulis mysticetus Günther, Proc. Zool. Soc. Lond., 1866, 604, Panama.
Stolephorus opercularis Jordan and Gilbert, Proc. U. S. Nat. Mus., IV, 1881, 275, Punta San Felipe, Gulf of California.

299. Cetengraulis engymen Gilbert and Pierson.
Panama Bay.
Cetengraulis engymen Gilbert and Pierson, in Jordan and Evermann, Fishes North and Mid. Amer. 1898, 2815, Panama Bay.

Genus 119. PTERENGRAULIS Günther.
Pterengraulis Günther, Cat., VII, 1868, 398, (*Clupea atherinoides* L.).

300. Pterengraulis atherinoides (Linnæus).
Coast of Guiana and Brazil; ascending rivers.
Clupea atherinoides Linnæus, Syst. Nat., ed. XII, 1766, 523, Surinam.

Genus 120. LYCENGRAULIS Günther.
Lycengraulis Günther, Cat., VII, 1868, 399 (*Engraulis grossidens* Cuvier).

301. Lycengraulis grossidens (Cuvier).
Coast of Guiana and Brazil.
Engraulis grossidens Cuvier, in Agassiz, Spix, Pisc. Brasil., 1828, 50, Rio Janeiro.
Engraulis janeiro Agassiz, loc. cit., pl. 24, fig. 1, Rio Janeiro.
Engraulis dentex Cuvier and Valenciennes, Hist. Nat. Poiss., XXI, 1848, 28, Rio Janeiro.

302. Lycengraulis poeyi (Kner and Steindachner).
Rio Bayano, Panama.
Engraulis poeyi Kner and Steindachner, Abhandl. Bayer. Akad. Wiss., X, 1864, 23, with plate; Rio Bayano.

Family 46. ALEPOCEPHALIDÆ

Genus 121. ALEPOCEPHALUS Risso.
Alepocephalus Risso, Mém. Acad. Nat. Sci. Turin, XXV, 1820, 270 (*A. rostratus* Risso).

303. Alepocephalus agassizii Goode and Bean.
Gulf Stream.
Alepocephalus agassizii Goode and Bean, Bull. Mus. Comp. Zool., X, 1883, 318, Gulf Stream.

304. Alepocephalus productus Gill.
Gulf Stream.
Alepocephalus productus Gill, Proc. U. S. Nat. Mus., VI, 1883, 256, Gulf Stream at *Albatross* station 2035 in 1,362 fathoms.

305. Alepocephalus tenebrosus Gilbert.
Santa Barbara Channel, California.
Alepocephalus tenebrosus Gilbert, Proc. U. S. Nat. Mus., XIV, 1891, 545, Santa Barbara Channel.

306. Alepocephalus asperifrons Garman.
Off Panama in deep water.
Alepocephalus asperifrons Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 291, Pl. LIX, fig. 1, Panama.

307. Alepocephalus convexifrons Garman
Off Pacific coast of Mexico, in deep water.
Alepocephalus convexifrons Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 292, Pl. LIX, fig. 2; off Pacific coast of Mexico.

308. Alepocephalus fundulus Garman.
Pacific coast of Panama, in deep water.
Alepocephalus fundulus Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 293, Pl. LVII, fig. 2; off Panama in deep water.

Genus 122. MITCHILLINA Jordan and Evermann.
Mitchillina Jordan and Evermann, Fishes North and Mid. Amer., 1896, 453, (*Alepocephalus bairdii* Goode and Bean).

309. Mitchillina bairdii (Goode and Bean).
Grand Banks of Newfoundland.
Alepocephalus bairdii Goode and Bean, Proc. U. S. Nat. Mus., II, 1879, 55, Grand Banks of Newfoundland.

Genus 123. BATHYTROCTES Günther.
Bathytroctes Günther, Ann. Mag. Nat. Hist., II, 5th ser., 1878, 249 (*B. microlepsis* Günther).

310. Bathytroctes stomias Gilbert.
Coast of Oregon.
Bathytroctes stomias Gilbert, Proc. U. S. Nat. Mus., XII, 1890, 53, coast of Oregon in 877 fathoms, *Albatross* station 3074.

311. Bathytroctes inspector Garman.
Pacific coast of Panama, in deep water.
Bathytroctes inspector Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 288, Pl. M., fig. 1; Panama.

312. Bathytroctes alveatus Garman.
Pacific coast of Panama in deep water.
Bathytroctes alveatus Garman, Mem. Mus. Comp. Zool., XXIV, 1899, Pl. LVIII, fig. 1, 287; Panama.

313. Bathytroctes alvifrons Garman.
Pacific coast of Panama in deep water.
Bathytroctes alvifrons Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 286, Pl. LVIII, figs. 2, 2a; Panama.

Genus 124. XENOGNATHUS Gilbert.
Xenognathus Gilbert, Proc. U. S. Nat. Mus., XLVIII, 1915, 311, (*X. profundorum* Gilbert).

314. Xenognathus profundorum Gilbert.
Coast of California, in deep water, 1,350 to 2,182 fathoms.
Xenognathus profundorum Gilbert, Proc. U. S. Nat. Mus., XLVIII, 1915, 311, off Santa Catalina Island, California.

Genus 125. NARCETES Alcock.
Narcetes Alcock, Ann. Mag. Nat. Hist., VI, 1890, 305 (*N. erimelas* Alcock).

315. Narcetes stomias (Gilbert).
Off Pacific coast of America, from Oregon to southern California in deep water.
Bathytroctes stomias Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 53, coast of Oregon in 877 fathoms, *Albatross* station 3074.

316. Narcetes pluriserialis Garman.
Pacific coast of Panama in deep water.
Narcetes pluriserialis Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 289, Pl. LVII, fig. 3; Panama.

Genus 126. LEPTOCHILICHTHYS Garman.
Leptochilichthys Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 284 (*L. agassizii* Garman).

317. Leptochilichthys agassizii Garman.
Pacific coast of Panama, in deep water.
Leptochilichthys agassizii Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 286, Pl. LVIII, fig. 3; off Panama.

Genus 127. PLATYTROCTES Günther.
Platytroctes Günther, Ann. Mag. Nat. Hist., II, 1878, 249 (*P. apus* Günther).

318. Platytroctes apus Günther.
Mid-Atlantic and the Arabian Sea.
Platytroctes apus Günther, Ann. Mag. Nat. Hist., II, 1878, 249, Mid-Atlantic.

Genus 128. TALISMANIA Goode and Bean.
Talismania Goode and Bean, Oceanic Ichth., 1895, 41 (*Bathytroctes homopterus* Vaillant).

319. Talismania antillarum Goode and Bean.
Caribbean Sea.
Talismania antillarum Goode and Bean, Oceanic Ichth., 1895, 44, fig. 49, *Albatross* station 2394, in Caribbean Sea, lat. 28° 38′ 30″ N., long. 87° 2′ W., 420 fathoms.

320. Talismania æquatoris Goode and Bean.
Coast of Ecuador.
Talismania æquatoris Goode and Bean, Oceanic Ichth., 1895, 44, fig. 50, off coast of Ecuador.

Genus 129. CONOCARA Goode and Bean.
Conocara Goode and Bean, Oceanic Ichth., 1895, 39 (*C. macdonaldi* Goode and Bean).

321. Conocara macdonaldi Goode and Bean.
Gulf of Mexico.
Conocara macdonaldi Goode and Bean, Oceanic Ichth., 1895, 39, fig. 48, Gulf of Mexico.

322. Conocara macroptera (Vaillant).
Deep seas, coast of Morocco to Soudan, banc d'Arguin, and from the Canaries. A specimen 8 inches in length was obtained by the *Albatross* at station 2751, lat. 16° 57′ N., long. 63° 12′ W., in 68 fathoms.
Alepocephalus macropterus Vaillant, Expéd. Sci. *Travailleur* et *Talisman*, Poissons, 1888, 150, Pl. XI, figs. 2a, 2b, 2c, coast of Morocco, Soudan, and Canaries.

Genus 130. BAJACALIFORNIA Townsend and Nichols.
Bajacalifornia Townsend and Nichols, Bull. Amer. Mus. Nat. Hist., LII, 1925, 8 (*B. burragei* Townsend and Nichols).

323. Bajacalifornia burragei Townsend and Nichols.
West coast of Lower California in deep water.
Bajacalifornia burragei Townsend and Nichols, Bull. Am. Mus. Nat. Hist., LII, 1925, 8, fig. 3, off Todos Santos Bay, Lower California, in 590 fathoms.

Genus 131. XENODERMICHTHYS Günther.
Xenodermichthys Günther, Ann. Mag. Nat. Hist., II, ser. 5, 1878, 250 (*X. nodulosus* Günther).
Aleposomus Gill, Amer. Nat., XVIII, 1884, 433 (*A. copei* Gill).

324. Xenodermichthys copei (Gill).
Gulf Stream.
Aleposomus copei Gill, Amer. Nat., XVIII, 1884, 433, Gulf Stream, lat. 37° 12′ 20″ N., long. 69° 39′ W.

Genus 132. ERICARA Gill and Townsend.
Ericara Gill and Townsend, Proc. Biol. Soc. Wash., XI, 1897, 232 (*E. salmonea* Gill and Townsend).

325. Ericara salmonea Gill and Townsend.
Bering Sea, southwest of Pribilof Islands.
Ericara salmonea Gill and Townsend, Proc. Biol. Soc. Wash., XI, 1897, 232, Bering Sea.

Genus 133. ATOPICHTHYS Garman.
Atopichthys [21] Garman, Mem., Mus. Comp. Zool., XXIV, 1899, 325 (*A. esunculus* Garman).

326. Atopichthys esunculus Garman.
Pacific coast of Mexico.
Atopichthys esunculus Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 327, Pl. LXV, figs. 2, 2a; off Acapulco, Mexico.

Suborder SALMONOIDEI

Family 47. SALMONIDÆ. Salmon; Trout

Genus 134. ONCORHYNCHUS Suckley. *Pacific salmon.*
Oncorhynchus Suckley, Ann. Lyc. Nat. Hist. N. Y., VII, 1861, 313 (*Salmo scouleri* Richardson=*Salmo gorbuscha* Walbaum).
Hypsifario Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 330 (*Salmo kennerlyi* Gill).

Subgenus. ONCORHYNCHUS Suckley.

327. Oncorhynchus gorbuscha (Walbaum). *Humpback salmon; Pink salmon, Haddo; Holia; Gorbuscha.*
Pacific coast and rivers of North America and Asia, from California northward.
Salmo gorbuscha Walbaum, Artedi Pisc. 1792, 69, Kamchatka; after Gorbuscha of Pennant and Krasheninnikof.
Salmo gibber Bloch and Schneider, Syst. Ichth., 1801, 409, Kamchatka; after Krasheninnikof.
Salmo proteus Pallas, Zoogr. Rosso-Asiat., III, 1811, 376, Bering Sea.
Salmo scouleri Richardson, Fauna Bor.-Amer., III, 1836, 158; Observatory Inlet.
Salmo tschawytschiformis Smitt, I Riksmuseeum Befintliga Salmonider, 1886, 161; Port Clarence.

328. Oncorhynchus keta (Walbaum). *Dog salmon; Hayko; Le kai salmon; Chum; Calico salmon.*
Pacific coast of America, from San Francisco to Kamchatka.
Salmo keta vel kayko Walbaum, Artedi Pisc., 1792, 72, rivers of Kamchatka; after *keta* or *kayko* of Pennant and Krasheninnikof.
Salmo lagocephalus Pallas, Zoogr. Rosso-Asiat., III, 1811, 372; Bering Sea.
?*Salmo japonicus* Pallas, loc. cit., 382, Curile Islands; Amur River.
Salmo dermatinus Richardson, Voy. *Herald*, Zool., 1854, 167; Yukon River.
Salmo consuetus Richardson, loc. cit., 168; Yukon River.
Salmo canis Suckley, Ann. Lyc. Nat. Hist. N. Y., VII, 1858, 9, and Monogr. Salmo, 101, 1861 (1874); Puget Sound.

329. Oncorhynchus kisutch (Walbaum). *Silver salmon; Kisutch; Medium red salmon; Skowitz; Hoopid salmon; Coho salmon; Bielaya ryba; Quisutsch; Tschaviche.*
From San Francisco northward, especially in Puget Sound and the Alaskan fjords; south on the Asiatic coast to Japan.
?*Salmo milktschitch* Walbaum, Artedi Pisc., 1792, 70, Bering Sea; after *milktschutsch* or *miltschitsch* of Pennant and Krasheninnikof; probably the young of *kisutch*.
Salmo kisutch Walbaum, Artedi Pisc., 1792, 70, rivers and lakes of Kamchatka; after the *kisutch* of Pennant.
?*Salmo striatus* Bloch and Schneider, Syst. Ichth., 1801, 407, Kamchatka; after *milktschitsch* of Krasheninnikof.

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[21] This name is given not as a genus, but rather as a group name of larval fishes related to the eels or to the Alepocephalidæ, commonly known as *Leptocephalus*; but *Leptocephalus morrisi* (type of *Leptocephalus*) is now known to be a young conger. A number of these larvæ (*A. sicarius, cinctus, dentatus, falcidens, acus, opichthys, cingulus, lychnus, obtusus*, and *longidens*) are described by Garman (Deep Sea Fishes), but they need not be specifically recognized here. The species called *Atopichthys esunculus* Garman, perhaps belonging to the Alepocephalidæ, has been designated as the type of this group.

Salmo kisutch Bloch and Schneider, loc. cit., 407, Kamchatka; after Pennant.
Salmo sanguinolentus Pallas, Zoogr. Rosso-Asiat., III, 1811, 379, Bering Sea.
Salmo tsuppitch Richardson, Fauna Bor.-Amer., III, 1836, 224, Columbia River.

Subgenus HYPSIFARIO Gill.

330. **Oncorhynchus nerka** (Walbaum). *Blueback salmon; Redfish; Fraser River salmon; Nerka; Sau-qui salmon; Sockeye or Sukkegh salmon; Krashnaya ryba.*
Klamath River and Rogue River to northern Alaska, Kamchatka, and Japan.
Salmo nerka Walbaum, Artedi Pisc., 1792, 71; after the *nerka* of Pennant, *narka* of Krasheninnikof; rivers and seas of Kamchatka.
Salmo lycaodon Pallas, Zoogr. Rosso-Asiat., III, 1811, 370, Okhotsk Sea, Kamchatka.
Salmo paucidens Richardson, Fauna Bor.-Amer., III, 1836, 222, Columbia River.
Salmo tapdisma Cuvier and Valenciennes, Hist. Nat. Poiss., XXI, 1848, 365, Kamchatka; on a drawing.
Salmo arabatch Cuvier and Valenciennes, loc. cit., Kamchatka; on a drawing.
Salmo melampterus Cuvier and Valenciennes, loc. cit., Kamchatka; on a drawing.
Fario aurora Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 218; Girard, Pac. R. R. Surv., X, 1858, 308, pl. 68, Astoria, Oreg.

331. **Oncorhynchus tschawytscha** (Walbaum). *Chinook salmon; Tchaviche; King salmon; Columbia River salmon; Spring salmon; Sacramento River salmon; Tyee salmon; Tschawytscha; Quinnat salmon.*
Alaska, Oregon, and California; southward to Monterey, and to northern China.
Salmo tschawytscha Walbaum, Artedi Pisc., 1792, 71, rivers of Kamchatka; after the *tschawytscha* of Krasheninnikof, Descr. Kamchatka, 1768, 178, and the *tschawytscha* of Pennant, 1792.
Salmo orientalis Pallas, Zoogr. Rosso-Asiat., III, 1811, 367, Kamchatka.
Salmo quinnat Richardson, Fauna Bor.-Amer., III, 1836, 219, Columbia River; and of many writers.
Fario argyreus Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 218, Cape Flattery; Fort Steilacoom.
Salmo confluentus Suckley, Ann. Lyc. Nat. Hist. N. Y., December, 1858, and Pacific R. R. Surv., XII, pt. 2, 1860, 334, Puyallup River near Fort Steilacoom.
Salmo cooperi Suckley, Notices New Spec. N. Amer. Salmon, New York, June, 1861, Okanogan River.
Salmo warreni Suckley, loc. cit., June, 1861, and loc. cit., 1861, 117 (1874) Fraser River, British Columbia.
Salmo richardi Suckley, loc. cit., June, 1861, and loc. cit., 1861, 117, Fraser and Skagit Rivers.

332. **Oncorhynchus kennerlyi** (Suckley).
Lakes of Oregon, Washington, Idaho, British Columbia, Alaska, and Hokkaido. A dwarf landlocked form. Probably several forms should be recognized.
Salmo kennerlyi Suckley, Ann. Lyc. Nat. Hist. N. Y., VII, 1861, 307, Lake Chiloweyuck, Washington.

Genus 135. SALMO Linnæus. *Salmon and trout.*
Salmo Linnæus, Syst. Nat., ed. X, 1758, 308 (*S. salar* Linnæus); after Artedi.
Truttæ Linnæus, loc. cit., 308 (*trutta*, etc.: "*Truttæ corpore variegato*").
Trutta Geoffroy, Descr. de 719 Plantes, etc., 1767, 719 (*Salmo trutta* Linnæus).
Fario Cuvier and Valenciennes, Hist. Nat. Poiss., XXI, 1848, 277 (*Fario argenteus*=*Salmo fario* L.).
Salar Cuvier and Valenciennes, loc. cit., 314 (*Salmo ansonii*=*Salmo fario*).
Trutta Siebold, Süswasserfische Mitteleuropas, 1863, 280 (*Salmo trutta* L.).

Subgenus SALMO Linnæus.

333. Salmo salar Linnæus. *Common Atlantic salmon.*
North Atlantic; ascending all suitable rivers in northern Europe and region north of Cape Cod; formerly abundant in the Hudson and occasional in the Delaware, its northern limit being about lat. 50° N., and southwest Greenland.
Salmo salar Linnæus, Syst. Nat., ed. X, 1758, 308, seas of Europe.
Salmo mas Walbaum, Artedi Pisc., 1792, 58, Germany; based on "Der Hakelachs" of Bloch; probably not intended as a binomial name.
Salmo gloveri Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 86, Union River, Me.

334 Salmo sebago Girard. *Landlocked salmon; Sebago salmon.*
Lakes of Maine, New Hampshire, New Brunswick, and Nova Scotia.
Salmo sebago Girard, Proc. Acad. Nat. Sci. Phila., VI, 1853, 380, Sebago Lake, Me.

335. Salmo ouananiche McCarthy. *Ouananiche; Winninish.*
Lake St. John, Saguenay River, and northward.
Salmo salar ouananiche Eugene McCarthy, Forest and Stream, March 10, 1894, 206, and in Jordan and Evermann, Fishes North and Mid. Amer., 1896, 487, Saguenay River, Canada.

336. Salmo mykiss Walbaum. *Mykiss; Somka; Kamchatka salmon trout; Muikichi.*
Kamchatka; probably not occurring in America.
Mykiss Pennant, Arctic Zool., 1792, 126, Kamchatka; after Krasheninnikof, etc.
Salmo mykiss Walbaum, Artedi Pisc., 1792, 59, Kamchatka; based on *mykiss* of Pennant.
Salmo penshinensis Pallas, Zoogr. Rosso-Asiat., III, 1811, Gulf of Penshin.
Salmo purpuratus Pallas, loc. cit., 374, Bering Sea.

337. Salmo regalis Snyder. *Royal silver trout.*
Lake Tahoe.
Salmo regalis Snyder, Bull. U. S. Bur. Fish., XXXII, 1912 (Dec. 31), 26, Lake Tahoe near Brockway, Nev.

Subgenus TRUTTA Linnæus.

338. Salmo clarkii Richardson. *Columbia River trout; Cut-throat trout.*
Coastwise streams, from Puget Sound south to Elk River, Humboldt County, California.
Salmo clarkii Richardson, Fauna Bor.-Amer., III, 1836, 225, Cathlapootl River.
Fario stellatus Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 219, Fort Steilacoom, Shoalwater Bay.
Salmo brevicauda Suckley, Ann. Lyc. Nat. Hist. N. Y., VII, 1861, 308, Puget Sound.

339. Salmo lewisi (Girard). *Yellowstone trout; Cut-throat trout.*
Snake River basin above the Shoshone Falls, through Two-Ocean Pass to the headwaters of the Yellowstone and other affluents of the upper Missouri; Yellowstone Lake.
Salar lewisi Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 219, Falls of Missouri River.
Salmo carinatus Cope, Hayden's Geol. Surv. Mont., 1871 (1872); locality unknown, probably Yellowstone River.

340. Salmo bouvieri (Bendire). *Waha Lake trout.*
Waha Lake, Washington.
Salmo purpuratus bouvieri Bendire, in Jordan and Gilbert, Synopsis, 1883, 315, Waha Lake, Wash.

341. Salmo utah Suckley. *Cut-throat trout of Utah Lake.*
Lakes and streams west of the Wasatch range, especially in Bear, Provo, Jordan, and Sevier Rivers and in Utah Lake.
Salmo utah Suckley, Monogr. Salmo, 1861 (1874), 136, Utah Lake; pale specimens from the lake.

342. Salmo gibbsii Suckley.
Middle Columbia River basin.
Fario tsuppitch Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 218, Fort Dalles, Oreg.; not of Richardson.
Salmo gibbsii Suckley, Ann. Lyc. Nat. Hist. N. Y., VII, 1858, 1, Fort Dalles; also in the Yakima, John Day, and Boise Rivers; also in the Columbia at The Dalles, Oreg.

343. Salmo henshawi Gill and Jordan. *Lake Tahoe trout; Silver trout; Truckee trout; Pyramid Lake trout.*
Basin of the post-tertiary Lake Lahontan; Lake Tahoe, Pyramid Lake, Wennemuca Lake, Webber Lake, Donner Lake, Independence Lake, Truckee River, Humboldt River, Carson River, and most streams of the eastern slope of the Sierra Nevada; also the headwaters of Feather River, west of the Sierra Nevada; probably introduced from Nevada.
Salmo henshawi Gill and Jordan, in Jordan, Man. Vert., ed. 2, 1878, 258, Lake Tahoe.

344. Salmo tahoenis (Jordan and Evermann). *Great trout of Lake Tahoe.*
Deep waters of Lake Tahoe.
Salmo clarkii tahoensis Jordan and Evermann, Fishes North and Mid. Amer., 1898, 2870, Lake Tahoe.

345. Salmo jordani (Meek). *Jordan's trout; Spotted trout of Lake Southerland.*
Lake Southerland, west of Puget Sound.
Salmo clarkii jordani Meek, Publ., Field Col. Mus., Zool., I, 1897 (1899), 229, Lake Southerland, Wash.

346. Salmo declivifrons (Meek). *Salmon trout of Lake Southerland.*
Lake Southerland, west of Puget Sound.
Salmo clarkii declivifrons Meek, Field Col. Mus., Zool., I, 1899, 230, Lake Southerland, Wash.

347. Salmo virginalis (Girard). *Rio Grande trout.*
Upper Rio Grande and southward into the mountains of Chihuahua.
Salar virginalis Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 220, Utah Creek and at Sangre de Cristo Pass, Colo.
Salmo spilurus Cope, Hayden's Geol. Surv. Mont., 1871 (1872), 470; Sangre de Cristo Pass, Colo.

348. Salmo pleuriticus Cope. *Colorado River trout.*
Colorado River basin.
Salmo pleuriticus Cope, Hayden's Geol. Surv. Mont., 1871 (1872), 471; headwaters of Green River, Wyo.

349. Salmo stomias Cope. *Greenback trout.*
Headwaters of Arkansas and Platte Rivers.
Salmo stomias Cope, Hayden's Geol. Surv. Wyo., 1870 (1871), 433; South Platte River; locality unknown.

350. Salmo macdonaldi (Jordan and Evermann). *Yellowfin trout.*
Headwaters of the Arkansas River.
Salmo mykiss macdonaldi Jordan and Evermann, Proc. U. S. Nat. Mus., XII, 1889 (January 20, 1890), 453, Twin Lakes, Colo.

351. Salmo crescentis (Jordan and Beardslee). *Blueback trout of Lake Crescent.*
Crescent Lake, Clallam County, Washington.
Salmo gairdneri crescentis Jordan and Beardslee, Proc. Calif. Acad. Sci., 2d ser., VI, 1896, 207, pl. 22, Crescent Lake, Clallam County, Wash.

352. Salmo bathœcetor Meek. *Long-headed trout of Crescent Lake.*
Deep water of Crescent Lake, Washington.
Salmo bathœcetor Meek, Field Col. Mus., Zool., I, 1899, 227, Crescent Lake, Wash.

353. Salmo beardslei (Jordan and Seale). *Speckled trout of Lake Crescent.*
Crescent Lake, Clallam County, Wash.
Salmo gairdneri beardslei Jordan and Seale, Proc. Calif. Acad. Sci., 2d Ser., VI, 1896, 209, pl. 23, Crescent Lake, Clallam County, Wash.

354. Salmo eremogenes Evermann and Nichols.
Streams of central Wash.
Salmo eremogenes Evermann and Nichols, Proc. Biol. Soc. Wash., XXII, June 25, 1909, 93, pl. 2, Crab Creek at Rocky Ford near Ritzville, Wash.

355. Salmo smaragdus Snyder. *Emerald trout.*
Truckee Basin, Nev.
Salmo smaragdus Snyder, Bull. U. S. Bur. Fish., XXXV, 1915–16 (Sept. 28, 1917), 80, fig. 9, Pyramid Lake, Nev.

356. Salmo aquilarum Snyder. *Eagle Lake trout.*
Lakes of northeastern California.
Salmo aquilarum Snyder, Bull. U. S. Bur. Fish., XXXV, 1915–16 (Sept. 28, 1917), 77, fig. 7, Eagle Lake near mouth of Pine Creek, Modoc Co., Calif.

357. Salmo irideus Gibbons. *Rainbow trout; Coast range trout.*
Coastwise mountain streams of the Coast Ranges from the northern coast of California southward to San Diego County, Calif.; entering the sea where it grows to 6 or 10 pounds, returning as a steelhead.
Salmo iridia Gibbons, Proc. Calif. Acad. Nat. Sci., I, 1855, 35, San Leandro Creek, Alameda County, Calif.
Salmo rivularis Ayres, loc. cit., 42, Martinez, Calif.; steelhead form.

358. Salmo gairdnerii Richardson. *Brook trout of western Oregon to southern Alaska; Steelhead; Salmon trout; Kamloops trout; Stit-tse.*
Southern Alaska and Puget Sound to southern Oregon; in streams of the Coast Ranges and the Cascades, descending to the sea as a "steelhead"; perhaps not separable from *Salmo irideus*. Kamloops Lake, Okanogan Lake, and other lakes tributary to Frazer River or to the upper Columbia.
Salmo gairdnerii Richardson, Fauna Bor.-Amer., III, 1836, 221, Columbia River at Fort Vancouver.
Salmo masoni Suckley, Pac. R. R. Surv., XII, part 2, 1860, 345, Cathlapootle River.
Salmo truncatus Suckley, Ann. Lyc. Nat. Hist. N. Y., VII, 1862, 3, New Dungeness, straits of Fuca.
Oncorhynchus kamloops Jordan, Forest and Stream, XXXIX, No. 19, November 10, 1892, 405, Kamloops Lake, British Columbia.

359. Salmo shasta (Jordan). *McCloud River rainbow trout; Rainbow trout of fish culturists.*
Streams of the Sierra Nevadas from Mount Shasta southward; known from McCloud River; the limits of its range not well known. Introduced into the Truckee River and many eastern streams, as well as in Europe and New Zealand.
Salmo irideus or rainbow trout of most writers and especially of fish-culturists; not *Salmo irideus* Gibbons, which is based on coastwise specimens.
Salmo gairdneri shasta Jordan, Thirteenth Biennial Rept. Calif. Fish Com., 1894, 142, with plate; McCloud River at Baird, Shasta County, Calif.

360. Salmo stonei (Jordan). *Nissuee trout; No-shee trout.*
McCloud River and upper Sacramento River.
Salmo gairdneri stonei Jordan, Thirteenth Biennial Rept. Calif. Fish Com., 1894, 142, with plate; McCloud River at Baird, Calif.; perhaps a variant of *Salmo shasta*.

361. Salmo newberrii Girard.
Klamath River.
Fario or *Salmo newberrii* Girard, Proc. Acad. Nat. Sci. Phila., X, 1858, 225; new name for fish misidentified and described as "*Salmo gairdneri* Richardson" in Pacific R. R. Survey, X, 1859, 313, Pl. LXXI, figs. 1–4, Klamath River, Oreg.

362. Salmo gilberti (Jordan). *Kern River trout.*
Kern River, Calif.
Salmo gairdneri gilberti Jordan, Thirteenth Biennial Rept. Calif. Fish Com., 1894, 143, with plate; Kern River at Soda Springs, Calif.

363. Salmo rosei Jordan and McGregor. *Rose trout.*
Certain headwaters of Kern River, Calif.
Salmo rosei Jordan, Proc. Acad. Nat. Sci. Phila., LXXVI, 1924, 19, Pl. II, Lake Culver, Calif., and neighboring lakes.

364. Salmo agua-bonita (Jordan). *Golden trout of south fork of Kern River.*
South fork of Kern River, Calif.; introduced into Cottonwood Lakes, east of Mount Whitney.
Salmo mykiss agua-bonita Jordan, Proc. U. S. Nat. Mus., XV, 1892, 481, "Volcano or Whitney Creek, California," by error; the original type came from the Cottonwood Lakes on the east side of Mount Whitney, into which the species had been introduced from the south fork of Kern River. This species does not occur in Volcano Creek nor in Whitney Creek.

365. Salmo whitei Evermann. *Golden trout of western tributaries of Kern River; Stewart White trout.*
Western tributaries of Kern River, Calif.
Salmo whitei Evermann, Bull. U. S. Bur. Fish., XXV, 1905 (May 19, 1906), 20, Pl. XVI; south fork of Kaweah River, Calif., into which the species had been transplanted from Coyote Creek, a western tributary of Kern River.

366. Salmo roosevelti Evermann. *Golden trout of Volcano Creek; Roosevelt trout; Volcano Creek trout.*
Native only to Volcano Creek, an eastern tributary of Kern River, Calif.
Salmo roosevelti Evermann, Bull. U. S. Bur. Fish., XXV, 1905 (May 19, 1906), 26, Pl. I, Volcano Creek, Kern River Basin, Calif.

367. Salmo evermanni Jordan and Grinnell. *San Bernardino trout; Evermann's trout.*
Headwaters of Santa Ana River, Calif., above the falls.
Salmo evermanni Jordan and Grinnell, Proc. Biol. Soc. Wash., XXI, 1908, 31, Pl. II, south fork of the Santa Ana River, Calif., at 8,200 feet altitude.

368. Salmo nelsoni Evermann. *Lower California trout; Nelson's trout.*
Mountain streams of northern Lower California.
Salmo nelsoni Evermann, Proc. Biol. Soc. Wash., XXI, 1908, 26, Pl. I, San Ramon River, San Pedro Martir Mountains, Lower California.

Genus 136. CRISTIVOMER Gill and Jordan. *Great Lakes trout.*
Cristivomer Gill and Jordan, in Jordan, Man. Vert., ed. 2, 1878, 356. (*Salmo namaycush* Walbaum).

369. Cristivomer namaycush (Walbaum). *Great Lakes trout; Mackinaw trout; Longue (Vermont); Togue (Maine); Namaycush; Masamacush.*
Great Lakes region and lakes of northern New York, New Hampshire, and Maine; headwaters of Columbia and Fraser Rivers; streams of Vancouver Island, and north to the Arctic Circle.
Namaycush salmon Pennant, Arctic Zool., 1792, 191, Hudson Bay.
Salmo namaycush Walbaum, Artedi Pisc., 1792, 68, Hudson Bay; based on the *Namaycush salmon* of Pennant.
Salmo pallidus Rafinesque, Amer. Month. Mag., December, 1817, 120, Lake Champlain.
Salmo amethystinus Mitchill, Jour. Acad. Nat. Sci. Phila., I, 1818, 410, Sault Ste. Marie.
Salmo confinis DeKay, N. Y. Fauna: Fishes, 1842, 238, Louis Lake, Hamilton County, N. Y.; Silver Lake, Pa.
Salmo symmetricus Prescott, Am. Jour. Sci. Arts, XI, 1851, 340, Lake Winnipiseogee, N. H.
Salmo toma Hamlin, The Togue, in Holmes, 2d Ann. Rept., Maine Fish Com., 1862, 109; lakes of Maine.
Salmo adirondacus Norris, Amer. Angler's Book, 1865, 255; Adirondack lakes.

370. Cristivomer siscowet (Agassiz). *Siscowet.*
Lake Superior, in deep water, where it feeds on the fat ciscoes; a deep-water variant of *C. namaycush.*
Salmo siscowet Agassiz, Lake Superior, 1850, 333, Lake Superior.
Salmo siskawitz Agassiz, in Herbert Frank Forester's Fish and Fishing, 1850, 112, with plate; Lake Superior.
Salmo ursinus Barnston, Rept. Fish. Canada, Lake Superior; reference uncertain.

Genus 137. SALVELINUS Richardson. *Charrs.*
Salvelini Nilsson, Prodr. Icth. Scand., 1832, 7 (*alpinus*); group name.
Salvelinus Richardson, Fauna Bor.-Amer., III, 1836, 169 (*Salmo salvelinus* L.); after Nilsson.
Baione DeKay, N. Y. Fauna: Fishes, 1842, 244 (*B. fontinalis* DeKay).
Umbla Rapp, Fische Bodensees, 1854, 32 (*Salmo umbla=alpinus* L.).

371. Salvelinus fontinalis (Mitchill). *Brook trout; Speckled trout; Eastern brook trout.*
Maine to the Saskatchewan and northward to Labrador, southward in the Alleghenies to headwaters of the Savannah, Chattahoochee, Catawba, and French Broad Rivers; largely introduced into western streams but not native west of the Mississippi except in Minnesota and Iowa. Some unnamed variants included.
Salmo fontinalis Mitchill, Trans. Lit. Phil. Soc. N. Y., I, 1815, 435, near New York City.
Salmo alleghaniensis Rafinesque, Ichth. Ohiensis, 1820, 44, brooks falling into the Allegheny and Monongahela Rivers.
Salmo nigrescens Rafinesque, Ichth. Ohiensis, 1820, 45, near the Laurel Hills, Pa.
Salmo canadensis Hamilton Smith, in Griffith's Cuvier, X, 1834, 474, Canada; dots blood red, each "in white circular spot."
Salmo hudsonicus Suckley, Ann. Lyc. Nat. Hist. N. Y., VII, 1861, 310, Hudson Bay and tributaries; Labrador; Newfoundland.

372. Salvelinus agassizii Garman. *Dublin Pond trout.*
Dublin Pond, N. H.
Salmo agassizii Garman, Nineteenth Rept., Mass. Fish Com., 1885, 20, Dublin Pond (Lake Monadnock), N. H.; Center Pond, N. H.

373. Salvelinus timagamensi Henn and Rinkenbach. *Aurora trout.*
White Pine Lake, Clearwater Lake, Timigami region, Ontario, of the St. Lawrence Basin.
Salvelinus timagamensis Henn and Rinkenbach, Ann. Carnegie Mus., XVI, 1925, 131, figs. 1, 2, and 3; White Pine Lake.

374. Salvelinus aureolus Bean. *Sunapee trout; American saibling; Golden trout of Sunapee Lake.*
Sunapee Lake, N. H.; Dan Hole Pond, Carroll County, N. H., tributary to Saco River; and Floods Pond, Otis, Me., tributary to Union River; also in Averill Pond, Vt.
Salvelinus aureolus Bean, Proc. U. S. Nat. Mus., X, 1887, 628, Sunapee Lake, N. H.

375. Salvelinus rossii (Richardson). *Ross's arctic salmon.*
Lakes of Greenland and Boothia Felix.
?*Salmo hearnei* Richardson, Franklin's First Voy. 1823, 706, and in Fauna Bor.-Amer., III, 1836, 167, Bloody Fall, Coppermine River, Lat. 67°; not certainly recognizable, description imperfect.
Salmo rossii Richardson, App., Ross's Voy., LVI, 1835; and in Fauna Bor.-Amer., III, 1836, 163, Regent's Inlet, Boothia Felix.
Salmo alipes Richardson, loc. cit., LVII, 1835, and in Fauna Bor.-Amer., III, 1836, 169, Lakes in Regent's Inlet, Boothia Felix.
Salmo nitidus Richardson, loc. cit., LVII, 1835, and Fauna Bor.-Amer., 1836, 171; Lake of Boothia Felix.

376. Salvelinus stagnalis (Fabricius). *Greenland charr.*
Waters of Greenland, Boothia, and neighboring regions.
Salmo stagnalis Fabricius, Fauna Grœnlandica, 1780, 175; Alpine ponds of Greenland; not migratory.
Salmo rivalis Fabricius, loc. cit., 176, Alpine brooks of Greenland; not entering the sea.
Salmo immaculatus H. R. Storer, Jour. Bost. Soc. Nat. Hist., VI, 1850, 364, lower St. Lawrence; Canadian "salmon trout." Name preoccupied. Sea-run forms.

377. Salvelinus naresi (Günther).
Lakes of Arctic America, Discovery Bay, and Cumberland Gulf.
Salmo naresi Günther, Proc. Zool. Soc. Lond., 1877, 476, plate, fresh-water lakes near Discovery Bay.

378. Salvelinus arcturus (Günther). *Arctic charr.*
Victoria Lake and Flœberg Beaches of Arctic America, latitude 82° 34′.
Salmo arcturus Günther, Proc. Zool. Soc. Lond., 1877, 294, Pl. XXXII, Victoria Lake, Flœberg Beach.

379. Salvelinus malma (Walbaum). *Malma trout.*
Waters of Kamchatka and Alaska, everywhere abundant; descending to the sea; apparently intergrading southward with *Salvelinus spectabilis.*
Salmo malma Walbaum, Artedi Pisc., 1792, 66, Kamchatka; based on *Malma* of Pennant.
Salmo curilus Pallas, Zoogr. Rosso-Asiat., III, 1811, 251, Curile Islands.
Salmo callaris Pallas, loc. cit., 353, Bering Sea.
Salmo lævigatus Pallas, loc. cit., 385, Curile Islands.
Salmo nummifer Cuvier and Valenciennes, Hist. Nat. Poiss., XXI, 1848, 365, Kamchatka; on a drawing by Mertens.
Salmo erythrorhychos Cuvier and Valenciennes, loc. cit., 367, Kamchatka.
Salmo tudes Cope, Proc. Amer. Phil. Soc. Phila., XIII, 1873, 24, Captains Harbor, Unalaska.
Salmo pluvius Hilgendorf, Mitth., Deutsch. Ges. Ostasiens, XI, 1876, 25; clear streams throughout Japan.

380. Salvelinus malma spectabilis (Girard). *Dolly Varden trout; Oregon charr; Bull trout; Red-spotted trout; Golet.*
Streams west of the Cascade Range, from the upper Sacramento to Montana and Alaska; in the Columbia basin as far up as Montana and Idaho.
Salmo spectabilis Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 218; Fort Dalles, Oreg.
Salmo bairdii Suckley, loc. cit., 309, tributary of Flathead River, Mont.
Salmo parkei Suckley, Ann. Lyc. Nat. Hist. N. Y., VII, 1861, 309, Kootenay River.
Salmo campbelli Suckley, loc. cit., 313, Fort Dalles, Oreg.; substitute for *spectabilis*, preoccupied in *Fario*, not in *Salmo* or *Salvelinus.*
Salmo lordii Günther, Cat., VI, 1866, 148, Skagit River; dwarf specimens.

381. Salvelinus oquassa (Girard). *Oquassa trout; Blueback trout; Quasky.*
Rangeley Lakes, western Maine.
Salmo oquassa Girard, Proc. Bost. Soc. Nat. Hist., IV, 1854, 262, Oquassa or Oquossoc Lake, Me.

382. Salvelinus marstoni (Garman). *Lac de Marbre trout; Marston trout.*
Salmo marstoni Garman, Science, July 14, 1893, Lac de Marbre, Ottawa County, Quebec.

Family 48. COREGONIDÆ. Whitefishes

Genus 138. STENODUS Richardson. *Inconnu.*
Stenodus Richardson, in Back's Narrative Arctic Land Exped., back append., 1836, 521 (*Salmo mackenzii* Richardson).

383. Stenodus mackenzii (Richardson). *Inconnu.*
Delta of MacKenzie River.
Salmo mackenzii Richardson, Franklin's Jour., 1823, 707, MacKenzie River.

Genus 139. LEUCICHTHYS Dybowski. *Lake herrings and ciscoes.*
Argyrosomus Agassiz, Lake Superior, 1850, 330 ("*clupeiformis*" of DeKay, not of Mitchill = *Salmo harengus* Rich); not of M. de la Pylaie, which is *Sciæna aquila* Cuvier.
Leucichthys Dybowski, Fische Baikal-Wassersysteme, Verk. KK. Zool.-Bot. Gesell. Wien, Bd. XXIV, 1874, 300 (*Salmo omul* Pallas).
Allosomus Jordan, Man. Vert., ed. 2, 1878, 361 (*Coregonus tullibee* Richardson).

Thrissomimus Gill, in Jordan and Evermann, Bull. U. S. Bur. Fish., XXIX, 1909 (1911), 3 (*Coregonus artedi* LeSueur).
Cisco Jordan and Evermann, Bull. U. S. Bur. Fish., XXIX, 1909 (1911), 3 (*Argyrosomus nigripinnis* Gill).

Subgenus THRISSOMIMUS Gill.

384. Leucichthys harengus (Richardson). *Saginaw Bay herring; Georgian Bay herring.*
Shallow bays of Lakes Huron and Michigan; Georgian Bay, Saginaw Bay, Green Bay, etc.
Salmo (*Coregonus*) *harengus* Richardson, Fauna Bor.-Amer., III, 1836, 210, Pl. XC, fig. 2; Georgian Bay at Penetanguishene, Ontario.
Coregonus clupeiformus Agassiz, Lake Superior, 1850, 339, the Pic; Shallow Bays, Michipicoten Island; not *clupeaformis* of Mitchill.
Coregonus albus Agassiz, loc. cit., p. 342, the Pic; not of LeSueur.

385. Leucichthys osmeriformis (Smith). *Seneca Lake herring; Seneca Lake smelt.*
Lakes of central New York, tributary to Lake Ontario.
Coregonus hoyi Bean, Proc. U. S. Nat. Mus., V, 1882, 658; not of Gill,
Coregonus osmeriformis Smith, Bull. U. S. Fish. Com., XIV, 1894, Pl. I, II, Seneca Lake, Skaneateles Lake, N. Y.

386. Leucichthys sisco (Jordan). *Cisco of Lake Tippecanoe.*
Small lakes of Wisconsin and northern Indiana.
Argyrosomus sisco Jordan, Amer. Nat., 1875, 135, Lake Tippecanoe near Warsaw, Ind.

387. Leucichthys sisco huronius (Jordan and Evermann). *Lake Huron herring; Blueback or Michigan herring.*
Lakes Huron and Michigan. The common form from which *L. sisco* is derived.
Argyrosomus huronius Jordan and Evermann, Proc. U. S. Nat. Mus., XXXVI, March 3, 1909, 167, fig. 2, Port Stanley, Ontario.

388. Leucichthys ontariensis Jordan and Evermann.
Lake Ontario and Cayuga Lake, N. Y.
Coregonus clupeiformis DeKay, New York Fauna: Fishes, 1842, 248, pl. 60, fig. 198, Lake Ontario; not *clupeaformis* of Mitchill.
Leucichthys ontariensis Jordan and Evermann, Bull. U. S. Bur. Fish., XXIX, 1909 (1911), 13, Lake Ontario and Cayuga Lake, N. Y.

389. Leucichthys lucidus (Richardson). *Great Bear Lake herring.*
Mackenzie River and tributaries; Great Bear Lake and River.
Salmo (*Coregonus*) *lucidus* Richardson, Fauna Bor.-Amer., III, 1836, 207, Pl. XC, fig. 1, with figure, Great Bear Lake.

390. Leucichthys laurettæ (Bean). *Lauretta whitefish.*
Lakes and streams of northern and western Alaska.
Coregonus laurettæ Bean, Proc. U. S. Nat. Mus., IV, 1881, 156, Point Barrow, Alaska.

391. Leucichthys alascanus (Scofield). *Arctic lake herring.*
Argyrosomus alascanus Scofield, in Jordan and Evermann, Fish. North and Mid. Amer., 1898, 2817, northern Alaska near Bering Straits.

392. Leucichthys pusillus (Bean). *Least lake herring.*
Lakes of Yukon basin and Alaska generally.
Coregonus pusillus Bean, Proc. U. S. Nat. Mus., XI, 1888, 526, Kobuk River, Alaska.

393. Leucichthys athabascæ Harper and Nichols. *Athabasca herring.*
Saskatchewan River.
Leucichthys athabascæ Harper and Nichols, Bull. Amer. Mus. Nat. Hist., XLI, 1919, 269, Saskatchewan River.

394. Leucichthys macrognathus Harper and Nichols. *Mackenzie River herring.*
Mackenzie River.
Leucichthys macrognathus Harper and Nichols, Bull. Amer. Mus. Nat. Hist., XLI, 1919, 269, Mackenzie River.

395. Leucichthys entomophagus Harper and Nichols.
Mackenzie River.
Leucichthys entomophagus Harper and Nichols, Bull. Amer. Mus. Nat. Hist., XLI, 1919, 267, Mackenzie River.

396. Leucichthys gemmifer Snyder. *Cisco of Lake Bonneville.*
Bear River Basin.
Leucichthys gemmifer Snyder, Bull. U. S. Bur. Fish., XXXVI, 1817–18 (May 7, 1919), 4, Bear Lake, near Fish Haven, Idaho.

397. Leucichthys artedi (LeSueur). *Lake herring; Erie herring; Common lake herring; Grayback.*
Lake Erie and Lake St. Clair; Lake Huron at Port Huron.
Coregonus artedi LeSueur, Jour. Acad. Nat. Sci. Phila., I, 1818, 231, Lake Erie (at Buffalo) and Niagara River (Lewiston).

398. Leucichthys artedi bisselli (Bollman). *Rawson Lake herring; Bissell's herring.*
Glacial lakes of southern Michigan once tributary to Lake Erie.
Coregonus tullibee bisselli Bollman, Bull. U. S. Fish Com., VIII, 1888, 223, Rawson Lake and Howard Lake, Mich.

399. Leucichthys eriensis (Jordan and Evermann). *Jumbo herring; Erie great herring.*
Lake Erie and Lake Huron.
Argyrosomus eriensis Jordan and Evermann, Proc. U. S. Nat. Mus., XXXVI, March 3, 1909, 165, fig. 1, Lake Erie at Port Stanley.

400. Leucichthys reighardi Koelz.
Lake Michigan.
Leucichthys reighardi Koelz, Occ. Papers, Mus. Zool. Univ. Mich., No. 146, March 22, 1924, 5; Lake Michigan 18 miles off Michigan City, Ind.

401. Leucichthys alpenæ Koelz.
Lake Michigan and Lake Huron, including Georgian Bay.
Leucichthys alpenæ Koelz, Occ. Papers, Mus. Zool. Univ. Mich., No. 146, I, March 22, 1924; Lake Michigan off Isle aux Galets.

Subgenus CISCO Jordan and Evermann.

402. Leucichthys supernas Jordan and Evermann. *Cisco of Lake Superior.*
Deep waters of Lake Superior.
Leucichthys supernas Jordan and Evermann, Bull. U. S. Bur. Fish., XXIX, 1909 (1911), 22, Lake Superior.

403. Leucichthys prognathus (H. M. Smith). *Cisco of Lake Ontario; Ontario longjaw; Bloater; Chub.*
Deep waters of Lake Ontario, in depths of 60 fathoms and more.
Coregonus prognathus Smith, Bull. U. S. Fish Com., XIV, 1894, 4, pl. 1, fig. 3, Lake Ontario at Wilson, N. Y.

404. Leucichthys johannæ (Wagner). *Lake Michigan cisco; Bloater of Lake Michigan.*
Northwestern part of Lake Huron in deep water, and also for the whole length of Lake Michigan.
Argyrosomus johannæ Wagner, Science, N. S., XXXI, No. 807, June 17, 1910, 957–958; Lake Michigan in about 25 fathoms, some 18 miles off Racine, Wis.

405. Leucichthys nigripinnis (Gill). *Blackfin of Lake Michigan.*
Deep waters of Lake Michigan and certain small lakes in Wisconsin.
Argyrosomus nigripinnis Gill, in Hoy, Trans. Wis. Acad. Sci., I, 1872, 100, Lake Michigan off Racine; name only.
Coregonus nigripinnis Jordan, Man. Vert., ed. 2, 1878, 275; description.

406. Leucichthys cyanopterus Jordan and Evermann.
Deep waters of Lake Superior.
Leucichthys cyanopterus Jordan and Evermann, Bull. U. S. Bur. Fish., XXIX, 1909 (1911), 27, fig. 13, Lake Superior, off Marquette, Mich.

407. Leucichthys hoyi (Gill). *Cisco of Lake Michigan; Kiyi; Chub; Mooneye cisco.*
Lake Michigan in deep water.
Argyrosomus hoyi Gill, in Hoy, Trans. Wis. Acad. Sci., I, 1872, 100, Lake Michigan off Racine; no description.
Argyrosomus hoyi Gill, in Jordan, Amer. Nat., March, 1875, 135, Lake Michigan off Racine, Wis.; description same specimens.

408. Leucichthys kiyi Koelz. *Kiyi; Mooneye; Waterbelly.*
Lake Michigan.
Leucichthys kiyi Koelz, Occ. Papers, Mus. Zool. Univ. Mich., No. 104, Dec. 31, 1921; Lake Michigan, 12 miles E. by S. of the mouth of Sturgeon Bay ship channel in about 60 fathoms.

409. Leucichthys birgei Wagner. *Cisco of Green Lake.*
Green Lake, Wisconsin.
Leucichthys birgei Wagner, Bull. Wis. Nat. Hist. Soc., IX, 1911, 73, Green Lake, Wis., 28 meters below the surface.

410. Leucichthys zenithicus (Jordan and Evermann). *Longjaw of Lake Superior.*
Lake Superior, in deep water; possibly in other lakes.
Argyrosomus hoyi Milner, Rept. U. S. Fish Com., II, 1872–73 (1874), 86, Lake Superior at Outer Island, Wis.; not of Gill, Hoy, or Jordan, and not original type.
Argyrosomus zenithicus Jordan and Evermann, Proc. U. S. Nat. Mus., XXXVI, March 3, 1909, 169, fig. 3, Lake Superior between Duluth and Isle Royale.

Subgenus ALLOSOMUS Jordan.

411. Leucichthys manitoulinus Jordan and Evermann. *Manitoulin tullibee.*
North channel of Lake Huron, and probably lakes of Minnesota.
Argyrosomus tullibee, Evermann and Smith, Rept. U. S. Fish Com., XX, 1894, 320, pl. 28; in part, the plate being tullibee.
Leucichthys manitoulinus Jordan and Evermann, Bull. U. S. Bur. Fish., XXIX, 1909, 31, fig. 16, Blind River, North channel, Lake Huron.

412. Leucichthys tullibee (Richardson). *Tullibee; Tulipi.*
Lake Winnipeg Basin, perhaps entering Lake Superior Basin.
Salmo (*Coregonus*) *tullibee* Richardson, Fauna Bor.-Amer., III, 1836, 201, Cumberland House, Pine Island Lake, near Lake Winnipeg.
Leucichthys nipigon Koelz, Occ. Papers Mus. Zool. Univ. Mich., No. 158, April 6, 1925; Lake Nipigon, Lake Winnipeg.

Genus 140. COREGONUS Linnæus. *Whitefishes; Lavarets.*
Coregonus Artedi, Genera Pisc., 1738, 9.
Coregoni Linnæus, Syst. Nat., Ed. X, 1758, 310 (*Salmo lavaretus* L.).
Tripteronotus Lacépède, Hist. Nat. Poiss., V, 1803, 48 (*T. hautin* Lacépède=*Salmo lavaretus* L.).
Coregonus Lacépède, loc. cit., X, 263 (*Salmo lavaretus* L.).
Coregonus Cuvier, Régne Anim. Ed. I, 1817, 162 (*thymallus, lavaretus*, etc.).

413. Coregonus clupeaformis (Mitchill). *Whitefish; Labrador whitefish; Lake Superior whitefish; Manitoba whitefish; Musquaw River whitefish; Whiting of Lake Winnepesaukee; Shad of Lake Champlain.*
Great Lakes, excepting Lake Erie; and neighboring waters.
Salmo clupeaformis Mitchill, Amer. Month. Mag., II, 1818, 321, Falls of St. Mary, northern extremity of Lake Huron.
Salmo otsego Clinton, account of the *Salmo otsego* or the Otsego bass, 1822, 1, with plate, Otsego Lake.
Coregonus labradoricus Richardson, Fauna Bor.-Amer., III, 1836, 206, Musquaw River, Labrador.
Salmo (*Coregonus*) *sapidissimus* Agassiz, Lake Superior, 1850, 344, Lake Superior.
Salmo latior Agassiz, loc. cit., 348, Lake Superior.
Coregonus neohantonius Prescott, Amer. Jour. Sci. Arts, XI, 1851, 343, Lake Winnepesaukee, N. H.
?*Coregonus richardsonii* Günther, Cat., VI, 1866, 185, Arctic America.

414. Coregonus clupeaformis albus (LeSueur). *Lake Erie whitefish; Common whitefish.*
Lake Erie and Lake St. Clair; Lake Ontario and various lakes to western New York and New Hampshire. New York; probably not separable from *Coregonus clupeaformis*, although local differences appear.
Coregonus albus LeSueur, Jour. Acad. Nat. Sci. Phila., I, 1818, 232, Lake Erie

415. Coregonus nelsonii Bean. *Humpback whitefish; Nelson's whitefish.*
Alaska, from Bristol Bay northward.
Coregonus nelsonii Bean, Proc. U. S. Nat. Mus., VII, 1884, 48, Nulato, Alaska.

Genus 141. PROSOPIUM Milner.
Prosopium Milner, in Jordan, Man. Vert., ed. 2, 1878, 361 (*Coregonus quadrilateralis* Richardson).

416. Prosopium quadrilaterale (Richardson). *Menominee whitefish; Pilotfish; Round whitefish; Shadwaiter.*
Alaska and upper Great Lakes to New England, in lakes.
Coregonus quadrilateralis Richardson, Franklin's Narrative, 1823, 714, Pl. XXV, fig. 2, Fort Enterprise, British America.
Coregonus novæ-angliæ Prescott, Amer. Jour. Sci. Arts, XI, 1851, 342, Lake Winnipesaukee, N. H.

417. Prosopium kennicotti (Milner). *Kennicott's whitefish.*
Mackenzie River, Canada; Yukon River and other streams of the Alaska region; Lake Bennett, Alaska.
Coregonus kennicotti Milner, in Jordan and Gilbert, Synopsis, 1883, 298, Fort Good Hope, British America.

418. Prosopium preblei (Harper and Nichols).
Mackenzie River, Canada.
Coregonus preblei Harper and Nichols, Bull. Amer. Mus. Nat. Hist., XLI, 1919, 266, Pl. XV, fig. 2, Mackenzie River.

419. Prosopium stanleyi (Kendall). *Stanley's whitefish.*
Lakes of northern Maine.
Coregonus stanleyi Kendall, Bull. U. S. Fish Com., XXII, 1902 (1904), 366, with figure, thoroughfare between Mud and Cross Lakes, Aroostook County, Me.

420. Prosopium williamsoni (Girard). *Rocky Mountain whitefish.*
Rivers of Sierra Nevada and west slope of the Rocky Mountains, from the Fraser and the Columbia to the Truckee and other streams of the Lahontan Basin of Nevada; abundant, especially in lakes of northern Idaho, western Montana, Washington, and Utah.
Coregonus williamsoni Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 136, Des Chutes River, Oreg.

421. Prosopium williamsoni cismontanus (Jordan). *Yellowstone whitefish.*
Streams of the Rocky Mountain region tributary to the upper Missouri.
Coregonus williamsoni cismontanus Jordan, Bull. U. S. Fish Com., IX, 1889, 49, pl. 9, figs. 8, 9, Horsethief Creek, Madison River, Mont. Hardly distinct from *P. williamsoni*.

422. Prosopium coulteri (Eigenmann and Eigenmann). *Coulter's whitefish.*
Headwaters of the Columbia.
Coregonus coulteri Eigenmann and Eigenmann, Amer. Nat., Nov., 1892, 961, Kicking Horse River at Field, British Columbia.

423. Prosopium couesi (Milner).
Headwaters of Saskatchewan River.
Coregonus couesi Milner, Rept. U. S. Fish Com., II, 1872–73 (1874), 88, Chief Mountain Lake, Mont.

424. Prosopium spilonotus (Snyder). *Bonneville whitefish.*
Bear River Basin.
Coregonus spilonotus Snyder, Bull. U. S. Bur. Fish., XXXVI, 1917–18 (May 7, 1919), 6, Bear Lake, near Fish Haven, Idaho.

425. Prosopium abyssicola (Snyder). *Bear Lake whitefish.*
Bear Lake, Idaho.
Coregonus abyssicola Snyder, Bull. U. S. Bur. Fish., XXXVI, 1917–18 (May 7, 1919), 8, Bear Lake, near Fish Haven, Idaho.

Genus 142. IRILLION Jordan.
Irillion Jordan, Proc. Acad. Nat. Sci. Phila., LXX, 1918, 342 (*Coregonus oregonius* Jordan and Snyder).

426. Irillion oregonius (Jordan and Snyder). *Chiselmouth jack.*
Mountain streams of Oregon tributary to the Columbia.
Coregonus oregonius Jordan and Snyder, Proc. U. S. Nat. Mus., XXXVI, 1911, 425, with fig., McKenzie River, Oreg.

Family 49. THYMALLIDÆ. Graylings

Genus 143. THYMALLUS Cuvier. *Graylings.*
Thymallus Cuvier, Règne Anim., ed. 2, II, 1829, 306 (*Salmo thymallus* Linnæus); not *Thymalus* Latreille, 1802, a genus of *Coleoptera.*
Choregon Minding, Lehrbuch Naturgesch. Fische, 1832, 119 (*Salmo thymallus* L.) substitute for *Thymallus*, regarded as preoccupied.
Orthocolus Gistel, Thierreich, 1848, XI, 1838 (*Salmo thymallus* L.); substitute for *Thymallus*, regarded as preoccupied.

427. Thymallus signifer (Richardson). *Arctic grayling; Poisson bleu.*
Mackenzie River to Alaska and the Arctic Ocean.
Coregonus signifer Richardson, Franklin's Jour., 1823, 711; Winter Lake near Fort Enterprise.
Coregonus thymalloides Richardson, Fauna Bor.-Amer., III, 1836. 714, Winter River.

428. Thymallus tricolor Cope. *Michigan grayling.*
Streams of northern Michigan; formerly abundant in Au Sable River, Jordan River, and other streams in the southern peninsula, and Otter Creek, near Keweenaw, in the northern peninsula.
?*Thymallus ontariensis* Cuvier and Valenciennes, Hist. Nat. Poiss., XXI, 1848, 452; said to have been brought by Milbert from Lake Ontario; most likely from Lake Geneva, Switzerland.
Thymallus tricolor Cope, Proc. Acad. Nat. Sci. Phila., XVII, 1865, 80, Au Sable River, Mich.

429. Thymallus montanus Milner. *Montana grayling.* A hardy and attractive aquarium fish.
Madison and Gallatin Rivers, Montana.
Thymallus montanus Milner, Rept. U. S. Fish Com., II, 1872–73 (1874), 741, tributary of Missouri River at Camp Baker.

Family 50. OSMERIDÆ. Smelts

Genus 144. MALLOTUS Cuvier. *Capelins.*
Mallotus Cuvier, Règne Anim., ed. 2, II, 1829, 305 (*Clupea villosa* Müller).

430. Mallotus villosus (Müller). *Capelin; Lodde.*
Arctic America, south to Cape Cod and southern Alaska; Kamchatka.
Clupea villosa Müller, Prodr. Zool. Dan., 1777, 245, Greenland.
Salmo arcticus Fabricius, Fauna Grœnlandica, 1780, 177, Greenland.
Salmo grönlandicus Bloch, Ichthyologie, VIII, 1794, pl. 99, Greenland.
Salmo socialis Pallas, Zoogr. Ross.-Asiat., III, 389, islands between Asia and America.
Osmerus microdon Cuvier and Valenciennes, Hist. Nat. Poiss., XXI, 1848, 385, no locality.

Genus 145. THALEICHTHYS Girard. *Eulachon.*
Thaleichthys Girard, Pac. R. R. Surv., X, 1858, Fishes, 325 (*T. stevensi* Girard = *Salmo* (*Mallotus*) *pacificus* Richardson).

431. Thaleichthys pacificus (Richardson). *Eulachon; Candlefish; Oolachan.*
Oregon to Alaska.
Salmo (*Mallotus*) *pacificus* Richardson, Fauna Bor.-Amer., III, 1836, 226, Columbia River.
Thaleichthys stevensi Girard, Pac. R. R. Surv., X, 1858, 325, pl. 75, figs. 1–4, Puget Sound.

432. Thaleichthys albatrossis (Jordan and Gilbert). *Kodiak smelt.*
Off Kodiak Island, Alaska.
Osmerus albatrossis Jordan and Gilbert, in Jordan and Evermann, Fishes North and Mid. Amer., 1898, 2823, Kodiak Island; probably not distinct from *Thaleichthys pacificus.*

Genus 146. SPIRINCHUS Jordan and Evermann.
Spirinchus Jordan and Evermann, Fishes North and Mid. Amer., I, 1896, 522 (*Osmerus thaleichthys* Ayres).

433. Spirinchus thaleichthys (Ayres).
Pacific coast of America from San Francisco northward to Bristol Bay, Alaska.
Osmerus thaleichthys Ayres, Proc. Calif. Acad. Nat. Sci., II, 1860, 62, San Francisco.

Genus 147. ALLOSMERUS Hubbs.
Allosmerus Hubbs, Proc. Biol. Soc. Wash., XXXVIII, 1925, 53 (*Osmerus attenuatus* Lockington).

434. Allosmerus attenuatus (Lockington).
Coast of California, from San Francisco northward.
Osmerus attenuatus Lockington, Proc. U. S. Nat. Mus., III, 1880, 66, San Francisco.

Genus 148. OSMERUS Lacépède. *Smelts.*
Osmerus Lacépède, Hist. Nat. Poiss., V, 1803, 229 (*Salmo eperlanus* L.).
Eperlanus Gaimard, Voy. Island and Grœnland, 1851 (*Salmo eperlanus* L.).

435. Osmerus dentex Steindachner. *Rainbow herring.*
Coast of Alaska and south on the Asiatic coast to northern China.
Osmerus dentex Steindachner, Sitzungsb. Kais. Akad. Wiss. Wien, LXI, 1870, 429, northern China.

436. Osmerus mordax (Mitchill). *American smelt; Icefish.*
Atlantic coast of United States, from Virginia northward to Gulf of St. Lawrence; Lakes Champlain and Memphremagog.
Atherina mordax Mitchill, Trans. Lit. Phil. Soc. N. Y., I, 1815, 446, New York.
Osmerus viridescens LeSueur, Jour. Acad. Nat. Sci. Phila., I, 1818, 230, coast of Maine.

437. Osmerus mordax spectrum (Cope). *Wilton smelt.*
Wilton Pond, Kennebec County, Me.
Osmerus spectrum Cope, Proc. Amer. Phil. Soc., XI, 1870, 490, Wilton Pond, Kennebec County, Me.

438. Osmerus mordax abbotti (Cope). *Cobessicontic smelt.*
Landlocked in Cobessicontic Lake, Kennebec County, Me.
Osmerus abbotti Cope, Proc. Amer. Phil. Soc., XI, 1870, 490, Cobessicontic Lake, Me.

439. Osmerus sergeanti [22] Norris.
New York Bay and southward.
Osmerus sergeanti Norris, Proc. Acad. Nat. Sci. Phila., XX, 1868, 93, Schuylkill River, N. J.

Genus 149. HYPOMESUS Gill. *Surf smelts.*
Mesopus [23] Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 14 (*Argentina pretiosa* Girard).
Hypomesus Gill, loc. cit., 15 (*Argentina pretiosa* Girard).

440. Hypomesus pretiosus (Girard). *Surf smelt.*
Coast of California and Oregon, from Monterey northward.
Argentina pretiosa Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 155, San Francisco.
Osmerus elongatus Ayres, Proc. Calif. Acad. Nat. Sci., I, 1854, 17, San Francisco.

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[22] The fish is *described*, but not named, in Proc. Acad. Nat. Sci. Phila., XIII, 1861, 58. It is *named* in Proc. Acad. Nat. Sci. Phila., XX, 1868, 93.
[23] *Mesopus*, a name left in type through failure to correct proof sheets. *Hypomesus* of same date, a page lower, chosen by author as name.

441. Hypomesus olidus (Pallas). *Pond smelt.*
Alaska and Kamchatka.
Salmo (*Osmerus*) *olidus* Pallas, Zoogr. Rosso.-Asiat., III, 1811, 391, lakes and rivers of Kamchatka.
?*Osmerus oligodon* Kner, Denkschr. Akad. Wiss. Wien, 1865, 185, tab. 4, fig. 1.

Genus 150. THEROBROMUS Lucas. *Ghost smelts.*
Therobromus Lucas, in Jordan and Gilbert, Fishes of Bering Sea, 1898, 440 (*T. callorhini* Lucas).

442. Therobromus callorhini Lucas. *Ghost smelt.*
Bering Sea.
Therobromus callorhini Lucas, in Jordan and Gilbert, Fishes of Bering Sea, in Jordan, Fur Seals and Fur-Seal Islands, Pt. III, 1898, 440, Bering Sea, in southern portion; known only from skeletons and bones found in the stomachs of fur seals.

Family 51. ARGENTINIDÆ. Argentines

Genus 151. ARGENTINA Linnæus. *Argentines.*
Argentina (Artedi) Linnæus, Syst. Nat., Ed. X, 1758, 315 (*A. sphyræna* L.).
Silus Reinhardt, Bemærk., Skandinav. Ichthy., 1833, 11 (*Argentina silus* Ascanius).
Acantholepis Kröyer, Danmarks Fiske, III, 1846–49, 98 (*Argentina silus* Ascanius).

443. Argentina silus Ascanius.
Northern Europe; occasionally taken on the Grand Banks and off the coast of Maine.
Argentina silus Ascanius, Icon. Rev. Nat., 1763, Pl. III, 3, 24. Norway.
Silus ascanii Reinhardt, Bemærk., Skandinav. Ichth., 1833, 11, Norway.
Argentina syrtensium Goode and Bean, Proc. U. S. Nat. Mus., I, 1878, 261, off Sable Island in 200 fathoms; from stomach of *Phycis tenuis*.

444. Argentina striata Goode and Bean.
Gulf of Mexico.
Argentina striata Goode and Bean, Oceanic Ichth., 1895, 52, fig. 62, Gulf Stream.

445. Argentina sialis Gilbert.
Coast of California.
Argentina sialis Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 56, *Albatross* station 3017 in 58 fathoms.

Genus 152. LEUROGLOSSUS Gilbert.
Leuroglossus Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 57 (*L. stilbius* Gilbert).

446. Leuroglossus stilbius Gilbert.
Coast of California, in deep water.
Leuroglossus stilbius Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 57, from *Albatross* stations 2997 and 2998 in 221 and 40 fathoms.

Family 52. MICROSTOMIDÆ

Genus 153. NANSENIA Jordan and Evermann.
Nansenia Jordan and Evermann, Fishes North and Mid. Amer., 1396, 528 (*Microstomus grœnlandica* Reinhardt).

447. Nansenia grœnlandica (Reinhardt).
Greenland.
Microstomus grœnlandica Reinhardt, Vidensk. Selsk. Naturv. Math. Afhandl., VIII, 1841, LXXIV, Greenland.

Family 53. BATHYLAGIDÆ

Genus 154. BATHYLAGUS Günther.
Bathylagus Günther, Ann. Mag. Nat. Hist., II, 1878, 248 (*B. antarcticus* Günther).

448. Bathylagus benedicti Goode and Bean.
Gulf Stream.
Bathylagus benedicti Goode and Bean, Oceanic Ichth., 1895, 55, fig. 64, Gulf Stream.

449. Bathylagus euryops Goode and Bean.
Gulf Stream.
Bathylagus euryops Goode and Bean, Oceanic Ichth., 1895, 55, fig. 63, Gulf Stream, in about lat. 40° N. and long. 70° W.

450. Bathylagus pacificus Gilbert.
Coast of Washington, in deep water.
Bathylagus pacificus Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 55, *Albatross* stations 3071 and 3074, off coast of Washington.

451. Bathylagus borealis Gilbert.
Coast of Alaska, in deep water.
Bathylagus borealis Gilbert, Rept. U. S. Fish Com., XIX, 1893 (1896), 402, north of Unalaska Island at *Albatross* station 3327 in 322 fathoms.

452. Bathylagus milleri Jordan and Gilbert.
Off coast of southern California in deep water.
Bathylagus milleri Jordan and Gilbert, in Jordan and Evermann, Fishes North and Mid. Amer., 1898, 2825, Cortez Banks, off San Diego, Calif.

Genus 155. XENOPHTHALMICHTHYS Regan.
Xenophthalmichthys Regan, Ann. Mag. Nat. Hist., ser. 9, XV, 1925, 59 (*X. danæ* Regan).

453. Xenophthalmichthys danæ Regan.
Depths of the Caribbean Sea.
Xenophthalmichthys danæ Regan, Ann. Mag. Nat. Hist., ser. 9, XV, 1925, 59, off Santa Lucia in deep water.

Suborder STOMIATIOIDEI

Family 54. STOMIATIDÆ

Genus 156. STOMIAS Cuvier.
Stomias Cuvier, Règne Anim., Ed. I, 1817, 184 (*Esox boa* Risso).

454. Stomias ferox Reinhardt.
Greenland and southward; Gulf Stream, from Bahama Channel to the Grand Banks.
Stomias ferox Reinhardt, Vidensk. Selsk. Naturv. Math. Afhandl., X, 1842, 77, Greenland.

455. Stomias affinis Günther.
Sombrero Island, West Indies.
Stomias affinis Günther, *Challenger* Rept., XXII, 1887, 205, Pl. LIV, Fig. A; Sombrero Island, West Indies.

456. Stomias colubrinus Garman.
Off Panama in deep water.
Stomias colubrinus Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 275, Pl. LVII, fig. 7, station 3360, lat. 6° 17′ N., long. 82° 5′ W. in 1,672 fathoms.

457. Stomias hexagonatus Garman.
Eastern tropical Pacific in deep water.
Stomias hexagonatus Garman, Mem. Mus. Comp. Zool., XXIV, 1899, Pl. LVI, fig. 5; various stations in the Pacific.

458. Stomias atriventer Garman.
Eastern Pacific in deep water.
Stomias atriventer Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 277, Pl. LVI, fig. 4, *Albatross* station 3433, lat. 25° 76′ 15″ N., long. 109° 48′ W., in 1,218 fathoms.

Genus 157. DACTYLOSTOMIAS Garman.
Dactylostomias Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 279 (*D. filifer* Garman).

459. Dactylostomias filifer Garman.
Off Panama in deep water.
Dactylostomias filifer Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 279, Pl. LVI, fig. 6, *Albatross* stations 3413, 3414, and 3418.

Genus 158. ZASTOMIAS Gilbert.
Zastomias Gilbert, Proc., U. S. Nat. Mus., XLVIII, 1915, 322 (*Z. scintillans* Gilbert).

460. Zastomias scintillans Gilbert.
Coast of California; Monterey Bay in deep water.
Zastomias scintillans Gilbert, Proc. U. S. Nat. Mus., XLVIII, 1915, 322, pl. 15, off Monterey Bay, Calif.

Genus 159. ECHIOSTOMA Lowe.
Echiostoma Lowe, Proc. Zool. Soc. Lond., 1843, 87 (*E. barbatum* Lowe).
Hyperchoristus Gill, Proc. U. S. Nat. Mus., VI, 1883, 256 (*H. tanneri* = *Echiostoma barbatum*).

461. Echiostoma barbatum Lowe.
Madeira; Gloucester, Mass.; and southward in the Gulf Stream to the old Bahama Channel.
Echiostoma barbatum Lowe, Proc. Zool. Soc. Lond., 1843, 88, Madeira.
Hyperchoristus tanneri Gill, Proc. U. S. Nat. Mus., VI, 1883, 256, Gulf Stream at *Albatross* station 2083, at 40° 26′ 40″ N., 60° 58′ W., in 956 fathoms.

462. Echiostoma margaritum Goode and Bean.
Middle of the Gulf of Mexico.
Echiostoma margarita Goode and Bean, Oceanic Ichth., 1895, 109, fig. 131, Gulf of Mexico.

Genus 160. GRAMMATOSTOMIAS Goode and Bean.
Grammatostomias Goode and Bean, Oceanic Ichth., 1895, 110 (*G. dentatus* Goode and Bean).

463. Grammatostomias dentatus Goode and Bean.
Gulf Stream.
Grammatostomias dentatus Goode and Bean, Oceanic Ichth., 1895, 110, fig. 133, Gulf Stream.

Genus 161. PHOTONECTES Günther.
Lucifer Döderlein, Weigmann's Archiv, 1882, 26 (*L. albipinnis* Döderlein); name preoccupied in Crustacea.
Photonectes Günther, *Challenger* Rept., XXII, 1887, 212 (*L. albipinnis* Döderlein).

464. Photonectes gracilis Goode and Bean.
Martinique.
Photonectes gracilis Goode and Bean, Oceanic Ichth., 1895, 112, fig. 137, off Martinique at *Blake* station XL in 472 fathoms.

Family 55. IDIACANTHIDÆ.

Genus 162. IDIACANTHUS Peters.
Idiacanthus Peters, Monatsber. Akad. Wiss. Berlin, 1876, 846 (*I. fasciola* Peters).
Bathyophis Günther, Ann. Mag. Nat. Hist., ser. 5, II, 1878, 181 (*B. ferox* Günther).

465. Idiacanthus ferox (Günther).
North Atlantic, nearly midway, in 2,750 fathoms.
Bathyophis ferox Günther, Ann. Mag. Nat. Hist., ser. 5, II, 1878, 181, middle of North Atlantic in 2,750 fathoms.

466. Idiacanthus antrostomus Gilbert.
Coast of southern California in deep water.
Idiacanthus antrostomus Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 54, off southern California, at *Albatross* station 2980 in 603 fathoms.

Family 56. MALACOSTEIDÆ

Genus 163. MALACOSTEUS Ayres.
Malacosteus Ayres, Jour. Bost. Soc. Nat. Hist., 1849, 53 (*M. niger* Ayres).

467. Malacosteus niger Ayres.
Open sea; Gulf Stream and southward to Barbados.
Malacosteus niger Ayres, Jour. Bost. Soc. Nat. Hist., 1849, 53, Gulf Stream, 42° N., 60° W.

Family 57. ASTRONESTHIDÆ

Genus 164. ASTRONESTHES Richardson.
Astronesthes Richardson, Ichth. Voy. *Sulphur*, 1845, 97 (*A. nigra*, Richardson).
Phænodon Lowe, Proc. Zool. Soc. Lond., XVIII, 1850, 250 (*P. ringens* Lowe).

468. Astronesthes richardsoni (Poey).
Deep waters of West Indies; Indian and Pacific Oceans.
Chauliodus richardsoni Poey, Memorias, I, 1852, 176, Cuba.

469. Astronesthes gemmifer Goode and Bean.
Gulf Stream.
Astronesthes gemmifer Goode and Bean, Oceanic Ichth., 1895, 105, fig. 124, Grand Banks, lat. 44° 25′ N., long 53° 12′ W., in 300 fathoms, in halibut stomach.

470. Astronesthes niger Richardson.
Deep waters of all seas.
Astronesthes niger Richardson, Ichth. Voy. *Sulphur*, 1845, 97, Atlantic.

Family 58. STYLOPTHALMIDÆ

Genus 165. STYLOPTHALMUS Brauer.
Stylopthalmus Brauer, Zool. Anzeiger, XXV, 1902, 298 (*S. paradoxus* Brauer).

471. Stylophthalmus paradoxus Brauer.
Open sea, north to southern California (San Pedro, W. F. Thompson).
Stylophthalmus paradoxus Brauer, Tiefseefische *Valdivia* Exped. (Zool. Anzeiger, XXV), 1902, 298; deep sea off the Cape of Good Hope and the Indian Ocean.

Family 59. CHAULIODONTIDÆ

Genus 166. CHAULIODUS Bloch and Schneider.
Chauliodus Bloch and Schneider, Syst. Ichth., 1801, 430 (*C. sloani* Bloch and Schneider).
Leptodes Swainson, Nat. Hist. Anim., II, 298 (*Chauliodes sloani* Bloch and Schneider).

472. Chauliodus sloani Bloch and Schneider.
Mediterranean and deep waters of the Atlantic; Georges Banks.
Chauliodus sloani Bloch and Schneider, Syst. Ichth., 1801, 430, Atlantic; after *Vipera marina* of Catesby.

473. Chauliodus macouni Bean.
Coast of California to British Columbia and Queen Charlotte Islands.
Chauliodus macouni Bean, Proc. U. S. Nat. Mus., XIII, 1890, 44, off Cape St. James, Queen Charlotte Islands.

474. Chauliodus barbatus Garman.
Off Pacific coast of Panama.
Chauliodus barbatus Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 271, Pl. K, figs. 2, 2a; off Panama.

Family 60. GONOSTOMIDÆ

Genus 167. GONOSTOMA Rafinesque.
Gonostoma Rafinesque, Indice, 1810, 64 (*G. denudatum* Rafinesque).

475. Gonostoma denudatum Rafinesque.
Gulf of Mexico at *Albatross* station 2665; off Morocco and Cape Verdes; Mediterranean Sea.
Gonostoma denudata Rafinesque, Indice, 1810, 65, Palermo.

Genus 168. ZAPHOTIAS Goode and Bean.
Bonapartia Goode and Bean, Oceanic Ichth. 1895, 102 (*B. pedaliota* Goode and Bean); name preoccupied.
Zaphotias Goode and Bean, in Jordan and Evermann, Fish. North and Mid. Amer., 1898, 2826 (*Bonapartia pedaliota* Goode and Bean).

476. Zaphotias pedaliotus (Goode and Bean).
Gulf Stream.
Bonapartia pedaliota Goode and Bean, Oceanic Ichth., 1895, 102, fig. 120, *Albatross* station 2642, in 25° 20′ 30″ N. Lat., 79° 58′ W. Long., depth 217 fathoms.

Genus 169. CYCLOTHONE Goode and Bean.
Cyclothone Goode and Bean, Bull. Mus. Comp. Zool., X, No. 5, 1883, 221 (*C. lusca* Goode and Bean).
Sigmops Gill, Proc. U. S. Nat. Mus., VI, 1883, 256 (*S. stigmaticus* Gill).
Neostoma Filhol, La Nature, 1884, 184 (*N. bathyphilum* Filhol).

Subgenus CYCLOTHONE Goode and Bean.

477. Cyclothone microdon (Günther).
Bermuda; Atlantic, Pacific, and Antarctic Oceans; Pacific coast from Oregon to Panama.
Gonostoma microdon Günther, Ann. Mag. Nat. Hist., II, 1878, 188, near Bermuda.
Cyclothone lusca Goode and Bean, Bull. Mus. Comp. Zool., X, No. 5, 1883, 221, Gulf Stream.

478. Cyclothone bathyphila Vaillant.
Gulf of Gascony and off the Azores; western Atlantic.
Neostoma bathyphilum Filhol, La Nature, 1884, 184; name and rough figure only.
Cyclothone bathyphila Vaillant, Expéd. Sci. *Travailleur* et *Talisman*, Poissons, 1888, 96, pl. 8, figs. 1, 1a; Gulf of Gascony, Azores.

479. Cyclothone acclinidens Garman.
Off California in deep water.
Cyclothone acclinidens Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 247, Pl. T, fig. 4; numerous stations of *Albatross* off California coast.

480. Cyclothone signata Garman.
Off Panama in deep water.
Cyclothone signata Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 246, Pl. T, fig. 3; *Albatross* station 3382, off Panama.

Subgenus SIGMOPS Gill.

481. Cyclothone elongata (Günther).
New Guinea; Banda; American coast; Gulf Stream; Indian Ocean.
Gonostoma elongatum Günther, Ann. Mag. Nat. Hist., II, 1878, 187, New Guinea; Banda.
Sigmops stigmaticus Gill, Proc. U. S. Nat. Mus., VI, 1883, 256, Gulf Stream, in 38° 19′ 26″ N., 68° 20′ 20″ W.

Genus 170. YARRELLA Goode and Bean.
Yarrella Goode and Bean, Oceanic Ichth., 1895, 103 (*Y. blackfordi* Goode and Bean).

482. Yarrella blackfordi Goode and Bean.
Gulf Stream.
Yarrella blackfordi Goode and Bean, Oceanic Ichth., 1895, 103, fig. 121, Gulf Stream at *Albatross* station 2376, in 324 fathoms.

Genus 171. LYCHNOPOLES Garman.
Lychnopoles Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 244 (*L. argenteolus* Garman).

483. Lychnopoles argenteolus Garman.
Off Panama in deep water.
Lychnopoles argenteolus Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 244, Pl. LIII, figs. 4, 4a; off Panama.

Family 61. MAUROLICIDÆ

Genus 172. MAUROLICUS Cocco.
Maurolicus Cocco, Nuovi Ann. Sci. Nat., II, 1838, 32 (*M. amethystino punctatus* Cocco).

484. Maurolicus pennanti (Walbaum). *Pearlsides.*
Open seas, widely distributed; New England coast at Nahant, Provincetown, Woods Hole, etc.
Argentina pennanti Walbaum, Artedi Pisc., 1792, 47, England; after "sheppy Argentine" of Pennant.

485. Maurolicus oculatus Garman.
Deep water off Pacific coast of Mexico.
Maurolicus oculatus Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 241, Pl. LIII, fig. 3; off Pacific coast of Mexico.

Genus 173. VINCIGUERRIA Jordan and Evermann.
Vinciguerria Jordan and Evermann, in Goode and Bean, Oceanic Ichth., 1895, 513 (*V. attenuata* Cocco).
Zalarges Jordan and Williams, in Jordan and Starks, Proc. Calif. Acad. Sci., ser. 2, V, 1895, 793 (*Z. nimbarius* Jordan and Williams).

486. Vinciguerria attenuata (Cocco).
Open Atlantic, west to the Bahama regions.
Maurolicus attenuatus Cocco, Nuovi Ann. Sci. Nat., II, 1838, 33, coast of Italy.

487. Vinciguerria lucetia (Garman).
Eastern Pacific, in deep water.
Maurolicus lucetius Garman, Deep Sea Fishes, in Mem. Mus. Comp. Zool., XXIV, 1899, 242, Pl. T, fig. 2; various *Albatross* stations, eastern Pacific.

488. Vinciguerria nimbaria (Jordan and Williams).
Open sea between Oregon and Hawaii.
Zalarges nimbarius Jordan and Williams, Proc. Calif. Acad. Sci., ser. 2, V, 1895 (1896), 793, open Pacific.

Genus 174. VALENCIENNELLUS Jordan and Evermann.
Valenciennellus Jordan and Evermann, Fishes North and Mid. Amer., 1896, 577 (*Maurolicus tripunctulatus* Esmark).

489. Valenciennelus tripunctulatus (Lütken).
Madagascar; Denmark Straits between Greenland and Iceland.
Maurolicus tripunctulatus Esmark, Christiania Vid. Selsk. Forh., 1870, 488, Madagascar.

490. Valenciennellus stellatus Garman.
Deep water off California.
Valenciennellus stellatus Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 239, Pl. LIII, fig. 2; off California coast, lat. 30° 31′ 35″ N., long. 140° 5′ 30″ W. in 300 fathoms.

Family 62. STERNOPTICHIDÆ

Genus 175. STERNOPTIX Herrmann.
Sternoptix Herrmann, Naturforscher, 2 Stück, XVI, 1781, 8 (*S. diaphana* Herrmann).
Sternoptyx, authors' amended spelling.

491. Sternoptix obscura (Garman).
Eastern Pacific in deep water.
Sternoptyx obscura Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 232, Pl. LIII, fig. 1; numerous stations in eastern Pacific in depths ranging from 421 to 1,823 fathoms.

492. Sternoptix diaphana Herrmann.
Atlantic; Gulf Stream, from Santa Cruz Island to the Grand Banks.
Sternoptix diaphana Herrmann, Naturforscher, XVI, 1781, 8, Jamaica.

Genus 176. ARGYROPELECUS Cocco.
Argyropelecus Cocco, Arch. del R. Acad. Peloritano, 1829, 146 (*A. hemigymnus* Cocco).
Pleurothyris Lowe, Hist. Fish. Madeira, 1843, 64 (*Sternoptyx olfersi* Cuvier).

493. Argyropelecus hemigymnus Cocco.
Atlantic and Mediterranean; Gulf Stream off Southern New England.
Argyropelecus hemigymnus Cocco, Arch. del R. Acad. Peloritano, 1829, 146, coast of Italy.
Sternoptyx mediterraneus Cocco, Giorn. Faro de Messina, IV, 1838, 7, coast of Italy.

494. Argyropelecus olfersi (Cuvier).
Open Atlantic; coast of Norway to Brazil and Cape of Good Hope; Grand Banks southward in the Gulf Stream.
Sternoptyx olfersi Cuvier, Règne Anim., ed. 2, II, 1829, 316, near Cape of Good Hope.
Argyropelecus durvillii Cuvier and Valenciennes, Hist. Nat. Poiss., XXII, 1849, 405, open Atlantic.

495. Argyropelecus lychnus Garman.
Western Pacific in deep water.
Argyropelecus lychnus Garman, Deep Sea Fishes, in Mem. Mus. Comp. Zool., XXIV, 1899, 234, Pl. T, fig. 1, 16; many stations in eastern Pacific.

496. Argyropelecus affinis Garman.
Tropical Atlantic in deep water.
Argyropelecus affinis Garman, Deep Sea Fishes, in Mem., Mus. Comp. Zool., XXIV, 1899, 237; sta. 2117, N. lat. 15° 24′ 40″, W. long. 63° 31′ 30″, in 683 fathoms.

Genus 177. POLYIPNUS Günther.
Polyipnus Günther, *Challenger* Rept., 1887, 170 (*P. spinosus* Günther).

497. Polyipnus laternatus Garman.
Off Barbados.
Polyipnus laternatus Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 238; *Blake* station 280, off Barbados in 221 fathoms.

498. Polyipnus spinosus Günther.
Gulf of Mexico; between the Philippines and Borneo.
Polyipnus spinosus Günther, *Challenger* Rept., XXII, 1887, 170, from the surface near the Philippine Islands.

Order O. LYOPOMI

Family 63. HALOSAURIDÆ

Genus 178. HALOSAURUS Johnson.
Halosaurus Johnson, Ann. Mag. Nat. Hist., XIV, 1863, 74 (*H. oweni* (*ovenii*) Johnson).
Halosaurichthys Alcock, loc. cit., 1889, 454, (*H. carinicauda* Alcock).

499. Halosaurus güntheri Goode and Bean.
Gulf Stream.
Halosaurus güntheri Goode and Bean, Oceanic Ichth., 1895, 131, Gulf Stream, in lat. 39° 13′ N., long. 72° 1′ W., *Albatross* station 2722.

500. Halosaurus radiatus Garman.
Off Panama in deep water.
Halosaurus radiatus Garman, Deep Sea Fishes, in Mem. Mus. Comp. Zool., XXIV, 1899, 298, Pl. LX, figs. 2, 2a, Pl. LXXXIV, figs. 3–6; several stations off Panama in depths from 259 to 511 fathoms.

501. Halosaurus attenuatus Garman.
Off Panama in deep water.
Halosaurus attenuatus Garman, Deep Sea Fishes, in Mem. Mus. Comp. Zool., XXIV, 1899, 296, Pl. LX, figs. 1, 1a, *Albatross* station 3413, lat. 2° 34′ N., long. 92° 06′ W., in 1,360 fathoms.

Genus 179. ALDROVANDIA Goode and Bean.
Aldrovandia Goode and Bean, Oceanic Ichth., 1895, 132 (*Halosaurus rostrata* Günther).
Halosauropsis Collett, Poiss. Prov. Comp. l'*Hirondelle*, Fasc. *X., Monaco, 1896, 143 (*Halosaurus macrochir*).

502. Aldrovandia rostrata (Günther).
Mid-Atlantic.
Halosaurus rostratus Günther, Ann. Mag. Nat. Hist., II, 1878, 252, Mid-Atlantic.

503. Aldrovandia macrochir (Günther).
Marion Island; *Blake* stations 308 and 325.
Halosaurus macrochir Günther, Ann. Mag. Nat. Hist., II, 1878, 251, between Cape of Good Hope and Kerguelen Island.

504. Aldrovandia goodei (Gill).
Gulf Stream, at *Albatross* stations 2037 in 1,731 fathoms; 2051 in 1,106 fathoms; 2035 in 1,362 fathoms, and 2052 in 1,098 fathoms.
Halosaurus goodei Gill, Proc. U. S. Nat. Mus., VI, 1883, 257, Gulf Stream off South Carolina.

505. Aldrovandia gracilis Goode and Bean.
Gulf Stream and Gulf of Mexico.
Aldrovandia gracilis Goode and Bean, Oceanic Ichth., 1895, 134, fig. 157, off Guadeloupe and in Gulf Stream at *Albatross* stations 2380 and 2381.

506. Aldrovandia pallida Goode and Bean.
Gulf of Mexico, in deep water.
Aldrovandia pallida Goode and Bean, Oceanic Ichth., 1895, 135, fig. 158, Gulf of Mexico, at *Albatross* station 173.

Order P. HETEROMI. Spiny eels

Family 64. LIPOGENYIDÆ

Genus 180. LIPOGENYS Goode and Bean.
Lipogenys Goode and Bean, Proc. U. S. Nat. Mus., XVII, 1894 (1895), 469 (*L. gillii* Goode and Bean).

507. Lipogenys gillii Goode and Bean
Gulf Stream.
Lipogenys gillii Goode and Bean, Proc. U. S. Nat. Mus., XVII, 1894 (1895), 469, pl. 18, fig. 3, and in Oceanic Ichth., 173, 1895, station 2742, Gulf Stream.

Family 65. NOTACANTHIDÆ

Genus 181. NOTACANTHUS Bloch.
Notacanthus Bloch, Abhandl., Böhmischen Gesellsch. Wiss., I, 1787, 278 (*N. chemnitzi* Bloch).
Acanthonotus Bloch, Ichthyologia, XII, 1797, 113 (*A. nasus* Bloch = *N. chemnitzi* Bloch).
Campylodon (Fabricius, 1798) Reinhardt, Vidensk. Selsk. Naturv. Math. Afhandl., 1838, 120 (*C. fabricii* Reinhardt).

508. Notacanthus chemnitzi Bloch.
Greenland; West Indies; Iceland; Scandinavia; South Greenland.
Notacanthus chemnitzi Bloch, Abhandl., Böhmischen Gesellsch. Wiss., I, 1787, 278, northern seas.
Notacanthus nasus Bloch, Ichthyologia, XII, 1795, 113, pl. 431, "India."
Campylodon fabricii Reinhardt, Vidensk. Selsk. Naturv. Math. Afhandl., 1838, 120, Greenland.

509. Notacanthus analis Gill.
Gulf Stream.
Notacanthus analis Gill, Proc. U. S. Nat. Mus., VI, 1883, 255, lat. 40° N., long. 69° W., *Albatross* stations 2677 in 478 fathoms and 2676 in 407 fathoms.

510. Notacanthus phasganorus Goode.
Grand Banks, Newfoundland.
Notacanthus phasganorus Goode, Proc. U. S. Nat. Mus., III, 1880, 535, Grand Banks of Newfoundland.

511. Notacanthus spinosus Garman.
Off Panama.
Notacanthus spinosus Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 301, Pl. L, figs. 4, 4a, 4b; *Albatross* stations 3384 and 3354, 322 and 458 fathoms.

Genus 182. POLYACANTHONOTUS Bleeker.
Polyacanthonotus Bleeker, Versl. Akad. Amsterdam (2), VIII, 368 (*Notacanthus rissoanus* Filippi and Verany).
Zanotacanthus Gill, Johnson's Cyclopædia, III, 1876, 883 (*Notacanthus rissoanus* Filippi and Verany).
Macdonaldia Goode and Bean, Proc. U. S. Nat. Mus., XVII, 1894 (1895), 467 (*Notacanthus rostratus* Collett).

512. Polyacanthonotus challengeri (Vaillant).
North Pacific and Bering Sea.
Notacanthus rissoanus Günther, Fishes, *Challenger*, XXII, Part LVII, Pl. LXI, fig. 13 (not of Filippi and Verany).
Notacanthus challengeri Vaillant, Expéd. Sci. *Travailleur* et *Talisman*, 1888, south of Yeddo; based on Günther's description.

513. Polyacanthonotus rostratus (Collett).
Gulf Stream.
Notacanthus rostratus Collett, Bull. Soc. Zool. France, 1889, 307, off Newfoundland, at *Albatross* station 2216 in 963 fathoms, and station 2553 in 551 fathoms.

Order Q. SYMBRANCHIA. Symbranchoid eels

Suborder HOLOSTOMI

Family 66. SYNBRANCHIDÆ

Genus 183. SYNBRANCHUS Bloch.
Synbranchus Bloch, Ichthyologia, IX, 1795, 87 (*Synbranchus marmoratus* Bloch).
Unibranchaptura Lacépède, Hist. Nat. Poiss., V, 1803, 658 (*Synbranchus marmoratus*).
Ophisternon McClelland, Calcutta Jour. Nat. Hist., V, 1845, 197 (*O. bengalensis*).
Tetrabranchus Bleeker, Nat. Tijds. Ned. Ind., II, 1862, 69 (*T. microphthalmus* McClelland).
Symbranchus of authors generally; corrected spelling.

514. Synbranchus marmoratus Bloch.
Tropical America, in streams from the Amazon northward to southern Mexico and St. Lucia; generally abundant; recorded northward from Vera Cruz, Trinidad, St. Lucia, Lake Peton, Huamuchal, Rio Chisoy, etc.
Synbranchus marmoratus Bloch, Ichthyologia, IX, 1795, 87, pl. 418, tropical America.
Synbranchus immaculatus Bloch, loc. cit., pl. 419, fig. 1.
Synbranchus transversalis Bloch and Schneider, loc. cit., 1801, 524, Guinea; after Gronow.
Unibranchapertura grisea, marmorata, immaculata, and *lineata* Lacépède, Hist. Nat. Poiss., V, 1803, 658, Surinam.
Synbranchus fuliginosus Ranzani, Nov. Com. Acad. Sci. Bonon, IV, 1840, 75, pl. 11, fig. 1, Brazil.
Muræna lumbricus Gronow, Cat. Fish., 1854, 18, Sea of Guinea.
Symobranchus vittatus Castelnau, Anim. Amer. Sud, Poiss., 84, 1855, pl. 44, fig. 3, Rio de Janeiro.

Order R. CARENCHELI. Long-necked eels

Family 67. DERICHTHYIDÆ

Genus 184. DERICHTHYS Gill.
Derichthys Gill, Amer. Nat., XVIII, 1884, 433 (*D. serpentinus* Gill).

515. Derichthys serpentinus Gill.
Gulf Stream.
Derichthys serpentinus Gill, Am. Nat., XVIII, 1884, 433, Gulf Stream at *Albatross* station 2094 in 1,022 fathoms.

Genus 185. GORGASIA Meek and Hildebrand.
Gorgasia Meek and Hildebrand, Field Mus. Nat. Hist., Zool., XV, 1923, 133 (*G. punctata* Meek and Hildebrand).

516. Gorgasia punctata Meek and Hildebrand.
Panama.
Gorgasia punctata Meek and Hildebrand, Field Mus. Nat. Hist., Zool., XV, 1923, 133, Chame Point, Panama.

Order S. APODES

Suborder ENCHELYCEPHALI

Series ANGUILLOIDEI

Family 68. ANGUILLIDÆ. True eels

Genus 186. ANGUILLA Shaw. *Eels.*
Anguilla Shaw, Gen. Zool., IV, 1803, 15 (*A. anguilla*).
Muræna Bleeker, Poey, etc. (taking as type *Muræna anguilla*, the first species mentioned by Artedi under *Muræna*).
Tribranchus (Peters) Müller, Abhandl., Akad. Wiss. Berlin, 1844 (*T. anguillaris* Peters = *Anguilla australis* Rich).

517. Anguilla rostrata (LeSueur). *American eel; Fresh-water eel.*
Atlantic coast of the United States; very abundant from Maine to Mexico, ascending all rivers south of Canada and east of the Rocky Mountains, individuals sometimes resident throughout the Mississippi Valley; common in the West Indies.
Muræna rostrata LeSueur, Jour. Acad. Nat. Sci. Phila., 1817, 81, Cayuga Lake.
Muræna bostonensis LeSueur, loc. cit., 81, Boston.
Muræna serpentina LeSueur, loc. cit., 82, Newport, R. I.
Muræna macrocephala LeSueur, loc. cit., 82, Saratoga, N. Y.
Muræna argentea LeSueur, loc. cit., 82, Boston Bay.
Anguilla chrysypa Rafinesque, Amer. Month. Mag. and Crit. Rev., 1817, 120, Lake George; Hudson River; Lake Champlain.
Anguilla blephura Rafinesque, loc. cit., 120, Long Island.
Anguilla laticauda Rafinesque, loc. cit., 445, Ohio River.
Anguilla aterrima Rafinesque, Ichth. Ohiensis, 1820, 78, Tennessee and Cumberland Rivers.
Anguilla xanthomelas Rafinesque, loc. cit., 78, Ohio River.
Anguilla lutea Rafinesque, loc. cit., 78, Ohio River.
Anguilla tenuirostris DeKay, N. Y. Fauna: Fishes, 1842, 310, New York.
Anguilla novæorleansis Kaup, Apodal Fishes, 1856, 43, fig. 33, New Orleans, La.
Anguilla punctatissima Kaup, loc. cit., 44, Niagara River.
Anguilla cubana Kaup, loc. cit., 44, Cuba.
Anguilla novæterræ Kaup, loc. cit., 45, fig. 35, Newfoundland.
Anguilla texana Kaup, loc. cit., 45, fig. 36, Texas.
Anguilla wabashensis Kaup, loc. cit., 46, Wabash River.
Anguilla tyrannus Girard, U. S. Mex. Bound. Surv., Ichth., 1859, 75, Rio Grande.

Family 69. SIMENCHELYIDÆ. Snub-nosed eels

Genus 187. SIMENCHELYS Gill.

Simenchelys Gill, in Goode and Bean, Bull. Essex Inst., 1879, 27 (*S. parasiticus* Gill).

Conchognathus Collett, Bull. Soc. Zool. France, 1889, 123 (*C. grimaldii* Collett).

518. Simenchelys parasiticus Gill.

Offshore banks, in deep water, south of Newfoundland; also recorded from the Azores.

Simenchelys parasiticus Gill, in Goode and Bean, Bull. Essex Inst., 1879, 27, Newfoundland banks.

Conchognathus grimaldii Collett, Bull. Soc. Zool. France, 1889, 122, Azores.

Family 70. SYNAPHOBRANCHIDÆ

Genus 188. SYNAPHOBRANCHUS Johnson.

Synaphobranchus Johnson, Proc. Zool. Soc. Lond., 1862, 169 (*S. kaupii* Johnson = *Muræna pinnata* Gronow).

519. Synaphobranchus pinnatus (Gronow).

North Atlantic and western Pacific; common about the Madeiras, Canaries, etc., and also about the banks of Newfoundland.

Muræna pinnata Gronow, Cat. Fish., 1854, 19, locality unknown.

Synaphobranchus kaupii Johnson, Proc. Zool. Zoc. Lond., 1862, 169, Madeira.

Genus 189. HISTIOBRANCHUS Gill.

Histiobranchus Gill, Proc. U. S. Nat. Mus., VI, 1883, 255 (*H. infernalis* Gill).

520. Histiobranchus bathybius (Günther).

Northern and western Pacific in deep water; Bering Strait; off Japan and off Cape of Good Hope; one specimen obtained by Doctor Gilbert in Bering Sea in 1890.

Synaphobranchus bathybius Günther, Ann. Mag. Nat. Hist., XX, 1877, 445, and in Voy. *Challenger*, 254, Pl. LXII, fig. 6, 1887, off Yeddo; North Pacific; Kerguelen Island.

521. Histiobranchus infernalis Gill.

Gulf Stream.

Histiobranchus infernalis Gill, Proc. U. S. Nat. Mus., VI, 1883, 255, Gulf Stream, at *Albatross* station 2037, 38° 30′ N., 69° W., in 1,731 fathoms.

Family 71. ILYOPHIDÆ. Ooze eels

Genus 190. ILYOPHIS Gilbert.

Ilyophis Gilbert, Proc. U. S. Nat. Mus., XIV, 1891, 351 (*I. brunneus* Gilbert).

522. Ilyophis brunneus Gilbert.

One specimen from Chatham Island, Galapagos Archipelago, in 634 fathoms.

Ilyophis brunneus Gilbert, Proc. U. S. Nat. Mus., XIV, 1891, 352, Chatham Island, Galapagos Archipelago, at *Albatross* station 2808 in 654 fathoms.

Family 72. MURÆNESOCIDÆ

Genus 191. MURÆNESOX McClelland.

Murænesox McClelland, Calcutta Jour. Nat. Hist., V, 1844, 408 (*M. tricuspidata* McClelland).

Branchyconger Bleeker, Nederl. Tijdschr. Dierk., II, 1865, 236 (*Muræna savanna* Cuvier).

523. Murænesox savanna (Cuvier).

Cuba to Rio Janeiro, not common; occasional in the Mediterranean Sea.

Muræna savanna Cuvier, Règne Anim., ed. 2, II, 1829, 350, Martinique.

Conger brasiliensis Ranzani, De Novis Spec. Pisc. Diss. Prima., IV, 1838, 17, pl. 13, fig. 1, Brazil.

Congrus curvidens Richardson, Voy. *Erebus* and *Terror*, 1844, 111, no locality.

Conger limbatus Castelnau, Anim. Amér. Sud, 1855, 83, pl. 43, fig. 3, Rio Janeiro.

524. Muræneso x coniceps Jordan and Gilbert.
Cape San Lucas to the coast of Colombia; generally common.
Muræneso x coniceps Jordan and Gilbert, Proc. U. S. Nat. Mus., IV, 1881, 348, Mazatlan, Mexico.

Family 73. CONGRIDÆ (LEPTOCEPHALIDÆ). Conger eels

Genus 192. CONGER Cuvier. *Conger eels.*

a. Adult forms (*Conger*):
Conger Cuvier, Oken, in Règne Anim., Ed. I, 1817, 231 ("Les Congres" Cuvier, Oken, 1182) (*Muræna conger* Linnæus).
Congrus Richardson, Voy. *Erebus* and *Terror*, 1844, 107 (*Muræna conger* Linnæus).

b. Larval forms (*Leptocephali*):
Leptocephalus Scopoli, Int. Hist. Nat., 1777, 453 (*L. morrisi* Gmelin).
Oxyurus Rafinesque, Caratteri, 1810, 19 (*O. vermiformis* Lacépède).
Helmictis Rafinesque, Indice, 1810, 62.
Helmichthys Costa, Fauna Napoli, Pesci, tavoli 31, 1854 (*H. diaphanus* Costa).
? *Leptocephalichthys* Bleeker, Act. Soc. Sci. Indo-Neder., I, 69 (*L. hypselosoma* Bleeker, a larval form allied to *Conger*).
? *Diaphanichthys* Peters, Sitzungsb., Akad. Wiss. Berlin, 1864, 399 (*D. brevicaudus* Peters); larva allied to *Conger*.

525. Conger conger (Linnæus). *Conger eel.*
Atlantic Ocean; generally common on both coasts, from Cape Cod to Brazil, also on coasts of Asia and Africa.

a. Adult forms:
Muræna supremo marginæ pinnæ dorsalis nigro Artedi, Synon., 40, 1738, 2, Mediterranean.
Muræna conger Linnæus, Syst. Nat., ed. X, 1758, 245; based on Artedi.
Muræna nigra Risso, Ichth. Nice, 1810, 93 (black variety), Nice.
Anguilla oceanica Mitchill, Jour. Acad. Nat. Sci. Phila., 1818, 407, off New York.
Conger verus Risso, Europ. Mérid., III, 1826, 201, Nice.
Conger vulgaris Cuvier, Règne Anim., ed. 2, II, 1829, 350, France.
Conger rubescens Ranzani, De Novis Spec. Pisc. Diss. Prima, 1838, 19, Pl. V, fig. 5, Mediterranean.
Ophisoma obtusa Swainson, Nat. Hist. Fish., Reptiles, and Amphib., II, 1839, 395, Sicily.
Conger orbignyanus Valenciennes, D'Orbigny, Voy. Am. Merid., Poiss., 1839, pl. 12, 1, South America.
Conger verreauxi Kaup, Apodal Fishes, 1856, 115, no locality.
Conger esculentus Poey, Memorias, II, 1861, 346, Cuba.

b. Larval forms:
Leptocephalus morrisi Gmelin, Syst. Nat., 1150, 1877, Holyhead, England.
Ophidium pellucidum Couch, Lond. Mag. Nat. Hist., V, 1832, 3113, 742, England.
Leptocephalus gracilis Storer, Mem. Amer. Acad., II, 1839, 524, Massachusetts.
Leptocephalus spallanzani, candidissimus, etc., of European writers.

526. Conger caudilimbatus (Poey).
Tropical parts of Atlantic; Pensacola to Cuba and Madeira.
Echelus caudilimbatus Poey, Repertorio, II, 1867, 249, Cuba.
Conger macrops Günther, Cat., VIII, 1870, 40, Madeira, Bahamas.
Conger caudicula Bean, Proc. U. S. Nat. Mus., V, 1882, 435, Pensacola.

Genus 193. ARIOSOMA Swainson.
Ariosoma Swainson, Nat. Hist. Fish., I, 1838, 220; II, 1839, 195 (no type named, logotype as restricted by Bleeker and by Swainson *Ophisoma acuta* Swainson = *Muræna balearica* De la Roche).
Ophisoma Swainson, loc. cit., 1839; *Ophisoma acuta* Swainson; substitute for *Ariosoma*; the name preoccupied.
Congermuræna Kaup, Apodal Fishes, 1856, 71 (108) (*Muræna balearica* De la Roche, as restricted by Bleeker).
Congrellus Ogilby, Proc. Linn. Soc. New South Wales, XXIII, 1898, 288 (*Muræna balearica* De la Roche).

527. Ariosoma opisthopthalma (Ranzani).
West Indies to Brazil.
Conger opisthopthalmus Ranzani, De Novis Spec. Pisc. Diss. Prima, 1838, 16, Pl. V, fig. 1, Bahia.
Conger microstomus Castelnau, Anim. Amér. Sud, 1855, 83, pl. 42, fig. 4, Rio Janeiro.
Conger analis Poey, Memorias, II, 1861, 318, Habana.
Conger impressus Poey, loc. cit., 318, Cuba.

528. Ariosoma gilberti (Ogilby).
Panama; probably also at the Galapagos and Cape San Lucas.
Ophisoma balearicum Gilbert, Proc. U. S. Nat. Mus., XIV, 1891, 349, *Albatross* station 2797, Panama Bay, 33 fathoms; not of De la Roche.
Congrellus gilberti Ogilby, Proc. Linn. Soc. New South Wales, 1898, 288, after Gilbert.

529. Ariosoma caudale (Garman).
Off Panama in deep water.
Congermuræna caudalis Garman, Mus. Comp. Zool., XXIV, 1899, 305; *Albatross* station 3354, lat. 7° 9′ 45″ N., long. 80° 50′ W., in 322 fathoms.

Genus 194. ANAGO[24] **Jordan and Hubbs.**
Anago Jordan and Hubbs, Mem. Carnegie Mus., X, 1925, 191 (*Conger anago* Schlegel).

530. Anago nitens (Jordan and Bollman).
One specimen dredged at *Albatross* station 2801, off Panama, 8° 47′ N., 79° 29′ 30″ W., in 14 fathoms.
Ophisoma nitens Jordan and Bollman, Proc. U. S. Nat. Mus., XII, 1889, 153, Panama.

531. Anago macrurus (Gilbert).
Gulf of California.
Ophisoma macrurum Gilbert, Proc. U. S. Nat. Mus., XIV, 1891, 351, Gulf of California, at *Albatross* station 3105.

Genus 195. HILDEBRANDIA Jordan and Evermann.
Hildebrandia Jordan and Evermann, Proc. Calif. Acad. Sci., 4th Ser., XVI, Apr. 27, 1927, 502 (*Congermuræna flava* Goode and Bean).

532. Hildebrandia flava (Goode and Bean).
Albatross stations 2121 and 2122 in 31 and 34 fathoms; station 2402 in 111 fathoms; also *Blake* station 264 in 84 fathoms; Gulf Stream.
Congermuræna flava Goode and Bean, Oceanic Ichth., 1895, 138, fig. 159, Gulf Stream.

Genus 196. GNATHOPHIS Kaup.
Gnathophis Kaup, Abhandl., Natur. Verein Hamburg, 1859 (1860), IV, Abth. 2, 7 (*G. heterognathus* Kaup); teeth blunt.

533. Gnathophis guppii (Norman).
West Indies.
Congromuræna guppii Norman, Ann. Mag. Nat. Hist., ser. 9, XV, 1925, 313, Tobago.

534. Gnathophis proriger (Gilbert).
Panama to Ecuador.
Ophisoma prorigerum Gilbert, Proc. U. S. Nat. Mus., XIV, 1891, 350, coast of Ecuador, at *Albatross* station 2792 in 401 fathoms; also at station 2799, near Panama.

Genus 197. CONGROSOMA Garman.
Congrosoma Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 308 (*Congrosoma evermanni* Garman).

535. Congrosoma evermanni Garman.
Off Panama.
Congrosoma evermanni Garman, Mem. Mus. Comp. Zool., XXIV, 1899, Pl. LXII, fig. 1, *Albatross* station 3355, lat. 7° 12′ 20″ N., long. 80° 55′ W. in 182 fathoms.

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[24] The shore species named below may not, any of them, belong to Anago or, in fact, to the same genus. They seem nearer the Japanese form *Anago* than to *Ariosoma*.

Genus 198. UROCONGER Kaup.
Uroconger Kaup, Apodal Fishes, 1856, 110 (*U. lepturus* Kaup).

536. Uroconger vicinus Vaillant.
Deep waters off the coast of northern Africa; a young individual taken by the *Albatross* at station 2161 in 146 fathoms.
Uroconger vicinus Vaillant, Expéd. Sci. *Travailleur* et *Talisman*, 188 ;, 86, Pl. VI, fig. 1, Banc d'Arguin, off Soudan, off Cape Verde Islands.

537. Uroconger varidens Garman.
Off Panama in deep water.
Uroconger varidens Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 304, Pl. LXI, fig. 1, *Albatross* stations 3396 and 3357 in 259 and 782 fathoms.

Genus 199. MICROCONGER Fowler.
Microconger Fowler, Proc. Acad. Nat. Sci. Phila., LXIV, 1912, 9 (*Leptocephalus caudalis* Fowler).

538. Microconger caudalis (Fowler).
Coast of Lower California.
Leptocephalus (*Microconger*) *caudalis* Fowler, Proc. Acad. Nat. Sci. Phila., LXIV, 1912, 9; off Lower California.

Genus 200. MAYERINA Silvester.
Mayerina Silvester, Carnegie Inst. Year Book, XIV, 1915, 214 (*Mayerina mayeri* Silvester).

539. Mayerina mayeri Silvester.
Porto Rico.
Mayerina mayeri Silvester, Carnegie Inst. Year Book, XIV, 1915, 214, Porto Rico.

Genus 201. XENOMYSTAX Gilbert.
Xenomystax Gilbert, Proc. U. S. Nat. Mus., XIV, 1891, 348 (*X. atrarius* Gilbert).

540. Xenomystax atrarius Gilbert.
Coast of Ecuador.
Xenomystax atrarius Gilbert, Proc. U. S. Nat. Mus., XIV, 1891, 348, 1° S., 81° W., at *Albatross* station 2792 in 401 fathoms.

541. Xenomystax rictus Garman.
Off Panama.
Xenomystax rictus Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 315, Pl. N, several *Albatross* stations (3384, 3394, 3354, 3404, 3417) in from 322 to 511 fathoms.

Genus 202. HOPLUNNIS Kaup.
Hoplunnis Kaup, Aalen. Fische Hamburg Mus., 1860, 19 (*H. schmidtii* Kaup).

542. Hoplunnis schmidtii Kaup.
Caribbean Sea at Puerto Cabello, near Aspinwall; Colon.
Hoplunnis schmidtii Kaup, Aalen. Fische Hamburg Mus., 1859, 19, pl. 2, fig. 4, Puerto Cabello, near Aspinwall, Colon.

543. Hoplunnis diomedianus Goode and Bean.
A single individual obtained by the *Albatross* in the Gulf of Mexico.
Hoplunnis diomedianus Goode and Bean, Oceanic Ichth., 146, 1895, fig. 163, Gulf of Mexico, *Albatross* station 2402, 28° 36′ N., 86° 50′ W., 111 fathoms.

Genus 203. NEOCONGER Girard.
Neoconger Girard, Proc. Acad. Nat. Sci. Phila., X, 1858 (1859), 171 (*N. mucronatus* Girard).

544. Neoconger mucronatus Girard.
Coast of Texas.
Neoconger mucronatus Girard, Proc. Acad. Nat. Sci. Phila., X, 1858 (1859), 171, St. Joseph Island, Texas.

545. Neoconger vermiformis Gilbert.
Lower California to Panama
Neoconger vermiformis Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 57, off Lower California, at *Albatross* station 3035 in about 30 fathoms.

Genus 204. LEPTOCONGER Poey.
Leptoconger Poey, Anal. Soc. Española Hist. Nat., Madrid, 1880, 250 (*L. perlongus* Poey).

546. Leptoconger perlongus (Poey).
Matanzas, Cuba.
Neoconger perlongus Poey, Ann. Lyc. Nat. Hist. N. Y., XI, 1874, 67, pl. 9, figs. 3 and 4, Matanzas, Cuba.

Family 74. NETTASTOMIDÆ. Duckbill eels; Sorcerers

Genus 205. CHLOPSIS Rafinesque.
Chlopsis Rafinesque, Indice, 1810, 58 (*C. bicolor* Rafinesque).
Saurenchelys Peters, Sitzungsb. Akad. Wiss. Berlin, 1864, 397 (*S. cancrivora* Peters).

547. Chlopsis equatorialis Gilbert.
Coast of Ecuador.
Chlopsis equatorialis Gilbert, Proc. U. S. Nat. Mus., XIV, 1891, 347, off coast of Ecuador, 1° S., 81° W., at *Albatross* station 2792 in 401 fathoms.

548. Chlopsis gilberti Garman.
Off Panama and San Diego.
Chlopsis gilbertii Garman, Mem. Mus. Comp. Zool., XXIV, 1899, Pl. LXII, fig. 2, various stations of the *Albatross*, from 322 to 511 fathoms.

Genus 206. VENEFICA Jordan and Davis.
Venefica Jordan and Davis, Rept. U. S. Fish Com., XVI, 1888, 651 (*Nettastoma procerum* Goode and Bean).

549. Venefica procera (Goode and Bean).
Gulf Stream; also taken off San Pedro, Calif.
Nettastoma procerum Goode and Bean, Bull. Mus. Comp. Zool., X, 1883, 224, Gulf Stream, at *Albatross* station 325.

550. Venefica ocella Garman.
Off Panama in deep water.
Venefica ocella Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 318, Pl. LXI, fig. 2, *Albatross* station 3366, lat. 5° 30′ N., long. 86° 45′ W., in 1,067 fathoms.

551. Venefica tentaculata Garman.
Off Panama in deep water; San Diego.
Venefica tentaculata Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 319, Pl. M, fig. 2, various *Albatross* stations at depths ranging from 770 to 978 fathoms.

Genus 207. TÆNIOCONGER Herre.
Tænioconger Herre, Philippine Jour. Sci., XXIII, No. 2, August, 1923, 152 (*T. chapmani* Herre).

552. Tænioconger digueti Pellegrin.
Gulf of California.
Tænioconger digueti Pellegrin, Compt. Rend. Acad. Sci. Paris, CLXXVII, 1923, 789, near Island of Espiritu Santo, Gulf of California.

Family 75. ECHELIDÆ. Worm eels

Genus 208. AHLIA Jordan and Davis.
Ahlia Jordan and Davis, Rept. U. S. Fish Com., XVI, 1888, 639 (*Myrophis egmontis* Jordan).

553. Ahlia egmontis (Jordan).
Florida Keys.
Myrophis egmontis Jordan, Proc. Acad. Nat. Sci. Phila., XXXVI, 1884, 44, Egmont Key, Fla.

Genus 209. MYROPHIS Lütken.
Myrophis Lütken, Vid. Med. Naturh. Foren. Kjøbenhavn, 1, 1851 (*M. punctatus* Lütken).

554. Myrophis punctatus Lütken.
West Indies; coast of Texas to Surinam; common along our Gulf coast.
Myrophis punctatus Lütken, Vid. Med. Naturh. Foren. Kjøbenhavn, 1, 1851, 9, West Indies.
Myrophis microstigmius Poey, Repertorio, II, 1867, 250, Cuba.
Myrophis lumbricus Jordan and Gilbert, Proc. U. S. Nat. Mus., V, 1882, 261, Galveston, Tex.

555. Myrophis vafer Jordan and Gilbert.
Pacific coast of tropical America, from Guaymas to Panama.
Myrophis vafer Jordan and Gilbert, Proc. U. S. Nat. Mus., V, 1882, 645, Panama.

Genus 210. CHILORHINUS Lütken.
Chilorhinus Lütken, Vid. Med. Naturh. Foren. Kjøbenhavn, 1, 1851 (*C. suensonii* Lütken).

556. Chilorhinus suensonii Lütken.
St. Croix, West Indies.
Chilorhinus suensonii Lütken, Vid. Med. Naturh. Foren. Kjøbenhavn, 1, 1851, St. Croix.

Family 76. NEMICHTHYIDÆ. Thread eels; Snipe eels

Genus 211. NEMICHTHYS Richardson.
Nemichthys Richardson, Voy. *Samarang*, 1848, 25 (*N. scolopaceus* Richardson).
Leptorhynchus Lowe, Ann. Mag. Nat. Hist., X, 1852, 54 (*L. leuchtenbergi* Lowe); preoccupied.
Belonopsis Brandt, Mem. Acad. Sci. St. Petersb., Savans Etrangères, 1854, 174 (*Leptorhynchus leuchtenbergi* Lowe).

557. Nemichthys scolopaceus Richardson. *Snipe eel.*
Atlantic Ocean, in deep water; many specimens taken off the New England coast and off the Grand Banks; common about Madeira.
Nemichthys scolopacea Richardson, Voy. *Samarang*, 1848, 25, South Atlantic.
Leptorhynchus leuchtenbergii Lowe, Mem. Acad. Sci. St. Petersb., Savans Etrangères 1854, 171, Madeira.
Belonopsis leuchtenbergii Brandt, loc. cit., 1854, 174 (with good plate).

558. Nemichthys avocetta Jordan and Gilbert.
Puget Sound near Seattle; only the type known.
Nemichthys avocetta Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880, 409, harbor of Port Gamble, near Seattle.

559. Nemichthys fronto Garman
Off Pacific coast of Mexico, in deep water.
Nemichthys fronto Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 324, Pl. LXV, fig. 1, *Albatross* stations 3384 and 3434, in 458 and 1,588 fathoms.

Genus 212. AVOCETTINA Jordan and Davis.
Avocettina Jordan and Davis, Rept. U. S. Fish Com., XVI, 1888, 655 (*Nemichthys infans* Günther).

560. Avocettina infans (Günther).
Known from West Indies, and middle Atlantic off Pernambuco.
Nemichthys infans Günther, Ann. Mag. Nat. Hist., 5th Ser., II, 1878, 251, and in *Challenger* Rept., XXII, 1887, 264, mid. Atlantic in 2,500 fathoms.

561. Avocettina gilli (Bean).
Coast of southeastern Alaska in deep water.
Labichthys gilli Bean, Proc. U. S. Nat. Mus., XIII, 1890, 45, east of Prince of Wales Island, Alaska.

562. Avocettina elongata (Gill and Ryder).
Gulf Stream.
Labichthys elongatus Gill and Ryder, Proc. U. S. Nat. Mus., VI, 1883, 262, Gulf Stream at *Albatross* station 2100, 39° 22′ N., 68° 34′ W.

Genus 213. SERRIVOMER Gill and Ryder.
Serrivomer Gill and Ryder, Proc. U. S. Nat. Mus., VI, 1883, 260 (*S. beanii* Gill and Ryder).

563. Serrivomer beanii Gill and Ryder.
Gulf Stream; also taken in the Gulf of California.
Serrivomer beanii Gill and Ryder, Proc. U. S. Nat. Mus., VI, 1883, 261, Gulf Stream, lat. 41° 40′ 30″, long. 65° 28′ 30″ in 855 fathoms.

564. Serrivomer sector Garman.
Gulf of California to Panama in deep water.
Serrivomer sector Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 320, Pl. LXIII, numerous stations of the *Albatross* and off Guaymas, 50 miles south, surface to 700 fathoms.

Genus 214. SPINIVOMER Gill and Ryder.
Spinivomer Gill and Ryder, Proc. U. S. Nat. Mus., VI, 1883, 261 (*S. goodei* Gill and Ryder).

565. Spinivomer goodei Gill and Ryder.
Gulf Stream.
Spinivomer goodei Gill and Ryder, Proc. U. S. Nat. Mus., VI, 1883, 261, Gulf Stream, at lat. 38° 19′ 26″, long. 68° 20′ 20″ in 2,361 fathoms.

Genus 215. LABICHTHYS Gill and Ryder.
Labichthys Gill and Ryder, Proc. U. S. Nat. Mus., VI, 1883, 261 (*L. carinatus* Gill and Ryder).

566. Labichthys carinatus Gill and Ryder.
Gulf Stream.
Labichthys carinatus Gill and Ryder, Proc. U. S. Nat. Mus., VI, 1883, 253, 255, 261, Gulf Stream, 41° 13′ N., 65° 33′ W.

567. Labichthys bowersi Garman.
Off Panama in deep water.
Labichthys bowersi Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 823, Pl. XIV, fig. 1, *Albatross* stations 3414, 3388, and 3361, in 1,168 to 2,232 fathoms.

Family 77. OPHICHTHYIDÆ. Snake eels

Genus 216. SPHAGEBRANCHUS Bloch.
Sphagebranchus Bloch, Ichthyologia, IX, 1795, 88, pl. 419 (*S. rostratus* Bloch).
Cœcilia Lacépède, Hist. Nat. Poiss., II, 1800, 135 (*C. brandieriana* Lacépède = *Muræna cœca* Linnæus); not *Cæcilia* L. a genus of *Batrachia*.
Apterichthys Duméril, Zool. Anal., 112, 1806, 331 (*Muræna cœca* Linnæus).
Branderius Rafinesque, Anal. Nat., 1815, 93; substitute for *Cæcilia* Lacépède.
Ichthyapus Brisout de Barneville, Revue Zool., 1847, 219 (*I. acutirostris*).
Ophisuraphis Kaup, Apodal Fishes, 1856, 29 (*O. gracilis* Kaup).

568. Sphagebranchus anguiformis (Peters).
Open Atlantic, near the West Indies.
Ophichthys (*Sphagebranchus*) *anguiformis* Peters, Monatsber. Akad. Wiss. Berlin, 1876, 849, Atlantic Ocean, 15° 40′ N., 23° 5′ W.

569. Sphagebranchus selachops (Jordan and Gilbert).
Rocks about Cape San Lucas.
Apterichthys selachops Jordan and Gilbert, Proc. U. S. Nat. Mus., V, 1882, 356, Cape San Lucas.

570. Sphagebranchus ophioneus Evermann and Marsh.
Porto Rico.
Sphagebranchus ophioneus Evermann and Marsh, Fish. Porto Rico, Bull. U. S. Fish Com., XX, 1900, 73, fig. 7, off Mayaguez, Porto Rico.

Genus 217. VERMA Jordan and Evermann.
Verma Jordan and Evermann, Fishes North and Mid. Amer., 1896, 374 (*Sphagebranchus kendalli* Gilbert).

571. Verma kendalli (Gilbert).
Coast of Florida, in rather deep water.
Sphagebranchus kendalli Gilbert, Bull. U. S. Fish Com., IX, 1889 (1891), 310, off west coast of Florida, 25° 34′ N., 82° 50′ W., in 25 fathoms.

Genus 218. CRYPTOPTERENCHELYS Fowler.
Cryptopterus Kaup, Aalen. Fische Hamburg Mus., II, 1860 (*C. punctaceps* Kaup); name preoccupied.
Cryptopterenchelys Fowler, Amer. Mus. Novitates, CLXII, March 31, 1925 (*Cryptopterus puncticeps* Kaup); substitute for *Cryptopterus* Kaup, preoccupied.

572. Cryptopterenchelys puncticeps (Kaup).
Caribbean Sea.
Cryptopterus puncticeps Kaup, Aalen. Fische Hamburg Mus., II, 1860, pl. 1, fig. 2, Puerto Cabello.

573. Cryptopterenchelys frontalis (Garman).
Off Panama.
Ophichthys (*Cryptopterus*) *frontalis* Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 309, *Albatross* stations 3386, 3389, 3391.

Genus 219. MYRICHTHYS Girard.
Pisodonophis Kaup, Apodal Fishes, 1856, 15 (in part; not type, as restricted by Bleeker, which is *P. cancrivorus*).
Myrichthys Girard, Proc. Acad. Nat. Sci. Phila., XI, 1859, 58 (*M. tigrinus* Girard).
Ophisurus Swainson, Bleeker, etc. (not of Lacépède, nor of Risso, nor Kaup, who restrict the name to *O. serpens*).

574. Myrichthys tigrinus Girard.
Pacific coast of Mexico; rather common about Mazatlan, and occasionally ranging northward.
Myrichthys tigrinus Girard, Proc. Acad. Nat. Sci. Phila., XI, 1859, 58, Adair Bay, Oregon; doubtless a error.
Ophisurus xysturus Jordan and Gilbert, Proc. U. S. Nat. Mus., IV, 1881, 346, Mazatlan.

575. Myrichthys xysturus (Jordan and Gilbert).
Pacific coast of Mexico; common among the rocks about Mazatlan.
Ophichthys xysturus Jordan and Gilbert, Proc. U. S. Nat. Mus., IX, 1881, 346, Mazatlan, Mexico.

576. Myrichthys oculatus (Kaup).
Tropical Atlantic; Cuba to Surinam and Cape Verde Islands.
Pisodonophis oculatus Kaup, Apodal Fishes, 1856, 22, Curaçao.
Ophisurus latimaculatus Poey, Repertorio, II, 1867, 252, pl. 3, fig. 1, Cuba.

577. Myrichthys acuminatus (Gronow).
West Indies, occasionally northward to Florida Keys.
Muræna acuminata Gronow, Fish. Brit. Mus., 1854, 21, Insula Div., Eustachii.
Pisodonophis guttulatus Kaup, Apodal Fishes, 1856, 21, fig. 10, Martinique.
Ophisurus longus Poey, Repertorio, II, 1867, 254, Cuba.
Ophichthys pisavarius Poey, Anal. Soc. Española Hist. Nat., 1875, 196, Cuba.

578. Myrichthys pantostigmius Jordan and McGregor.
Revillagigedo Islands.
Myrichthys pantostigmius Jordan and McGregor, Rept. U. S. Fish Com., XXIV, 1898 (1899), 274, pl. 4, Clarion Island.

Genus 220. LETHARCHUS Goode and Bean.
Letharchus Goode and Bean, Proc. U. S. Nat. Mus., V, 1882, 436 (*L. velifer* Goode and Bean).

579. Letharchus pacificus Osburn and Nichols.
Gulf of California.
Letharchus pacificus Osburn and Nichols, Bull. Amer. Mus. Nat. Hist., XXXV, 1916, 146, fig. 3, Cape San Lucas.

580. Letharchus velifer Goode and Bean.
Coast of Florida, in rather deep water; known only from the Snapper Banks off Pensacola and Tampa.
Letharchus velifer Goode and Bean, Proc. U. S. Nat. Mus., V, 1882, 437, West Florida.

Genus 221. PISODONOPHIS Kaup.
Pisodonophis Kaup, Apodal Fishes, 1856, 17 (*P. cancrivorus* Kaup as restricted by Bleeker; later written *Pisoodonophis* by Kaup and since spelled *Pisodontophis* by purists).

581. Pisodonophis daspilotus Gilbert.
Panama.
Pisodonophis daspilotus Gilbert, in Jordan and Evermann, Fishes North and Mid. Amer., 1898, 2803, Panama.

Genus 222. OMOCHELYS Fowler.
Omochelys Fowler, Proc. Acad. Nat. Sci. Phila., LXX, 1918, 3 (*Pisoodonophis cruentifer* Goode and Bean).
Styletor Jordan, loc. cit., LXX, 1918 (1919), 343 (*Pisoodonophis cruentifer* Goode and Bean); name preoccupied.

582. Omochelys cruentifer (Goode and Bean).
Two specimens at station 1035 of U. S. Fish Commission steamer *Fish Hawk*, 39° 57′ N., 69° 28′ W., in 120 fathoms; four others at nearly same region in 245 fathoms.
Pisoodonophis cruentifer Goode and Bean, Oceanic Ichth., 1895, 147, fig. 166, Gulf Stream.

Genus 223. CALLECHELYS Kaup.
Callechelys Kaup, Apodal Fishes, 1856, 28 (*C. guichenoti* Kaup).

583. Callechelys muræna Jordan and Evermann.
Snapper Banks off Pensacola.
Callechelys muræna Jordan and Evermann, Proc. U. S. Nat. Mus., IX, 1886, 466, Snapper Banks.

Genus 224. BASCANICHTHYS Jordan and Davis.
Bascanichthys Jordan and Davis, Rept. U. S. Fish Com., XVI, 1888, 621 (*Cœcula bascanium* Jordan).

584. Bascanichthys bascanium (Jordan).
Egmont Key, Florida.
Cœcula bascanium Jordan, Proc. Acad. Nat. Sci. Phila., XXXVI, 1884, 48, Egmont Key, Fla.

585. Bascanichthys scuticaris (Goode and Bean).
West coast of Florida.
Sphagebranchus scuticaris Goode and Bean, Proc. U. S. Nat. Mus., II, 1879, 343, Cedar Key.
Sphagebranchus teres Goode and Bean, loc. cit., V, 1882, 436, west Florida.

586. Bascanichthys cylindricus Meek and Hildebrand.
Panama.
Bascanichthys cylindricus Meek and Hildebrand, Field Mus. Nat. Hist., Zool., XV, 1923, 152, Pl. VIII, Chame Point, Panama.

587. Bascanichthys panamensis Meek and Hildebrand.
Panama.
Bascanichthys panamensis Meek and Hildebrand, Field Mus. Nat. Hist., Zool., XV, 1923, Pl. VII, 151, Chame Point, Panama.

588. Bascanichthys bascanoides Osburn and Nichols.
Coast of Lower California.
Bascanichthys bascanoides Osburn and Nichols, Bull. Amer. Mus. Nat. Hist., XXXV, 1916, 147, fig. 4, San Cristobal, from the stomach of *Mycteroperea venadorum*.

589. Bascanichthys peninsulæ (Gilbert).
La Paz Bay, Gulf of California.
Callechelys peninsulæ Gilbert, Proc. U. S. Nat. Mus., XIV, 1891, 548, La Paz Bay, Lower California.

Genus 225. QUASSIREMUS Jordan and Davis.
Quassiremus Jordan and Davis, Rept. U. S. Fish Com., XVI, 1888, 622 (*Ophichthus evionthas* Jordan and Bollman).

590. Quassiremus nothochir (Gilbert).
San Josef Island, Gulf of California.
Ophichthys nothochir Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 58, San Josef Island, Gulf of California.

591. Quassiremus evionthas (Jordan and Bollman).
Hood Island, Galapagos Archipelago.
Ophichthus evionthas Jordan and Bollman, Proc. U. S. Nat. Mus., XII, 1889, 154, Hood Island, Galapagos Archipelago.

Genus 226. OPHICHTHUS Thunberg and Ahl.
Ophichthus Ahl, De Muræna et Ophichtho, 1789 (*Muræna ophis* L.).
Cogrus Rafinesque, Caratteri, 1810, 62 (*C. maculatus* Rafinesque).
Centrurophis Kaup, Apodal Fishes, 1856, 2 (*C. spadiceus* Kaup).
Pœcilocephalus Kaup, loc. cit., 5 (*P. bonapartei* Kaup).
Microdontophis Kaup, loc. cit., 6 (*M. altipinnis* Kaup).
Cœcilophis Kaup, loc. cit., 6 (*C. compar* Kaup).
Herpetoichthys Kaup, loc. cit., 7 (*H. ornatissimus* Kaup).
Elapsopsis Kaup, loc. cit., 9 (*E. versicolor* Kaup).
Muræpsis Kaup, loc. cit., 11 (*Muræpsis ocellatus* LeSueur); the name wrongly credited to LeSueur.
Scytalophis Kaup, loc. cit., 13 (*S. magnioculis* Kaup).
Leptorhinophis Kaup, loc. cit., 14 (*Ophisurus gomesi* Castelnau).
Uranichthys Poey, Repertorio, II, 1867, 256 (*Muræna havannensis* Bloch and Schneider).
Oxyodontichthys Poey, Anales Soc. Española Hist. Nat., 1880, 254 (*macrurus*).
Ophichthys Bleeker, Günther, and of recent authors generally.

592. Ophichthus ophis (Linnæus).
West Indies; apparently not common.
? *Serpens marinus maculosus* Willoughby, Hist. Pisc., 1686, Tab. G., 9, no locality.
? *Muræna ophis* Linnæus, Syst. Nat., ed. X, 1758, 244; after Willoughby; may be identical with *Ophichthius regius*, a St. Helena species likewise spotted with black.
Innominado Parra, Dif. Piezas Hist. Nat., 1787, pl. 37, fig. 2, Habana.
Muræna havannensis Bloch and Schneider, Syst. Ichth., 1801, 491; after Parra.
? *Ophisurus guttatus* Cuvier, Règne Anim., ed. 1, 1817, 232, Surinam; after Bloch, pl. 154.
? *Muræna maculosa* Cuvier, loc. cit., Surinam; after *Ophisurus ophis* Lacépède, which is based on Bloch, pl. 154.
Herpetoichthys sulcatus Kaup, Apodal Fishes, 1856, 8, fig. 5, locality unknown.
Uranichthys brachycephalus Poey, Repertorio, II, 1867, 257, Cuba.

593. Ophichthus retropinnis Eigenmann.
Snapper Banks off Pensacola, Fla.
Ophichthys retropinnis Eigenmann, Proc. U. S. Nat. Mus., X, 1887, 116, Snapper Banks off Pensacola.

594. Ophichthus guttifer (Bean and Dresel).
Snapper Banks off Pensacola, Fla.
Ophichthys guttifer Bean and Dresel, Proc. Biol. Soc. Wash., II, 1884, 100, Snapper Banks.

595. Ophichthus ocellatus (LeSueur).
West Indies, south to Brazil and north to Pensacola.
Muræpsis ocellatus LeSueur, Jour. Acad. Nat. Sci. Phila., V, 1825, 108, pl. 4, fig. 3, South America.

596. Ophichthus triserialis (Kaup).
Pacific coast of tropical America, rather common from Lower California to the Galapagos.
Murænopsis triserialis Kaup, Apodal Fishes, 1856, 12, Pacific.
Herpetoichthys callisoma Abbott, Proc. Acad. Nat. Sci. Phila., XII, 1860, 475, locality unknown.
Ophisurus californiensis Garrett, Proc. Calif. Acad. Nat. Sci., III, 1863, 66, Margarita Bay, Lower California.
Ophichthus rugifer Jordan and Bollman, Proc. U. S. Nat. Mus., XII, 1889, 155, Charles Island, Galapagos; young with longer pectorals.

597. Ophichthus biserialis (Garman).
Galapagos Islands.
Ophichthys biserialis Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 311, Chatham Island.

598. Ophichthus chamensis Meek and Hildebrand.
Panama.
Ophichthus chamensis Meek and Hildebrand, Field Mus. Nat. Hist., Zool., XV, 1923, 155, Pl. VIII, fig. 2, Chame Point, Panama.

Subgenus SCYTALOPHIS Kaup.

599. Ophichthus gomesii (Castelnau). *Sea serpent; Sea eel; Whipsnake eel.*
South Carolina to Rio Janeiro; generally common, especially about the Florida Keys and Cuba.
Ophisurus gomesii Castelnau, Anim. Amér. Sud, 1855, 84, pl. 44, fig. 2; Rio Janeiro.
Ophisurus chrysops Poey, Memorias, II, 1861, 321, Habana.
Oxydontichthys brachyurus Poey, Synopsis, 1868, 426; and Poey, Enumeratio, II, 1875, 155, Habana.
Oxydontichthys macrurus Poey, Anal. Soc. Española Hist. Nat., 1880, 254, Habana
Oxydontichthys limbatus Poey, loc. cit., 254, Habana; name a substitute for *brachyurus*.

600. Ophichthus zophochir (Jordan and Gilbert).
Pacific Coast of Mexico, Guaymas to Acapulco.
Ophichthys zophochir Jordan and Gilbert, Proc. U. S. Nat. Mus., IV, 1881, 347.

601. Ophichthus magnioculus (Kaup).
West Indies to Brazil; Aspinwall.
Scytalophis magnioculus Kaup, Apodal Fishes, 1856, 13, fig. 7, St. Croix; Brazil.

602. Ophichthus parilis (Richardson).
Cuba to Brazil.
Ophisurus parilis Richardson, Voy. *Erebus* and *Terror*, 1844, 105, West Indies.
Ophichthys pauciporus Poey, Repertorio, II, 1868, 255, pl. 3, fig. 5.

Genus 227. MYSTRIOPHIS Kaup.
Mystriophis Kaup, Apodal Fishes, 1856, 10 (*Ophisurus rostellatus* Richardson).
Crotolopsis Kaup, Abhandl. Natur. Verein Hamburg, IV, 1860, 12 (*C. quinctifer* Kaup).
Echiopsis Kaup, loc. cit., 13, (*Ophisurus intertinctus* Richardson).
Macrodonophis Poey, Repertorio, II, 1867, 251 (*M. mordax ophiurus* Poey).

Subgenus ECHIOPSIS Kaup

603. Mystriophis intertinctus (Richardson).
West Indies, north to Pensacola, Fla.
Ophisurus intertinctus Richardson, Voy. *Erebus* and *Terror*, Fishes, 1844, 102, West Indies.
Ophisurus sugillatus Richardson, loc. cit., 103, probably West Indies.
Crotalopsis punctifer Kaup, Abhandl. Natur. Verein Hamburg, IV, 1860, 2, 12, pl. 1, fig. 3, Puerto Cabello.
Conger mordax Poey, Memorias, II, 1861, 319, Cuba.
Ophichthys schneideri Steindachner, Ich. Beitr., VIII, 1879, 66, Brazil.

Genus 228. SCYTALICHTHYS Jordan and Davis.
Scytalichthys Jordan and Davis, Rept. U. S. Fish Com., XVI, 1888, 635 (*Ophichthys miurus* Jordan and Gilbert).

604. Scytalichthys miurus (Jordan and Gilbert).
Cape San Lucas, Lower California.
Ophichthys miurus Jordan and Gilbert, Proc. U. S. Nat. Mus., V, 1882, 357, Cape San Lucas.

Genus 229. BRACHYSOMOPHIS Kaup.
Brachysomophis Kaup, Apodal Fishes, 1856, 9 (*B. horridus* Kaup).
?*Achrophichthys* Bleeker, Poisson Ined. Murènes, Ned. Tijdschr. Dierk., II, 242, 1865, (*A. typus*), young.

605. Brachysomophis crocodilinus (Bennett).
East Indies; a specimen recorded by Günther from the Galapagos.
Ophisurus crocodilinus Bennett, Proc. Zool. Soc. Lond., 1833, 32, Mauritius.
Brachysomophis horridus Kaup, Apodal Fishes, 1856, 9, fig. 6, Otaheite [Tahiti].
?*Achirophichthys typus* Bleeker, Nederl. Tijdschr. Dierk., II, 1865, 242, Celebes.

Family 78. ACANTHENCHELYIDÆ

Genus 230. ACANTHENCHELYS Regan.
Acanthenchelys Regan, Ann. Mag. Nat. Hist., X, 1922, 296 (*A. spinicauda* Regan).

606. Acanthenchelys spinicauda Regan.
West Indies.
Acanthenchelys spinicauda Regan, Ann. Mag. Nat. Hist., X, 1922, 296, Island of Tobago.

Family 79. MORINGUIDÆ

Genus 231. MORINGUA Gray.
Moringua Gray, Zool. Misc., 1831, 9 (*M. lateralis* Gray).
Rataboura Gray, Illust. Ind. Zool., 1831, 95 (*Muræna ratibouri* Hamilton = *Ratabouri hardwickei* Gray).
Pachyurus Swainson, Nat. Hist. Fish, Reptiles and Amphib., II, 1839, 335 (*Moringua linearis* Gray; not of Agassiz, 1829).
Pseudomoringua Bleeker, Nederl. Tijdschr. Dierk., II, 1865, 114 (*Moringua lumbricoides* Richardson).

607. Moringua bœkei Metzelaar.
Caribbean Sea.
Moringua boekei Metzelaar, Trop. Atl. Visschen, 1919, 17, Curaçao.

Genus 232. APHTHALMICHTHYS Kaup.
Apthalmichthys Kaup, Apodal Fishes, 1856, 68 (*A. javanicus* Kaup).

608. Aphthalmichthys caribbeus Gill and Smith.
Porto Rico.
Aphthalmichthys caribbeus Gill and Smith, Science, XI, No. 286, 1900, 974, San Geronimo, near San Juan, Porto Rico.

Genus 233. STILBISCUS Jordan and Bollman.
Stilbiscus Jordan and Bollman, Proc. U. S. Nat. Mus., XI, 1888, 549 (*S. edwardsi* Jordan and Bollman).

609. Stilbiscus edwardsi Jordan and Bollman.
Green Turtle Cay, one of the Bahamas.
Stilbiscus edwardsi Jordan and Bollman, Proc. U. S. Nat. Mus., XI, 1888, 549, Green Turtle Cay, Bahamas.

Genus 234. GORDIICHTHYS Jordan and Davis.
Gordiichthys Jordan and Davis, Rept. U. S. Fish Com., XVI, 1888, 644 (*G. irretitus* Jordan and Davis).

610. Gordiichthys irretitus Jordan and Davis.
Snapper Banks off west Florida in rather deep water.
Gordiichthys irretitus Jordan and Davis, Rept. U. S. Fish Com., XVI, 1888, 644, off Pensacola, Fla.

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Family 80. MURÆNIDÆ. Morays

Genus 235. ENCHELYCORE Kaup.
Enchelycore Kaup, Apodal Fishes, 1856, 72 (*Muræna nigricans* Bonnaterre).

611. Enchelycore nigricans (Bonnaterre).
West Indies; rather common.
Muræna unicolor maxillis elongatus teretiusculus, inferiore longiore, etc., Gronow, Zoophy., 1, 1763, 163, South America.
Muræna nigricans Bonnaterre, Encycl. Meth. Ichth., 1788, 34; after Gronow.
Muræna anguina Gronow, Cat. Fish., 1854, 18, South America.
Enchelycore euryrhina Kaup, Apodal Fishes, 1856, 73, no locality.

612. Enchelycore nigrocastaneus (Cope).
West Indies.
Gymnothorax nigrocastaneus Cope, Trans. Amer. Phil. Soc., XIV, 1871, 483, St. Martin.
?*Gymnothorax umbrosus* Poey, Ann. Lyc. Nat. Hist. N. Y., XI, 1874, 67, Habana, Cuba.

Genus 236. MURÆNA Linnæus. *Morays.*
Muræna Artedi, Gen. Pisc., 1738, 23, in part; includes all eels.
Muræna Klein, Hist. Pisc., 1742, 28, in part; includes all eels without pectoral fins.
Muræna Linnæus, Syst. Nat., ed. X, 1758, 244 (*helena*, etc.); includes all eels.
Muræna Thunberg and Ahl, De Muræna et Ophichthus, 1789, 6 (restricted to *helena*, etc.), includes species without pectoral fins.
Muræna Günther and of authors generally; not of Bleeker.
Muræno phis Lacépède, Hist. Nat. Poiss., V, 1803, 630 (*helena*, etc.).
Limamuræna Kaup, Apodal Fishes, 1856, 95 (*L. guttata* Kaup).

613. Muræna melanotis (Kaup).
Tropical Atlanta, from Africa to South America.
Limamuræna melanotis Kaup, Aalen. Fische Hamburg Mus., 1859, 27, pl. 4, fig. 3.

614. Muræna lentiginosa Jenyns. *Morena pinta.*
Pacific coast of America, from Gulf of California to Galapagos.
Muræna lentiginosa Jenyns, Voy. *Beagle*, Zool., 1842, 143, Galapagos Islands.
Muræna pinta Jordan and Gilbert, Proc. U. S. Nat. Mus., IV, 1881, 345, Mazatlan.

615. Muræna retifera Goode and Bean.
Coast of South Carolina, in rather deep water; one taken at Tuckernuck Island, Mass.
Muræna retifera Goode and Bean, Proc. U. S. Nat. Mus., V, 1882, 435, off Charleston.

616. Muræna argus (Steindachner).
Gulf of California.
Gymnothorax (*Limamuræna*) *argus* Steindachner, Ichth. Notizen, X, 1870, 17, Pl. IV, Altata, Gulf of California.

617. Muræna insularum Jordan and Davis.
Galapagos Islands.
Muræna insularum Jordan and Davis, Rept. U. S. Fish Com., XVI, 1888, 609, Chatham Island.

618. Muræna myrialeucosticta Fowler.
West Indies.
Muræna myrialeucosticta Fowler, Proc. Acad. Nat. Sci. Phila., LXIV, 1912, 18, St. Martin.

619. Muræna clepsydra Gilbert.
Panama.
Muræna clepsydra Gilbert, in Jordan and Evermann, Fish. North and Mid. Amer., 1898, 2805, Panama.

Genus 237. PYTHONICHTHYS Poey.
Pythonichthys Poey, Repertorio, II, 1867, 265 (*P. sanguineus* Poey).

620. Pythonichthys sanguineus Poey.
Coast of Cuba, in rather deep water.
Pythonichthys sanguineus Poey, Repertorio, II, 1867, 265, pl. 2, fig. 7, Cuba.

Genus 238. RABULA Jordan and Davis.
Rabula Jordan and Davis, Rept. U. S. Fish Com., XVI, 1888, 589 (*R. aquæ-dulcis* Jordan and Davis=*Rabula davisi* Fowler, not *Muræna aquæ-dulcis* Cope).

621. Rabula davisi Fowler.
Said to be from San Diego, which is doubtful.
Rabula davisi Fowler, Proc. Acad. Nat. Sci. Phila., LXIV, 1912, 21; after *Rabula aquæ-dulcis* Jordan and Davis; not of Cope.

622. Rabula marmorea (Valenciennes).
Galapagos Islands.
Muræ̃nophis marmoreus Valenciennes, Voy. *Vénus*, Zool., 1855, 347, pl. 10, fig. 1, Galapagos.

623. Rabula panamensis (Steindachner).
Pacific coast of Central America.
Muræna panamensis Steindachner, Ichth. Beitr., V, 1876, 19, Panama.

624. Rabula longicauda (Peters).
Tropical Atlantic, off the West Indies.
Muræna longicauda Peters, Monatsberichte, 1876, 850, open Atlantic, with *Sphagebranchus anguiformis*.

Genus 239. GYMNOTHORAX Bloch. *Morays.*
Gymnothorax Bloch, Naturgesch. Ausl. Fische, IX, 1795, 83, restricted to allies of *M. afra* by Günther (*G. muræna* Bloch).
Lycondontis McClelland, Calcutta Jour. Nat. Hist., V, No. XVIII, 1844, 173 (*L. literata=tile*).
Throndontis McClelland, loc. cit., V, No. XVIII, 1844, 174 (*T. reticulata=tesselata*).
Eurymyctera Kaup, Apodal Fishes, 1856, 72, (*E. crudelis* Kaup).
Polyuranodon Kaup, loc. cit., 96 (*Muræna polyuranodon* Bleeker).
Tæniophis Kaup, Aalen. Fische Hamburg Mus., Nachträge, 1859, 10 (*T. westphali* Kaup).
Priodontophis Kaup, loc. cit., 1859, 22 (*Gymnothorax ocellatus* Agassiz).
Neomuræna Girard, U. S. Mex. Bound. Surv., Fishes, 1859, 76 (*N. nigromarginata* Girard=*ocellatus*).
Pseudomuræna Johnson, Proc., Zool. Soc. Lond., 1860, 167 (*P. madeirensis* Johnson.

625. Gymnothorax mordax (Ayres). *Conger eel of California.*
Point Conception to Cedros Island; abundant about Santa Barbara Islands.
Muræna mordax Ayres, Proc. Calif. Acad. Nat. Sci., II, 1859, 30, Cerros [Cedros] Island.

626. Gymnothorax moringa (Cuvier). *Common spotted moray; Hamlet; Eel.*
Gulf of Mexico, Pensacola, and West Indies to Rio Janeiro and St. Helena.
Muræna maculata nigra; the black moray, Catesby, Nat. Hist. Carolinas, etc., 1738, pl. 21, Bahamas.
?*Gymnothorax afer* Bloch, Syst. Ichth., 1795, pl. 417, Africa.
Muræna moringa Cuvier, Règne Anim., ed. 2, II, 1829, 352; after Catesby.
Gymnothorax rostratus Agassiz, Spix, Pisc. Brasil., 1830, 91, pl. 50a, Brazil.
Muræna moringua Richardson, Voy. *Erebus* and *Terror*, Fishes, 1844, 89, Jamaica.
Muræna punctata Gronow, Cat. Fish., 1854, 18, North America.
Muræ̃nophis curvilineata Castelnau, Anim. Amér. Sud, Poiss., 1855, 81, pl. 42, fig. 2, Rio Janeiro.
Muræ̃nophis caramuru Castelnau, loc. cit., 85, pl. 43, Bahia.
Gymnothorax flavoscriptus Poey, Enumeratio, 1875, 158, Cuba.
Gymnothorax picturatus Poey, Anal. Soc. Española Hist. Nat., 1880, 257, Cuba.

627. Gymnothorax funebris Ranzani. *Black moray; Morena verde.*
Tropical America; Rio Janeiro; West Indies.
Muræna maculata nigra et viridis (the moray) Catesby, Nat. Hist. Carolinas, etc., 1738, pl. 20, Bahamas.
Gymnothorax funebris Ranzani, Nov. Com. Acad. Sci. Inst. Bonon., IV, 1840, 76, Brazil.
Muræna lineopinnis Richardson, Voy. *Erebus* and *Terror*, Fishes, 1844, 89, Puerto Cabello.
Muræna infernalis Poey, Memorias, II, 1861, 347, 354, Cuba.
Thyrsoidea concolor Abbott, Proc. Acad. Nat. Sci. Phila., XII, 1860, 479, Vera Cruz.
Muræna erebus Poey, Memorias, II, 1861, 426, Cuba.

628. Gymnothorax castaneus (Jordan and Gilbert).
Pacific coast of Mexico; common about Mazatlan; representing *G. funebris* of the West Indies.
Sidera castanea Jordan and Gilbert, Proc. U. S. Nat. Mus., V. 1882, 647, Mazatlan.

629. Gymnothorax sanctæ-helenæ (Günther).
Tropical Atlantic; recorded from St. Helena and the Bermudas.
Muræna sanctæ-helenæ Günther, Cat., VIII, 1870, 115, St. Helena.

630. Gymnothorax vicinus (Castelnau).
Tropical Atlantic, Cuba to Africa and Brazil.
Muræno phis vicina Castelnau, Anim. Amér. Sud, Poiss., 1855, 81, pl. 42, fig. 4, Bahia.
Gymnothorax versipunctatus Poey, Enumeratio, 1875, 156, Cuba.
Thyrosoidea maculipinnis Kaup, Apodal Fishes, 1856, 86, Gold Coast.

631. Gymnothorax punctarenæ Fowler.
Puntarenas, Costa Rica, one specimen known.
Gymnothorax punctarenæ Fowler, Copeia, No. 39, Jan. 24, 1917, 3, Puntarenas, Costa Rica.

632. Gymnothorax brunneus Nichols.
Bermudas.
Gymnothorax brunneus Nichols, Proc. Biol. Soc. Wash., XXXIII, 1920, 59, Bermuda.

633. Gymnothorax virescens Poey.
Cuba.
Gymnothorax virescens Poey, Enumeratio, 1875, 156, Cuba.

634. Gymnothorax polygonius Poey.
Cuba.
Gymnothorax polygonius Poey, Ann. Lyc. Nat. Hist. N. Y., XI, 1870, 68, Habana.

635. Gymnothorax dovii (Günther). *Morena pintita.*
Gulf of California to the Galapagos Archipelago.
Muræna dovii Günther, Cat., VIII, 1870, 103, Panama.
Muræna pintita Jordan and Gilbert, Proc. U. S. Nat. Mus., IV, 1881, 346, Mazatlan.

636. Gymnothorax conspersus Poey.
Cuba to Rio Janeiro.
Muræno phis punctata Castelnau, Anim. Amér. Sud, 1855, 82, Rio Janeiro; not *Gymnothorax punctatus* Bloch.
Gymnothorax conspersus Poey, Repertorio, II, 1868, 259, Cuba.

637. Gymnothorax jordani (Evermann and Marsh).
Porto Rico.
Lycondontis jordani Evermann and Marsh, Fish. Porto Rico, Bull. U. S. Fish Com., XX, 1900 (1902), pt. 1, 78, pl. 2; off Mayaguez, Porto Rico.

638. Gymnothorax miliaris (Kaup).
West Indies.
Thyrsoidea miliaris Kaup, Apodal Fishes, 1856, 90, Martinique.
Muræna multocellata Poey, Memorias, II, 1861, 324, Cuba; based on specimens with smaller spots than usual.
Gymnothorax scriptus Poey, Repertorio, II, 1868, 261, Cuba.
Muræna myrialeucostictus Fowler, Proc. Acad. Nat. Sci. Phila., LXIV, 1912, 18, St. Martins, West Indies.

639. Gymnothorax elaboratus (Poey).
Cuba.
Muræna elaborata Poey, Memorias, II, 1861, 323, Cuba.

640. Gymnothorax obscuratus Poey.
Cuba.
Gymnothorax obscuratus Poey, Ann. Lyc. Nat. Hist. N. Y., IX, 1870, 320, Cuba.

641. Gymnothorax chlevastes (Jordan and Gilbert).
Galapagos Islands.
Sidera chlevastes Jordan and Gilbert, Proc. U. S. Nat. Mus., VI, 1883, 208, Galapagos.

642. Gymnothorax albimentis (Evermann and Marsh).
Porto Rico.
Lycodontis albimentis Evermann and Marsh, Fish. Porto Rico, Bull. U. S. Fish Com., XX, 1900 (1902), pt. 1, 78, fig. 9; off Culebra Island.

643. Gymnothorax concolor (Abbott).
West Indies.
Thyrsoidea concolor Abbott, Proc. Acad. Nat. Sci. Phila., XII, 1860, 479, Vera Cruz.
?*Muræna erebus* Poey, Memorias, II, 1861, 426, Cuba.

644. Gymnothorax aquædulcis (Cope).
Rio Grande, Costa Rica.
Muræna aquæ-dulcis Cope, Rept., U. S. Geol. Surv., 1871 (1872), 474; said to be from Rio Grande, Costa Rica. It is evidently not a fresh-water fish. According to Fowler, it is not a *Rabula*, the dorsal beginning well before the gill opening.

645. Gymnothorax carcinognathus Fowler.
West Indies.
Gymnothorax carcinognathus Fowler, Proc. Acad. Nat. Sci. Phila., LXIV, 1912, 22, St. Martins, West Indies.

646. Gymnothorax verilli (Jordan and Gilbert).
Panama; one specimen known.
Sidera verrilli Jordan and Gilbert, Proc. U. S. Nat. Mus., V, 1882, 623, Panama.

647. Gymnothorax ocellatus Agassiz. *Spotted moray; Moray eel.*
Pensacola to Rio Janeiro.
Gymnothorax ocellatus Agassiz, Spix, Pisc. Brasil., 1828, 91, pl. 50b, Brazil.

648. Gymnothorax ocellatus saxicola Jordan and Davis.
Snapper Banks off Pensacola and deep water off Cuba.
Muræna meleagris Quoy and Gaimard, Voy. *Freycinet*, Zool., 1824, 245, pl. 52, fig. 2; not of Shaw.
Gymnothorax ocellatus saxicola Jordan and Davis, Rept. U. S. Fish Com., XVI, 1888, 606, Snapper Banks off Pensacola.

649. Gymnothorax ocellatus nigromarginatus (Girard).
Coast of west Florida and Texas.
Neomuræna nigromarginata Girard, U. S. Mex. Bound, Surv., 1859, 76, pl. 41, St. Joseph Island, Tex.

Genus 240. SIDEREA Kaup.
Siderea Kaup, Uebersicht der Aale, 1856, 59 (*Muræna pfeifferi* Bleeker = *Muræna picta* Ahl); name later written *Sidera*.

650. Siderea picta (Ahl).
South Seas; East Indies; Hawaii; Revillagigedos; taken at Clarion Island.
Muræna picta Ahl, De Muræna et Ophichtho, VI, 1787, 6, tab. 2.
Muræno phis pantherina Lacépède, Hist. Nat. Poiss., V, 1803, 628.
Muræna variegata Quoy and Gaimard, Voy. *Uranie*, 1824, 246, pl. 52.
Muræna lita Richardson, Voy. *Erebus* and *Terror*, 1844, 84, Moluccas.
Muræna siderea Richardson, loc. cit. 85, pl. 48, Australia.
Muræna pfeifferi Bleeker, Nat. Tijds. Ned. Ind., V, 173, Celebes.

Genus 241. AHYNNODONTOPHIS Fowler.
Ahynnodontophis Fowler, Proc. Acad. Nat. Sci. Phila., LXIV, 1912, 25 (*A. stigmanotus* Fowler).

651. Ahynnodontophis stigmanotus Fowler.
West Indies (?)
Ahynnodontophis stigmanotus Fowler, Proc. Acad. Nat. Sci. Phila., LXIV, 1912, 25; supposed to be from the West Indies.

Genus 242. ECHIDNA Forster.
Echidna Forster, Bibliotheca Banksiæ, 1777, 181 (*E. variegata* Forster).
Gymnomuræna Lacépède, Hist. Nat. Poiss., V, 1803, 648 (*G. doliata* Lacépède).
Gymnopsis Rafinesque, Anal. Nat., 1815, 93 (substitute for *Gymnomuræna*).
Megaderia Rafinesque, loc. cit., 93 (substitute for *Echidna* Forster).
Molarii Richardson, Voy. *Erebus* and *Terror*, 1844, 79 (*Muræna ophis*= *Echidna nebulosa*).
Pœcilophis Kaup, Apodal Fishes, 1856, 98 (*Gymnothorax catenatus* Bloch).

652. Echidna catenata (Bloch).
West Indies, from Bermuda to Surinam; our specimens from Santa Lucia.
Muræna seu conger brasiliensis Seba, Thesaurus, II, 1738, 72, pl. 69, figs. 4, 5, Brazil.
Gymnothorax catenatus Bloch, Naturgesch. Ausl. Fische, XII, 1795, 74, pl. 415, fig. 1, Coromandel; an error.
Muræna sordida Cuvier, Règne Anim., ed. 1, 1817, 233, after Seba.
Muræpophis catenula Lacépède, Hist. Nat. Poiss., V, 1803, 628 and 641, Palmerston Island; after Bloch.
Echidna fuscomaculata Poey, Repertorio, II, 1868, 263, Cuba.
Echidna flavoscripta Poey, loc. cit., 264, Cuba.

653. Echidna nocturna (Cope).
Pacific coast of Mexico, the two known specimens from the Rio Grande, in Costa Rica and from Cape San Lucas.
Pœcilophis nocturnus Cope, Rept. U. S. Geol. Surv. Mont., 1871 (1872), 474, Rio Grande at San José, Costa Rica.

654. Echidna scabra Garman
Cocos Island.
Echidna scabra Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 314, Cocos Island.

655. Echidna cocosa Garman.
Cocos Island.
Echidna cocosa Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 313, Cocos Island.

656. Echidna chionostigma Fowler.
Gulf of California (?).
Echidna chionostigma Fowler, Proc. Acad. Nat. Sci. Phila., LXIV, 1912, 28; supposed to be from the Gulf of California.

Genus 243. UROPTERYGIUS Rüppell.
Gymnomuræna Lacépède, Hist. Nat. Poiss., V, 1803, 648 (*G. doliata* Lacépède); restricted first by Kaup, in 1856, to *doliata*, which is a species of *Echidna*.
Ichthyophis Lesson, Voy. *Coquille*, II, 1830, 120 (*I. pantherinus* Lesson); not of Fitzinger, 1829, a genus of reptiles.
Uropterygius Rüppell, Neue Wirbelthiere, Fische, 1835, 83 (*Nebrius concolor* Rüppell).
Muræpoblenna Kaup, Apodal Fishes, 1856, 67, (*Ichthyophis tigrina* Lesson); not of Lacépède, 1803, which is *Myxine*.
Scutica Jordan and Evermann, Fish. North and Mid. Amer., 1896, 403, (*Uropterygius necturus* Jordan and Gilbert).

Subgenus SCUTICA Jordan and Evermann.

657. Uropterygius necturus (Jordan and Gilbert).
Gulf of California.
Gymnomuræna nectura Jordan and Gilbert, Proc. U.. S. Nat. Mus., V, 1882, 356, Cape San Lucas.

Genus 244. CHANNOMURÆNA Richardson:
Channo-Muræna Richardson, Voy. *Erebus* and *Terror*, 1844, 96 (*Ichthyophis vittata* Richardson).

658. Channomuræna vittata (Richardson).
Coast of Cuba.
Raro Parra, Dif. Piezas Hist. Nat., 1780, 66, pl. 30, fig. 3, Habana.
Ichthyophis vittatus Richardson, Voy. *Sulphur*, Fishes, 1844, 114, pl. 53, figs. 7–9; locality uncertain.
Channomuræna cubensis Poey, Repertorio, II, 1867, 266, pl. 3, fig. 6, Cuba.

Order U. LYOMERI

Family 81. SACCOPHARYNGIDÆ. Gulpers

Genus 245. SACCOPHARYNX Mitchill.
Saccopharynx Mitchill, Ann. Lyc. Nat. Hist. N. Y., 1824, 86 (type afterwards called *S. flagellum* Mitchill).
Ophiognathus Harwood, Philos. Trans., 1827, 277 (*O. ampullaceus* Harwood).

659. Saccopharynx ampullaceus (Harwood).
Atlantic.
Ophiognathus ampullaceus Harwood, Philos. Trans., 1827, 52, Atlantic.
Saccopharynx flagellum Cuvier, Règne Anim., ed. 2, 1829, 355, Atlantic; after Mitchill.
Saccopharynx chordatus Storer, Synopsis, 1846, 237, open Atlantic; after Mitchill.

Family 82. EURYPHARYNGIDÆ. Swallowers

Genus 246. GASTROSTOMUS Gill and Ryder.
Gastrostomus Gill and Ryder, Proc. U. S. Nat. Mus., VI, 1883, 271 (*G. bairdii* Gill and Ryder).

660. Gastrostomus bairdii Gill and Ryder.
Deep water off Newfoundland Banks and Davis Strait.
Gastrostomus bairdii Gill and Ryder, Proc. U. S. Nat. Mus., VI, 1883, 271, off the Grand Banks of Newfoundland.

661. Gastrostomus pacificus Bean.
Pacific Ocean in deep water.
Gastrostomus pacificus Bean, Smiths. Misc. Coll., XLV, 1904, 254, fig. 31; halfway between Midway Island and Guam.

Series OSTARIOPHYSI

Order V. HETEROGNATHI

Family 83. CHARACINIDÆ. Characins

Genus 247. PHENAGONIATES Eigenmann and Wilson.
Phenagoniates Eigenmann and Wilson, Indiana Univ. Studies, XIX, 1914, 2 (*P. wilsoni* Eigenmann=*Rœboides macrolepsis* Meek and Hildebrand).

662. Phenagoniates macrolepis (Meek and Hildebrand).
Atlantic slope of Panama.
Rœboides macrolepis Meek and Hildebrand, Field Mus. Nat. Hist., Zool., X, 1913, 84, Rio Cupe, Boca de Cupe, Tuyra River Basin.

Genus 248. COMPSURA Eigenmann.
Compsura Eigenmann, Mem. Carnegie Mus., VII, 1915, 60 (*Compsura heterura* Eigenmann).

663. Compsura gorgonæ (Evermann and Goldsborough).
Both slopes of Panama.
Cheirodon gorgonæ Evermann and Goldsborough, Proc. Biol. Soc. Wash., XXII, 1909, 99, figs. 1, 3, Gorgona, Atlantic slope, Panama Canal Zone.

Genus 249. PSEUDOCHEIRODON Meek and Hildebrand.
Pseudocheirodon Meek and Hildebrand, Field Mus. Nat. Hist., Zool., X, 1916, 275 (*P. affinis* Meek and Hildebrand).

664. Pseudocheirodon affinis Meek and Hildebrand.
Both slopes of Panama.
Cheirodon insignis Evermann and Goldsborough, Proc. Biol. Soc. Wash., XXII, 1909, 98, Tabernilla, Atlantic slope; not of Steindachner.
Pseudocheirodon affinis Meek and Hildebrand, Field Mus. Nat. Hist., Zool., X, 1916, 275, Pl. XVIII, Rio Gatun, Monte Liria, Canal Zone, Panama.

Genus 250. GEPHYROCHARAX Eigenmann.
Gephyrocharax Eigenmann, Indiana Univ. Studies, No. 16, 1912, 23 (*G. chocöensis* Eigenmann).

665. Gephyrocharax atricaudatus (Meek and Hildebrand).
Both slopes, Canal Zone, Panama.
Deuterodon atricaudata Meek and Hildebrand, Field Mus. Nat. Hist., Zool., X, 1912, 68, Rio Frijoles, Canal Zone.
Gephyrocharax atricaudata Eigenmann, Indiana Univ. Studies, No. 20, 1914, 41, Panama Canal Zone.

666. Gephyrocharax intermedius Meek and Hildebrand.
Rio Chama, Panama.
Gephyrocharax intermedius Meek and Hildebrand, Field Mus. Nat. Hist., Zool., X, 1916, 278, Rio Chama.

Genus 251. ASTYANAX Baird and Girard.
Astyanax Baird and Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 26 (*A. argentatus* Baird and Girard = *Tetragonopterus mexicanus* Filippi).
Pœcilurichthys Gill, Ann. Lyc. Nat. Hist. N. Y., VI, 1858, 417 (*P. brevoorti* Gill).
All the species mentioned below belong to the subgenus or genus *Astyanax*, distinguished from *Tetragonaptenes* Cuvier by the absence of teeth on the maxillary and by the shorter anal of less than 40 rays.

667. Astyanax mexicanus (Filippi).
Rio Balsas and Rio Tehuacan to tributaries of the Rio Grande in Texas, the northernmost species of the multitude of Characins.
Tetragonopterus mexicanus Filippi, Guerin's Rev. Mag. Zool., 1853, 166, Mexico.
Astyanax argentatus Baird and Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 27, Comanche Spring and Brownsville, Tex.
Tetragonopterus fulgens Bocourt, Ann. Sci. Nat. Zool., IX, 62, 1868.
Tetragonopterus nitidus Vaillant and Pellegrin, Bull. Mus. Hist. Nat. Paris, 1904, 324.
Tetragonopterus brevimanus Günther, Cat., V, 1864, 325, Yzabel; Rio San Geronimo, Guatemala.

668. Astyanax æneus (Günther).
Oaxaca, Mexico, and Rio Chagres, and other streams about Panama, south to Brazil.
Tetragonopterus æneus Günther, Proc. Zool. Soc. Lond., 1860, 319, Oaxaca, Mexico,
Tetragonopterus microphthalmus Günther, Cat., V, 1864, 324, Lake Amatitlan, Guatemala; Rio Rimac.
Tetragonopterus panamensis Günther, loc. cit., 324, Pacific coast of Panama; Yzabel.
Tetragonopterus humilis Günther, loc. cit., 327, Lake Amatitlan, Guatemala.
Tetragonopterus ærstedi Krøyer, in Lütkin, Ict. Bidrag., III, 1874, 229, Rio San Juan, Nicaragua.

669. **Astyanax petenensis** (Günther).
Nicaragua to western Ecuador; southeast to Argentine Republic.
Tetragonopterus petenensis Günther, Cat., V, 1864, 326, Lake Peten, Nicaragua.

670. **Astyanax scabripinnis** (Jenyns).
Jamapa, Mexico, to Rio Janeiro.
Tetragonopterus scabripinnis Jenyns, Voy. *Beagle*, Zool., Fishes, 1842, 125, Rio Janeiro, Brazil.

671. **Astyanax macrophthalmus** (Regan).
Streams of eastern Mexico.
Tetragonopterus macrophthalmus Regan, Biol. Centrali-Amer., 1915, 171, eastern Mexico; Monzorangi, Vera Cruz.

672. **Astyanax nasutus** Meek.
Astyanax nasutus Meek, Field Mus. Nat. Hist., Zool., VII, 1907, 108, Lake Managua, Nicaragua.

673. **Astyanax fasciatus** (Cuvier).
Coasts of Brazil, from Para to Napo and on the Pacific side from Panama to Ecuador.
Tetragonopterus fischeri Steindachner, Flussfische Südamerikas, I, 1879, 166, Mamo River at Chepo, Colombia.

674. **Astyanax ruberrimus** Eigenmann.
Panama, both slopes.
Astyanax ruberrimus Eigenmann, Indiana Univ. Studies, XVIII, 1913, 25, Isthmeria, Atlantic slope.

675. **Astyanax brevoortii** (Gill).
Island of Trinidad.
Pœcilurichthys brevoortii Gill, Ann. Lyc. Nat. Hist. N. Y., VI, 1858, 417. Trinidad.
Pœcilurichthys tæniurus Gill, loc. cit., 418, Trinidad.
Pœcilurichthys pulcher Gill. loc. cit., 419, Trinidad.

Genus 252. BRYCONAMERICUS Eigenmann.
Bryconamericus Eigenmann, Ann. Carnegie Mus., IV, 1907, 139, (*B. exodon* Eigenmann).

676. **Bryconamericus emperador** (Eigenmann and Ogle).
Streams of both slopes, Panama.
Astyanax emperador Eigenmann and Ogle, Proc. U. S. Nat. Mus., XXXIII, 1907, 26, Empire Station, Panama.

677. **Bryconamericus cascajalensis** Meek and Hildebrand.
Panama.
Bryconamericus cascajalensis Meek and Hildebrand, Field Mus. Nat. Hist., Zool., X, 1916, 284, Rio Cascajal, Puerto Bello, Panama.

Genus 253. HEMIBRYCON Günther.
Hemibrycon Günther, Cat., V, 1864, 318 (*Tetragonopterus* (*Hemibrycon*) *polyodon* Günther).

678. **Hemibrycon dariensis** Meek and Hildebrand.
Basin of Rio Tuyra, Panama.
Hemibrycon dariensis Meek and Hildebrand, Field Mus. Nat. Hist., Zool., X, 1916, 285, Pl. XX, mouth of Rio Yape, Panama.

Genus 254. HYPHESSOBRYCON Durbin.
Hyphessobrycon Durbin, in Eigenmann, Bull. Mus. Comp. Zool., LII, 1908, 100, (*Hemigrammus compressus* Meek).
Dermatocheir Durbin, Ann. Carnegie Mus., 1909, 55 (*D. calablepta* Durbin).

679. **Hyphessobrycon panamensis** Durbin.
Rio Chagres Basin, Panama.
Hyphessobrycon panamensis Durbin, in Eigenmann, Bull. Mus. Comp. Zool., LII, 1908, 101, Rio Boqueron, Atlantic slope, Panama.
Hemigrammus minutus Meek and Hildebrand, Field Mus. Nat. Hist., Zool., X, 1912, 67, Agua Clara, Panama, Atlantic side of Isthmus of Panama.

Genus 255. HEMIGRAMMUS Gill.
Hemigrammus Gill, Ann. Lyc. Nat. Hist. N. Y., VI, 1858, 420 (*H. unilineatus* Gill).

680. Hemigrammus unilineatus (Gill).
Streams of Trinidad.
Pœcilurichthys unilineatus Gill, Ann. Lyc. Nat. Hist. N. Y., VI, 1854, 420, Trinidad.

Genus 256. CREAGRUTUS Günther.
Creagrutus Günther, Cat., V, 1864, 339 (*Leporinus mulleri* Günther).

681. Creagrutus notropoides Meek and Hildebrand.
Rio Chagres, Panama.
Creagrutus notropoides Meek and Hildebrand, Field Mus. Nat. Hist., Zool., X, 1912, 68, Rio Indio, Chagres basin.

682. Creagrutus simus Meek and Hildebrand.
Rio Tuyra Basin, Panama.
Creagrutus simus Meek and Hildebrand, Field Mus. Nat. Hist., Zool., X, 1913, 85, Rio Cupe, Cituro, Panama.

Genus 257. RŒBOIDES Günther.
Rœboides Günther, Cat., V, 1864, 347 (*Epicyrtus microlepis* Reinhardt).

683. Rœboides guatemalensis (Günther).
Rio Chagres and streams of Guatemala.
Anacyrtus guatemalensis Günther, Cat., V, 1864, 347, Rio Chagres; Huamuchal.

684. Rœboides salvadoris Hildebrand. *Plateado; Sardina; Alma seca; Ulmina.*
Lakes Guija and Metapan and Rio Sucio and Lempa, El Salvador.
Rœboides salvadoris Hildebrand, Bull. U. S. Bur. Fish., XLI, 1925, 246, fig. 9, Rio Sucio, Sitio del Niño.

685. Rœboides occidentalis Meek and Hildebrand.
Pacific slope of Panama and southward.
Rœboides occidentalis Meek and Hildebrand, Field Mus. Nat. Hist., Zool., X, 1916, 293, Pl. XXIII, Rio Cardenas, Corozal, Panama.

Genus 258. BRYCON Müller and Troschel.
Brycon Müller and Troschel, Horæ Ichth., I, 1845, 15 (*B. falcatus* Müller and Troschel).
Chalcinopsis Kner, Sitzungsb. Akad. Wiss. München, 1863, 226 (*C. striatulus* Kner).
Megalobrycon Günther, Proc. Zool. Soc. Lond., 1869, 423 (*Brycon cephalus* Günther).

686. Brycon striatulus (Kner).
Rio Chagres and streams about Panama.
Chalcinopsis striatulus Kner, Sitzungsb. Akad. Wiss. München, 1863, 226, Panama.
Chalcinopsis chagresensis Kner, loc. cit., 1863, 226, Rio Chagres.

687. Brycon guatemalensis Regan.
Brycon guatemalensis Regan, Biol. Centrali-Amer., 1908, 168, lakes and streams of Guatemala and Nicaragua.

688. Brycon petrosus Meek and Hildebrand. *Pipon.*
Chagres River basin, Atlantic slope of Panama.
Brycon petrosus Meek and Hildebrand, Field Mus. Nat. Hist., Zool., X, 1913, 84, Pl. XXIV, 1916; upper Chagres, Panama.

689. Brycon dentex Günther.
Yucatan to Ecuador.
Brycon dentex Günther, Proc. Zool. Soc. Lond., 1860, 240, Esmeraldas, Ecuador.

690. Brycon argenteus Meek and Hildebrand.
Rio Charrera, and in Rio Bayano and Rio Tuyra basins, Pacific slope of Panama.
Brycon argenteus Meek and Hildebrand, Field Mus. Nat. Hist., Zool., X, 1913, 84, Pl. XXV, 298, 1916; Rio Aruza, Aruza, Panama.

691. Brycon oligolepis Regan.
Streams of Panama.
Brycon oligolepis Regan, Ann. Mag. Nat. Hist., IX, 1913, 462, Rio Condoto, Panama.

Genus 259. BRAMOCHARAX Gill.
Bramocharax Gill, Proc. Acad. Nat. Sci. Phila., XXIX, 1877, 189 (*B. bransfordi* Gill).

692. Bramocharax bransfordi Gill.
Lake Nicaragua.
Bramocharax bransfordi Gill, Proc. Acad. Nat. Sci. Phila., XXIX, 1877, 190, Lake Nicaragua.

693. Bramocharax elongatus Meek. *Sabalito.*
Bramocharax elongatus Meek, Field Mus. Nat. Hist., Zool., VII, 1907, 110, Lake Managua, Nicaragua.

Genus 260. PIABUCINA Cuvier and Valenciennes.
Piabucina Cuvier and Valenciennes, Hist. Nat. Poiss., XXII, 1849, 122 (161) (*P. erythrinoides* Cuvier and Valenciennes).

694. Piabucina panamensis Gill.
Tripoli, Atlantic slope of the Isthmus of Panama.
Piabucina panamensis Gill, Proc. Acad. Nat. Sci. Phila., XXVIII, 1876, 336, Rio Tripoli, Isthmus of Panama.

695. Piabucina festæ Boulenger.
Panama.
Piabucina festæ Boulenger, Bull. Mus. Torino, XIV, 1899, 346, I, Rio Sabina, Panama.

Genus 261. HOPLIAS Gill.
Macrodon Müller, in Wiegmann's Archiv, 1843 163, (*Macrodon trahira*= *Synodus malabaricus* Schneider); name preoccupied in *Sciænidæ*.
Hoplias Gill, Proc. U. S. Nat. Mus., XXVI, 1903, 1016 (*Synodus malabaricus* Schneider).

696. Hoplias malabaricus (Bloch).
Rio Tuyra Basin; both slopes of Colombia; Ecuador, and south to Brazil.
Esox malabaricus Bloch, Naturgesch. Ausl. Fische, pt. 8, 1794, 149, pl. 392, Tranquebar; locality wrongly given.
Macrodon tereira Cuvier and Valenciennes, Hist. Nat. Poiss., XIX, 1846, 508, Bahia; San Francisco; Amazon; Maracaibo.
Erythrinus trahira Agassiz, in Spix, Pisc. Brasil., 1829, pl. 18, Bahia; San Francisco; Amazon; Maracaibo.
Erythrinus macrodon Agassiz, loc. cit., 43, pl. 18, Alma, Prov. Bahia, San Francisco.
Erythrinus microcephalus Agassiz, loc. cit., 44, San Francisco.
Erythrinus brasiliensis Agassiz, loc. cit., 45, pl. 20, Peruaguacu.
Macrodon auritus Cuvier and Valenciennes, Hist. Nat. Poiss., XIX, 1846, 519, Montevideo.
Macrodon teres Cuvier and Valenciennes, loc. cit., 521, Lake Maracaibo.
Macrodon patana Cuvier and Valenciennes, loc. cit., 522, Cayenne.
Macrodon aimara Cuvier and Valenciennes, loc. cit., 586, Cayenne.
Macrodon ferox Gill, Ann. Lyc. Nat. Hist. N. Y., VI, 1858, 51, Trinidad.

697. Hoplias microlepis (Günther).
Panama to Ecuador.
Macrodon microlepis Günther, Cat., V, 1864, 282, western Ecuador, Guatemala.

Family 84. GASTEROPELICIDÆ

Genus 262. GASTEROPELECUS Gronow.
Gasteropelecus Gronow, Mus. Ichth., II, 1763, 7 (type given in Gen. Fish. as *Clupea sternica* L.).

698. Gasteropelecus maculatus Steindachner. *Peche-peche.*
Rio Mamoni, near Panama.
Gasteropelecus maculatus Steindachner, Flussfische Südamerikas, 1879, 168, Rio Mamoni, at Chepo, Panama.

699. Gasteropelecus sternicla Pallas.
Surinam; Brazil; Essequibo.
Gasteropelecus sternicla Pallas, Spic. Zool., 1780, fasc. 8, p. 50, tab. 3, fig. 4.

Family 85. XIPHOSTOMIDÆ

Genus 263. CTENOLUCIUS Gill.
Ctenolucius Gill, Suppl., Proc. Acad. Nat. Sci. Phila., XIII, 1861, 8 (*Luciocharax insculptus* Steindachner).
Luciocharax Steindachner, Denkschr. Akad. Wiss. Wien, XXXIX, 1878 (1879), 67 (*L. insculptus* Steindachner).

700. Ctenolucius insculptus (Steindachner).
Rio Magdalena and Rio Momoni near Panama.
Luciocharax insculptus Steindachner, Denkschr. Akad. Wiss. Wien, XXXIV, 1878 (1879), 67 Rio Magdalena, and Rio Mamoni near Panama.

701. Ctenolucius beani (Fowler).
Pacific coast of Panama; both slopes of Colombia.
Belonocharax beani Fowler, Proc. Acad. Nat. Sci. Phila., LVIII, 1906, 464, Rio Truando, a tributary of Rio Atrato, Panama.
Luciocharax striatus Boulenger, Ann. Mag. Nat. Hist., ser. 8, VII, 1911, 312, Boca de Calmia, Choco.

Family 86. ANOSTOMIDÆ. (Curimatidæ)

Genus 264–265. CURIMATA Walbaum.
Curimata Walbaum, Artedi Pisc., 1792, 80 (*Salmo marcgravii* Walbaum, based on *Charax maxilla superiore longiore* Gronow, which is *Salmo cyprinoides* Linnæus).
Les Curimates Cuvier, Règne Anim., ed. 1, II, 1817, 165 (*Salmo edentulus* Bloch).
Curimatus of authors generally; altered spelling.
Curimatella Eigenmann and Eigenmann, Ann. N. Y. Acad. Sci., IV, 1889, 415 (*C. lepidurus* Eigenmann and Eigenmann).
Semitapicus Eigenmann and Eigenmann, loc. cit., 415 (*Curimatus spilurus* Günther).

701a. Curimata magdalenæ Steindachner. *Sardina blanca.*
Rio Magdalena and Rio Mamoni, Colombia.
Curimatus magdalenæ Steindachner, Denkschr. Akad. Wiss. Wien, XXXIX, 1878 (1879), 34, Rio Magdalena, Colombia.

Family 87. HEMIODONTIDÆ

Genus 266. CHARACIDIUM Reinhardt.
Characidium Reinhardt, Overs. Dansk. Forh. Kjøbenhavn, 1866, 56, (*C. fasciatum* Reinhardt).

702. Characidium marshi Breder.
Tuyra Basin, Pacific slope of Panama.
Characidium marshi Breder (C. M.), Amer. Mus. Novitates, CLXXX, July 5, 1925, 5, fig. 5, Rio Sucubti, Darien, Panama.

Genus 267. APAREIODON Eigenmann.
Apareiodon Eigenmann, Ann. Carnegie Mus., X, 1916, 71 (*Parodon piracicabæ* Eigenmann).

703. Apareiodon compressus Breder.
Tuyra Basin, Pacific slope of Panama.
Apareiodon compressus C. M. Breder, jr., Amer. Mus. Novitates, CLXXX, July 5, 1925, 4, fig. 3, 4, Rio Chucunaque, Panama.

704. Apareiodon dariensis (Meek and Hildebrand).
Rio Cupe, Panama.
Parodon dariensis Meek and Hildebrand, Field Mus. Nat. Hist., Zool., X, 1913, 83, Pl. XVII, 1916, Rio Cupe, Pacific slope of Panama.

Order W. GYMNONOTI

Family 83. GYMNOTIDÆ

Genus 268. GYMNOTUS Linnæus.
Gymnotus Linnæus, Syst. Nat., Ed. X, 1758, 246 (*G. carapo* L.).
Carapus Rafinesque, Indice, 37, 1810, 57 (*Gymnotus acus* Linnæus, prior to *Fierasfer* Cuvier, not *Carapus* Cuvier=*Giton* Kaup).
Carapus Müller and Troschel, Horæ Zool., III, 1849, 13 (*Gymnotus fasciatus* Pallas=*Gymnotus carapo* L.).

705. Gymnotus carapo Linnæus.
Carapo Marcgrave, Hist. Pisc. Brasil., 1648, 170, Brazil.
Gymnotus carapo Linnæus, Syst. Nat., Ed. X, 1758, 246.
Gymnotus fasciatus Pallas, Spic. Zool., VII, 1769, 35, fresh waters of America; anal rays about 180.
Gymnotus albus Pallas, loc. cit., 36, Surinam.
Gymnotus putaol Lacépède, Hist. Nat. Poiss., II, 1801, 176, Brazil.

Genus 269. APTERONOTUS Lacépède.
Apteronotus Lacépède, Hist. Nat. Poiss., II, 1800, 208 (*A. passan* Lacèpéde=*Gymnotus albifrons* L.).
Sternarchus Schneider, Syst. Ichth., Bloch, 1801, 497 (*Gymnotus albifrons* L.).
Memarchus Kaup in Duméril, Ichth. Anal., 1856, 201 (*Gymnotus albifrons* L.).

706. Apteronotus rostratus (Meek and Hildebrand).
Streams of Panama, in Atlantic drainage, and of Colombia (Rio Cauca).
Stenarchus rostratus Meek and Hildebrand, Field Mus. Nat. Hist., Zool., X, 1913, 85, Rio Grande near Cana, Panama.

Genus 270. STERNOPYGUS Müller and Troschel.
Sternopygus Müller and Troschel, Horæ Zool., III, 1849, 13 (*Gymnotus macrurus* Bloch and Schneider).
Carapus Cuvier, Règne Anim., Ed. I, 1817, 237 (*Gymnotus macrourus* Bloch and Schneider); not *Carapus* Rafinesque, 1810.
Carapo Oken, Isis, 1817, 1183; after Cuvier.
Giton Kaup, in Duméril, Ichth. Anal., 1856, 201 (*Gymnotus fasciatus* Pallas).

707. Sternopygus dariensis Meek and Hildebrand.
Streams of Panama, Atlantic slope.
Sternopygus dariensis Meek and Hildebrand, Field Mus. Nat. Hist., Zool., X, 1916, 309, Rio Tuyra at Marrigante.

Genus 271. HYPOPOMUS Gill.
Hypopomus Gill, Proc. Acad. Nat. Sci. Phila., XVI, 1864, 152 (*Rhamphichthys mulleri* Kaup).
Brachyrhamphichthys Günther, Cat., VIII, 1890, 6 (*Rhamphichthys artedi* Kaup).

708. Hypopomus brevirostris (Steindachner).
Panama, on both slopes to Brazil and Rio de la Plata.
Rhamphichthys brevirostris Steindachner, Sitzungsb., Akad. Wiss. Wien, LVIII, 1868, 254, fig. 2, Garapore, Amazon, at Santarem.
Hypopomus occidentalis Regan, Ann. Mag. Nat. Hist., XIV, 1914, (8), 32, Condoto River, Colombia.

Genus 272. EIGENMANNIA Jordan and Evermann.
Cryptops Eigenmann, Ann. N. Y. Acad. Sci., VII, 1894, 626 (*Sternopygus humboldti* Steindachner); name preoccupied.
Eigenmannia Jordan and Evermann, Fish. North and Mid. Amer., 1896, 341 (*Sternopygus humboldti* Steindachner=*Sternarchus virescens* Valenciennes).

709. Eigenmannia virescens (Valenciennes).
Brazil, north in Atlantic drainage to Panama.
Sternarchus virescens Valenciennes, D'Orbigny Voyage, V, 1847, 11.
Sternopygus lineatus Müller and Troschel, Schomburgk's Reise, III, 1848, 640, British Guiana.
Sterhopygus tumifrons Müller and Troschel, Horæ Zool., III, 1849, 14.
Sternopygus humboldti Steindachner, Denkschr. Akad. Wiss. Wien, 1878, 55, Rio Magdalena.

Order X. EVENTOGNATHI. Carps

Family 89. CATOSTOMIDÆ. Suckers and buffalofishes

Genus 273. CYCLEPTUS Rafinesque. *Blackhorse.*

Cycleptus Rafinesque, Jour. Phys., LXXXVIII, 1819, 421 (*C. nigrescens* Rafinesque=*Catostomus elongatus* LeSueur).

Rhythidostomus Heckel, Fisch. Syriens, in Russegger's Reisen, 1842, 1023 (*Catostomus elongatus* LeSueur).

710. Cycleptus elongatus (LeSueur). *Blackhorse; Gourdseed sucker; Missouri sucker; Suckerel.*

Mississippi valley; rather common in large streams.

Catostomus elongatus LeSueur, Jour. Acad. Nat. Sci. Phila., I, 1817, 103, Ohio River.

Cycleptus nigrescens Rafinesque, Jour. Phys., LXXXVIII, 1819, 421, Ohio River.

Genus 274. MEGASTOMATOBUS Fowler. *Big-mouthed buffalofish.*

Megastomatobus Fowler, Proc., Acad. Nat. Sci. Phila., LXV, 1913, 45 (*Sclerognathus cyprinella* Cuvier and Valenciennes, the chef de filo of these authors for *Sclerognathus* being *Sclerognathus cyprinus*).

Ichthyobus Agassiz, Amer. Jour. Sci. Arts, 1855, 192 (*I. bubalus* Agassiz; not *Catostomus bubalus* Rafinesque; revised spelling of *Ictiobus*).

711. Megastomatobus cyprinella (Cuvier and Valenciennes). *Redmouth buffalofish; Common buffalofish; Bigmouth buffalo; Gourdseed buffalo.*

Mississippi Valley to Red River of the North; generally abundant in larger streams.

Sclerognathus cyprinella Cuvier and Valenciennes, Hist. Nat. Poiss., XVII, 1844, 355 (477), Lake Pontchartrain, La.

Genus 275. ICTIOBUS Rafinesque. *Buffalofishes.*

Ictiobus Rafinesque, Ichth. Ohiensis, 1820, 55 (*Amblodon bubalus* Rafinesque).

Bubalichthys Agassiz, Amer. Jour. Sci. Arts, XVIII, 1855, 192 (*Carpiodes urus* Agassiz).

Subgenus BUBALICHTHYS Agassiz.

712. Ictiobus urus (Agassiz). *Mongrel buffalo; Round buffalo; Black buffalo, Chopper.*

Mississippi Valley; less common than the others in the large streams; the largest and least common of the buffalo fish.

?*Carpiodes niger* Rafinesque, Ichth. Ohiensis, 1820, 56, Ohio River; may be *M. cyprinella.*

Carpiodes urus Agassiz, Amer. Jour. Sci. Arts, XVII, 1854, 355, Tennessee River, Ala.

Bubalichthys urus Agassiz, loc. cit., Ohio River.

?*Bubalichthys niger* Agassiz, loc. cit., 193, Ohio River.

?*Bubalichthys bonasus* Agassiz, loc. cit., 195, Osage River, Mo.

Subgenus ICTIOBUS Rafinesque.

713. Ictiobus bubalus (Rafinesque). *Smallmouth buffalo; Razor-backed buffalo; Suckermouth buffalo; Quillback buffalo; Brown buffalo; Rooter.*

Mississippi Valley and southward; generally abundant.

?*Amblodon bubalus* Rafinesque, Jour. Phys., LXXXVIII, 1819, 421, Ohio River.

?*Carpiodes taurus* Agassiz, Amer. Jour. Sci. Arts, XVII, 1854, 355, Mobile River.

?*Carpiodes vitulus* Agassiz, loc. cit., 356, Wabash River at New Harmony.

Ichthyobus rauchi Agassiz, loc. cit., XIX, 1855, 192.

Ichthyobus cyanellus Nelson, Bull., Ill. Lab. Nat. Hist., I, 1876, 49, Illinois River.

Bubalichthys altus Nelson, in Jordan, Proc. Acad. Nat. Sci. Phila., XXIX, 1877, 73, Cairo, Ill.

Bubalichthys bubalinus Jordan, Bull. U. S. Nat. Mus., IX, 1877, 50, Ohio River.

Genus 276. CARPIODES Rafinesque. *Carp suckers.*

Carpiodes Rafinesque, Ichth. Ohiensis, 1820, 56 (*Catostomus cyprinus* LeSueur).

Sclerognathus Cuvier and Valenciennes, Hist. Nat. Poiss., XVII, 1844, 472 (*Catostomus cyprinus* and *Sclerognathus cyprinella* Cuvier and Valenciennes; restricted to the former by Agassiz, 1854, to the latter by Günther, 1868).

714. **Carpiodes cyprinus** (LeSueur). *Carp sucker; American carp; Carp; Quillback.*

Streams about Chesapeake Bay; common in the Chesapeake and Potomac, rare in the Delaware.

Catostomus cyprinus LeSueur, Jour. Acad. Nat. Sci. Phila., I, 1817, 91, Elk River and other tributaries of Chesapeake Bay.

Carpiodes vacca Agassiz, Amer. Jour. Sci. Arts, XVII, 1854, 356, Susquehanna River.

715. **Carpiodes carpio** (Rafinesque). *Carp sucker; Common river carp; Sucker.*

Ohio Valley and southwest to central Texas; generally abundant and variable.

Catostomus carpio Rafinesque, Ichth. Ohiensis, 1820, 56, falls of the Ohio River.

Carpiodes nummifer Cope, Proc. Amer. Phil. Soc., XI, 1870, 484, Wabash River.

716. **Carpiodes cutisanserinus** Cope.

Allegheny Basin.

Carpiodes cutisanserinus Cope, Proc., Amer. Phil. Soc. Phila., XI, 1870, 481, Kiskiminitas River, Pennsylvania (Allegheny Basin).

Carpiodes selene Cope, loc. cit., 1870, 41; supposed to be from Root River, Mich.

717. **Carpiodes difformis** Cope. *Blunt-nosed river carp; Sucker.*

Ohio valley and westward; generally common.

Carpiodes difformis Cope, Proc., Amer. Phil. Soc., XI, 1870, 480, Wabash River.

718. **Carpiodes bison** Agassiz.

Osage River.

Carpiodes bison Agassiz, Amer. Jour. Sci. Arts, XVII, 1854, 356, Osage River, Mo.

719. **Carpiodes thompsoni** Agassiz. *Lake carp; Drum; Shad* (Sandusky, Ohio).

Great Lakes region from Lake Champlain to Lake of the Woods, chiefly northward.

Carpiodes thompsoni Agassiz, Amer. Jour. Sci. Arts, XVIII, 1855, 191, Lake Champlain.

720. **Carpiodes velifer** (Rafinesque). *Silver carp; Quillback; Spearfish; Sailfish; Skimback; Sailing sucker; Sailorfish.*

Mississippi Valley and westward to the upper Missouri; more common northward.

Catostomus velifer Rafinesque, Ichth. Ohiensis, 1820, 56, Ohio.

Carpiodes damalis Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 170, Milk River, Mont.

Carpiodes grayi Cope, Proc., Amer. Phil. Soc., XI, 1870, 482, Western States.

721. **Carpiodes tumidus** Baird and Girard. *Metalote; Buffalo.*

Lowland streams and lagoons, from the Rio Grande to the Rio Panuco and Tampico

Carpiodes tumidus Baird and Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 28, Rio Grande at Fort Brown, Tex.; perhaps not separable from *C. velifer*.

722. **Carpiodes labiosus** Meek.

Streams of eastern Mexico.

Carpiodes labiosus Meek, Field Col. Mus., Zool., V, 1904, 29, fig. 6, Valles, San Luis Potosi, Mexico.

723. Carpiodes elongatus Meek.
Streams of the east coast of Mexico.
Carpiodes elongatus Meek, Field Col. Mus., Zool., V, 1904, 28, fig. 5, Rio San Juan, Rio Conchos, and Rio Sarto Maruta in Tamaulipas, Linares, Nueva Leon.

724. Carpiodes microstomus Meek.
Tributaries of the Rio Grande, on the Mexican plateau.
Carpiodes microstomus Meek, Field Col. Mus., Zool., V, 1904, 27, fig. 4, Rio Conchos in Chihuahua.

725. Carpiodes meridionalis (Günther).
Southern Mexico and Guatemala.
Sclerognathus meridionalis Günther, Cat., VII, 1868, 23, Rio Usumacinta, Guatemala.

Genus 277. NOTOLEPIDOMYZON Fowler.
Notolepidomyzon Fowler, Proc. Acad. Nat. Sci. Phila., LXV, 1913, 47 (*Pantosteus arizonæ* Gilbert=*Catostomus clarki* Baird and Girard).

726. Notolepidomyzon plebeius (Baird and Girard).
Basin of the Rio Grande, Colorado to Chihuahua; Rio Piedras, Rio Casas Grandes; very common.
Catostomus plebeius Baird and Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 28, Rio Mimbres, a tributary of Lake Guzman, Chihuahua, Mexico.
Catostomus (*Acomus*) *guzmaniensis* Girard, loc. cit., VIII, 1856, 173, Rio Janos, tributary to Lago de Guzman, Chihuahua, Mexico.
Catostomus nebuliferus Garman, Bull Mus. Comp. Zool., VIII, 1881, 89, Rio Nazas, Coahuila, Mexico.

727. Notolepidomyzon clarkii (Baird and Girard).
Rio Gila, Salt River, and their tributaries in Arizona.
Catostomus clarkii Baird and Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 27, Rio Santa Cruz, Gila Basin, Ariz.
Pantosteus arizonæ Gilbert, in Jordan and Evermann, Fishes North and Mid. Amer., 1896, 170, Salt River, Tempe, Ariz.

728. Notolepidomyzon santæ-anæ (Snyder).
Streams of southern California.
Pantosteus santæ-anæ Snyder, Proc. U. S. Nat. Mus., XXXIV, 1908, 33, Santa Ana River, at Riverside, Calif.

729. Notolepidomyzon generosus (Girard). *Mountain sucker.*
Colorado Basin.
Catostomus (*Acomus*) *generosus* Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 174, Cottonwood Creek; not in Utah, "no doubt from Colorado" (Snyder).

Genus 278. PANTOSTEUS Cope. *Mountain suckers.*
Pantosteus Cope, Wheeler's Surv., V, 1875, 673 (*Minomus platyrhynchus* Cope).

730. Pantosteus delphinus (Cope). *Bluehead sucker.*
Mountain streams tributary to the Colorado River in western Colorado and Wyoming; very abundant.
Minomus delphinus Cope, Hayden's Geol. Surv. Wyo., 1870, 435; probably Henry Fork of Green River, Wyo.
?*Minomus bardus* Cope, loc. cit., 436; probably Green River, Wyo.

731. Pantosteus platyrhynchus (Cope).
Streams of Utah Basin (Provo and Sevier Rivers).
Minomus platyrhynchus Cope, Proc. Am. Phil. Soc., XIV, 1874, 134, Utah Lake at Provo.
?*Minomus jarrovii* Cope, loc. cit., 135; "near Provo"; the type lost.

732. Pantosteus jordani Evermann.
Upper Missouri and Columbia River Basins.
Pantosteus jordani Evermann, Bull. U. S. Fish Com., XII, 1892 (Jan. 27, 1893), 51, fig. on p. 53; Whitewood Creek and other streams of the Black Hills, S. Dak.

733. Pantosteus columbianus Eigenmann.
Columbia Basin.
Pantosteus columbianus Eigenmann, Amer. Nat., Feb. 4, 1893, 151, Columbia River; perhaps identical with *Pantosteus jordani*.

734. Pantosteus virescens Cope.
Tributaries of Lake Bonneville basin of Utah; abundant in Weber and Bear Rivers; largest of the hard-mouthed or mountain suckers.
Pantosteus virescens Cope, Wheeler's Surv., Zool., 1875, 675; by error ascribed to Arkansas River at Pueblo; must have come from the basin of Utah.

735. Pantosteus lahontan Rutter.
Streams of western Nevada; Lahontan Basin.
Pantosteus lahonton Rutter, Bull. U. S. Fish Com., XXII, 1902, 146, with figure; Susan River, a tributary of Honey Lake, Little Truckee River, Prosser Creek; misprint for *lahontan*.

Genus 279. CATOSTOMUS LeSueur. *Fine-scaled sucker.*
Catostomus LeSueur, Jour. Acad. Nat. Sci. Phila., I, 1817, 89 (*Cyprinus catostomus* Forster).
Decactylus Rafinesque, Ichth. Ohiensis, 1820, 60 (*Catostomus bostoniensis* Rafinesque = *Cyprinus commersoni* Lacépède).
Stomocatus Bonaparte, Fauna Italica, 1840, Fasc. 129 (*Cyprinus catostomus* Forster).
Minomus Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 173 (*Catostomus insignis* Baird and Girard).
Acomus Girard, loc. cit., 173 (*Catostomus forsterianus* Richardson = *Cyprinus catostomus* Forster).

Subgenus DECACTYLUS Rafinesque.

736. Catostomus commersonii (Lacépède). *Common sucker; White sucker; Brook sucker; Fine-scaled sucker; Black mullet (Sandusky, Ohio); Fine-scaled mullet; Bay mare.*
Quebec and the Great Lakes to Montana, Colorado, southward to Missouri and Georgia; the commonest of the suckers, excessively abundant from Massachusetts west to Kansas.
Cyprinus commersonii Lacépède, Hist. Nat. Poiss., V, 1803, 503, locality unknown; wrongly accredited to Commerson, the description and figure drawn from an old example long in alcohol.
Cyprinus teres Mitchill, Trans. Lit. Phil. Soc. N. Y., 1815, 458, New York.
Catostomus communis LeSueur, Jour. Acad. Nat. Sci. Phila., I, 1817, 95, 106, Delaware River.
Catostomus bostoniensis LeSueur, loc. cit., 106, Boston.
Catostomus flexuosus Rafinesque, Ichth. Ohiensis, 1820, 59, Ohio River.
Catostomus reticulatus Richardson, Fauna Bor.-Amer., Fishes, 1836, 303, Albany River.
Catostomus gracilis Kirtland, Rept. Zool. Ohio, 1838, 169, Cleveland, Ohio.
Catostomus pallidus DeKay, New York Fauna: Fishes, 1842, 200, New York.
Catostomus sucklii Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 175, Milk River, Mont.
Catostomus chloropteron Abbott, loc. cit., XII, 1860, 473, Kansas.
?*Catostomus alticolus* Cope, Proc. Amer. Phil. Soc., XIV, 1874, 138, Twin Lake, Colo.
Moxostoma trisignatum Cope, Wheeler's Surv., V, Zool., 1875, 679, Arkansas River.
?*Catostomus utawana* Mather, Twelfth Rept., N. Y. Fish Com., Surv. of Adirondacks, 1884, 36, Blue Mountain Lakes, N. Y.; dwarf form.

737. Catostomus ardens Jordan and Gilbert. *Mullet of Utah Lake.*
Great basin of Utah and upper Snake River; Idaho; locally abundant.
Catostomus ardens Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880, 464, Utah Lake, Provo, Utah.

738. Catostomus occidentalis Ayres. *Sacramento sucker.*
Streams of northern and central California and southern Oregon.
Catostomus occidentalis Ayres, Proc. Calif. Acad. Nat. Sci., I, 1854, 18, San Francisco.
Catostomus labiatus Ayres, loc. cit., 1855, 32, San Joaquin River, Stockton, Calif.
Catostomus araeopus Jordan, Bull. U. S. Nat. Mus., XII, 1878, 173, South Fork of Kern River, Calif.

739. Catostomus tsiltcoosensis Evermann and Meek.
Coastal streams of Oregon.
Catostomus tsiltcoosensis Evermann and Meek, Bull. U. S. Fish Com., XVII, 1897, 66, fig. 1, Tsilcoos Lake, Lane Co., Oreg.

740. Catostomus snyderi Gilbert.
Klamath Basin, California and Oregon.
Catostomus snyderi Gilbert, Bull. U. S. Fish Com., XVII, 1897 (Jan. 6, 1898), 3, Upper Klamath Lake, Oreg.

741. Catostomus microps Rutter.
Streams of the lava beds of California.
Catostomus microps Rutter, Bull. U. S. Bur. Fish., XXVII, 1907 (1908), 120, fig. 1; Rush Creek, a tributary of Ash Creek, Aden, Modoc Co., Calif.

742. Catostomus macrocheilus Girard. *Columbia River sucker; Biglip sucker.*
Columbia River Basin, as far up as Flathead Lake, Montana; Upper Salmon Falls and the headwaters of Salmon River, Idaho.
Catostomus macrocheilus Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 175, Astoria, Oreg.

743. Catostomus insignis Baird and Girard.
Gila Basin, Ariz.
Catostomus insignis Baird and Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 28, Rio San Pedro, Ariz.
Catostomus gila Kirsch, Proc. U. S. Nat. Mus., XI, 1888, 555, Rio Gila, Fort Thomas, Ariz.

744. Catostomus bernardini Girard.
San Bernardino Creek, a tributary of Rio Yaqui, on the boundary of Arizona and Sonora.
Catostomus bernardini Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 175, San Bernardino Creek, Ariz.

745. Catostomus sonoriensis Meek.
Rivers of Sonora on the Pacific slope.
Catostomus sonoriensis Meek, Field Col. Mus., Zool., Ser. III, No. 6, May, 1902, 75, Pl. XVI, Rio Paphigochic, Miñaca, Chihuahua, Mexico.

Subgenus CATOSTOMUS LeSueur.

746. Catostomus catostomus (Forster). *Long-nosed sucker; Northern sucker; Red sucker; Black sucker* (Sandusky, Ohio); *Sturgeon sucker.*
Great Lakes; upper Missouri River; Ohio Basin; West Virginia; upper Columbia; eastward to Maine and northwestward to Alaska; very abundant northward.
Cyprinus catostomus Forster, Philos. Trans., LXIII, 1773, 155, tab. 6, streams about Hudson Bay.
Catostomus longirostrum and *hudsonius* LeSueur, Jour. Acad. Nat. Sci. Phila., I, 1817, 102, 107, Vermont; after Forster.
Catostomus forsterianus Richardson, Franklin's Jour., 1823, 720, Lake Huron; Great Slave Lake.
Catostomus aurora Agassiz, Lake Superior, 1850, 360, Lake Superior.
Catostomus nanomyzon Mather, Twelfth Rep., N. Y. Fish Com., Surv. of Adirondacks, 1884, 36, Big Moose Lake, northern New York; dwarf form.

747. Catostomus richardsoni Harper and Nichols. *Gray sucker.*
Streams of northwestern Canada.
Catostomus richardsoni Harper and Nichols, Bull., Amer. Mus. Nat. Hist., XLI, 1919, 263, Pl. XV, fig. 1, type locality not designated.

748. Catostomus griseus Girard.
Platte River and upper Missouri region.
Catostomus (Acomus) griseus Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 174, Sweetwater Fork of Platte River.
?*Catostomus (Acomus) lactarius* Girard, loc. cit., 174, Milk River, Mont.

749. Catostomus retropinnis Jordan.
Northern Montana.
Catostomus retropinnis Jordan, Bull. U. S. Nat. Mus., XII, 1878, 178, Milk River, Mont.

750. Catostomus pocatello Gilbert and Evermann. *Moo-gad-ee of the Fort Hall Indians.*
Upper Snake River.
Catostomus pocatallo Gilbert and Evermann, Bull., U. S. Fish Com., XIV, 1894, 189, pl. 21, fig. 1, Ross fork of Snake River, near Pocatello, Idaho.

751. Catostomus tahoensis Gill and Jordan. *Tahoe sucker.*
Lake Tahoe and Humboldt River, Nev.
Catostomus tahoensis Gill and Jordan, in Jordan, Bull., U. S. Nat. Mus., XII, 1878, 173, Lake Tahoe, Calif.

752. Catostomus discobolus Cope.
Upper Colorado Basin.
Catostomus discobolus Cope, Hayden's Geol. Surv. Wyo., 1870 (1872), 435, Green River, Wyo.

753. Catostomus chamberlaini (Rutter).
Chasmistes chamberlaini Rutter, Bull. U. S. Fish Com., XXII, 1902 (1904), 147, Eagle Lake (a lake without outlet in the Lahontan Basin); apparently a variant of *C. tahoensis*.

754. Catostomus latipinnis Baird and Girard. *Flannel-mouthed sucker.*
Rio Colorado and Rio Gila and their tributaries.
Catostomus latipinnis Baird and Girard, Proc. Acad. Nat. Sci. Phila., VI, 1853, 388, Rio San Pedro, Gila Basin, Ariz.

755. Catostomus conchos Meek.
Catostomus conchos Meek, Field Col. Mus., Zool., III, 1902, 75, Rio Conchos, Jimenez, Chihuahua, Mexico.

Genus 280. HYPENTELIUM Rafinesque.
Hypentelium Rafinesque, Jour. Acad. Nat. Sci. Phila., II, 1818, 421 (*H. macroplectum* Rafinesque = *Catostomus nigricans* LeSueur).
Eurystomus Rafinesque, Ichth. Ohiensis, 1820, 59 (*Catostomus megastomus* Rafinesque), based on an incorrect drawing of *Hypentelium nigricans*.
Hylomyzon Agassiz, Amer. Jour. Sci. Arts, 1855, 205 (*Catostomus nigricans* LeSueur).

756. Hypentelium nigricans (LeSueur). *Black sucker; Mud sucker; Hog sucker; Stoneroller; Toter; Crawl-a-bottom; Hammerhead; Stonelugger; Hogmolly; Bootleg sucker; Spotted sucker; Niggerhead.*
New York to Minnesota, Kansas, Arkansas, and the Carolinas; abundant in swift or rocky streams.
Catostomus nigricans LeSueur, Jour. Acad. Nat. Sci. Phila., I, 1817, 102, Lake Erie.
Catostomus maculosus LeSueur, loc. cit., 103, Pipe Creek, Md.
Hypentelium macropterum Rafinesque, loc. cit., I, 1817, 420, Ohio River.
Catostomus xanthopus Rafinesque, Ichth. Ohiensis, 1820, 57, Ohio River.
Catostomus nigricans etowanus Jordan, Ann. Lyc. Nat. Hist. N. Y., XI, 1876 (1877), 345, Etowah River, Rome, Ga.
Catostomus megastomus Rafinesque, Ichth. Ohiensis, 1820, 59; based on incorrect drawing.
Catostomus planiceps Cuvier and Valenciennes, Hist. Nat. Poiss., XVII, 1844, 334 (450), 1844, Wabash River.

Genus 281. THOBURNIA Jordan and Snyder.
Thoburnia Jordan and Snyder, Copeia, October 4, 1917, 88 (*Catostomus rhothœcus* Thoburn).

757. **Thoburnia rhothœca** (Thoburn).
Headwaters of Tennessee River.
Catostomus rhothœcus Thoburn, in Jordan and Evermann, Fishes North and Mid. Amer., 1896, 181, upper tributaries of Tennessee River; supposed to be from the French Broad River at Wolf Creek, Tenn.

Genus 282. CHASMISTES Jordan.
Chasmistes Jordan, Bull., Hayden's Geol. Surv. Terr., IV, No. 2, 1878, 417 (*C. fecundus* Jordan; not *Catostomus fecundus* Cope and Yarrow = *Chasmistes liorus* Jordan).
Lipomyzon Cope, Amer. Nat., XV, 1881, 59 (*Chasmistes brevirostris* Cope).
Pithecomyzon Fowler, Proc. Acad. Nat. Sci. Phila., LXV, 1913, 54 (*Chasmistes cujus* Cope).

Subgenus LIPOMYZON Cope.

758. **Chasmistes fecundus** (Cope and Yarrow). *Webug sucker.*
Utah Lake.
Catostomus fecundus Cope and Yarrow, Wheeler's Surv., Zool., V, 1875, 678, Utah Lake.

759. **Chasmistes brevirostris** Cope.
Klamath Lake, Oreg.
Chasmistes brevirostris Cope, Amer. Nat., XIII, 1879, 785, Klamath Lake, Oreg.

760. **Chasmistes stomias** Gilbert.
Upper Klamath Lake, Oreg.
Chasmistes stomias Gilbert, Bull., U. S. Fish Com., XVII, 1897 (1898), 5, text figure, Upper Klamath Lake, Oreg.

761. **Chasmistes liorus** Jordan. *June sucker.*
Utah Lake.
Chasmistes liorus Jordan, Bull., U. S. Nat. Mus., XII, 1878, 249, Utah Lake at Provo, Utah.

762. **Chasmis es cujus** Cope. *Couia; Kweewee; Quiwee.*
Pyramid Lake, Nevada; locally abundant.
Chasmistes cujus Cope, Proc. Acad. Nat. Sci. Phila., XXXV, 1883, 149, Pyramid Lake, Nev.

763. **Chasmistes copei** Evermann and Meek. *Tswam.*
Klamath Lakes, Oreg.
Chasmistes copei Evermann and Meek, Bull., U. S. Fish Com., XVII, 1894 (1898), 70, fig. 3; Pelican Bay, Upper Klamath Lake, Oreg.

Genus 283. DELTISTES Seale.
Deltistes Seale, Proc. Calif. Acad. Sci., ser. 2, VI, 1896, 269 (*Chasmistes luxatus* Cope).

764. **Deltistes luxatus** (Cope). *Tswam; Lost River sucker.*
Klamath Lake and River, Oreg; abundant.
Chasmistes luxatus Cope, Amer. Nat., XIII, 1879, 784, Klamath Lake, Oreg.
Catostomus rex Eigenmann, loc. cit., XXV, July, 1891, 667, Lost River, Oreg.

Genus 284. XYRAUCHEN Eigenmann and Kirsch. *Razorback suckers.*
Xyrauchen Eigenmann and Kirsch, Proc. U. S. Nat. Mus., XI, 1888, 556 (*Catostomus cypho* Lockington = *Catostomus texanus* Abbott).

765. **Xyrauchen texanus** (Abbott). *Razorback sucker; Humpback sucker.*
Basin of the Colorado and Gila Rivers (not in Texas).
Catostomus texanus Abbott, Proc. Acad. Nat. Sci. Phila., XII, 1860, 473, Colorado and New Rivers, Ariz.
Catostomus cypho Lockington, loc. cit., 1880, 237, Colorado River at mouth of the Gila, Ariz.
Xyrauchen uncompahgre Jordan and Evermann, Bull. U. S. Fish Com., 1889, 26, Uncompahgre River delta, Colo.; young example, probably the same.

Genus 285. ERIMYZON Jordan. *Chub suckers.*
Erimyzon Jordan, Bull. Buffalo Soc. Nat. Hist., III, 1876, 95 (*Cyprinus oblongus* Mitchill).

766. Erimyzon sucetta (Lacépède). *Chub; Chub sucker; Creekfish; Creek sucker.*

Coastwise streams, Pennsylvania and south; very abundant southward.

Cyprinus sucetta Lacépède, Hist. Nat. Poiss., V, 1803, 606, South Carolina.

Moxostoma kennerlyi Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 171, Dry Creek, Victoria, Tex.

Moxostoma campbelli Girard, loc. cit., 172, Live Oak Creek and Devil River, Tex.

Moxostoma tenue Agassiz, Amer. Jour. Sci. Arts, 1855, 203, Mobile, Ala.

Erimyzon goodei Jordan, Bull. U. S. Nat. Mus., XII, 1878, 148, St. Johns River, Fla.

767. Erimyzon oblongus (Mitchill). *Chub sucker; Sweet sucker; Mullet; Creek fish; Pin minnow.*

Great Lakes region to Maine and the Dakotas, south to Virginia and Oklahoma; very abundant; replacing the deeper-bodied *sucetta* northward; the two probably intergrading.

Cyprinus oblongus Mitchill, Trans. Lit. Phil. Soc. N. Y., I, 1815, 459, New York.

Catostomus gibbosus LeSueur, Connecticut River, Northampton; *tuberculatus*, Germantown, Pa.; and *vittatus*, Wissahickon River, Pa.; Jour. Acad. Nat. Sci. Phila., I, 1817, 92, 93, 104.

Catostomus fasciolaris Rafinesque, Ichth. Ohiensis, 1820, 58, Ohio River.

Labeo elegans, New York; *esopus*, New York; and *elongatus*, Mohawk River; DeKay, N. Y. Fauna: Fishes, 1842, 192, 195, 394.

Moxostoma claviformis Girard, Proc. Acad. Nat. Sci. Pila., VIII, 1856, 171, Coal Creek, Canadian River, Indian Territory [Okla.]

Genus 286. MINYTREMA Jordan. *Spotted suckers.*

Minytrema Jordan, Man. Vert., ed. 2, 1878, 318 (*Catostomus melanops* Rafinesque).

768. Minytrema melanops (Rafinesque). *Spotted sucker; Striped sucker; Winter sucker; Sand sucker; Black winter sucker.*

Great Lakes region to North Carolina and west to Texas and Montana; rather common westward.

Catostomus melanops Rafinesque, Ichth. Ohiensis, 1820, 57, Ohio River.

Catostomus fasciatus LeSueur, in Cuvier and Valenciennes, Hist. Nat. Poiss., XVII, 1844, 333 (449), Mississippi River.

Moxostoma victoriæ Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 171, Dry Creek, Victoria, Tex.

Ptychostomus haydeni Girard, loc. cit., 172, Yellowstone River; Missouri River at Fort Pierre, Neb.

Genus 287. MOXOSTOMA Rafinesque. *Redhorse.*

Moxostoma Rafinesque, Ichth. Ohiensis, 1820, 54 (*Catostomus anisurus* Rafinesque).

Teretulus Rafinesque, loc. cit., 57 (*Catostomus aureolus* LeSueur).

Ptychostomus Agassiz, Amer. Jour. Sci. Arts., XIX, 1855, 203 (*Catostomus aureolus* LeSueur).

Myxostoma Jordan; corrected orthography.

769. Moxostoma papillosum (Cope). *White mullet.*

Lowland streams, from the Dismal Swamp in Virginia to the Ocmulgee River, Ga.

Ptychostomus papillosus Cope, Proc. Amer. Phil. Soc. Phila., XI, 1870, 470, Catawba and Yadkin Rivers, N. C.

770. Moxostoma anisurum (Rafinesque). *White-nosed sucker.*

Ohio River, Great Lakes region and Lake of the Woods; not very common, but widely distributed.

Catostomus anisurus Rafinesque, Ichth. Ohiensis, 1820, 54, Ohio River.

Catostomus carpio Cuvier and Valenciennes, Hist. Nat. Poiss., XVII, 1844, 457, Lake Ontario, not of Rafinesque.

Ptychostomus velatus Cope, Proc. Amer. Phil. Soc., XI, 1870, 471, Youghiogheny River, Pa.

Moxostoma valenciennesi Jordan, Proc. U. S. Nat. Mus., VIII, 1885, 73; substitute for *Catostomus carpio* Cuvier and Valenciennes; preoccupied.

771. **Moxostoma bucco** (Cope).
Missouri River at St. Joseph.
Ptychostomus bucco Cope, Hayden's Geol. Surv. Wyo., 1870, 437, St. Joseph, Mo.; a doubtful species allied to *M. anisurum*.

772. **Moxostoma pidiense** (Cope).
Great Pedee Basin, the Carolinas.
Ptychostomus pidiensis Cope, Proc. Amer. Phil. Soc. Phila., XI, 1870, 471, Yadkin River, N. C.

773. **Moxostoma collapsum** (Cope).
Lowland streams of North Carolina.
Ptychostomus collapsus Cope, Proc. Amer. Phil. Soc., XI, 1870, 471, Neuse, Yadkin, and Catawba Rivers, N. C.

774. **Moxostoma coregonus** (Cope). *Blue mullet.*
Catawba and Yadkin Rivers, N. C.
Ptychostomus coregonus Cope, Proc. Amer. Phil. Soc. Phila., XI, 1870, 472, Catawba and Yadkin Rivers.

775. **Moxostoma album** (Cope).
Rivers of North Carolina.
Ptychostomus albus Cope, Proc., Amer. Phil. Soc. Phila., XI, 1870, 472, Catawba River, N. C.

776. **Moxostoma thalassinum** (Cope).
Yadkin River, N. C.
Ptychostomus thalassinus Cope, Proc. Amer. Phil. Soc. Phila., XI, 1870, 472, Yadkin River, N. C.

777. **Moxostoma congestum** (Baird and Girard). *Texas redhorse.*
Streams of Texas.
Catostomus congestus Baird and Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 27, Rio Salado, Tex.
Ptychostomus albidus Girard, loc. cit., VIII, 1856, 172, Rio San Juan, Monterey, Nuevo Leon, Mexico.

778. **Moxostoma austrinum** (Bean.)
Rio de Santiago, Mexico; known from Michoacan, Mexico (west of Sierra Madre); Rio Lerna at Salamanca.
Myxostoma austrina Bean, Proc. U. S. Nat. Mus., II, 1879, 302, Piedad in Morelia, Michoacan, Mexico.

779. **Moxostoma mascotæ** Regan.
Streams of Jalisco (Pacific drainage), Mexico.
Moxostoma mascotæ Regan, Biol. Centrali-Amer., 1907, 147, Tab. XXIV, fig. 2, Rio Mascota, Mexico.

780. **Moxostoma parvidens** Regan.
Rio Grande Basin.
Moxostoma parvidens Regan, Biol. Centrali-Amer., 1907, 147, Tab. XXIV, fig. 3, Rio Grande at Juarez, Mexico.

781. **Moxostoma aureolum** (LeSueur). *Common redhorse; Mullet; White sucker; Large-scaled sucker; Sucker.*
Lake Ontario and Lake Michigan to the Missouri River and Lake of the Woods, south to Arkansas and Georgia; very abundant west of Alleghenies.
Catostomus aureolus LeSueur, Jour., Acad. Nat. Sci. Phila., I, 1817, 95, Lake Erie near Buffalo.
Catostomus duquesnii LeSueur, loc. cit., I, 105, 1817, Ohio River at Pittsburgh, Pa.
Catostomus erythurus Rafinesque, Amer. Month. Mag., III, 1818, 354, 355, Ohio River.
Catostomus oneida DeKay, N. Y. Fauna: Fishes, 1842, 198, Oneida Lake.
Rutilus melanurus Rafinesque, Ichth. Ohiensis, 1820, 51, Ohio River.
Myxostoma euryops Jordan, Ann. Lyc. Nat. Hist. N. Y., XI, 1876, 348, Oostanaula River, Rome, Ga.; probably a monstrosity of this species.

782. Moxostoma lesueuri (Richardson). *Picconou.*
Tributaries of Hudson Bay and westward.
Catostomus lesueuri Richardson, Franklin's Jour., 1823, 1772, Pine Island Lake, British America.

783. Moxostoma macrolepidotum (LeSueur). *Mullet; Red mullet; Eastern redhorse; River sucker.*
Streams about Chesapeake and Delaware Bays and southward to North Carolina; east of the Alleghenies.
Catostomus macrolepidotus LeSueur, Jour. Acad. Nat. Sci. Phila., I, 1817, 94, Delaware River.
Ptychostomus lachrymalis Cope, Proc., Amer. Phil. Soc., XI, 1870, 474, Neuse River at Newbern, N. C.

784. Moxostoma robustum (Cope).
Yadkin River, N. C.
Ptychostomus robustus Cope, Proc. Amer. Phil. Soc., XI, 1870, 473, Yadkin River, N. C.

785. Moxostoma crassilabre (Cope).
Streams of eastern North Carolina.
Ptychostomus crassilabris Cope, Proc. Amer. Phil. Soc., XI, 1870, 477, Neuse River near Raleigh, N. C.

786. Moxostoma conus (Cope).
Neuse and Yadkin Rivers, N. C.
Ptychostomus conus Cope, Proc. Amer. Phil. Soc., XI, 1870, 478, Yadkin River, N. C.

787. Moxostoma breviceps (Cope). *Short-headed redhorse.*
Ohio Valley and Great Lakes region; abundant in Lake Erie.
Ptychostomus breviceps Cope, Proc. Amer. Phil. Soc., XI, 1870, 478, Youghiogheny River, Pa.

788. Moxostoma pœcilurum (Jordan).
Southern Mississippi to eastern Texas; Pearl, Tangipahoa, and Sabine Rivers.
Myxostoma pœcilura Jordan, Bull. U. S. Nat. Mus., X, 1877, 66, Tangipahoa River, La.

789. Moxostoma alleghaniensis Nichols.
Mountain streams of North Carolina.
Moxostoma alleghaniensis Nichols, Bull. Amer. Mus. Nat. Hist., XXX, 1911, 275, Pl. XI, fig. 1, Marshall, N. C.

Genus 288. SCARTOMYZON Fowler.
Scartomyzon Fowler, Proc. Acad. Nat. Sci. Phila., LXV, 1913, 59 (*Ptychostomus cervinus* Cope).

790. Scartomyzon rupiscartes (Jordan and Jenkins). *Jumprocks.*
Rivers of the Carolinas and Georgia, from the Catawba to the Chattahoochee; locally abundant.
Moxostoma rupiscartes Jordan and Jenkins, Proc. U. S. Nat. Mus., XI, 1888, 353, Catawba River at Morgantown, and various other streams, representing *Scartomyzon cervinus* southward.

791. Scartomyzon cervinus (Cope). *Jumping mullet; Crawl-a-bottom.*
Rivers of the South Atlantic States, from the James to the Neuse.
Teretulus cervinus Cope, Jour. Acad. Nat. Sci. Phila., VI, 1868, 236, headwaters of the Roanoke and James Rivers, Va.

Genus 289. PLACOPHARYNX Cope.
Placopharynx Cope, Proc. Amer. Phil. Soc., XI, 1870, 467 (*P. carinatus* Cope).

792. Placopharynx carinatus Cope. *White sucker; Big-toothed redhorse.*
Michigan to Tennessee, Georgia, and Arkansas; abundant in large streams, especially in the Ozarks.
Placopharynx carinatus Cope, Proc. Amer. Phil. Soc., XI, 1870, 467, Wabash River.

Genus 290. LAGOCHILA Jordan and Brayton. *Rabbitmouth suckers.*
Lagochila Jordan and Brayton, Proc. Acad. Nat. Sci. Phila., XXIX, 1877 280, (*L. lacera* Jordan and Brayton); not *Lagocheilus*, an earlier genus of mollusks.
Quassilabia Jordan and Brayton, Man. Vert., Ed. II, 1878, 406 (*Lagochila lacera* Jordan and Brayton); substitute for *Lagochila*, regarded as preoccupied.

793. Lagochila lacera Jordan and Brayton. *Harelip sucker; Cut-lips; Splitmouth sucker; May sucker; Rabbitmouth sucker; Pealip sucker.*
Mississippi Valley; Ozark Mountains; Scioto, Tippecanoe, Clinch, Cumberland, and Chickamauga Rivers, and the White River of Arkansas; nowhere very common.
Lagochila lacera Jordan and Brayton, Proc. Acad. Nat. Sci. Phila., XXIX, 1877, 280, Chickamauga River, Ringgold, Ga.

Family 90. CYPRINIDÆ. Daces and minnows

In arranging the genera of this by far the largest natural family of fishes, we have begun the series with the forms having closest affinity with Asiatic and then with European types—these having largely five teeth in the main row on the pharyngeals. Later follow the characteristically American forms, more or less degenerate as compared with the possible European ancestors, the series closing with aberrant forms from the same stock.

Genus 291. ORTHODON Girard.
Orthodon Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 182 (*Gila microlepidota* Ayres).

794. Orthodon microlepidotus (Ayres). *Blackfish.*
Larger rivers and lakes of central and northern California; generally abundant.
Gila microlepidota Ayres, Proc. Calif. Acad. Nat. Sci., I, 1854, 21, Sacramento and San Joaquin Rivers, Calif.

Genus 292. ACROCHEILUS Agassiz. *Chiselmouths.*
Acrocheilus Agassiz, Amer. Jour. Sci. Arts, XIX, 1855, 96 (*A. alutaceus* Agassiz and Pickering).

795. Acrocheilus alutaceus Agassiz and Pickering. *Chiselmouth; Squaremouth; Hardmouth.*
Lakes and rivers of southeastern Oregon; lower Columbia and tributaries as far up as Spokane and Shoshone Falls.
Acrocheilus alutaceus Agassiz and Pickering, Amer. Jour. Sci. Arts, XIX, 1855, 99, Willamette Falls and Walla Walla River, Oreg.

Genus 293. MYLOCHEILUS Agassiz.
Mylocheilus Agassiz, Amer. Jour. Sci. Arts, XIX, 1855, 229 (*M. lateralis* Agassiz and Pickering).

796. Mylocheilus lateralis Agassiz and Pickering. *Columbia River chub.*
Columbia and Frazer River Basins; ascending to Flathead Lake and Shoshone Falls.
Mylocheilus lateralis Agassiz and Pickering, Amer. Jour. Sci. Arts, 1855, 231, Columbia River at Fort Vancouver; confused by recent writers with *Leuciscus caurinus* Richardson, which is a near relative of *Richardsonius balteatus*.

797. Mylocheilus fraterculus Girard.
Mylocheilus fraterculus Girard, Proc., Acad. Nat. Sci. Phila., VIII, 1856, 169, "Monterey, Calif."; a doubtful record, as no *Mylocheilus* has been yet found in California; scales about 85; 77 in *Mylocheilus lateralis*.

Genus 294. MYLOPHARODON Ayres.
Mylopharodon Ayres, Proc. Calif. Acad. Nat. Sci., I, 1855, 33 (*M. robustus* Ayres = *Mylopharodon conocephalus* Girard).

798. Mylopharodon conocephalus (Baird and Girard). *Kaweah chub.*
Sacramento and San Joaquin Rivers, Calif.; southeastern Oregon, Pit River and Big Valley.
Gila conocephala Baird and Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 135, San Joaquin River, Calif.
Mylopharodon robustus Ayres, Proc. Calif. Acad. Nat. Sci., I, 1855, 33, San Joaquin River, Calif.

Genus 295. STYPODON Garman.
Stypodon Garman, Bull. Mus. Comp. Zool., VIII, 1881, 90 (*S. signifer* Garman).

799. Stypodon signifer Garman.
Lago de Parras, an isolated lagoon in Coahuila, Mexico.
Stypodon signifer Garman, Bull. Mus. Comp. Zool., VIII, 1881, 90, Lago de Parras, Coahuila, Mexico.

Genus 296. CHROSOMUS Rafinesque.
Chrosomus Rafinesque, Ichth. Ohiensis, 1820, 47 (*Luxilus erythrogaster* Rafinesque).

800. Chrosomus erythrogaster Rafinesque. *Red-bellied dace.*
New Brunswick to Ohio, Wisconsin, Colorado, and northern Alabama; St. Lawrence River; chiefly or entirely west of the Alleghenies; very abundant northward.
Luxilus or *Chrosomus erythrogaster* Rafinesque, Ichth. Ohiensis, 1820, 47, Ohio River.
Chrosomus pyrrhogaster Jordan, Man. Vert., Ed. I, 1876, 284, White River, Ind.

801. Chrosomus eos Cope.
Streams east of the Alleghenies, north to the Susquehanna; scarce.
Chrosomus eos Cope, Proc., Acad. Nat. Sci. Phila., XIII, 1861, 523, Meshoppen Creek, Susquehanna River, Pa.; perhaps a variation of *Chrosomus erythrogaster.*

802. Chrosomus oreas Cope.
Headwaters of Roanoke River, and clear tributaries of the Tennessee River.
Chrosomus oreas Cope, Jour. Acad. Nat. Sci. Phila., VI, 1868, 233, head of Roanoke River, Montgomery County, Va.

803. Chrosomus dakotensis Evermann and Cox.
Chrosomus dakotensis Evermann and Cox, Rept. U. S. Fish Com., XIX, 1895, Crow Creek, Chamberlain, S. Dak.

Genus 297. LAVINIA Girard.
Lavinia Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 137 (*L. exilicauda* Baird and Girard).
Luxilinus Jordan, Cat. Fishes N. Amer., 1885, 33 (*Laucosomus occidentalis* Baird and Girard); young.

804. Lavinia exilicauda Baird and Girard. *Hitch; Chigh.*
Streams of the coast ranges about San Francisco and Monterey; locally common as far north as Clear Lake, Calif.
Lavinia exilicauda Baird and Girard, Proc., Acad. Nat. Sci. Phila., VII, 1854, 137, Sacramento River, Calif.
Leucosomus occidentalis Baird and Girard, loc. cit., VII, 1854, 137, Poso Creek; Four Creeks, Calif.; young of *L. exilicauda.*
Lavinia harengus Girard, loc. cit., VIII, 1856, 184, Monterey, Calif.

Genus 298. OXYGENEUM Forbes.
Oxygeneum Forbes, Bull. Ill. Lab. Nat. Hist., II, 1885, 136 (*O. pulverulentum* Forbes).

805. Oxygeneum pulverulentum Forbes.
Illinois River, Ill.
Oxygeneum pulverulentum Forbes, Bull. Ill. Lab. Nat. Hist., II, 1885, 136, Illinois River, Ill.

Genus 299. PTYCHOCHEILUS Agassiz. *Squawfish.*
Ptychocheilus Agassiz, Amer. Jour. Sci. Arts, XIX, 1855, 227 (*P. gracilis* Agassiz=*Cyprinus* (*Leuciscus*) *oregonensis* Richardson).

806. Ptychocheilus oregonensis (Richardson). *Squawfish; Chappaul; Whitefish.*
Rivers of Oregon and Washington, in the Columbia Basin to Montana and Idaho, and northward to British Columbia.
Cyprinus (*Leuciscus*) *oregonensis* Richardson, Fauna Bor.-Amer., III, 1836, 305, Columbia River.
Ptychocheilus gracilis Agassiz, Amer. Jour. Sci. Arts, XIX, 1855, 229, Willamette River.

807. Ptychocheilus grandis (Ayres). *Sacramento pike; Sacramento squawfish.*
Rivers of California and southeastern Oregon; Pit River.
Gila grandis Ayres, Proc. Calif. Acad. Nat. Sci., I, 1854, 18, San Francisco.
Ptychocheilus major Agassiz, Amer. Jour. Sci. Arts, XIX, 1855, 229, San Francisco.
Ptychocheilus harfordi Jordan and Gilbert, Proc. U. S. Nat. Mus., IV, 1881, 72, Sacramento River; scales 90 to 95, a variant with smaller scales.

808. Ptychocheilus lucius Girard. *White salmon of the Colorado; Colorado River squawfish.*
Colorado River Basin, in all larger streams from Rio Uncompahgre to the Gulf of California; largest of American *Cyprinidæ*, reaching 80 pounds.
Ptychocheilus lucius Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 209, Rio Colorado.

809. Ptychocheilus umpquæ Snyder.
Coastal streams of Oregon.
Ptychocheilus umpquæ Snyder, Bull. U. S. Bur. Fish., XXVII, 1907 (1908), 170, fig. 2, in part, Callopooia Creek, Oakland, Oreg.

Genus 300. GILA Baird and Girard.
Gila Baird and Girard, Proc. Acad. Nat. Sci. Phila., VI, 1853, 368 (*G. robusta* Baird and Girard).

810. Gila elegans Baird and Girard. *Bony-tail; Gila trout; Verde trout.*
Colorado and Gila Rivers; abundant in river channels.
Gila elegans Baird and Girard, Proc. Acad. Nat. Sci. Phila., VI, 1853, 369, Zuñi, Colorado, and Gila Rivers.
Gila emoryi Baird and Girard, loc. cit., 388, Gila River.

811. Gila robusta Baird and Girard. *Roundtail.*
Tributaries of the Rio Colorado and Rio Gila; very common up to the foot of the mountains in Colorado.
Gila robusta Baird and Girard, Proc. Acad. Nat. Sci. Phila., VI, 1853, 368, Zuñi River.
Gila gracilis Baird and Girard, loc. cit., 369, Zuñi River.
Gila grahami Baird and Girard, loc. cit., 389, Rio San Pedro, tributary to Rio Gila.
Ptychocheilus vorax Girard, loc. cit., 1856, 209, locality unknown.
Leuciscus zunnensis Günther, Cat., VII, 1868, 241, Zuñi River; substitute for *gracilis*, preoccupied in *Leuciscus*.
Gila affinis Abbott, Proc. Acad. Nat. Sci. Phila., XII, 1860, 474, probably erroneously ascribed to Kansas River.
Gila nacrea Cope, Hayden's Geol. Surv. Wyo., 1870 (1871), 441, tributary of Green River, Wyo.; young, perhaps of *G. elegans*.

812. Gila seminuda Cope and Yarrow.
Rio Virgen, in Utah and Nevada.
Gila seminuda Cope and Yarrow, Wheeler's Surv., Zool., V, 1875, 666, Rio Virgen, Nev.

813. Gila minacæ Meek.
Streams of Chihuahua, Mexico.
Gila minacæ Meek, Field Col. Mus., Zool., III, May, 1902, 80, Rio Paphigochic, Miñaca, Chihuahua, Mex.

Genus 301. NOTEMIGONUS Rafinesque.
Notemigonus Rafinesque, Jour. Phys., LXXXVIII, 1819, 420, (*N. auratus* Rafinesque = *Cyprinus crysoleucas* Mitchill).
Hemiplus Rafinesque, Anal. Nat., I, 1820, 6 (*H. lacustris* Rafinesque).

814. Notemigonus crysoleucas (Mitchill). *Roach; Sunfish; Dace; Bitterhead; Shiner; Chub; Bream; Gudgeon; Young shad; Windfish.*
Nova Scotia and Maryland to the Dakotas.
Cyprinus crysoleucas Mitchill, Rept., Fish. N. Y., 1814, 23, New York.
Cyprinus hemiplus Rafinesque, Amer. Month. Mag., II, 1817, 121, Lake George, Saratoga, N. Y.
Notemigonus auratus Rafinesque, Jour. Phys., LXXXVIII, 1819, 421, Ohio River.
Hemiplus lacustris Rafinesque, Anal. Nat., I, 1820, 6, Lake George.
Abramis versicolor DeKay, N. Y. Fauna: Fishes, 1842, 191, Connecticut and Hudson Rivers; Peekskill.

815. Notemigonus bosci (Cuvier and Valenciennes).
Rivers of the South Atlantic States; abundant from the James to the Altamaha.
Leuciscus boscii Cuvier and Valenciennes, Hist. Nat. Poiss., XVII, 1844, 232 (313), Carolina, Pennsylvania, and New York.
Cyprinus americanus Linnæus, Syst. Nat., ed. XII, 1766, 530, Charlestown; name preoccupied.
Notemigonus ischanus Jordan, Ann. Lyc. Nat. Hist. N. Y., XI, 1876, 364, South Fork Ocmulgee River, Flat Shoals, Ga.
Luxilus leptosomus Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 203, Dry Creek, Victoria, Tex.
Luxilus seco Girard, loc. cit., 203, Rio Seco, tributary of Rio Nueces, Tex.

816. Notemigonus gardoneus (Cuvier and Valenciennes).
South Carolina.
Leuciscus gardoneus Cuvier and Valenciennes, Hist. Nat. Poiss., XVII, 1844, 235 (316), Charleston, S. C.; perhaps a hybrid.

Genus 302. OPSOPŒODUS Hay.
Opsopœodus Hay, Proc. U. S. Nat. Mus., III, 1880, 507 (*O. emiliæ* Hay).
Trychærodon Forbes, in Jordan and Gilbert, Bull. U. S. Nat. Mus., XVI, 1882, 247 (*T. megalops* Forbes).

817. Opsopœodus emiliæ Hay.
Lake Erie and southern Indiana and Illinois to Georgia and Mississippi.
Opsopœodus emiliæ Hay, Proc. U. S. Nat. Mus., III, 1880, 507, Artesia, Macon, and Enterprise, Miss.

818. Opsopœodus osculus Evermann.
Rio Neches and other streams about Palestine and Houston, Tex.
Opsopœodus osculus Evermann, Bull. U. S. Fish Com., XI, 1891 (1892), 82, Neches River near Palestine, Tex.

819. Opsopœodus borealis Harper and Nichols. *Athabaska minnow.*
Streams of Alberta.
Opsopœodus borealis Harper and Nichols, Bull. Amer. Mus. Nat. Hist., XLI, 266, Lake Athabaska at Fort Chipewyan, Alberta, Canada.

820. Opsopœodus megalops (Forbes).
Western Ohio to Illinois.
Trychærodon megalops Forbes, in Jordan and Gilbert, Synopsis, 1883, 247, Illinois River at Pekin and Peoria, Ill.

Genus 303. OPSOPŒA Jordan and Evermann.
Opsopœa Jordan and Evermann, Fishes North and Mid. Amer., 1896, 247 (*Opsopœodus bollmani* Gilbert).

821. Opsopœa bollmani (Gilbert).
Lowland swamps of the Southern States; known from Satilla River, Waycross, Ga., and Obion River, Cypress, Tenn.
Opsopœodus bollmani Gilbert, Bull. U. S. Fish Com., VIII, 1888 (1890), 226, Buckland Creek, Millen, Ga.

Genus 304. ALGANSEA Girard.
Algansea Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 182 (*Leuciscus tincella* Cuvier and Valenciennes).

822. Algansea tincella (Cuvier and Valenciennes).
Lakes about the City of Mexico and in streams of central Mexico.
Leuciscus tincella Cuvier and Valenciennes, Hist. Nat. Poiss., XVII, 1844, 240 (323), City of Mexico.

823. Algansea dugesi Bean.
Central Mexico, in streams tributary to Rio de Lerma, Lake Yuriria in Guanajuato.
Algansea dugesi Bean, Proc. U. S. Nat. Mus., XV, 1892, 283, Lake Yuriria, Guanajuato, Mex.
?*Algansea tarascorum* Steindachner, Einige Fischarten Mexicos, 1895, 11, pl. 3, figs. 2–2c, Lake Patzcuaro, Mex.

824. Algansea lacustris Steindachner.
Lake Patzcuaro, Jalisco, Mexico.
Algansea lacustris Steindachner, Einige Fischarten Mexicos, 1895, 10, pl. 3, figs. 1 and 1*b*, Lake Patzcuaro.

825. Algansea sallæi (Günther).
Streams of central Mexico.
Ceratichthys sallæi Günther, Cat., VII, 1868, 484, Cuernavaca, Mex.
Zophendum australe Jordan, Proc. U. S. Nat. Mus., II, 1879, 300, Lake Tupataro, Mex., Rio Lerma.

826. Algansea rubescens Meek.
Lake Patzcuaro, Michoacan.
Algansea rubescens Meek, Field Col. Mus., Zool., V, 1905, 46, fig. 9, Lake Patzcuaro.

827. Algansea stigmatura Regan.
Northern Mexico.
Algansea stigmatura Regan, Biol. Centrali-Amer., 1907, 152, Tab. XXV, fig. 2, Rio Grande de Santiago, Jalisco.

828. Algansea affinis Regan
Upper tributaries of Rio Lerma and Rio Panuco, Mexico.
Algansea affinis Regan, Biol. Centrali-Amer., 1907, 151, Tab. XXV, fig. 1, Aguas Calientes, Salamanca, and San Juan del Rio, Mexico.

Genus 305. POGONICHTHYS Girard.
Pogonichthys Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 136 (*P. inæquilobus* Baird and Girard = *Leuciscus macrolepidotus* Ayres).
Symmetrurus Jordan, Hayden's Geol. Surv. Terr., IV, 1878, 788, (*Pogonichthys argyreiosus* Girard); young.

829. Pogonichthys macrolepidotus (Ayres). *Splittail.*
Streams of central California; very common in the Sacramento and San Joaquin Rivers.
Leuciscus macrolepidotus Ayres, Proc. Calif. Acad. Nat. Sci., I, in Placer Times and Transcript, May 30, 1854, San Francisco, Calif.
Pogonichthys inæquilobus Baird and Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 136, San Joaquin Valley, Calif.
Pogonichthys argyreiosus Girard, loc. cit., 153, Presidio, Calif.

Genus 306. MARGARISCUS Cockerell.
Margariscus Cockerell, Proc. Biol. Soc. Wash., XXII, 1909, 217 (*Clinostomus margarita* Cope).
As a small barbel is normally present in this genus and placed above the tip of the maxillary, as in *Semotilus*, the genus must be placed near *Leucosomus*.

830. Margariscus margarita (Cope). *Minnow; Goldthread shiner; Pearl minnow.*
Lake Erie, south to James River and headwaters of the Kanawha.
Clinostomus margarita Cope, Trans. Amer. Phil. Soc., XIII, 1866, 377, Conestoga River, Lancaster, Pa.

831. Margariscus nachtriebi[25] (Cox).
North Dakota to New Brunswick.
Leuciscus nachtriebi U. O. Cox, Rept. U. S. Fish Com., XX, 1894 (1896), 615, Minnesota, Mille Lacs Lake.
Couesius plumbeus rubrilateralis Philip Cox, Bull. Nat. Hist., 2, 1901, 42, Miramachi, Canada.
Leuciscus carletoni Kendall, Bull. U. S. Fish Com., XXII, 1902, 357, fig. 1, Penobscot River, Me.

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[25] "With much doubt we leave this species (*M. nachtriebi*) with *Margariscus*. The actual relation of this and other related forms is yet to be determined." (Jordan.)

Genus 307. LEUCOSOMUS Heckel. *Fallfishes.*

Leucosomus Heckel, Russegger's Reisen, 1, 1843, 1042 (*L. chrysoleucus* Heckel = *Cyprinus corporalis* Mitchill); not *Leucosoma* Gray, a genus of Salangidæ.

Cheilonemus Baird, in Storer, Hist. Fish. Mass., 1855, 285 (*Leuciscus pulchellus* Storer = *Cyprinus corporalis* Mitchill).

832. Leucosomus corporalis (Mitchill). *Chub; Dace; Fallfish; Silver chub; Windfish; Corporal; Chivin.*

Eastern United States, from the St. Lawrence to James River, Virginia; largest of our eastern Cyprinidæ; common northward, east of the Alleghenies.

Cyprinus corporalis Mitchill, Amer. Month. Mag., I, 1817, 289, Wallkill River, N. Y.

Cyprinus bullaris Rafinesque, loc. cit., II, Dec., 1817, 120, Hudson River.

Leuciscus argenteus Storer, Hist. Fish. Mass., 1839, 90, Worcester Co., Mass.

Leuciscus pulchellus Storer, loc. cit., 90, Walpole, Mass.

Leuciscus nitidus DeKay, N. Y. Fauna: Fishes, 1842, 209, Lake Champlain.

Leuciscus chrysopterus DeKay, loc. cit., 211, N. Y. Harbor.

Leuciscus rotengulus Cuvier and Valenciennes, Hist. Nat. Poiss., XVII, 1844, 236 (318), Carolinas.

Leucosomus cataractus Baird, Iconog. Encyl., II, 216, and in Cope, Proc. Acad. Nat. Sci. Phila., XIII, 1861, 523, Susquehanna River.

Leucosomus rhotheus Cope, loc. cit., XIII, 1861, 523, Brandywine Creek and Rancocos Creek, Pa.

Squalius hyalope Cope, loc. cit., XVI, 1864, 280, Conestoga River, Pa.

Genus 308. SEMOTILUS Rafinesque. *Horned dace.*

Semotilus Rafinesque, Ichth. Ohiensis, 1820, 49 (*S. dorsalis* Rafinesque = *Cyprinus atromaculatus* Mitchill).

833. Semotilus atromaculatus (Mitchill). *Horned dace; Creek chub; Chub; Silver chub; Mud chub.*

Maine to New Jersey; westward to Kansas and Wyoming.

Cyprinus atromaculatus Mitchill, Amer. Month. Mag., II, 1818, 324, Wallkill River, N. Y.

Semotilus dorsalis Rafinesque, Ichth. Ohiensis, 1820, 49, Kentucky River.

Semotilus cephalus Rafinesque, loc. cit., 49, Ohio River.

Semotilus diplemia Rafinesque, loc. cit., 50, Ohio River.

Leuciscus iris Cuvier and Valenciennes, Hist. Nat. Poiss., XVII, 1844, 190, (255), New York and Carolina.

Leuciscus storeri Cuvier and Valenciennes, loc. cit., 237 (255), New York.

Leuciscus pulchelloides Ayres, Proc. Bost. Soc. Nat. Hist., III, 1849, 157, Connecticut.

Leucosomus pallidus Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 190, Antelope Creek, Ark.

Leucosomus incrassatus Girard, loc. cit., 1856, 190, Choctaw Agency.

Semotilus macrocephalus Girard, loc. cit., 1856, 204, Fort Pierre, Nebr.

Semotilus speciosus Girard, loc. cit., 1856, 204, Sweetwater River, Nebr.

Semotilus hammondii Abbott, loc. cit., XII, 1860, 474, Kansas.

834. Semotilus atromaculatus thoreauanus (Jordan).

Flint River, Ga.

Semotilus thoreauanus Jordan, Bull., U. S. Nat. Mus., X, 1877, 63, Flint River, Ga.

Genus 309. RICHARDSONIUS [26] Girard.

Richardsonius Girard, Proc., Acad. Nat. Sci. Phila., VIII, 1856, 201 (*Cyprinus* (*Abramis*) *balteatus* Richardson).

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[26] The various American allies of *Leuciscus* Cuvier (type *Cyprinus leuciscus* L. of Europe, *Squalius*), we now divide among several genera, these corresponding to the subgenera in the previous check list. No species belonging to *Leuciscus*, as strictly defined, occurs in America or Asia. Many of the species, both in the groups allied to *Leuciscus* and *Rutilus* as well as in those related to *Hybopsis* and *Notropis* need comparison and verification.

Richardsonius is here restricted to the single species, *balteatus*, distinguished, with its variant, by the very long anal fin. The genus *Cheonda* is provisionally recognized for species more or less similar to *Richardsonius* but with the anal fin shorter. This group seems to merge into *Tigoma*, species with the anal fin short and the scales rather loosely imbricated. One species, *caurina*, forms another intermediate type with short anal and very small scales. Any arrangement of these fishes must be still wholly provisional.

835. Richardsonius siuslawi (Evermann and Meek).
Streams of western Oregon.
Leuciscus siuslawi Evermann and Meek, Bull. U. S. Fish Com., XVII, 1897 (1898), 72, Siuslaw River, Mapleton, Oreg.

836. Richardsonius lateralis Girard.
Streams of Washington and Montana, a doubtful species, nominally distinguished by the smaller number of anal rays.
Richardsonius lateralis Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 202, Fort Steilacoom, Wash.
Leuciscus gilli Evermann, Bull., U. S. Fish Com., XI, 1891, 44, Browns Gulch Creek, Silver Bow, Mont.

837. Richardsonius balteatus (Richardson). *Red-sided bream.*
Columbia and Fraser Rivers, and streams about Puget Sound.
Cyprinus (*Abramis*) *balteatus* Richardson, Fauna Bor.-Amer., III, 1836, 301, Columbia River.

838. Richardsonius thermophilus Evermann and Cockerell.
Warm Springs, Silver Creek, and Silvies River, Oreg.
Richardsonius thermophilus Evermann and Cockerell, Proc. Biol. Soc. Wash., XXII, December 8, 1909, 185, Warm Springs, Harney Co., Oreg.

Genus 310. CLARKINA Jordan and Evermann.
Cyprinus (*Leuciscus*) *caurinus* Richardson is an ally of the genus *Richardsonius*, differing in the short anal fin of 9 rays only. The body is elongate and the scales (86) very small, well imbricated, differing from the type of *Tigoma*.
Clarkina Jordan and Evermann, Proc. Calif. Acad. Sci., 4th ser., XVI, 1927 (April 27), 502 (*Cyprinus caurinus* Richardson).

839. Clarkina caurina (Richardson).
Cyprinus (*Leuciscus*) *caurinus* Richardson, Fauna Bor.-Amer., III, 1836, 304, Columbia River at Fort Vancouver.
Leuciscus caurinus Snyder, Bull. U. S. Fish Com., XXVII, 1907, 173; not *Mylocheilus caurinus* Agassiz; Willamette River near Corvallis, Oreg.

Genus 311. CHEONDA Girard.
Cheonda Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 207 (*C. cooperi* Girard); scales moderate; anal rays 8 to 11, usually 9.

840. Cheonda cooperi Girard.
Lower Columbia River Basin.
Cheonda cooperi Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 207, Columbia River, Fort Vancouver, Wash.

841. Cheonda microdon (Snyder).
Richardsonius microdon Snyder, Bull. U. S. Bur. Fish., XXXV, 1915–16 (1918), 58; scales 55; anal rays 8 or 9.

842. Cheonda egregia (Girard).
Nevada to northern California; known from the Humboldt, Truckee, and Sacramento-San Joaquin Basins and Napa Valley, Calif.
Tigoma egregia Girard, Pac. R. R. Surv., X, 1858, 291, locality Humboldt River at Imlay, Nev.
Gila ardesiaca Cope, Wheeler Surv., Zool., V, 1875, 660, Pl. XXX, figs. 1, 1a, locality unknown, probably Nevada.
Squalius galtiæ Cope, Proc. Acad. Nat. Sci. Phila., XXXV, 1883, 148, Pyramid Lake, Nev.
Phoxinus clevelandi C. H. and R. S. Eigenmann, West Amer. Scientist, 1889, 149, Ætna Springs, Napa County, Calif. (locality probably erroneous).

843. Cheonda evermanni (Juday).
South Platte basin.
Leuciscus evermanni Juday, Bull. U. S. Bur. Fish., XXIV, 1904 (1905), 226, with plate, Boulder Creek, Boulder, Colo.; A. 8; scales 47; teeth 2, 5–5, 1.

844. Cheonda hydrophlox (Cope). *Silverside minnow; Po-he-wa.*
Salt Lake basin and upper Snake River.
Clinostomus hydrophlox Cope, Hayden's Geol. Surv. Mont., 1871, 475, Blackfoot Creek, Idaho.
?*Clinostomus tænia* Cope, Proc., Amer. Phil. Soc., XIV, 1874, 133, Utah Lake, Provo, Utah.

845. Cheonda humboldti (Girard).
Locality doubtful.
Tigoma humboldti Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 206, Humboldt River, Nev.; may be identical with *C. hydrophlox*, but this seems unlikely.

846. Cheonda montana (Cope).
Clinostomus montanus Cope, Hayden's Geol. Surv. Mont., 1871, 476, Grass Creek, Idaho.
?*Clinostomus tænia* Cope, Proc., Amer. Phil. Soc., XIV, 1874, 133, Utah Lake, Provo, Utah.
May prove to be the same as *C. hydrophlox*.

847. Cheonda copei (Jordan and Gilbert). *Leather-sided minnow.*
Great Basin of Utah and Wood River, Idaho.
?*Tigoma gracilis* Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 206, locality unknown; species unidentifiable, name preoccupied in *Leuciscus*.
Squalius copei Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880, 461, Bear River, Evanston; not *Leuciscus copei* Günther, a *Notropis*.
Squalius aliciæ Jouy, loc. cit., IV, 1881, 19, Provo River near Utah Lake, Utah.

Genus 312. TIGOMA Girard.
Tigoma Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 205 (*Gila pulchella* Baird and Girard).
Protoporus Cope, Hayden's Geol. Surv. Mont., 1871 (1872), 473 (*P. domninus* Cope, young of *Tigoma atraria* Girard).
Myloleucus Cope, loc. cit., 475 (*M. pulverentulus* Cope); the teeth of *Siphateles* accidentally placed in the pharynx of a *Tigoma*).
Temeculina Cockerell, Proc. Biol. Soc. Wash., XXII, 1909, 216 (*Richardsonius orcutti* Eigenmann and Eigenmann).

848. Tigoma atraria (Girard).
Great Basin of Utah, and Snake River Basin above Shoshone Falls.
?*Tigoma lineata* Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 206, locality unknown; not identifiable.
Siboma atraria Girard, loc. cit., 208, Fish Springs, Toole Co., Utah, near Desert.
Tigoma squamata Gill, Proc. Bost. Soc. Nat. Hist., VIII, 1861, 42, Great Salt Lake Basin.
Protoporus domninus Cope, Hayden's Geol. Surv. Mont., 1871, 473, Snake River, Fort Hall, Idaho.
Hybopsis bivittatus Cope, loc. cit., 474, Warm Springs, Utah.
Hybopsis timpanogensis Cope, Proc. Amer. Phil. Soc., XIV, 1874, 134, Timpanogus, Utah; young.
Squalius cruoreus Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880, 460, Provo River, Utah.
Squalius rhomaleus Jordan and Gilbert, loc. cit., 461, Utah Lake, Utah.

849. Tigoma gibbosa (Baird and Girard).
Rio Gila, Ariz.
Gila gibbosa Baird and Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 28, Rio Santa Cruz, Ariz.
Tigoma intermedia Girard, loc. cit., VIII, 1856, 206, Rio San Pedro of the Gila, Ariz.
Gila nigra Cope, Wheeler's Surv., Zool., V, 1875, 663, Ash Creek and San Carlos, Ariz.
Squalius lemmoni Rosa Smith, Bull. Calif. Acad. Sci., I, 1884, 3, Rillitto Creek, near Tucson, Ariz.

850. Tigoma purpurea Girard.
San Bernardino Creek in southern Arizona, a tributary of Rio Yaqui.
Tigoma purpurea Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 206, San Bernardino Creek, Ariz.

851. Tigoma pulchella (Girard). *Pescadito; Chub of the Rio Grande.*
Rio Grande and other Mexican rivers.
Gila pulchella Baird and Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 29, Rio Mimbres, Chihuahua; not *Leuciscus pulchella* Storer, a *Cheilonemus.*
Tigoma nigrescens Girard, loc. cit., VIII, 1856, 207, Boca Grande and Rio Janos, Chihuahua, Mexico.
Tigoma pulchra Girard, loc. cit., 207, Boca Grande and Rio Janos; Chihuahua River, Mexico.
Clinostomus pandora Cope, Hayden's Geol. Surv. Mont., 1871, 475, tributaries Rio Grande, Sangre de Cristo Pass.
Gila gula Cope, Wheeler's Surv., Zool., V, 1875, 661, Rio de Acama and near Fort Wingate, N. Mex.
Cheonda modesta Garman, Bull. Mus. Comp. Zool., VIII, 1881, 92, Rio Salinas, Saltillo, Coahuila.
Gila conspersa Garman, loc. cit., VIII, 1881, 91, Rio Nazas, Coahuila, Mexico.

852. Tigoma bicolor Girard.
Klamath Lake, Oreg.
Tigoma bicolor Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 206, Klamath Lake, Oreg.
Cheonda cærulea Girard, loc. cit., 207, Lost River, Oreg.

853. Tigoma pulverulenta (Cope).
Myloleucus pulverulentus Cope, Hayden's Geol. Surv. Mont., 1871, 475, Warm Springs, Utah.
Myloleucus is a synonym of *Tigoma.* In his study of these species, according to Fowler, Professor Cope by accident replaced the single-rowed teeth of a *Siphateles* in his type example of *Myloleucus pulverulentus,* a species having teeth in two rows.

Subgenus TEMECULINA Cockerell.

854. Tigoma orcutti (Eigenmann and Eigenmann).
Temecula, San Luis Rey, San Jacinto, and Santa Ana Rivers, California.
Phoxinus orcutti Eigenmann and Eigenmann, Proc. Calif. Acad. Sci., 2nd ser., III, 1890, 2, Temecula River, Riverside County, Calif.

Genus 313. SIBOMA Girard.
Siboma Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 209 (*S. crassicauda* Girard).

855. Siboma crassicauda (Baird and Girard). *Sacramento chub.*
Rivers of California; generally abundant in the Sacramento and San Joaquin Rivers.
Lavinia crassicauda Baird and Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 137, San Joaquin River.
Tigoma crassa Girard, loc. cit., VIII, 1856, 207, Sacramento River.

856. Siboma conformis (Baird and Girard).
Tulare Valley and Sacramento–San Joaquin Basin, Calif.
Lavinia conformis Baird and Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 137; Poso Creek, Tulare County, Calif.

Genus 314. CLINOSTOMUS Girard.
Clinostomus Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 211 (*Luxilus elongatus* Kirtland).

857. Clinostomus elongatus (Kirtland). *Red-sided shiner.*
Great Lakes, upper Mississippi Valley, and New York.
Luxilus elongatus Kirtland, Rept. Zool. Ohio, 1836, 169, 193, Mahoning River, Ohio, and Lake Erie near Cleveland.
Leuciscus productus Storer, Synopsis, 1846, 416, Wabash River.
?*Leuciscus longirostris* Kirtland, The Family Visitor, Mar. 14, 1850, Cleveland, Ohio, and Hudson River.
Squalius proriger Cope, Proc. Acad. Nat. Sci. Phila., XVI, 1864, 280, Michigan.

858. Clinostomus vandoisulus (Cuvier and Valenciennes). *Minnow; Long-mouthed minnow; Rosy dace; Pike shiner.*
Leuciscus vandoisulus Cuvier and Valenciennes, Hist. Nat. Poiss., XVII, 1844, 236 (317), South Carolina.
Clinostomus affinis Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 212, James River, Va.
Clinostomus funduloides (Potomac River at Washington) and *carolinus* (Salem, N. C.) Girard, loc. cit., 212.
Gila estor Jordan and Brayton, Bull. U. S. Nat. Mus., XII, 1878, 66, Elk River, Estill Springs, Tenn.

Genus 315. HEMITREMIA Cope.
Hemitremia Cope, Proc. Amer. Phil. Soc., XI, 1870, 462 (*H. vittata* Cope=*Phoxinus flammeus* Jordan and Gilbert).

859. Hemitremia vittata Cope.
Tributaries of the Tennessee River; common in clear streams in northern Alabama.
Hemitremia vittata Cope, Proc. Amer. Phil. Soc., XI, 1870, 462, Holston River, Knoxville, Tenn.; *vittatus* is preoccupied in *Leuciscus*.
Phoxinus flammeus Jordan and Gilbert, in Jordan, Man. Vert., ed. 2, 1878, 303, Elk River, Tenn.

860. Hemitremia milneriana (Cope).
Upper Missouri River Basin.
Phoxinus milnerianus Cope, Amer. Nat., July, 1879, 440, upper Missouri River Basin; probably Battle Creek, Mont.

Genus 316. PFRILLE Jordan.
Pfrille Jordan, Copeia, No. 32, 1924, 71 (*Phoxinus neogæus* Cope).

861. Pfrille neogæa (Cope). *Bronze minnow.*
Upper Mississippi Valley and neighboring waters; also Maine and Connecticut lakes.
Phoxinus neogæus Cope, Trans. Amer. Phil. Soc., XIII, 1866, 375, New Hudson, Mich.
?*Leuciscus burtonianus* LeSueur, in Vaillant, Bull. Soc. Philom., VIII, 1896, 28, with plate, Burton Mine, Mo.; perhaps a distinct species.

Genus 317. IOTICHTHYS Jordan and Evermann.
Iotichthys Jordan and Evermann, Fishes North and Mid. Amer., 1896, 228 (*Clinostomus phlegethontis* Cope).

862. Iotichthys phlegethontis (Cope).
Tributaries of Great Salt Lake and Sevier Lake; basin of Lake Bonneville.
Clinostomus phlegothontis Cope, Proc. Amer. Phil. Soc., XIV, 1874, 137, Beaver River, Utah.

Genus 318. HESPEROLEUCUS Snyder.
Hesperoleucus Snyder, Bull. U. S. Bur. Fish., XXXII, 1912, 63 (*Pogonichthys symmetricus* Girard).
Myloleucus Cope, Hayden's Geol. Surv. Mont., 1871, 475 (*M. pulverulentus* Cope=*Pogonichthys symmetricus* Baird and Girard, in part, not type, the teeth having been misplaced).
This genus and others related, having the teeth 4–5 or 5–5, were placed in the former check list and the Fishes of North and Middle America, in the European genus *Rutilus* Rafinesque; but no American or Asiatic dace is congeneric with *Rutilus rutilus* L.

863. Hesperoleucus symmetricus (Baird and Girard).
Rivers of California and Nevada and waters of Lake County, Oreg.
Pogonichthys symmetricus Baird and Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 136, Fort Miller, San Joaquin Valley, Calif.
Myloleucus parovanus Cope, Proc. Amer. Phil. Soc., XIV, 1874, 131, Beaver River, Utah.

864. Hesperoleucus navarroensis Snyder. *Navarro roach.*
Navarro Basin on the western coast of northern California.
Hesperoleucus navarroensis Snyder, Bull. U. S. Bur. Fish., XXXII, 1912 (1914), 65, Navarro River near Philo, Calif.

865. Hesperoleucus parvipinnis Snyder. *Short-finned roach.*
Gualala River Basin, Calif.
Hesperoleucus parvipinnis Snyder, Bull. U. S. Bur. Fish., XXXII, 1912 (1914), 66, Gualala River, Sonoma County, Calif.

866. Hesperoleucus venustus Snyder. *Venus roach.*
Russian River and the streams entering San Pablo, Suisun, and San Francisco Bays.
Hesperoleucus venustus Snyder, Bull. U. S. Bur. Fish., XXXII, 1912 (1914), 64, fig. 2, Coyote Creek near Gilroy Hot Springs, Calif.

867. Hesperoleucus mitrulus Snyder. *Northern roach.*
Streams tributary to the north end of Goose Lake, Oreg.
Hesperoleucus mitrulus Snyder, Bull. U. S. Bur. Fish., XXXII, 1912, (1914), 67, Drew Creek, Lake County, Oreg.

868. Hesperoleucus subditus Snyder. *Monterey roach.*
Pajaro River system in the region of foothills and lower mountain ranges of coast ranges.
Hesperoleucus subditus Snyder, Bull. U. S. Bur. Fish., XXXII, 1902 (1904), 67, fig. 3, Uvas Creek, Pajaro River Basin, Santa Clara County, Calif.

869. Hesperoleucus mearnsi (Snyder).
Rio Yaqui.
Notropis mearnsi Snyder, Proc., U. S. Nat. Mus., XLIX, 1916 (Dec. 23, 1915), 582, fig., Rio San Bernardino, Yaqui Basin, Sonora, Mexico.

870. Hesperoleucus anticus (Cope).
Texas.
Algansea antica Cope, Proc. Acad. Nat. Sci. Phila., XVI, 1864, 282, Texas.

Genus 319. SIPHATELES Cope.
Siphateles Cope, Proc. Acad. Nat. Sci. Phila., XXXV, 1883, 146 (*S. vittatus* Cope); young example.

871. Siphateles olivaceus (Cope).
Lake Tahoe; Pyramid Lake; Eagle Lake and Willow Creek, Calif.
Leucus olivaceus Cope, Proc. Acad. Nat. Sci. Phila., XXXV, 1883, 145, Pyramid Lake, Nev.

872. Siphateles obesus (Girard).
Lakes and streams of Lahontan Basin.
Algansea obesa Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 183, Humboldt River, Nev.
Leucus dimidiatus Cope, loc. cit., XXXV, 1883, 145, Pyramid Lake, Nev.
Siphateles vittatus Cope, loc. cit., 146, Pyramid Lake, Nev.

873. Siphateles bicolor (Girard).
Lakes of southeastern Oregon (Klamath, Warner, Goose, etc.); Sacramento-San Joaquin Basin; Pit River.
Algansea bicolor Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 183, Klamath Lake.

874. Siphateles formosus (Girard).
Algansea formosa Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 183, Merced and Mohave Rivers, Calif.
Myloleucus thalassinus Cope, loc. cit., XXXV, 1883, 144, Goose Lake, Oreg.

875. Siphateles columbianus (Snyder).
Lakes of southeastern Oregon.
Rutilus columbianus Snyder, Bull. U. S. Bur. Fish., XXVII, 1907, 92, fig. 4, Warm Springs near Harney Lake, Harney County, Oreg.

876. Siphateles oregonensis (Snyder).
Lakes of southeastern Oregon.
Rutilus oregonensis Snyder, Bull. U. S. Bur. Fish., XXVII, 1907, 87, fig. 3, XL, Spring, Abert Lake, Oreg.

877. Siphateles mohavensis Snyder.
Mohave River, Calif.
Siphateles mohavensis Snyder, Proc. U. S. Nat. Mus., LIV, 1919 (Mar. 15, 1918), 298, figure, Mohave River near Victor, Calif.

Genus 320. LEUCIDIUS Snyder.
Leucidius Snyder, Bull. U. S. Bur. Fish., XXXV. 1917, 64 (*L. pectinifer* Snyder).

878. Leucidius pectinifer Snyder. *Lake minnow.*
Lahontan system, Nevada and northeastern California.
Leucidius pectinifer Snyder, Bull. U. S. Bur. Fish., XXXV, 1916–17 (Sept. 28, 1917), 64, figs. 5 and 6, Pyramid Lake, Nev.

Genus 321. NOTROPIS Rafinesque.
Notropis [27] Rafinesque, Amer. Month. Mag., II, 1818, 204 (*Notropis atherinoides* Rafinesque = ?*Alburnus rubellus* Agassiz).
Minnilus Rafinesque, Ichth. Ohiensis, 1820, 45 (*M. dinemus* Rafinesque).
Alburnellus Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856 (*A. dilectus* Girard).
Photogenis Cope, Trans. Amer. Phil. Soc., XIII, 1867, 378 (*Squalius photogenis* Cope = *Photogenis leucops* Cope).

879. Notropis atherinoides Rafinesque. *Shiner; Emerald minnow; Rosy minnow.*
Great Lakes region and Ohio and Mississippi Valleys, and north to Winnipeg.
Notropis atherinoides Rafinesque, Amer. Month. Mag., II, 1818, 204, Lake Erie.
Minnilus dinemus Rafinesque, Ichth. Ohiensis, 1820, 46, Ohio River.
Alburnus rubellus Agassiz, Lake Superior, 1850, 364, pl. 3, figs. 1–3, Sault Ste. Marie and the Pic, Lake Superior.
Alburnus nitidus Kirtland, Cleveland Ann. Sci., 1854, 44, tributaries of Lake Erie.
Alburnellus jaculus Cope, Trans., Amer. Phil. Soc., XIII, 1866 (1869). 387, St. Joseph River and Dowagiac River, Mich.
Leuciscus copii Günther, Cat., VII, 1868, 255, Virginia and Michigan; substitute for *jaculus*, preoccupied.

880. Notropis photogenis (Cope). *Silvery minnows.*
Allegheny region.
?*Rutilus compressus* Rafinesque, Ichth. Ohiensis, 1820, 51, Monongahela River; not certainly identifiable; may be *Luxilis cornutus*.
Squalius photogenis Cope, Proc. Acad. Nat. Sci. Phila., XVI, 1864, 280, Youghiogheny River, Pa.
Photogenis leucops Cope, loc. cit., XIX, 1867, 164, Sinking Creek, and near Austinville, Va.
Photogenis leucops engraulinus Cope, loc. cit., 164, tributaries of Kanawha River, Austinville, Va.

881. Notropis amœnus (Abbott).
Clear streams of the Alleghenies from the Raritan to the Neuse.
Alburnellus amœnus Abbott, Amer. Nat., VIII, 1874, 334, Raritan River, N. J.

882. Notropis scepticus (Jordan and Gilbert).
Rivers of the Carolinas from Cape Fear to the Santee.
Notropis photogenis ("pale variety"), Jordan and Brayton, Bull. U. S. Nat. Mus., XII, 1878, 23.
Minnilus scepticus Jordan and Gilbert, Synopsis, 1883, 200, Saluda River, S. C.

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[27] The name *Notropis atherinoides* was given by Rafinesque to a small and very slender minnow from Lake Erie. It was apparently a semi-dried example having therefore a ridge on the back as implied in the name *Notropis*. It had a long anal fin of 11 rays, and the dorsal inserted behind the ventrals. Among the small minnows of the Great Lakes it could hardly be anything else than *rubellus*; yet the original description is very incomplete and perhaps not identifiable. As this is the oldest name for any of the small American minnows with four teeth in the main row of the pharyngeals, and as distinctions of genera among these is especially difficult, the writers in 1896 extended the name to include them all. But this assemblage is hardly a natural one, as the species diverge in various directions. Hence, in this catalogue the former subgenera are given generic rank.

883. Notropis telescopus (Cope).
Tennessee River Basin; very abundant in cold mountain streams.
Photogenis telescopus Cope, Proc. Acad. Nat. Sci. Phila., XIX, 1867 165, Holston River, Va.

884. Notropis arcansanus (Meek).
Ozark region.
Notropis telecopus arcansanus Meek, Bull. U. S. Fish Com., IX, 1889 (1891), 133, White River, Eureka Springs, Ark.

885. Notropis universitatis Evermann and Cockerell.
Boulder Creek, Boulder, Colo.
Notropis notatus var., Univ. of Colo. Stud., Apr., 1908, 170.
Notropis universitatis Evermann and Cockerell, Proc. Biol. Soc. Wash., XXII, Dec., 1909, 187, Boulder Creek, Boulder, Colo.

886. Notropis welaka Evermann and Kendall.
St. Johns River, Fla.
Notropis welaka Evermann and Kendall, Bull. U. S. Fish Com., XVII, 1897 (Feb. 9, 1898), 126, pl. 6, fig. 2, St. Johns River near Welaka, Fla.

887. Notropis leuciodus (Cope).
Tennessee River Basin, in mountain streams.
Photogenis leuciodus Cope, Proc. Acad. Nat. Sci. Phila., XIX, 1867, 165, Holston River, Va.

888. Notropis micropteryx (Cope).
Headwaters of Cumberland and Tennessee Rivers; also in Ozark region.
Alburnellus micropteryx Cope, Jour. Acad. Nat. Sci. Phila., VI, 1868, 233, Holston River, Va.

889. Notropis metallicus Jordan and Meek.
Swamp streams in Georgia and Florida, from the Suwanee Basin to the Escambia.
Notropis metallicus Jordan and Meek, Proc. U. S. Nat. Mus., VII, 1884, 475, Allapaha River, Nashville, Ga.

890. Notropis louisianæ Evermann.
Atchafalaya River, La.
Notropis louisianæ Evermann, in Jordan and Evermann, Fishes North and Mid. Amer., 1898, 2801, Atchafalaya River, Melville, La.

891. Notropis socius (Girard).
Live Oak Creek, southwestern Texas.
Alburnus socius Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 193, Live Oak Creek, Tex.

892. Notropis amabilis (Girard).
Rio Leona, a tributary of Rio Nueces, Tex.
Alburnus amabilis Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 193, Rio Leona, Tex.

893. Notropis arge (Cope).
Upper Mississippi Valley.
Alburnellus arge Cope, Trans. Amer. Phil. Soc., XIII, 1866, 388, Detroit River or St. Joseph River, Mich.

894. Notropis pilsbryi Fowler.
Notropis pilsbryi Fowler, Proc. Acad. Nat. Sci. Phila., LVI, 1904, 245, figure, Rogers, White River Basin, Ark.

895. Notropis rubrifrons (Cope). *Rosy-faced minnow.*
New York and western Pennsylvania to southern Michigan, Kansas, and Kentucky.
Alburnus rubrifrons Cope, Proc. Acad. Nat. Sci. Phila., XVII, 1865, 85, Kiskiminitas River, a tributary of Allegheny River.
Alburnellus percobromus Cope, Hayden's Geol. Surv. Wyo., 1870, 440, Missouri River at St. Joseph, Mo.

896. Notropis dilectus (Girard).
Lower Ohio to the Rio Grande; abundant in Arkansas and eastern Texas in sandy streams.
Alburnus dilectus Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 193, Arkansas River, Fort Smith, Ark.
Alburnus lepidulus Girard, loc. cit., 212, Black Warrior River, Ala.
Alburnus oligaspis Cope, loc. cit., XVI, 1864, 282, Kansas.
Alburnellus jemezanus Cope, Wheeler Surv., Zool., V, 1875, 650, Rio Grande, San Ildefonso, Mexico.

897. Notropis stilbius (Jordan).
Alabama River and tributaries.
Nototropis stilbius Jordan, Ann. Lyc. Nat. Hist. N. Y., XI, 1876, 343, Etowah and Oostanaula Rivers, Rome, Ga.

898. Notropis notemigonoides Evermann.
Rio Neches near Palestine, Tex., and streams about Houston, Tex.
Notropis notemigonoides Evermann, Bull. U. S. Fish Com., XI, 1891 (1892), 81, Neches River, Palestine, Tex., and Sims Bayou, Houston, Tex.

899. Notropis fumeus Evermann.
Hunter Creek, Houston, Tex.
Notropis fumeus Evermann, Bull. U. S. Fish Com., XI, 1891 (1892), 81, Hunter Creek, Houston, Tex.

Genus 322. PARANOTROPIS Fowler.
Episema Cope and Jordan, Bull. U. S. Nat. Mus., X, 1877, 64 (*Photogenis scabriceps* Cope, name preoccupied).
Paranotropis Fowler, Proc. Acad. Nat. Sci. Phila., LVI, 1904, 245 (*Photogenis scabriceps* Cope).

900. Paranotropis scabriceps (Cope).
Kanawha River, W. Va.
Photogenis scabriceps Cope, Proc. Acad. Nat. Sci. Phila., XIX, 1867, 166, Sinking and Walker Creeks, tributaries of Kanawha River.

901. Paranotropis ariommus (Cope).
Ohio and Tennessee Valleys.
Photogenus ariommus Cope, Trans. Amer. Phil. Soc., XIII, 1866, 378, no locality given.

902. Paranotropis jejunus (Forbes).
Western Pennsylvania to Kansas and north to Winnipeg.
Episema jejuna Forbes, Bull. Ill. Lab. Nat. Hist., I, 1878, 60, Illinois River.

903. Paranotropis megalops (Girard).
Rivers of Texas from the Colorado westward.
Alburnus megalops Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 193, San Felipe Creek, Tex.; the name preoccupied in *Notropis* (*Luxilus*) but not in *Paranotropis*.

Genus 323. LYTHRURUS Jordan.
Lythrurus Jordan, Man. Vert., ed. 1, 1876, 272 (*Notropis lythrurus* Jordan = *Semotilus diplæmius* of authors, not of Rafinesque).

904. Lythrurus umbratilis (Girard).
Arkansas River and streams of Kansas and southwestern Iowa.
Alburnus umbratilis Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 193, Sugar Loaf Creek, tributary of Poteau River, Ark.
Luxilus lucidus Girard, loc. cit., 203, Coal Creek, tributary of South Fork of Canadian River.
Minnilus nigripinnis Gilbert, Bull., Washburn Lab. Nat. Hist., I, 1884, 14, Shunganunga Creek near Topeka, Kans.
?*Notropis macrolepidotus* Forbes, Bull. Ill. Lab. Nat. Hist., II, 1885, 138, Illinois.

905. Lythrurus cyanocephalus Copeland.
Rivers of southern Wisconsin to Ohio and Kentucky and Indiana.
Lythrurus cyanocephalus Copeland, Proc. Acad. Nat. Sci. Phila., XXIX, 1877, 70, Racine River, Wis.
Rutilus ruber Rafinesque, Ichth. Ohiensis 1820, 52, Elkhorn and Kentucky Rivers; named but not described.
Notropis lythurus Jordan, Proc., U. S. Nat. Mus., VII, 1884, 476, White River, Indianapolis; a rather more slender southern form.

906. Lythrurus atripes Jordan. *Blackfin; Compressed redfin.*
Southern Illinois and Iowa.
Lythrurus atripes Jordan, Bull. Ill. Lab. Nat. Hist., No. 2, 1878, 59, streams of Union and Johnson Counties, Ill.

907. Lythrurus ardens (Cope).
Roanoke River, Va.
Hypsilepis ardens Cope, Proc. Acad. Nat. Sci. Phila., XIX, 1867, 163, headwaters of Roanoke River, Montgomery County, Va.

908. Lythrurus fasciol ris (Gilbert).
Southern bend of Tennessee River, in limestone streams.
Notropis umbratilis fasciolaris Gilbert, Bull. U. S. Fish Com., IX, 1889 (1891), 148, streams about Florence, Ala.

909. Lythrurus matutinus (Cope).
Neuse and Pamlico Rivers; common in sandy brooks.
Alburnellus matutinus Cope, Proc. Amer. Phil. Soc., XI, 1870, 465, Neuse River, Wake County, N. C.

910. Lythrurus punctulatus (Hay).
Tributaries of Big Hatchee River, northern Mississippi.
Minnilus punctulatus Hay, Proc. U. S. Nat. Mus., III, 1880, 508, Tuscumbia River, a tributary of the Big Hatchee, near Corinth, Miss.

911. Lythrurus bellus (Hay).
Tombigbee River, Miss.
Minnilus bellus Hay, Proc. U. S. Nat. Mus., III, 1880, 510, Tombigbee River, Artesia and Macon, Miss.

912. Lythrurus roseipinnis (Hay).
Sandy streams of Gulf States, from Escambia River to the Chickasawha.
Notropis roseipinnis Hay, in Jordan, Cat. Fishes N. Amer., 1885, 27, Chickasawha River, Enterprise, Miss.; substitute for *rubripinnis*, preoccupied.

913. Lythrurus lirus (Jordan).
Alabama River Basin; abundant in sandy streams.
Nototropis lirus Jordan, Ann. Lyc. Nat. Hist. N. Y., XI, 1876, 342, Etowah River, Rome, Ga.
Notropis alabamæ Jordan and Meek, Proc. U. S. Nat. Mus., VII, 1884, 476, Alabama River, Montgomery, Ala.

Genus 324. ORCELLA Jordan and Evermann
Orcella Jordan and Evermann, Fish. North and Mid. Amer., 1896, 254 (*N. orca* Woolman); not "*Orcæ̆lla*," a genus of Cetacea.
Orcula Jordan and Evermann, loc. cit., 1900, 3140, substitute for *Orcella*, regarded as preoccupied by *Orcæ̆lla*.

914. Orcella nazas (Meek).
Headwaters of the Rio Nazas in Durango, Mexico.
Nototropis nazas Meek, Field Col. Mus., Zool., V, 1904, 70, fig. 19, Santiago Papasquiaro, Durango, Mexico.

915. Orcella orca (Woolman).
Rio Grande at El Paso, Tex.
Notropis orca Woolman, Bull. U. S. Fish Com., XIV, 1894, 56, Rio Grande, El Paso, Tex.

Genus 325. HYDROPHLOX Jordan and Brayton
Hydrophlox Jordan and Brayton, Bull. U. S. Nat. Mus., XIII, 1878, 32 (*Hybopsis rubricroceus* Cope).

916. Hydrophlox rubricroceus (Cope). *Red fallfish.*
Headwaters of the Tennessee and Savannah Rivers.
Hybopsis rubricroceus Cope, Jour. Acad. Nat. Sci. Phila., VI, 1868, 231, Tumbling Creek, tributary of the North Fork of Holston River, Va.

917. Hydrophlox chlorocephalus (Cope).
Santee Basin, in North and South Carolina.
Hybopsis chlorocephalus Cope, Proc. Amer. Phil. Soc., XI, 1870, 461, Catawba River, N. C.

918. Hydrophlox lutipinnis Jordan and Brayton.
Santee and Oconee Rivers, Ga.
Hydrophlox lutipinnis Jordan and Brayton, Bull. U. S. Nat. Mus., XII, 1878, 36, Oconee River, Halls Springs, Ga.

919. Hydrophlox chiliticus (Cope).
Basin of Great Pedee River, N. C.; common in upland streams.
Hybopsis chiliticus Cope, Proc. Amer. Phil. Soc., XI, 1870, 462, Yadkin River, Rowan County, N. C.

920. Hydrophlox altipinnis (Cope).
Yadkin, Great Pedee, and Cape Fear Rivers, N. C.
Alburnellus altipinnis Cope, Proc. Amer. Phil. Soc., XI, 1870, 464, Yadkin River, Rowan County, N. C.

921. Hydrophlox roseus (Jordan).
Lowland streams of Gulf States from Ogeechee River to the Mississippi.
Luxilus roseus Jordan, Bull. U. S. Nat. Mus., X, 1877, 61, Notalbany River near Tikfaw, La.

922. Hydrophlox stonei (Fowler).
Streams of South Carolina.
Notropis stonei Fowler, Proc. Acad. Nat. Sci. Phila., LXXII, 1920, 391, figure, Pocataligo River, Manning, S. C.

923. Hydrophlox chalybæus (Cope).
Delaware River to Ogeechee River.
Hybopsis chalybæus Cope, Trans., Amer. Phil. Soc., XIII, 1866, 383, Schuylkill River, Pa.

924. Hydrophlox abbotti (Fowler).
Notropis chalybæus abbotti Fowler, Proc. Acad. Nat. Sci. Phila., LVI, 1904, 239, Pl. XVII, upper figure, Batsto River, N. J.

925. Hydrophlox chrosomus (Jordan).
Alabama Basin; very abundant in clear streams and outlets of springs.
Hybopsis chrosomus Jordan, Ann. Lyc. Nat. Hist. N. Y., XI, 1876, 333, Etowah River, etc., Rome, Ga.

926. Hydrophlox xænocephalus (Jordan).
Georgia to Mississippi; common in streams of the pine woods, descending to brackish water; abundant in Perdido Bay, Pensacola, Fla.
Hybopsis xænocephalus Jordan, Ann. Lyc. Nat. Hist. N. Y., XI, 1876, 334, Etowah River, etc., Rome, Ga.

Genus 326. COCCOTIS Jordan
Coccotis Jordan, Rept. Zool. Ohio, 1882, 852 (*Hypsilepis coccogenis* Cope).
Coccogenia Cockerell, Proc. Biol. Soc. Wash., XXII, 1909, 190 (*Hypsilepis coccogenis* Cope).

927. Coccotis coccogenis (Cope).
Cumberland, Tennessee, and Savannah Rivers.
Hypsilepis coccogenis Cope, Proc. Acad. Nat. Sci. Phila., XIX, 1867, 160, Holston River, Va.

928. Coccotis brimleyi (B. A. Bean).
Notropis brimleyi B. A. Bean, Proc. U. S. Nat. Mus., XXVI, 1903, 913, Cane River, N. C.

929. Coccotis macdonaldi (Jordan and Jenkins).
Mountain streams of Virginia tributary to the James and Shenandoah.
Notropis macdonaldi Jordan and Jenkins, Proc. U. S. Nat. Mus., XI, 1888, 354, plate 44, fig. 4, Shenandoah River, Luray, Va.

930. Coccotis zonatus (Agassiz).
Mountain streams in the Ozark region of Missouri and Arkansas.
Alburnus zonatus Agassiz, Bull. Mus. Comp. Zool., I, 1863, 9, Osage River, Mo.

931. Coccotis zonistius (Jordan).
Chattahoochee River.
Luxilus zonistius Jordan, Proc. U. S. Nat. Mus., II, 1879, 239, Suwannee Creek, tributary of Chattahoochee River in northern Georgia.

Genus 327. LUXILUS Rafinesque.
Luxilus Rafinesque, Ichth. Ohiensis, 1820, 47 (*L. chrysocephalus* Rafinesque=*Cyprinus cornutus* Mitchill).
Hypsolepis Baird, Amer. Jour. Sci. Arts, XVII, 1854, 359 (*Cyprinus cornutus* Mitchill); later written *Hypsilepis*.

932. Luxilus cornutus (Mitchill). *Shiner; Dace; Redfin.*
Entire region east of the Rocky Mountains excepting the south Atlantic States and Texas; very abundant; also Potomac River and tributaries; not found south of the James.
Cyprinus cornutus Mitchill, Amer. Month. Mag., I, July, 1817, 289, Wallkill River, N. Y.; preliminary notice, and II, 1818, 324, Westchester County, N. Y.
Cyprinus megalops Rafinesque, loc. cit., II, December, 1817, 121, Hudson River, above the falls.
Cyprinus melanurus Rafinesque, loc. cit., 121, Hudson River, above the falls.
?*Luxilus interruptus* Rafinesque, loc. cit., 49, Ohio River; may be *Notropis rubrifrons*.
Rutilus plargyrus Rafinesque, Ichth. Ohiensis, 1820, 50, Ohio River in Kentucky.
Rutilus compressus Rafinesque, loc. cit., 51, Monongahela River, etc., not certainly identifiable; may be *Notropis photogenis*.
Leuciscus vittatus DeKay, N. Y. Fauna: Fishes, 1842, 212, Chittenonga Creek, tributary of Mohawk River.
Argyreus rubripinnis Heckel, Russegger's Reisen, 1843, 1040.
Leuciscus spirlingulus Cuvier and Valenciennes, Hist. Nat. Poiss., XVII, 1844, 239 (321), New Jersey; New Harmony, Ind.
Leuciscus obesus Storer, Proc. Bost. Soc. Nat. Hist., II, 1845, 48, Florence, Ala.
Plargyrus typicus Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 196; after Rafinesque.
Plargyrus bowmani Girard, loc. cit., 196, Sweetwater River, Nebr.
Plargyrus argentatus Girard, loc. cit., 212, James River, Va.
Alburnops plumbeolus Cope, loc. cit., XVI, 1864, 282, Saginaw River, Flint, Mich.
Hypsilepis cornutus cyaneus Cope, loc. cit., XIX, 1867, 160, Montreal River, Keweenaw, Mich.
Leuciscus frontalis Agassiz, Lake Superior, 1850, 368, Montreal River, eastern shore of Lake Superior.
Leuciscus gracilis Agassiz, loc. cit., 370, Lake Huron.
Hypsilepis cornutus gibbus Cope, Proc. Acad. Nat. Sci. Phila., XIX, 1867, 158, Monroe County, Mich.

933. Luxilus cornutus isolepis (Hubbs and Brown).
Oklahoma and Arkansas.
Notropis cornutus isolepis Hubbs and Brown, Proc. Okla. Acad. Sci., Pt. I, VI, Jan. 1, 1927, 129, Mountain Fork River, McCurtain County Okla.

934. Luxilus cornutus chrysocephalus (Rafinesque).
Ohio River and southward; the southern form of *cornutus*.
Luxilus chrysocephalus Rafinesque, Amer. Month. Mag., 1820, 47, Ohio River.

935. Luxilus cerasinus (Cope).
Roanoke River Basin, in mountain brooks.
Hypsilepis cornutus cerasinus Cope, Proc. Acad. Nat. Sci. Phila., XIX, 1867, 159, headwaters of Roanoke River, Va.

936. Luxilus albeolus (Jordan).
Roanoke, Tar, and Neuse Rivers.
Notropis megalops albeolus Jordan, Bull. U. S. Fish Com., VIII, 1888 (1891), 123, Roanoke River near Roanoke, Va.

937. Luxilus lacertosus (Cope).
Headwaters of Tennessee River.
Hybopsis lacertosus Cope, Jour. Acad. Nat. Sci. Phila., VI, 1868, 232, Bear Creek, tributary of the Middle Fork of Holston River.

Genus 328. EROGALA Jordan and Brayton
Erogala Jordan and Brayton, Bull. U. S. Nat. Mus., XII, 1898, 20 (*Photogenis stigmaturus* Jordan).

938. Erogala pyrrhomelas (Cope).
North and South Carolina in the Santee Basin.
Photogenis pyrrhomelas Cope, Proc. Amer. Phil. Soc. Phila., XI, 1870, 463, Catawba River, N. C.

939. Erogala formosa (Putnam).
Southern Georgia and Alabama.
Alburnus formosus Putnam, Bull. Mus. Comp. Zool., I, 1863, 9, Mobile; not *Moniana formosa* Girard.
Leuciscus hypselopterus Günther, Cat., VII, 1868, 255, Mobile; substitute for *formosus*, preoccupied in *Leuciscus* but not in *Erogala*.
Photogenis grandipinnis Jordan, Bull. U. S. Nat. Mus., X, 1877, 62, Flint River, Ga.

940. Erogala whipplii (Girard). *Silverfin; Lemonfin; Satinfin; Steel-colored minnow.*
Central and northern New York to Minnesota, northern Alabama, and Arkansas, in clear streams.
Cyprinella whipplii Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 198, Sugarloaf Creek, tributary Poteau River, Ark.
Photogenis spilopterus Cope, Trans. Amer. Phil. Soc., XIII, 1866, 378, St. Joseph River, southwestern Michigan.
Hybopsis fretensis Cope, loc. cit., 382, Detroit, Mich.; young of *C. whipplii, fide* Hubbs.

941. Erogala analostana (Girard). *Silverfin; Satinfin; Lacefin; Shiner.*
Streams about Delaware and Chesapeake Bays; representing *Erogala whipplii* east of the Alleghenies.
Cyprinella analostana Girard, Proc. Acad. Nat. Sci. Phila., XI, 1859, 59, at Analostan Island, Washington, D. C.

942. Erogala galactura (Cope).
Ozark region to Cumberland, Tennessee, and Savannah Rivers; abundant in mountain streams.
Hypsilepis galacturus Cope, Proc. Acad. Nat. Sci. Phila., XIX, 1867, 160, Holston River, Va.

943. Erogala stigmatura (Jordan). *Spotted-tail minnow.*
Alabama Basin; very abundant.
Photogenis stigmaturus Jordan, Ann. Lyc. Nat. Hist. N. Y., XI, 1876, 337, Etowah River, Rome, Ga.
Cyprinella calliura Jordan, Bull. U. S. Nat. Mus., X, 1877, 61, Black Warrior River, Ala.

944. Erogala camura (Jordan and Meek).
Arkansas River and tributaries.
Cliola camura Jordan and Meek, Proc. U. S. Nat. Mus., VII, 1884, 474, Arkansas River, Fort Lyon, Colo.

945. Erogala nivea (Cope).
Southern Virginia to South Carolina.
Hybopsis niveus Cope, Proc. Amer. Phil. Soc., XI, 1870, 460, Catawba River, N. C.

946. Erogala chloristia (Jordan and Brayton).
Santee River and tributaries.
Codoma chloristia Jordan and Brayton, Bull. U. S. Nat. Mus., XII, 1878, 21, tributary of Saluda River, Greenville, S. C.

947. Erogala trichroistia (Jordan and Gilbert).
Alabama River Basin.
Codoma trichroistia Jordan and Gilbert, Bull. U. S. Nat. Mus., XII, 1878, 50, Etowah River, etc., Rome, Ga.

948. Erogala callistia (Jordan).
Alabama River Basin.
Photogenis callistius Jordan, Ann. Lyc. Nat. Hist. N. Y., XI, 1876, 337, Etowah River, etc., Rome, Ga.

949. Erogala cærulea (Jordan).
Alabama River Basin.
Photogenis cæruleus Jordan, Ann. Lyc. Nat. Hist. N. Y., XI, 1876, 338, Etowah River, Rome, Ga.

950. Erogala eurystoma (Jordan).
Chattahoochee River.
Photogenis eurystomus Jordan, Ann. Lyc. Nat. Hist. N. Y., XI, 1876, 356, Nancys Creek, tributary to Chattahoochee River, near Atlanta, exclusive of the smaller specimens mentioned, which are *Notropis zonistus;* not *Codoma eurystoma* Jordan.
Photogenis leucopus Jordan and Brayton, Bull. U. S. Nat. Mus., XII, 1878, 41, Chattahoochee River, Gainesville, Ga.

951. Erogala cercostigma (Cope).
Sandy streams tributary to the Gulf of Mexico, from Pearl River and Red River to Rio Nueces; abundant.
Cyprinella cercostigma Cope, Proc. Acad. Nat. Sci. Phila., XIX, 1867, 157, Pearl River, Monticello, Miss.
Luxilus chickasavensis Hay, Proc. U. S. Nat. Mus., III, 1880, 506, Chickasawha River, Enterprise, Miss.

952. Erogala xænura (Jordan).
Altamaha River Basin, Ga.
Minnilus xænurus Jordan, Proc. Acad. Nat. Sci. Phila., XXIX, 1877, 79, Ocmulgee River, Flat Shoals, Ga.

953. Erogala notata (Girard).
Streams of Texas from Austin westward.
Cyprinella notata Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 198, Rio Seco, Tex.

954. Erogala venusta (Girard).
Streams of Texas.
Cyprinella venusta Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 198, Rio Sabinal, Tex.

955. Erogala texana (Girard).
Rivers of Texas from Trinity River to Rio Salado.
Cyprinella texana Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 198, Rio Salado and Turkey Creek, Tex.

Genus 329. CYPRINELLA Girard.
Cyprinella Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 196 (*Leuciscus bubalinus* Baird and Girard).

956. Cyprinella bubalina (Baird and Girard).
Streams of Arkansas and westward; not common.
Leuciscus bubalinus Baird and Girard, Proc. Acad. Nat. Sci. Phila., VI, 1853, 391, Otter Creek, Ark.
Cyprinella umbrosa Girard, loc. cit., VIII, 1856, 197, Coal Creek, tributary of South Fork Canadian River.
Cyprinella gunnisonii Girard, loc. cit., 197, Cottonwood Creek of the Rio Grande, Colo.
Cyprinella beckwithi Girard, loc. cit., 197, Arkansas River, near Fort Makee.
Cyprinella lepida Girard, loc. cit., 197, Rio Frio, Tex.

957. Cyprinella ludibunda Girard.
Rio Grande Basin.
Cyprinella ludibunda Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 199, locality now known to be Cottonwood Creek, Colo.

958. Cyprinella macrostoma Girard.
Rio Grande region, northward perhaps to Kansas.
Cyprinella macrostoma Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 198, Devils River, Tex.
?*Cyprinella luxiloides* Girard, loc. cit., 198, San Pedro Creek, Tex.
?*Cyprinella lugubris* Girard, loc. cit., 199, Cottonwood Creek, Colo.
?*Notropis umbrifer* Hay, Proc. U. S. Nat. Mus., X, 1887, 245, Solomon River at Beloit and Saline River near Wakeeney, Kans.

959. Cyprinella forlonensis (Meek).
Streams of Tamaulipas, Mexico.
Nototropis forlonensis Meek, Field Col. Mus., Zool., V, 1904, 70, fig. 20, Rio Forlon, Tamaulipas, Mexico.

960. Cyprinella rubripinna Garman.
Tributaries of Lago del Muerto, Coahuila, Mexico.
Cyprinella rubripinna Garman, Bull. Mus. Comp. Zool., VIII, 1881, 91, Lago del Muerto; preoccupied.
Notropis garmani Jordan, Cat. Fish. N. Amer., 1885, 813; substitute for *rubripinna;* preoccupied in *Luxilus* but not in *Cyprinella.*

Genus 330. MONIANA Girard.
Moniana Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 199 (*Leuciscus lutrensis* Baird and Girard); probably inseparable from *Cyprinella.*

961. Moniana lutrensis (Baird and Girard). *Redfin.*
Southern Illinois to South Dakota, Kansas, and the Rio Grande; very abundant in clear brooks southward.
Leuciscus lutrensis Baird and Girard, Proc. Acad. Nat. Sci. Phila., VI, 1853, 391, Otter Creek, tributary of North Fork of Red River, Ark.
Cyprinella suavis Girard, loc. cit., VIII, 1856, 197, San Antonio, Tex.
Moniana leonina Girard, loc. cit., 199, Leon River, tributary to Rio San Antonio, Tex.
Moniana complanata Girard, loc. cit., 200, Brownsville, Tex.
Moniana lætabilis Girard, loc. cit., 200, Hurah Creek, tributary of Rio Pecos.
Moniana pulchella Girard, loc. cit., 200, Sugar Loaf Creek, tributary to the Poteau River.
Moniana couchi Girard, loc. cit., 201, China, Nuevo Leon, Mexico.
Moniana rutila Girard, loc. cit., 201, Cadereita, Nuevo Leon, Mexico.
Moniana gracilis Girard, loc. cit., 201, Monterrey, Nuevo Leon, Mexico.
Moniana gibbosa Girard, loc. cit., 201, Brownsville, Tex.
Cyprinella billingsiana Cope, Hayden's Geol. Surv. Wyo., 1870, 439, St. Joseph, Mo.
Moniana jugalis Cope, loc. cit., 439, St. Joseph, Mo.
Hypsilepis iris Cope, Wheeler Surv., Zool., V, 1875, 653, Rio Grande, San Ildefonso, N. Mex.
Cyprinella forbesi Jordan, Bull. Ill. State Lab. Nat. Hist., I, 1878, 57, clear streams of southern Illinois.
Cliola montiregis Cope, Proc. Amer. Phil. Soc., XII, 1885, 168 (read Dec. 7, 1884), Monterey, Nuevo Leon, Mexico.

962. Moniana formosa Girard.
Rio Mimbres, Chihuahua, Mexico.
Moniana formosa Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 201, Rio Mimbres, Chihuahua, Mexico.

963. Moniana frigida Girard.
Rio Frio and tributaries of Rio San Antonio, Tex., and Lake Santa Maria, Chihuahua, Mexico.
Moniana frigida Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 200, Rio Frio, Tex.

964. Moniana santamariæ (Evermann and Goldsborough).
Rio Grande Basin in Mexico.
Notropis santamariæ Evermann and Goldsborough, Bull., U. S. Fish Com., XXI, 1901 (1902), 147, fig. 2, Lake Santa Maria in Chihuahua, Mexico.

965. Moniana proserpina Girard.
Rio Grande region.
Moniana proserpina Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 200, Devils River, Tex.
Moniana aurata Girard, loc. cit., 200, Piedra Painte, N. Mex.
?*Moniana tristis* Girard, loc. cit., 1856, 201, locality unknown.

966. Moniana boucardi (Günther). *Salmichi.*
Central Mexico.
Leuciscus boucardi Günther, Cat., VII, 1868, 485, Cuernavaca, Mexico.
Graodus nigrotæniatus Günther, loc. cit., 485, Atlisco, Mexico.

967. Moniana robusta (Meek).
Santa Rosalia and Jimenez, Mexico.
Notropis robustus Meek, Field Col. Mus., Zool., III, 1902, 82, Rio Conchos, Jimenez, Chihuahua, Mexico, figured as *Nototropis robustus*, in Field Col. Mus., Zool., V, 1904, 66.

968. Moniana chihuahua (Woolman).
Streams of Chihuahua, Mexico.
Notropis chihuahua Woolman, Amer. Nat., March, 1892, 260, Rio de los Conchos, Chihuahua, Mexico.

969. Moniana callisema (Jordan).
Ocmulgee River, Ga.
Episema callisema Jordan, Ann. Lyc. Nat. Hist. N. Y., XI, 1876, 363, South Fork of Ocmulgee River, Flat Shoals, Ga.

Genus 331. HUDSONIUS Girard.
Hudsonius Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 210 (*Clupea hudsonia* Clinton)

970. Hudsonius chamberlaini (Evermann).
Atchafalaya River, La.
Notropis chamberlaini Evermann, in Jordan and Evermann, Fishes North and Mid. Amer., 1898, 2800, Atchafalaya River, Melville, La.

971. Hudsonius hudsonius (De Witt Clinton). *Spawneater; Spot-tailed minnow; Shiner; Smelt.*
The Dakotas and Lake Superior to New York, and southward; abundant in the Great Lakes.
Clupea hudsonia De Witt Clinton, Ann. Lyc. Nat. Hist. N. Y., I, 1824, 49, Hudson River.
Hudsonius fluviatilis Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 210, Hudson River.
Luxilus selene Jordan, Bull. U. S. Nat. Mus., X, 1877, 60, Lake Superior, Bayfield, Wis.
Notropis scopiferus Eigenmann and Eigenmann, Amer. Nat., 1893, 153. Winnipeg, Brandon, Fort Qu'Appelle and Medicine Hat, Assiniboia.

972. Hudsonius amarus Girard. *Gudgeon; Spawneater; Silverfin; Shiner; Smelt shiner; Silvery minnow; Blue-lined minnow.*
Delaware and Potomac Rivers.
Hudsonius amarus Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 210, Potomac River at Washington.
Hybopsis phaënna Cope, loc. cit., 1864, 279, Delaware River, Trenton, N. J.

973. Hudsonius saludanus (Jordan and Brayton).
Coastwise streams from the James to the Ocmulgee.
Alburnops saludanus Jordan and Brayton, Bull. U. S. Nat. Mus., XII, 1878, 16, a tributary of Saluda River, Greenville, S. C.
Hudsonius euryopa Bean, Proc. U. S. Nat. Mus., II, 1879, 285, McBean Creek, tributary of Savannah River, Ga.

974. Hudsonius aletes Jordan and Evermann.
Southern Indiana.
Hudsonius aletes Jordan and Evermann, Proc. Calif. Acad. Sci., 4th ser., XVI, 1927 (Apr. 27), 502, Switz City Swamp, Green County, Ind.

Genus 332. HYBOPSIS Agassiz.

Hybopsis Agassiz, Amer. Jour. Sci. Arts, XVII, 1854 (*H. gracilis* Agassiz = *Rutilus amblops* Rafinesque?).

Alburnops Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 194 (*Hybopsis gracilis* Agassiz = *A. blennius* Girard).

Graodus Günther, Cat., VII, 1868, 485 (*Graodus nigrotæniatus* Girard, specimen with pharyngeal teeth lost = *Alburnops blennius* Girard).

Chriope Jordan, Hayden's Geol. Surv. Terr., IV, 1878 (*Hybopsis bifrenatus* Cope).

Miniellus Jordan, Man. Vert., ed. 5, 1888, 56 (*Hybopsis procne* Cope).

975. **Hybopsis gracilis** Agassiz.

Tennessee River.

Hybopsis gracilis Agassiz, Amer. Jour. Sci. Arts, XVII, 1854, 358, Huntsville, Ala.

976. **Hybopsis blennius** (Girard). *Straw-colored minnow.*

Ohio, Michigan, and New York to Tennessee, Dakota, and Kansas, thence southwestward to Texas.

?*Minnilus microstomus* Rafinesque, Ichth. Ohiensis, 1820, 47, Kentucky River; not certainly identifiable.

?*Rutilus amblops* Rafinesque, loc. cit., 51; not certainly identifiable.

Alburnops blennius Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 194, Arkansas River, near Fort Smith, Ark.

Hybognathus stramineus Cope, loc. cit., XVI, 1864, 283, Detroit River, Grosse Isle.

Hybopsis missuriensis Cope, Hayden's Geol. Surv. Wyo., 1870, 437, Missouri River, St. Joseph, Mo.

Notropis reticulatus Eigenmann and Eigenmann, Amer. Nat., 1893, 152, Fort Qu'Appelle, Assiniboia.

977. **Hybopsis winchelli** Girard.

Black Warrior River, Ala.

Hybopsis winchelli Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 211, Black Warrior River, Ala.

This species and the preceding may prove to be identical with *Hybopsis gracilis*. The synonymy of these little fishes is still unsettled.

978. **Hybopsis procne** (Cope). *Minnow; Minnie; Swallowminnow shiner.*

Delaware River and Cayuga Lake Basin southward in coastwise streams as far as the Neuse River, N. C.

Hybognathus procne Cope, Proc. Acad. Nat. Sci. Phila., XVI, 1864, 283, Conestoga River, a tributary of the Susquehanna.

Hybopsis longiceps Cope, Jour. Acad. Nat. Sci. Phila., VI, 1868, 231, headwaters of James and Roanoke Rivers, Va.

979. **Hybopsis cummingsi** (Myers).

Streams near Wilmington, N. C.

Notropis cummingsi Myers, Amer. Mus. Novitates, No. 168, April 23, 1925, 1, fig. 1, upper Burnt Mill Creek, Wilmington, N. C.

980. **Hybopsis cayuga** (Meek).

Connecticut River, northern New York, and upper Mississippi Valley.

Notropis cayuga Meek, Ann. Acad. Sci. N. Y., IV, 1888, 305, Cayuga Lake, N. Y.

981. **Hybopsis atrocaudalis** (Evermann).

Rio Neches, Palestine, Tex., also in Rio Comal at New Braunfels, Tex.

Notropis cayuga atrocaudalis Evermann, Bull. U. S. Fish Com., XI, 1891 (1892), 76, Neches River, Palestine, Tex.

982. **Hybopsis keimi** (Fowler).

Allegheny River, western Pennsylvania.

Notropis keimi Fowler, Proc. Acad. Nat. Sci. Phila., LX, 1908, 533, Plate XXVII, tributary of Allegheny River, Port Allegheny, Pa.

983. **Hybopsis volucella** (Cope).

Michigan, Wisconsin, and northern Indiana.

Hybognathus volucellus Cope, Proc. Acad. Nat. Sci. Phila., XVI, 1864, 283, Grosse Isle, Detroit River, Mich.

984. Hybopsis phenacobius (Forbes).
Streams of central Illinois.
Notropis phenacobius Forbes, Bull. Ill. Lab. Nat. Hist., II, 1885, 2, 137, Peoria Ill.

985. Hybopsis spectrunculus Cope.
Headwaters of Tennessee River in Tennessee, Virginia, and North Carolina.
Hybopsis spectrunculus Cope, Jour. Acad. Nat. Sci. Phila., VI, 1868, 231, tributary of Middle Fork of Holston River, Va.

986. Hybopsis shumardi (Girard).
Missouri region and southwestward.
Alburnops shumardi Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 194, Arkansas River, Fort Smith, Ark.
Alburnops illecebrosus Girard, loc. cit., 194, Arkansas River, Fort Smith, Ark.

987. Hybopsis boops (Gilbert). *Bigeye minnow.*
Maumee River, west to Iowa and Missouri.
Notropis boops Gilbert, Proc. U. S. Nat. Mus., VII, 1884, 201, Salt Creek, Brown County, Ind., and Flat Rock Creek, Decatur County, Ind.

988. Hybopsis kanawha (Jordan and Jenkins).
Tributaries of Kanawha River, southwestern Virginia.
Notropis kanawha Jordan and Jenkins, Proc. U. S. Nat. Mus., XI, 1888, 354, Plate 44, fig. 5, Reed Creek, Wytheville, Va.

989. Hybopsis piptolepis (Cope).
North Platte River.
Photogenis piptolepis Cope, Hayden's Geol. Surv. Wyo., 1870, 438, Red Cloud Creek, a tributary of North Platte River.

990. Hybopsis gilberti (Jordan and Meek).
Illinois to eastern Colorado.
Notropis gilberti Jordan and Meek, Proc. U. S. Nat. Mus., VIII, 1885, 4, Des Moines River and Village Creek, Ottumwa, Iowa; perhaps not distinct from *Hybopsis piptolepis.*

991. Hybopsis horatii (Cockerell).
Platte Basin.
Notropis horatii Cockerell, Science, XXXIV, No. 879, Nov. 3, 1911, 614, Julesburg, Colo.

992. Hybopsis deliciosa (Girard). *Straw-colored minnow.*
Michigan, and southwest to Arkansas.
?*Minnilus microstomus* Rafinesque, Ichth. Ohiensis, 1820, 47, Ohio River; not certainly identifiable.
?*Hybopsis dorsalis* Agassiz, Amer. Jour. Sci. Arts., XVII, 1854, 358, Burlington, Iowa; unidentifiable.
Moniana deliciosa Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 199, Leon River, a tributary of the San Antonio River, Tex.

993. Hybopsis deliciosa straminea Cope. *Northern straw-colored minnow.*
Great Lakes region, mostly in small brooks, the northern form of *H. deliciosus.*
Hybopsis stramineus Cope, Trans. Amer. Phil. Soc., XIII, 1886, 381, Grosse Isle, Detroit River.

994. Hybopsis calientis (Jordan and Snyder).
Streams of central Mexico.
Notropis calientis Jordan and Snyder, Bull. U. S. Fish. Com., XIX, 1899 (1900), 122, fig. 4, Rio Verde at Aguas Calientes, Mexico.

995. Hybopsis buchanani (Meek).
Poteau River, Okla.
Notropis buchanani Meek, Bull. U. S. Fish Com., XV, 1895 (1896), 342, Poteau River near Poteau, Ind. Ter.

996. Hybopsis heterolepis (Eigenmann and Eigenmann).
Notropis heterolepis Eigenmann and Eigenmann, Amer. Nat., 1893, 152, Cayuga Lake.
Notropis muskoka Meek, Field Col. Mus., Zool., I, 1898, 308, Muskoka Lake near Georgian Bay, Ontario.

997. **Hybopsis kendalli** (Evermann and Cockerell).
Cross Lake Thoroughfare, Me.
Notropis kendalli Evermann and Cockerell, Proc. Biol. Soc. Wash., XXII, Dec. 8, 1909, Cross Lake Thoroughfare, Me.

998. **Hybopsis ozarcanus** (Meek).
White River, Ark.
Notropis ozarcanus Meek, Bull., U. S. Fish Com., IX, 1889 (1891), 129, North Fork of White River, Ark.

999. **Hybopsis scylla** Cope.
Illinois River to western Kansas and Montana; abundant in the shallow sandy streams of the plains.
?*Alburnus lineolatus* Agassiz, in Putnam, Bull., Mus. Comp. Zool., I, 1863, 9, Osage River, Mo.; unidentifiable.
Hybopsis scylla Cope, Hayden's Geol. Surv. Wyo., 1870, 438, Red Cloud Creek, tributary of Platte River.
Cliola chlora Jordan, Bull. Hayden's Geol. Surv. Terr., IV, 1878, 791, upper Missouri River.

1000. **Hybopsis longirostris** (Hay).
Chickasawha River, Miss., to Escambia River, Fla.
Alburnops longirostris Hay, Proc., U. S. Nat. Mus., III, 1880, 504, Chickasawha River at Enterprise, Miss.

1001. **Hybopsis nocomis** (Evermann).
Trinity, San Marcos, and Comal Rivers, Tex.
Notropis nocomis Evermann, Bull. U. S. Fish Com., XI, 1891 (1892), 78, Trinity River, Palestine, Tex., and San Marcos River, San Marcos, Tex.

1002. **Hybopsis ortenburgeri** (Hubbs.)
Mountain Fork River, Okla.
Notropis ortenburgeri Hubbs, Proc. Okla. Acad. Sci., pt. 1, VI, Jan. 1, 1927, 127, Mountain Fork River, McCurtain County, Okla.

1003. **Hybopsis nux** (Evermann).
Neches and Trinity Rivers near Palestine, Tex.
Notropis nux Evermann, Bull. U. S. Fish Com., XI, 1891 (1892), 77, Neches River, Palestine, Tex.

1004. **Hybopsis simus** (Cope).
Rio Grande at San Ildefonso, N. Mex.
Alburnellus simus Cope, Wheeler Surv., V, Zool., 1875, 649, San Ildefonso, N. Mex.

1005. **Hybopsis sabinæ** (Jordan and Gilbert).
Sabine River, Tex.
Notropis sabinæ Jordan and Gilbert, Proc. U. S. Nat. Mus., IX, 1886, 15, Sabine River at Longview, Tex.

1006. **Hybopsis nitida** (Girard).
Tributaries of Rio San Juan at Cadereita, Nuevo Leon, Mexico.
Moniana nitida Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 201, Cadereita, Mexico; not *Alburnus nitidus* Kirtland, also a *Notropis* but not a *Hybopsis*.
Notropis braytoni Jordan and Evermann, Fishes North and Mid. Amer., 1896, 264, Cadereita, Mexico; substitute for *M. nitida* Girard, preoccupied.

Subgenus CHRIOPE Jordan.

1007. **Hybopsis bifrenata** Cope. *Bridled minnow; Minnie.*
Maine to Maryland.
Hybopsis bifrenatus Cope, Trans., Amer. Phil. Soc., XIII, 1867, Schuylkill River, Conshohocken, Pa.

1008. **Hybopsis maculata** (Hay).
Chickasawha River, Miss.
Hemitremia maculata Hay, Proc. U. S. Nat. Mus., III, 1880, 1505, Chickasawha River, Enterprise, Miss.

1009. Hybopsis anogenus (Forbes).
Western New York (Cayuga Lake) to northern Illinois.
Notropis anogenus Forbes, Bull. Ill. Lab. Nat. Hist., II, 1885, Art. 2, 138, Fox River, McHenry, Ill.

1010. Hybopsis heterodon (Cope).
New York to Michigan and Kansas; common.
Alburnops heterodon Cope, Proc. Acad. Nat. Sci. Phila., XVI, 1864, 281, Lansing; Grosse Isle, Mich.
Notropis germanus Hay, Proc. U. S. Nat. Mus., X, 1887, 252, Smoky Hill River, Wallace, Kans.

1011. Hybopsis heterodon richardsoni (Hubbs and Greene).
Fox River System, tributary to Green Bay, Wis.
Notropis heterodon richardsoni Hubbs and Greene, Univ. Mich. Mus. Zool., Misc. Pub. 15, 1926, 39, Pl. III, fig. 1, Fox River, opposite Lock 25, Columbia County, Wis.

1012. Hybopsis jordani (Eigenmann and Eigenmann).
South Saskatchewan River, Medicine Hat, Assiniboia.
Notropis albeolus Eigenmann and Eigenmann, Amer. Nat., 1893, 152, Medicine Hat, Assiniboia; name preoccupied.
Notropis jordani Eigenmann and Eigenmann, loc. cit., 592, substitute for *Chriope albeolus*, preoccupied in *Notropis* but not in *Chriope*.

Genus 333. PLATYGOBIO Gill.
Platygobio Gill, Trans. Amer. Phil. Soc., V, 1863, 178 (*Pogonichthys communis* Girard = *Cyprinus* (*Leuciscus*) *gracilis* Richardson).

1013. Platygobio gracilis (Richardson). *Flat-headed chub.*
East slope of the Rocky Mountains, from the Missouri and Yellowstone Rivers to the Saskatchewan; abundant in river channels as far south as Kansas City.
Cyprinus (*Leuciscus*) *gracilis* Richardson, Fauna Bor.-Amer., Fishes, 1836, 120, Saskatchewan River at Carleton House.
Coregonus angusticeps Cuvier and Valenciennes, Hist. Nat. Poiss., XXI, 1848, 389–390 (534), Saskatchewan River.
Pogonichthys communis Girard, Proc., Acad. Nat. Sci. Phila., VIII, 1856, 188, Yellowstone River, Fort Pierre, Nebr., etc.
Pogonichthys (*Platygobio*) *gulonellus* Cope, loc. cit., XVI, 1864, 277, near Bridgers Pass, Wyo.

1014. Platygobio physignathus (Cope).
Upper waters of Arkansas River; very abundant in the channels; the most common fish at Pueblo, Colo.
Ceratichthys physignathus Cope, Wheeler Surv., V, Zool., 1875 (1876), 651, Arkansas River, Pueblo, Colo.

1015. Platygobio pallidus Forbes.
One specimen from Ohio River at Cairo, Ill.
Platygobio pallidus Forbes, in Jordan and Gilbert, Synopsis, 1883, 220, Ohio River at Cairo, Ill.

Genus 334. COUESIUS Jordan.
Couesius Jordan, Hayden's Geol. Surv. Terr., IV, 1878, 785 (*Nocomis milneri* Jordan = *Gobio plumbeus* Agassiz).

1016. Couesius squamilentus (Cope).
Henry Fork of Green River in southwestern Wyoming.
Ceratichthys squamilentus Cope, Hayden's Geol. Surv. Wyo., 1870, 442, Henry Fork of Green River, Wyo., Colorado Basin.

1017. Couesius plumbeus (Agassiz). *Chub minnow; Lake chub; Plumbeus minnow; Moose Lake minnow.*
Streams and lakes from Lake Superior east to the Adirondack region and New Brunswick; not very common except northward.
Gobio plumbeus Agassiz, Lake Superior, 1850, 366, Lake Superior.
Ceratichthys prosthemius Cope, Trans. Amer. Phil. Soc., XIII, 1867, Montreal River, Keweenaw Point, Lake Superior.
Nocomis milneri Jordan, Bull. U. S. Nat. Mus., X, 1877, 64, Lake Superior.

1018. Couesius greeni Jordan.
Stuart Lake, headwaters of Fraser River, British Columbia, and Lake Pend d'Oreille, Idaho.
Couesius greeni Jordan, Proc. U. S. Nat. Mus., XVI, 1893, 313, Stuarts Lake, British Columbia.

1019. Couesius dissimilis (Girard).
Upper Missouri and Black Hills region.
Leucosomus dissimilis Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 189, Milk River and Little Muddy River, Mont.

1020. Couesius adustus Woolman.
Rio de los Conchos, Chihuahua, Mexico.
Couesius adustus Woolman, Bull. U. S. Fish Com., XIV, 1894, 57, Rio de los Conchos, Chihuahua, Mexico.

Genus 335. NOCOMIS Girard.
Nocomis Girard, Proc. Acad. Nat. Sci. Phila., 1856, 190 (*N. nebrascensis* Girard = *Luxilus kentuckiensis* Rafinesque).
Ceratichthys Baird and Girard, Proc. Acad. Nat. Sci. Phila., VI, 1853, 391 (*C. vigilax* Baird and Girard; not of Baird and Girard, 1856); no description.

1021. Nocomis kentuckiensis (Rafinesque). *Chub; Hornyhead; River chub; Jerker; Indian chub.*
Pennsylvania to Wyoming and Alabama, on both sides of the Alleghenies; abundant in the larger streams.
Luxilus kentuckiensis Rafinesque, Ichth. Ohiensis, 1820, 48, Ohio River.
?*Catostomus melanotus* Rafinesque, loc. cit., 58, Ohio River at the falls.
Semotilus biguttatus Kirtland, Bost. Jour. Nat. Hist., III, 1840, 344, Pl. V, Yellow Creek, Ohio.
Nocomis nebrascensis Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 190, Sweetwater River, Nebr.
Ceratichthys leptocephalus Girard, loc. cit., 213, Salem, N. C.
Nocomis bellicus Girard, loc. cit., 213, Black Warrior River.
Ceratichthys cyclotis Cope, loc. cit., XVI, 1864, 277, Grosse Isle, Waterford; Clinton River and Bruce, Mich.
Ceratichthys stigmaticus Cope, loc. cit., 1864, 278, Michigan.

1022. Nocomis micropogon (Cope).
Streams of Pennsylvania.
Ceratichthys micropogon Cope, Proc. Acad. Nat. Sci. Phila., XVI, 1864, 277, Conestoga River near Lancaster, Pa.

Genus 336. YURIRIA Jordan and Evermann
Yuriria Jordan and Evermann, Fishes North and Mid. Amer., 1896, 321 (*Hudsonius altus* Jordan).

1023. Yuriria alta (Jordan). *Pesca blanca.*
Lakes and streams of Guanajuato, tributary to Rio Lerma, Mexico, in Pacific drainage.
Hudsonius altus Jordan, Proc. U. S. Nat. Mus., II, 1879, 301, Lake Tupataro, Guanajuato, Mexico.

Genus 337. ERINEMUS Jordan
Erinemus Jordan, Man. Vert., 1876, 279 (*Ceratichthys hyalinus* Cope).

1024. Erinemus storerianus (Kirtland). *Storer's chub; Lake minnow.*
Great Lakes and westward to Wyoming, Tennessee, and Arkansas; abundant in the larger streams and lakes, especially in Iowa.
Rutilus storerianus Kirtland, Proc. Bost. Soc. Nat. Hist., I, 1842, 71, Lake Erie (name only); description given as *Leuciscus storerianus* in Bost. Jour. Nat. Hist., V, 1845. 30, Pl. I, fig. 2,
Gobio vernalis Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 189, Arkansas River, Fort Smith, Ark.
Ceratichthys lucens Jordan, Proc. U. S. Nat. Mus., II, 1879, 238, Falls of Ohio River near New Albany, Ind.

1025. Erinemus hyalinus (Cope). *Silver chub.*
Ceratichthys hyalinus Cope, Jour. Acad. Nat. Sci. Phila., VI, 1868, 226, tributary of Holston River.

1026. **Erinemus labrosus** (Cope).
Basin of the Santee in North and South Carolina; common.
Ceratichthys labrosus Cope, Proc. Amer. Phil. Soc., XI, 1870, 458, tributaries of Catawba River, McDowell and Burke Counties, N. C.
Ceratichthys zanemus Jordan and Brayton, Bull. U. S. Nat. Mus., XII, 1878, 24, Saluda River, Greenville, N. C.

1027. **Erinemus hypsinotus** (Cope).
Santee Basin, in North and South Carolina.
Ceratichthys hypsinotus Cope, Proc. Amer. Phil. Soc. Phila., XI, 1870, 458, tributaries of Catawba River, McDowell County, N. C.

1028. **Erinemus rubrifrons** (Jordan).
Basin of the Altamaha, Ga.
Nocomis rubrifrons Jordan, Ann. Lyc. Nat. Hist. N. Y., XI, 1876, 330, Ocmulgee River, Flat Rock, Ga.

Genus 338. ERIMYSTAX Jordan.
Erimystax Jordan, Rept. Geol. Surv. Ohio, IV, 1882, 858 (*Luxilus dissimilis* Kirtland).

1029. **Erimystax dissimilis** (Kirtland). *Spotted shiner.*
Lake Erie to the headwaters of the Tennessee and west to Arkansas and Iowa.
Luxilus dissimilis Kirtland, Bost. Jour. Nat. Hist., III, 1840, 341, pl. 4, fig. 2, Mahoning River, Ohio, and Lake Erie near Cleveland, Ohio.

1030. **Erimystax watauga** (Jordan and Evermann).
Holston River, Va.; Watauga River Tenn.; White River, Ark.; Big Barren River, Ky.; and Tippecanoe River, Ind.
Hybopsis watauga Jordan and Evermann, Proc. U. S. Nat. Mus., XI, 1888, 355, Watauga River, Elizabethtown, Tenn.; North Fork of Holston River, Saltville, Va.

Genus 339. ERIMONAX Jordan.
Erimonax Jordan, Copeia, 1924, 52 (*Ceratichthys monacus* Cope).

1031. **Erimonax monacus** (Cope).
Tennessee Basin in the river channels.
Ceratichthys monacus Cope, Jour. Acad. Nat. Sci. Phila., VI, 1868, 227, Holston River, Washington County, Va.

Genus 340. OREGONICHTHYS Hubbs.
Oregonichthys Hubbs, Occ. Papers, Mus. Zool. Univ. Mich., 1927 (*Hybopsis crameri* Snyder).

1032. **Oregonichthys crameri** (Snyder).
Hybopsis crameri Snyder, Bull. U. S. Bur. Fish., XXVII, 1907, 181, fig. 5, Willamette River at Oregon City, Oreg.

1033. **Oregonichthys cumingii** (Günther).
California; only the type known.
Ceratichthys cumingii Günther, Cat., VII, 1868, 177, California; type locality uncertain.

Genus 341. MACRHYBOPSIS Cockerell and Alliston.
Macrhybopsis Cockerell and Alliston, Proc. Biol. Soc. Wash., XXII, 1909, 162 (*Gobio gelidus* Girard).

1034. **Macrhybopsis æstivalis** (Girard).
Arkansas River to the Rio Grande; abundant in sandy river channels, not in small brooks.
Gobio æstivalis Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 189, Rio San Juan, near Cadereita, Nuevo Leon.

1035. **Macrhybopsis marconis** (Jordan and Gilbert).
Abundant in Rio San Marcos, San Marcos, Tex.; also known from the Guadalupe River near San Marcos and the Rio Comal at New Braunfels, Tex.
Hybopsis æstivalis marconis Jordan and Gilbert, Proc. U. S. Nat. Mus., IX, 1886, 22, Rio San Marcos, San Marcos, Tex.

1036. Macrhybopsis sterletus (Cope).
Rio Grande.
Ceratichthys sterletus Cope, Wheeler Surv., V, Zool., 1875 (1876), 652, Rio Grande, at San Ildefonso, New Mexico.

1037. Macrhybopsis gelida (Girard).
Middle Missouri River Basin, from Wyoming to eastern Nebraska.
Gobio gelidus Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 188, Milk River, Mont.

1038. Macrhybopsis montana (Meek).
Type supposed to be from the upper Missouri.
Hybopsis montanus Meek, Proc. U. S. Nat. Mus., VII, 1884, 526, locality unknown but collected by Dr. F. V. Hayden, probably in the upper Missouri Basin.

1039. Macrhybopsis meeki (Jordan and Evermann).
Missouri River at St. Joseph and elsewhere in the river channel.
Hybopsis meeki Jordan and Evermann, Fish. North and Mid. Amer., 1896, 317, Missouri River at St. Joseph, Mo.

1040. Macrhybopsis hyostoma (Gilbert).
Indiana to Iowa, and south to the Alabama River.
Nocomis hyostomus Gilbert, Proc. U. S. Nat. Mus., VII, 1884, 203, White River, Bedford, Ind.

Genus 342. EXTRARIUS Jordan.
Extrarius Jordan, Proc. Acad. Nat. Sci. Phila., LXX, 1918, 342 (*Hybopsis tetranemus* Gilbert).

1041. Extrarius tetranemus (Gilbert).
Tributaries of Arkansas River in Kansas and Arkansas.
Hybopsis tetranemus Gilbert, Bull. Washburn Lab. Nat. Hist., 1886, 208, Elm and Spring Creeks, Medicine Lodge, Kans.

Genus 343. RHINICHTHYS Agassiz.
Argyreus Heckel, Russegger's Reisen, 1842 (*Cyprinus atronasus* Mitchill; name preoccupied).
Rhinichthys Agassiz, Lake Superior, 1850, 353 (*Cyprinus atronasus* Mitchill).

1042. Rhinichthys cataractæ (Cuvier and Valenciennes). *Long-nosed dace; Black-nosed dace; Black minnow; Niagara gudgeon.*
New England to Virginia and Wisconsin.
Gobio cataractæ Cuvier and Valenciennes, Hist. Nat. Poiss., XVI, 1842, 240 (315), pl. 483, Niagara Falls.
Leuciscus nasutus Ayres, Jour. Bost. Soc. Nat. Hist., IV, 1843, 299, West Hartford, Conn.
Rhinichthys marmoratus Agassiz, Lake Superior, 1850, 354, Pl. II, figs. 1 and 2, Sault Ste. Marie, Lake Superior.

1043. Rhinichthys bowersi Goldsborough and Clark.
Rhinichthys bowersi Goldsborough and Clark, Bull. U. S. Bur. Fish., XXVII, 1907, 36, Dry Fork, Herman, W. Va.

1044. Rhinichthys dulcis (Girard).
Upper Missouri, Platte, Arkansas, Rio Grande, and Colorado Rivers; Columbia River; Utah Basin; and coastwise streams of Washington and Oregon.
Argyreus dulcis Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 185, Sweetwater River, Nebr.
Rhinichthys maxillosus Cope, loc. cit., XVI, 1864, 278, Kansas.
Rhinichthys transmontanus Cope, Amer. Nat., 1879, 441, tributaries of Rio Grande in Colorado and New Mexico.
Rhinichthys ocella Garman, Science Observer, III, 1881, 59, northeastern Wyoming and Montana.
Rhinichthys luteus Garman, Bull. Mus. Comp. Zool., VIII, 1881, 87, Bear River, Ogden, Utah.

1045. Rhinichthys atronasus (Mitchill). *Dace; Black-nosed dace; Brook minnow; Striped dace.*
New England to Minnesota, northern Alabama, and Virginia; very abundant in clear brooks and mountain streams.
Cyprinus atronasus Mitchill, Trans. Lit. Phil. Soc. N. Y., I, 1815, 460, Wallkill River; brooks of New York.
Cyprinus vittatus Rafinesque, Amer. Month. Mag., II, 1817, 121, upper Hudson River.

1046. Rhinichthys croceus (Storer).
Tennessee Basin; abundant in clear brooks.
Leuciscus croceus Storer, Proc. Bost. Soc. Nat. Hist., 1845, 48, Florence, Ala.
Rhinichthys obtusus Agassiz, Amer. Jour. Sci. Arts, XVII, 1854, 357, Huntsville, Ala.
Rhinichthys badius Garman, Science Observer, III, 1881, 60, Clinch River, Tenn.

1047. Rhinichthys lunatus Cope.
Lakes and brooks of Michigan, Indiana, Wisconsin, and Minnesota, and in Rainy River.
Rhinichthys lunatus Cope, Proc. Acad. Nat. Sci. Phila., XVI, 1864, 278, Grosse Isle, Mich.
Rhinichthys arenatus Garman, Science Observer, 1881, 62, Sand Hill River, Minn.

1048. Rhinichthys meleagris Agassiz.
Illinois and Iowa.
Rhinichthys meleagris Agassiz, Amer. Jour. Sci. Arts, XVII, 1854, 357, Burlington, Iowa.

1049. Rhinichthys simus Garman.
Coahuila, Mexico.
Rhinichthys simus Garman, Science Observer, III, 1881, 61, Coahuila, Mexico.

Genus 344. AGOSIA Girard.
Agosia Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 186 (*Agosia chrysogaster* Girard).
Zophendum Jordan and Gilbert, Synopsis, 1883, 155 (*Hybognathus siderius* Cope = *Agosia chrysogaster* Girard).

1050. Agosia chrysogaster Girard.
Tributaries of the Gila River; common in the mountain brooks.
Agosia chrysogaster Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 187, Rio Santa Cruz, Sonora.
Agosia metallica Girard, loc. cit., 1856, 187, Rio San Pedro, Ariz.
Hyborhynchus (*Hybognathus*) *siderius* Cope, Wheeler Surv., V, Zool., 1875, 670, Pl. XXXI, figs. 6 and 6a, Camp Lowell, Ariz.

Genus 345. APOCOPE Cope.
Apocope Cope, Hayden's Geol. Surv. Mont., etc., 1871 (1872), 472 (*A. carringtoni* Cope).
Eritrema Cope, Wheeler's Surv., V, Zool., 1876, 645 (*Apocope henshavii* Cope).

1051. Apocope nubila (Girard).
Basin of the Columbia River from western Idaho, below Shoshone Falls of Snake River, to the coast, and in coastwise streams from Washington southward into Oregon.
Argyreus nubilus Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 186, Fort Steilacoom, Puget Sound.

1052. Apocope robusta (Rutter).
Upper Sacramento Basin.
Agosia robusta Rutter, Bull. U. S. Fish Com., XXII, 1902, 148, Prosser Creek, Calif.

1053. **Apocope carringtonii** Cope.
Upper Snake River Basin to Heart Lake in Yellowstone Park, thence extending southward in the Great Basin and the Coast Ranges; southeastern Oregon.
Apocope carringtonii Cope, Hayden's Geol. Surv. Mont., 1871, 472, Warm Springs, Utah.
Apocope vulnerata Cope, loc. cit., 473, Logan, Utah.
Tigoma rhinichthyoides Cope, loc. cit., 473, Logan, Utah.
Rhinichthys henshavii Cope, Proc. Amer. Phil. Soc., XIV, 1874, 133, Provo, Utah.
Agosia novemradiata Cope, Proc. Acad. Nat. Sci. Phila., XXV, 1883, 141, Weber River at Echo, Utah.

1054. **Apocope oscula** (Girard).
Lower Colorado and Gila Rivers; not rare.
Argyreus osculus Girard, Proc. Acad. Nat. Sci. Phila., 1856, 186, Babocomori Creek, a tributary of the Rio San Pedro, Ariz.
Argyreus notabilis Girard, loc. cit., 1856, 186, Rio Santa Cruz, Sonora, a tributary of the Rio San Pedro, Ariz.
Ceratichthys ventricosus Cope, Proc. Amer. Phil. Soc., XXV, 1874, 136, Ariz.

1055. **Apocope couesii** Yarrow.
Colorado River Basin.
Apocope couesii Yarrow, Field and Forest, 1876, and Wheeler Surv., V, Zool., 1875, 648, Camp Apache, Ariz.

1056. **Apocope yarrowi** (Jordan and Evermann).
Streams of Colorado in the Colorado River Basin.
Agosia yarrowi Jordan and Evermann, Bull. U. S. Fish Com., IX, 1889 (1891), 28, Tomichi Creek and Gunnison River, Gunnison, Colo.

1057. **Apocope adobe** (Jordan and Evermann).
Sevier River, Utah; locally abundant.
Agosia adobe Jordan and Evermann, Bull. U. S. Fish Com., IX, 1889 (1891), Sevier River, Juab, Utah.

1058. **Apocope klamathensis** (Evermann and Meek).
Agosia klamathensis Evermann and Meek, Bull. U. S. Fish Com., XVII, 1897 (1898), 75, 9, fig. 5, Pelican Bay, Upper Klamath Lake, Oreg.

1059. **Apocope nevadensis** (Gilbert).
Warm springs in the deserts of southwestern Nevada; Ash Meadows, Indian Creek, and Vegas Creek, Nev.
Rhinichthys (*Apocope*) *nevadensis* Gilbert, Death Valley Exped., 1893, 230, pl. 6, fig. 1, Ash Meadows, Amargosa Desert, Nev.

1060. **Apocope velifera** (Gilbert).
Pahranagat Valley, southwestern Nevada.
Rhinichthys (*Apocope*) *velifer* Gilbert, Death Valley Exped., 1893, 229, pl. 6, fig. 2, Pahranagat Valley, Nev.

1061. **Apocope falcata** (Eigenmann and Eigenmann).
Columbia River Basin; locally abundant; Boise River at Caldwell, Idaho; Payette River at Payette, Idaho; Columbia River at Pasco and Umatilla; and Mill Creek at Walla Walla.
Agosia falcata Eigenmann and Eigenmann, Amer. Nat., XXVII, Feb. 4, 1893, 153, Boise River, Caldwell, Idaho.

1062. **Apocope umatilla** (Gilbert and Evermann).
Columbia River at Umatilla, Oreg., and Payette and Salmon Rivers, Idaho.
Agosia umatilla Gilbert and Evermann, Bull. U. S. Fish Com., XIV, 1894, 192, pl. 9, fig. 2, Columbia River, Umatilla, Oreg.

Genus 346. ERICYMBA Cope.
Ericymba Cope, Proc. Acad. Nat. Sci. Phila., XVII, 1865, 88 (*E. buccata* Cope).

1063. **Ericymba buccata** Cope. *Silver-mouthed minnow.*
Michigan and western Pennsylvania to Kansas and southward to western Florida.
Ericymba buccata Cope, Proc., Acad. Nat. Sci. Phila., XVII, 1865, 88, Kiskiminitas River, a tributary of the Monongahela, western Pennsylvania.

Genus 347. PHENACOBIUS Cope.
Phenacobius Cope, Proc., Acad. Nat. Sci. Phila., XIX, 1867, 96 (*P. teretulus* Cope).
Sarcidium Cope, Hayden's Geol. Surv. Wyo., 1870, 363 (*S. scopiferum* Cope).

1064. **Phenacobius teretulus** Cope.
Kanawha River, W. Va.
Phenacobius teretulus Cope, Proc. Acad. Nat. Sci. Phila., XIX, 1867, 96, Kanawha River, Eggleston Springs, W. Va.

1065. **Phenacobius mirabilis** (Girard). *Sucker-mouthed minnow.*
Illinois to Arkansas.
Exoglossum mirabile Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 191, Arkansas River, Fort Smith, Ark.

1066. **Phenacobius scopifer** (Cope).
Illinois to the Rio Grande.
Sarcidium scopiferum Cope, Hayden's Geol. Surv. Wyo., 1870 (1871), 440, Missouri River near St. Joseph, Mo.
Phenacobius teretulus liosternus Nelson, Bull. Ill. Lab. Nat. Hist., I, 1876, 46, brooks of McLean County, Ill.

1067. **Phenacobius uranops** Cope.
Upper Tennessee Basin.
Phenacobius uranops Cope, Proc. Acad. Nat. Sci. Phila., XIX, 1867, 96, Holston River, Saltville, Va.

1068. **Phenacobius catostomus** Jordan.
Alabama River Basin.
Phenacobius catostomus Jordan, Ann. Lyc. Nat. Hist. N. Y., XI, 1876, 332, Silver Creek, Etowah River, Rome, Ga.

Genus 348. FALCULARIUS Jordan and Snyder.
Falcula Jordan and Snyder, Bull. U. S. Fish Com., XIX, 1899, 124 (*Falcula chapalæ* Jordan and Snyder); name preoccupied.
Falcularius Jordan, Amer. Nat., XXXVII, 1903, 360 (*Falcula chapalæ* Jordan and Snyder).

1069. **Falcularius chapalæ** (Jordan and Snyder).
Lake Chapala, Mexico.
Falcula chapalæ Jordan and Snyder, Bull. U. S. Fish Com., XIX, 1899 (1901), 124, Lake Chapala at Ocotlan, Mexico.

Genus 349. XYSTROSUS Jordan and Snyder.
Xystrosus Jordan and Snyder, Bull. U. S. Fish Com., XIX, 1899 (1901), 123 (*X. popoche* Jordan and Snyder).

1070. **Xystrosus popoche** Jordan and Snyder.
Basin of the Rio Lerma, Mexico.
Xystrosus popoche Jordan and Snyder, Bull. U. S. Fish Com., XIX, 1899 (1901), 123, Lake Chapala at Ocotlan, Jalisco, Mexico.

Genus 350. EVARRA Woolman.
Evarra Woolman, Bull. U. S. Fish Com., XIV, 1894, 64 (*E. eigenmanni* Woolman).

1071. **Evarra eigenmanni** Woolman.
Central Mexico.
Evarra eigenmanni Woolman, Bull. U. S. Fish Com., XIV, 1894, 64, City of Mexico.

1072. **Evarra tlahuacensis** Meek.
Chalco Lake, Tlahuac, Mexico.
Evarra tlahuacensis Meek, Field Col. Mus., Zool., III, 1902, 85, Pl. XVIII, lower figure, Chalco Lake, Tlahuac, Mexico.

Genus 351. TIAROGA Girard.
Tiaroga Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 204 (*T. cobitis* Girard).

1073. Tiaroga cobitis Girard.
Gila Basin, Ariz.
Tiaroga cobitis Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 204, Rio San Pedro, Ariz.

Genus 352. AZTECULA Jordan and Evermann.
Azteca Jordan and Evermann, Fishes North and Mid. Amer., 1896, 254 (*Notropis aztecus* Woolman); name preoccupied.
Aztecula Jordan and Evermann, loc. cit., 1898, 2799, (*Notropis aztecus* Woolman = *Codoma vittata* Girard).

1074. Aztecula vittata (Girard).
Valley of Mexico and headwaters of the Rio Balsas at Pueblo, Mexico.
Codoma vittata Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 195, Valley of Mexico.
Notropis aztecus Woolman, Bull. U. S. Fish Com., XIV, 1894, 63, pl. 2, canals about City of Mexico.

1075. Aztecula mexicana Meek.
Basin of Rio San Juan on the Mexican plateau.
Aztecula mexicana Meek, Field Col. Mus., Zool., III, 1902, 81, figured; loc. cit., V, 1904, 62, fig. 15; San Juan del Rio, Mexico.

1076. Aztecula lermæ (Evermann and Goldsborough).
Basin of Rio Lerma.
Notropis lermæ Evermann and Goldsborough, Bull. U. S. Fish. Com., XXI, 1901 (1902), 147, fig. 3, Lake Lerma, at Lerma, Mexico.

Genus 353. CODOMA Girard.
Codoma Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 194 (*C. ornata* Girard).

1077. Codoma ornata Girard.
Headwaters of the Rio Nezquital and Rio Nazas in Durango to upper tributaries of the Rio Yaqui and Rio Conchos in Chihuahua, Mexico.
Codoma ornata Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 195, Chihuahua River, Mexico.

1078. Codoma topeka (Gilbert).
Western Iowa and eastern South Dakota to Kansas; locally abundant in the prairie streams.
Notropis topeka Gilbert, Bull. Washburn Lab. Nat. Hist., I, 1884, 13, tributary of Kansas River, Topeka, Kans.
Notropis æneolus Hay, Proc. U. S. Nat. Mus., X, 1887, 245, Solomon River, Wakeeney, Kans.

Genus 354. HYBOGNATHUS Agassiz.
Hybognathus Agassiz, Amer. Jour. Sci. Arts, XIX, 1855, 223 (*H. nuchalis* Agassiz).

1079. Hybognathus nuchalis Agassiz. *Gudgeon; Smelt; Silvery minnow; Smelt minnow.*
Clear streams from the upper Missouri southward to Georgia and Texas, west of the Alleghenies.
Hybognathus nuchalis Agassiz, Amer. Jour. Sci. Arts, XIX, 1855, 224, Quincy, Ill.
Hybognathus evansi Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 182, Fort Pierre, Nebr.
Hybognathus placitus Girard, loc. cit., 1856, 182, sluices of the Arkansas River.

1080. Hybognathus regius Girard. *Gudgeon; Silvery minnow.*
Streams New Jersey to Virginia, east of the Alleghenies.
Hybognathus regius Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 209, Potomac River.
Hybognathus osmerinus Cope, Proc. Amer. Phil. Soc., XI, 1870, 466, Raritan River, N. J.

1081. Hybognathus argyritis Girard.
Upper Missouri region and Red River of the North.
Hybognathus argyritis Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 182, Milk River, Mont.

1082. Hybognathus hayi Jordan.
Lower Mississippi Valley and neighboring rivers in Mississippi.
Hybognathus hayi Jordan, Proc. U. S. Nat. Mus., VII, 1884, 548, Pearl River, Jackson, Miss.; this and three preceding are all very close to *Hybognathus nuchalis.*

Genus 355. DIONDA Girard.
Dionda Girard, Proc. Acad. Nat. Sci. Phila., VIII, 176 (*D. episcopa* Girard).
Algoma Girard, loc. cit., 180 (*A. amara* Girard).

1083. Dionda episcopa Girard.
Southern Texas and northern Mexico; south to the Rio Mezquital in Durango and the Rio San Juan in Nuevo Leon.
Dionda episcopa Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 177, headwaters of Pecos River and Comanche Spring, tributary to the Rio Grande, Tex.
Dionda texensis Girard, loc. cit., 177, Nueces River, Tex.
Dionda papalis Girard, loc. cit., 178, Delaware Creek, a tributary of Pecos River, Tex.
Dionda argentosa Girard, loc. cit., 178, San Felipe Creek and Devils River, tributaries of Rio Grande.
Dionda chrysitis Girard. loc. cit., 178, Live Oak Creek, a tributary of the Pecos.
Dionda couchi Girard, loc. cit., 178, Guajuco, Monterey, and Cadereita, Nuevo Leon.
Hybognathus flavipinnis Cope, Bull. U. S. Nat. Mus., XVII, 1880, 36, Johnsons Fork of Llano River, Tex.
Hybognathus nigrotæniata Cope, loc. cit., 37, Wallace Creek, a tributary of Medina River, Tex.
Hybognathus (Dionda) punctifer Garman, Bull. Mus. Comp. Zool., VIII, 1881, 89, Parras and spring near Saltillo, Mexico.
Hybognathus civilis Cope, Trans. Amer. Phil. Soc., 1884, 167, Monterey, Nuevo Leon.

1084. Dionda serena Girard.
Sabinal River, Tex.
Dionda serena Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 177, Sabinal River, Tex.

1085. Dionda amara (Girard)
Near Fort Brown, Tex.
Algoma amara Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 180, Lagoon near Fort Brown, Tex.

1086. Dionda melanops Girard.
Coahuila, Mexico.
Dionda melanops Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 178, Buena Vista, Coahuila.

1087. Dionda nubila (Forbes).
Western Illinios, west to Wyoming and southwest to the Ozark region.
Alburnops nubilus Forbes, Bull. Ill. Lab. Nat. Hist., I, 1878, 56, Rock River, Ogle County, Ill.

1088. Dionda plumbea Girard.
Tributaries of Arkansas River, in Oklahoma.
Dionda plumbea Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 178, Canadian River, Okla.
Dionda spadicea Girard, loc. cit., 178, Fort Smith, Ark.
Dionda grisea Girard, Pac. R. R. Surv., X, 1858, 230, Pl. LII, figs. 6–10, near Choctaw Agency.

Genus 356. CERATICHTHYS Baird and Girard.
Ceraticthys Baird and Girard, Proc., Acad. Nat. Sci. Phila., VI, 1853, 391 (*C. vigilax;* misprinted *Ceraticthys*, not of Girard, 1856).
Cliola Girard, loc. cit., VIII, 1856, 192 (*Ceratichthys vigilax* Baird and Girard).
Hypargyrus Forbes, in Gilbert, Proc. U. S. Nat. Mus., VII, 1884, 200 (*Hybopsis tuditanus* Cope).

1089. Ceratichthys vigilax Baird and Girard. *Bullhead minnow; Fathead minnow.*

Ohio to Georgia, Iowa, and Texas.

Ceratichthys vigilax Baird and Girard, Proc., Acad. Nat. Sci. Phila., VI, 1853, 391, Otter Creek, North fork of Red River, Ark.

Cliola velox Girard, loc. cit., VIII, 1856, 192, San Pedro Creek and *Cliola vivax*, Rio Leon, tributaries of Rio San Antonio, Tex.

Hybopsis tuditanus Cope, Trans., Amer. Phil. Soc., XIII, 1866, 381, Detroit, Mich.

Alburnops taurocephalus Hay, Proc. U. S. Nat. Mus., 1880, 503, Chickasawha River, Miss.

1090. Ceratichthys smithi (Evermann and Cox).

Southern South Dakota; known only from Prairie Creek near Scotland.

Cliola smithii Evermann and Cox, Rept. U. S. Fish Com., XIX, 1894 (1896), 400, Prairie Creek, Scotland, S. Dak.

Genus 357. HYBORHYNCHUS Agassiz.

Hyborhynchus Agassiz, Amer. Jour. Sci. Arts, XIX, 1855, 223 (*Minnilus notatus* Rafinesque).

1091. Hyborhynchus notatus (Rafinesque). *Blunt-nosed minnow; Spotted minnow.*

Quebec to Delaware; Kentucky, Alabama, Arkansas, and northward to the Dakotas; generally very abundant in small streams west of the Alleghenies.

Minnilus notatus Rafinesque, Ichth. Ohiensis, 1820, 47, Ohio River.

Hyborhynchus perspicuus Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 179, Arkansas River, Fort Smith.

?*Hyborhynchus tenellus* Girard, loc. cit., 179, Choctaw Agency.

Hyborhynchus puniceus Girard, loc. cit., 179, Antelope Creek, Canadian River.

Hybopsis hæmaturus Cope, Trans. Amer. Phil. Soc., XIII, 1866, 382, St. Joseph River, Michigan City, Ind.

?*Hyborhynchus superciliosus* Cope, Jour. Acad. Nat. Sci. Phila., VI, 1868, 234, Kanawha River.

Genus 358. PIMEPHALES Rafinesque. *Fatheads.*

Pimephales Rafinesque, Ichth. Ohiensis, 1820, 52 (*P. promelas* Rafinesque).

Coliscus Cope, Hayden's Geol. Surv. Wyo., 1872, 437 (*Coliscus parietalis* Cope; young of *Pimephales promelas*).

Spinicephalus LeSueur, Bull. Sci. Philom., VIII, 1896, 14, pl. 26 (*S. fibulatus* LeSueur=*Pimephales promelas* Rafinesque).

1092. Pimephales promelas Rafinesque. *Fathead minnow; Blackhead minnow.*

Lake Champlain to Kentucky, Dakota, and the Rio Grande; abundant in sluggish brooks, especially in the Missouri Basin.

Pimephales promelas Rafinesque, Ichth. Ohiensis, 1820, 53, pond near Lexington, Ky.

Pimephales maculosus Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 180, sluices of the Arkansas River, Fort Makee, Ark.

Pimephales fasciatus Girard, loc. cit., 180, Yellowstone River.

Plargyrus melanocephalus Abbott, loc. cit., XII, 1860, 325, Lake Whittlesey, Minn.

Pimephales milesi Cope, loc. cit., XVI, 1864, 282, Grosse Isle, Detroit River, Mich.

Pimephales agassizii Cope, Trans. Amer. Phil. Soc., XIII, 1866, 394, tributary of Ohio River, near Richmond, Ind.

Coliscus parietalis Cope, Hayden's Geol. Surv. Wyo., 1871, 437, St. Joseph, Mo.; young.

Hyborhynchus nigrellus Cope, Wheeler's Surv., V, Zool., 1875, 671, Arkansas River.

Spinicephalus fibulatus LeSueur, Bull. Soc. Philom., VIII, 1896, pl. 26; no locality.

1093. Pimephales confertus (Girard).

Tributaries of the Rio Grande.

Hyborhynchus confertus Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 179, Hurrah Creek, a tributary of the Pecos River, Tex.

1094. Pimephales anuli Kendall.
Thoroughfare between Mud and Grass Lakes, Me.
Pinephales anuli Kendall, Bull. U. S. Fish Com., XXII, 1902, 257, between Mud Lake and Grass Lake, Me.

Genus 359. COCHLOGNATHUS Baird and Girard.
Cochlognathus Baird and Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 158 (*C. ornatus* Baird and Girard).

1095. Cochlognathus ornatus Baird and Girard.
Rio Grande Basin.
Cochlognathus ornatus Baird and Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 158, Brownsville, Tex.

1096. Cochlognathus biguttatus Cope.
Trinity River, Tex.
Cochlognathus biguttatus Cope, Bull. U. S. Nat. Mus., XVII, 1880, 37, Trinity River, Fort Worth, Tex.

Genus 360. EXOGLOSSUM Rafinesque.
Exoglossum Rafinesque, Jour., Acad. Nat. Sci. Phila., I, 1818, 419 (*E. lesueurianum* Rafinesque = *Cyprinus maxillingua* LeSueur).
Maxillingua Rafinesque, loc. cit., 421 (*Cyprinus maxillingua* LeSueur).

1097. Exoglossum maxillingua (LeSueur). *Cut-lips; Nigger chub; Nigger dick; Butter chub; Niggerfish.*
Lake Ontario, St. Lawrence River, Lake Champlain, Hudson River, and Cayuga Lake, and southward to Virginia; abundant in the basins of the Susquehanna, Hudson, Potomac, James, Roanoke, and Kanawha, but not widely distributed.
Cyprinus maxillingua LeSueur. Jour. Acad. Nat. Sci. Phila., I, 1817, 85, Pipe Creek, Md.
Exoglossum annulatum Rafinesque, loc. cit., 1818, 421, Hudson River.
Exoglossum nigrescens Rafinesque, loc cit., 422, Hudson River.
Exoglossum lesurianum Rafinesque, loc. cit., 420; after LeSueur.

Genus 361. CAMPOSTOMA Agassiz. *Stonerollers.*
Campostoma Agassiz, Amer. Jour. Sci. Arts, XIX, 1855, 218 (*Rutilus anomalus* Rafinesque).

1098. Campostoma anomalum (Rafinesque). *Stoneroller; Greased chub; Blue sucker; Rotgut minnow; Mammy; Doughbelly; Steel-backed chub.*
Central New York to Tennessee, Wyoming, and Texas.
Rutilus anomalus Rafinesque, Ichth. Ohiensis, 1820, 52, Licking River, Ky.
Exoglossum spinicephalum Cuvier and Valenciennes, Hist. Nat. Poiss., XVII, 1844, 363 (489), Wabash River.
Leuciscus prolixus Storer, Proc. Bost. Soc. Nat. Hist., II, 1845, 48, Alabama.
Exoglossum dubium Kirtland, Bost. Jour. Nat. Hist., V, 1845, 272, Yellow Creek, Ohio.
Chondrostoma pullum Agassiz, Amer. Jour. Sci. Arts, XVII, 1854, 357, Burlington, Iowa.
Campostoma nasutum Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 176, Cadereita, and near Monterey, Nuevo Leon, Mexico.
Campostoma callipteryx Cope, loc. cit., XVI, 1864, 284, Flint River, Mich.
Campostoma mormyrus Cope, loc. cit., 284, Bruce, Macomb County, Mich.
Campostoma gobionium Cope, loc. cit., 284, Bruce, Macomb County, and Grosse Isle, Mich.
Campostoma hippops Cope, loc. cit., 284, Platte River, Nebr.
Campostoma brevis Haseman, Proc. Ind. Acad. Sci., 1905 (1906), 161, Wabash River near Wabash, Ind.

1099. Campostoma ornatum Girard.
Chihuahua River, and tributaries of the Rio Grande in Mexico.
Campostoma ornatum Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 176, Chihuahua, Mexico.

1100. **Campostoma pricei** Jordan and Thoburn.
Rio Yaqui, Sonora and neighboring streams, tributary to the Gulf of California.
Campostoma pricei Jordan and Thoburn, in Jordan and Evermann, Fishes North and Mid. Amer., 1896, 203; Rucker Canyon, Chiricahua Mountains, Ariz., very near *C. ornatum*.

1101. **Campostoma formosulum** Girard.
Texas; San Antonio River to the Rio Grande.
Campostoma formosulum Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 176, Rio Sabinal, near San Antonio, Tex.

Family 91. MEDIDÆ

Genus 362. LEPIDOMEDA Cope.
Lepidomeda Cope, Proc. Amer. Phil. Soc. Phila., XIV, 1874, 131 (*L. vittata* Cope).

1102. **Lepidomeda vittata** Cope.
Known only from the Colorado Chiquito River, Ariz., and from Pahranagat Valley, Nev.
Lepidomeda vittata Cope, Proc. Amer. Phil. Soc. Phila., XIV, 1874, 131, Rio Colorado Chiquito, Ariz.

1103. **Lepidomeda jarrovii** Cope.
Colorado Chiquito River, Ariz.; also in southern Nevada, in springs in the desert.
Lepidomeda jarrovii Cope, Proc. Amer. Phil. Soc. Phila., XIV, 1874, 132, Rio Colorado Chiquito, Ariz.

Genus 363. MEDA Girard.
Meda Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 191 (*M. fulgida* Girard).

1104. **Meda fulgida** Girard.
Rio Gila Basin, Ariz.
Meda fulgida Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 192, Rio San Pedro, Ariz.

Genus 364. PLAGOPTERUS Cope.
Plagopterus Cope, Proc. Amer. Phil. Soc., XIV, 1874, 130 (*P. argentissimus* Cope).

1105. **Plagopterus argentissimus** Cope.
Colorado Basin in western Colorado; Fort Yuma.
Plagopterus argentissimus Cope, Proc. Amer. Phil. Soc., XIV, 1874, 130, San Luis Valley, Colo.

Order Y. NEMATOGNATHI.[28]

Family 92. ARIIDÆ. Sea catfishes

Genus 365. BAGRE Oken. *Gafftopsail catfishes.*
Les Bagres Cuvier, Règne Anim., II, 1817 (*Silurus bagre* L.).
Bagre Oken, Isis, 1817, 1183 (after les Bagres of Cuvier; type by tautonomy *Silurus bagre* Linnæus).
Breviceps Swainson, Nat. Hist. Anim., I, 1838, 328 (*Breviceps filamentosus* Swainson); name preoccupied.
Felichthys Swainson, loc. cit., II, 1839, 305 (*Breviceps filamentosus* Swainson); substitute for *Breviceps*.
Ailurichthys Baird and Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 26 (*Silurus marinus* Mitchill).
Ælurichthys, corrected spelling.

[28] Until recently all members of this order have been usually included in the single family *Siluridæ*. As properly restricted the *Siluridæ* is a small group of large river fishes of Europe and Asia, resembling our larger catfishes, but without adipose fin, the anal joined to the caudal.

1106 Bagre marina (Mitchill). *Sea catfish; Gafftopsail.*
Cape Cod to Texas.
Silurus marinus Mitchill, Trans. Lit. Phil. Soc. N. Y., I, 1815, 433, New York.
In the investigation of Linnæan types at Upsala Dr. Einar Lönnberg has found an example of this species labeled *Silurus felis.* On the strength of this discovery this species has been called *Felichthys felis.* But Linnæus's own description shows clearly that this was not his type, which must have been our common sea cat here called *Galeichthys felis.*

1107. Bagre isthmensis (Regan).
Atlantic coast of Panama; Colon.
Ælurichthys isthmensis Regan, Biol. Centrali-Amer., 1907, 117, Tab. XV, fig. 1, and Tab. XIX, fig. 1, Atlantic coast of Panama, Colon.

1108. Bagre panamensis (Gill).
Mazatlan to Panama.
Ælurichthys panamensis Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 172, Panama.

1109. Bagre pinnimaculatus (Steindachner).
Mazatlan to Panama.
Ailurichthys pinnimaculatus Steindachner, Ichth. Beitr., IV, 1875, 15, Panama, Altata, Costa Rica.

1110. Bagre eydouxii (Cuvier and Valenciennes).
Guayaquil.
Galeichthys eydouxii Cuvier and Valenciennes, Hist. Nat. Poiss., XV, 1840, 43, Guayaquil.

1111. Bagre scutatus (Regan).
Coast of Panama and Ecuador.
Ælurichthys scutatus Regan, Biol. Centrali-Amer., 1907, 116, Tab. XV, fig. 2, and Tab. XIX, fig. 2, Pacific coast of Panama.

1112. Bagre bahiensis (Castelnau).
Mexico to Bahia.
Galeichthys bahiensis Castelnau, Anim. Amér. Sud, 1855, 37, Bahia.
Ælurichthys longispinis Günther, Cat., V, 1864, 178; Mexico; South America.

Genus 366. SCIADEICHTHYS Bleeker.
Sciadeichthys Bleeker, Act. Soc. Sci. Indo-Neerl., V, 1858, 99 (*Sciades pictus* Müller and Troschel); not *Sciadeichthys* Bleeker, 1863.

1113. Sciadeichthys troscheli (Gill).
Gulf of California to Panama.
Sciades troscheli Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 171, Panama.
Arius brandti Steindachner, Ichth. Beitr., IV, 1876, 21, Altata, Panama.

1114. Sciadeichthys emphysetus (Müller and Troschel).
Surinam.
Bagrus (Sciades) emphysetus Müller and Troschel, Horæ Ichth., III, 1849, 8, Surinam.

1115. Sciadeichthys proops (Cuvier and Valenciennes).
West Indies from Porto Rico to Surinam and south to Pernambuco.
Bagrus proops Cuvier and Valenciennes, Hist. Nat. Poiss., XIV, 1839, 457, Guiana; Porto Rico.

Genus 367. SELENASPIS Bleeker.
Selenaspis Bleeker, Vissch. Ind. Archipel., I, 1858, 62 (*Silurus hertzbergi* Bloch).
Leptarius Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 170 (*L. dowi* Gill).

1116. Selenaspis dowii (Gill).
Panama to Guayaquil.
Leptarius dowi Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 170, Panama.
Arius alatus Steindachner, Ichth. Beitr., IV, 1876, 19, Panama.

Genus 368. NETUMA Bleeker.
Netuma Bleeker, Vissch. Ind. Archipel., I, 1858, 62 (*N. thalassina*, Bleeker=*N. nasuta* Bleeker).
Guiritinga Bleeker, loc. cit., 62 (*Arius commersonii* Bleeker).
Notarius Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 171 (*Arius grandicassis* Cuvier and Valenciennes).

1117. **Netuma planiceps** (Steindachner).
Gulf of California to Panama; not rare.
Arius planiceps Steindachner, Ichth. Beitr., IV, 1876, 26, Altata, Panama.

1118. **Netuma kessleri** (Steindachner).
Gulf of California to Panama, not rare.
Arius kessleri Steindachner, Ichth. Beitr., IV, 1876, 24, Altata, Panama.

1119. **Netuma insculpta** (Jordan and Gilbert).
Panama.
Arius insculptus Jordan and Gilbert, Bull. U. S. Fish Com., II, 1882 (1883), 41, Panama.

1120. **Netuma platypogon** (Günther).
Gulf of California to Peru; generally common.
Arius platypogon Günther, Cat., V, 1864, 147, San Jose de Guatemala.

1121. **Netuma oscula** (Jordan and Gilbert).
Panama; a single example known.
Arius osculus Jordan and Gilbert, Bull. U. S. Fish Com., II, 1882 (1883), 46, Panama.

1122. **Netuma elattura** (Jordan and Gilbert).
Panama; scarce.
Arius elatturus Jordan and Gilbert, Bull. U. S. Fish Com., II, 1882 (1883), 45, Panama.

Genus 369. GALEICHTHYS Cuvier and Valenciennes. *Sea catfish.*
Galeichthys Cuvier and Valenciennes, Hist. Nat. Poiss., XV, 1840, 28 (*G. feliceps* Cuvier and Valenciennes).
Hexanematichthys Bleeker, Act. Soc. Sci. Indo-Neerl., V., 1858, 2 (*Bagrus sundiacus* Bleeker).
Cephalocassis Bleeker, Vissch. Ind. Archipel., I, 1858, 62 (*Arius truncatus* Cuvier and Valenciennes).
Ariopsis Gill, Suppl. Proc. Acad. Nat. Sci. Phila., XIII, 1861, 56 (*Arius milberti*=*Silurus belis* L.).
Hemiarius Bleeker, Nederl. Tijdschr. Dierk., I, 1863, 7 (*Cephalocassis stormi* Bleeker).

Subgenus GALEICHTHYS [29] Cuvier and Valenciennes.

1123. **Galeichthys lentiginosus** (Eigenmann and Eigenmann).
Panama.
Tachisurus lentiginosus Eigenmann and Eigenmann, Proc. Calif. Acad. Sci., 2d ser., I, 1888, 139, Panama.

1124. **Galeichthys peruvianus** Lütken.
Pacific coast of Mexico to Peru.
Galeichthys peruvianus Lütken, Vid. Med. Naturh. Foren. Kjøbenhavn, 1874, 204, Callao, Peru.

Subgenus HEXANEMATICHTHYS [30] Bleeker.

1125. **Galeichthys felis** (Linnæus). *Sea cat.*
Cape Cod to Texas.
Silurus felis Linnæus, Syst. Nat., ed. XII, 1766, 503, Charleston, S. C.
Arius milberti Cuvier and Valenciennes, Hist. Nat. Poiss., XV, 1840, 74, New York; Charleston, S. C.
?*Arius equestris* Baird and Girard, Proc. Acad. Nat. Sci. Phila., VII, 1855, 26, Indianola, Tex.

1126. **Galeichthys guentheri** Regan.
Gulf of Mexico.
Galichthys guentheri Regan, Biol. Centrali-Amer., 1907, 124, Tab. XVI, fig. 1, and Tab. XIX, fig. 3, Gulf of Mexico.

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[29] Top of head covered with soft skin, hiding the rugose plates.
[30] Top of head with thin skin which does not hide the rugose plates.

1127. Galeichthys surinamensis (Bleeker).
Surinam.
Hexanematichthys surinamensis Bleeker, Versl. Akad. Amsterdam, 1862, 380, Surinam.

1128. Galeichthys seemani (Günther).
Panama.
Arius seemani Günther, Cat., V, 1864, 147, "Central America."

1129. Galeichthys gilberti Jordan and Williams.
Coast of Sinaloa.
Galeichthys gilberti Jordan and Williams, Proc. Calif. Acad. Sci., 2d ser., V, 1895, 395, pl. 26, Mazatlan, Mexico.

1130. Galeichthys jordani (Eigenmann and Eigenmann).
Panama.
Tachisurus jordani Eigenmann and Eigenmann, Proc. Calif. Acad. Sci., 2d ser., I, 1888, 142, Panama.

1131. Galeichthys cærulescens (Günther).
West coast of Guatemala.
Arius cærulescens Günther, Cat., V, 1864, 149, Rio Huamuchal, Guatemala.

1132. Galeichthys azureus Jordan and Williams.
Mazatlan, Mexico.
Galeichthys azureus Jordan and Williams, Proc. Calif. Acad. Sci., 2d ser., IV, 1895, 398, pl. 27, Mazatlan, Mexico.

1133. Galeichthys xenauchen Gilbert.
Panama.
Galeichthys xenauchen Gilbert, in Jordan and Evermann, Fishes North and Mid. Amer., 1898, 2777, Panama.

1134. Galeichthys guatemalensis (Günther).
Mazatlan to Central America.
Arius guatemalensis Günther, Cat., V, 1864, 145, Guatemala; Chiapas.

1135. Galeichthys assimilis (Günther).
Atlantic coast of Central America, ascending streams.
Arius assimilis Günther, Cat., V, 1864, 146, Lake Yzabel, Guatemala.

1136. Galeichthys dasycephalus (Günther).
Panama (wrongly ascribed to the Hawaiian Islands).
Arius dasycephalus Günther, Cat., V, 1864, 157, Oahu; apparently an error.

1137. Galeichthys longicephalus (Eigenmann and Eigenmann).
Panama.
Tachisurus longicephalus Eigenmann and Eigenmann, Proc. Calif. Acad. Sci., 2d ser., I, 1888, 143, Panama.

Genus 370. ARIUS Cuvier and Valenciennes.
?*Tachysurus* Lacépède, Hist. Nat. Poiss., V, 1803, 151 (*T. chinensis* Lacépède; from a Chinese drawing, not identifiable as to species; may be a fresh-water fish or a *Netuma*).
Arius Cuvier and Valenciennes, Hist. Nat. Poiss., XV, 1840, 52 (*A. arius* Cuvier and Valenciennes, type by autonomy).
Ariodes Müller and Troschel, Horæ Ichth., III, 1849, 9 (*Arius arenarius* Müller and Troschel).
Pseudarius Bleeker, Nederl. Tijdschr. Dierk., I, 1862, 91 (*Arius arius* Cuvier and Valenciennes).

1138. Arius spixii (Agassiz).
Trinidad to Brazil.
Pimelodus albidus Spix, in Agassiz, Gen. Spec. Pisc. Brasil., 1829, 19, equatorial Brazil; name preoccupied.
Pimelodus spixii Agassiz, loc. cit., 19; after Spix.
Arius arenatus Cuvier and Valenciennes, Hist. Nat. Poiss., XV, 1840, 106, Cayenne.
Arius laticeps Günther, Cat., V, 1864, 171, British Guiana, Trinidad.

1139. Arius melanopus Günther.
Pacific coast of Central America.
Arius melanopus Günther, Cat., V, 1864, 172, Rio Motagua.

1140. Arius furthi Steindachner.
Panama.
Arius fürthii Steindachner, Ichth. Beitr., IV, 1876, 29, Panama.

1141. Arius steindachneri (Gilbert and Starks).
Pacific coast of Panama.
Tachysurus steindachneri Gilbert and Starks, Mem. Calif. Acad. Sci., IV, 1904, 29, Pl. V, fig. 9, Panama Bay.

1142. Arius evermanni (Gilbert and Starks).
Panama.
Tachysurus evermanni Gilbert and Starks, Mem. Calif. Acad. Sci., IV, 1904, 32, Pl. V, fig. 10, Panama.

1143. Arius liropus (Bristol).
Coast of Sonora, Mexico.
Tachysurus liropus Susan Brown Bristol, in Gilbert, Proc. U. S. Nat. Mus., XIX, 1896 (Feb. 5, 1897), 438, San Juan Lagoon, near mouth of Rio Ahome, Sonora, Mexico.

1144. Arius emmelane (Gilbert).
Panama.
Tachysurus emmelane Gilbert, in Jordan and Evermann, Fishes North and Mid. Amer., 1898, 2785, Panama.

1145. Arius taylori Hildebrand. *Bagre.*
Coast of El Salvador.
Arius taylori Hildebrand, Bull. U. S. Bur. Fish., XLI, 1925, 250, fig. 10, Rio Lempa, San Marcos.

1146. Arius multiradiatus Günther.
Streams of Isthmus of Panama, Rio Bayano, Panama.
Arius multiradiatus Günther, Cat., V, 1864, 173, Rio Bayano, Panama.

Genus 371. CATHOROPS Jordan and Gilbert.
Cathorops Jordan and Gilbert, Bull. U. S. Fish Com., II, 1882, 54 (*Arius hypopthalmus* Steindachner).

1147. Cathorops hypophthalma (Steindachner).
Panama; rather scarce.
Arius hypopthalmus Steindachner, Ichth. Beitr., IV, 1875, 31, Pl. X, Panama.

1148. Cathorops gulosa (Eigenmann and Eigenmann).
Panama.
Tachisurus gulosus Eigenmann and Eigenmann, Proc. Calif. Acad. Sci., 2d. ser., I, 1888, 146, Panama.

Family 93. AMEIURIDÆ. Horned pouts; Channel cats

Genus 372. ISTLARIUS Jordan and Snyder.
Istlarius Jordan and Snyder, Bull. U. S. Fish Com., XIX, 1899, 118 (*I. balsanus* Jordan and Snyder).

1149. Istlarius balsanus Jordan and Snyder.
Balsas River Basin, Pacific slope of Mexico.
Istlarius balsanus Jordan and Snyder, Bull. U. S. Fish Com., XIX, 1899, 118; tributary of Rio de las Balsas at Puente de Ixtla, Guerrero, Mexico (Pacific drainage).

Genus 373. ICTALURUS Rafinesque. *Channel cats.*
Ictalurus Rafinesque, Ichth. Ohiensis, 1820, 61 (*Silurus punctatus* Rafinesque).
Elliops Rafinesque, loc. cit., 62 (*Pimelodus maculatus* Rafinesque).
Synechoglanis Gill, Ann. Lyc. Nat. Hist. N. Y., VI, 1858, 39 (*S. beadlei* Gill = *Ictalurus furcatus* Rafinesque).
Ichthyælurus, corrected spelling.

1150. Ictalurus furcatus (Cuvier and Valenciennes). *Blue cat; Great fork-tailed cat; Mississippi cat; Poisson bleu.*

Pimelodus furcatus LeSueur, in Cuvier and Valenciennes, Hist. Nat. Poiss., IX, 1840, 136, New Orleans.

Pimelodus affinis Baird and Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 26, Rio Grande.

Ameiurus ponderosus Bean, Proc. U. S. Nat. Mus., II, 1879, 286, St. Louis.

Ictalurus robustus Jordan, Bull. U. S. Nat. Mus., X, 1877, 76, Cairo, Ill.

1151. Ictalurus anguilla Evermann and Kendall. *Eel cat; Willow cat; Fulton cat.*

Mississippi River, occasionally as far north as Louisville, Ky., Muscatine and Fairport, Iowa, where it is known as the "Fulton cat."

Ictalurus anguilla Evermann and Kendall, Bull. U. S. Fish Com., XVII, 1897 (Feb. 9, 1898), 125, pl. 6, fig. 1, Atchafalaya River, La.

1152. Ictalurus punctatus (Rafinesque). *Channel cat; White cat; Fiddler.*

Rivers of the Great Lakes region, the Mississippi Valley, and streams tributary to the Gulf of Mexico.

Silurus punctatus Rafinesque, Amer. Month. Mag., 1818, 359, Ohio River.

Pimelodus caudafurcatus LeSueur, Mem. Mus., V, 1819, 152, Wabash River; Mississippi River.

Pimelodus maculatus, pallidus, argentinus, argyrus, with varieties *erythroptera, marginatus, lateralis, leucoptera* Rafinesque, Quarterly Jour. Sci., London, 1820, and Ichth. Ohiensis, 1820, 62, etc., Ohio River.

Pimelodus furcifer Cuvier and Valenciennes, Hist. Nat. Poiss., XV, 1840, 139, Surinam, by error.

Pimelodus gracilis Hough, Ann. Rept. Regent's, Albany, 1852, 26, Somerville, N. Y.

Pimelodus vulpes Girard, Proc. Acad. Nat. Sci. Phila., X, 1858, 170, rivers of Texas.

Synechoglanis beadlei Gill, Ann. Lyc. Nat. Hist. N. Y., VII, 1859, 40, St. Catherines, Ont.

Pimelodus houghi Girard, Proc. Acad. Nat. Sci. Phila., XI, 1859, 159, Somerville; Ogdensburg; Foxburg, Pa.

Pimelodus megalops Girard, loc. cit., 161, Black Warrior River, Bigsby River, Ala.

Pimelodus graciosus Girard, loc. cit., 161, Prairie Mer Rouge, La.

Pimelodus hammondi and *notatus* Abbott, loc. cit., XII, 1860, 568, 569, Fort Riley, Kans.

Ictalurus simpsoni Gill, Proc. Bost. Soc. Nat. Hist., VIII, 1862, 43, Platte River.

1153. Ictalurus meridionalis (Günther).

Rio Usumacinta, Guatemala.

Amiurus meridionalis Günther, Cat., V, 1864, 102, and in Trans. Zool. Soc. Lond., 1868, 473, Rio Usumacinta, Guatemala.

Genus 374. HAUSTOR Jordan and Evermann.

Haustor Jordan and Evermann, Fishes North and Mid. Amer., 1896, 137 (*Gadus lacustris* Walbaum = *Pimelodus nigricans* LeSueur).

Villarius Rutter, Proc. Calif. Acad. Sci., VI, Ser. 2, June 23, 1896, 258 (*V. pricei* Rutter).

1154. Haustor lacustris (Walbaum).

Saskatchewan River and the Great Lakes.

Gadus lacustris Walbaum, Artedi Pisc., 1792, 144, Arctic America; based on the mathemeg or land cod of Pennant.

Pimelodus nigricans LeSueur, Mem. Mus., V, 1819, 153, Lake Erie, Lake Ontario.

Pimelodus borealis Richardson, Fauna Bor.-Amer., III, 1836, 135, Pine Island Lake.

1155. Haustor okeechobeensis (Heilprin).

Florida.

Ictalurus okeechobeensis Heilprin, Trans. Wagner Inst. Sci. Phila., I, 1887, pl. 18, Kissimee River, Fla.

Ameiurus lacustris okeechobeensis Fowler, Proc. Acad. Nat. Sci. Phila., LI, 1899, 480; same type.

1156. Haustor catus (Linnæus). *White cat; Channel cat of the Potomac.*
Silurus catus Linnæus, Syst. Nat., ed. X, 1758, 305; based on the catfish of Catesby (*Bagre secundæ speciei marcgravei affinis*), which is a rude figure of the adult or "lophius" form of this species; northern part of America.
Pimelodus albidus LeSueur, Mem. Mus., V, 1819, 148, Delaware River.
Pimelodus lynx Girard, Proc. Acad. Nat. Sci. Phila., XI, 1859, 160, Potomac River.
Amiurus niveiventris Cope, Proc. Amer. Phil. Soc., XI, 1870, 486, Neuse River.
Ictalurus macaskeyi and *I. kevinskii* Stauffer, Hist. Lancaster County, Pa., 1869, 578, Lancaster County, Pa.

1157. Haustor lophius (Cope). *Big-mouthed cat.*
Potomac River.
Amiurus lophius Cope, Proc. Amer. Phil. Soc., XI, 1870, 486, Potomac River; not observed elsewhere. Known by its very wide flat head; apparently not the adult of *Ameiurus catus*, as has been supposed.

1158. Haustor lupus (Girard).
Rio Neuces and Rio Pecos, Tex.
Pimelodus lupus Girard, Pac. R. R. Surv., X, 1858, Pt. 4, Fishes, 211, Rio Pecos, Tex.

1159. Haustor pricei (Rutter).
Southern Arizona.
Villarius pricei Rutter, Proc., Calif. Acad. Sci., 2d ser., VI, 1896, 257, San Bernardino Creek, a tributary of the Yaqui River, southern Arizona.

1160. Haustor dugesi (Bean).
Rio Turbio, Guanajuato, Mexico, west of the Sierra Madre.
Ameiurus dugesi Bean, Proc. U. S. Nat. Mus., II, 1879, 304, Rio Turbio, Guanajuato, Mexico.

Genus 375. AMEIURUS Rafinesque. *Horned pout.*
Ameiurus Rafinesque, Ichth. Ohiensis, 1820, 65 (*Silurus cupreus* Rafinesque = *Pimelodus natalis* LeSueur).
Amiurus, corrected spelling.

1161. Ameiurus erebennus Jordan.
Coast swamps and black water streams from New Jersey to Florida.
Ameiurus erebennus Jordan, Bull. U. S. Nat. Mus., X, 1877, 85, St. John's River, Fla.

1162. Ameiurus natalis (LeSueur). *Yellow cat.*
Great Lakes region to Virginia and southward.
Pimelodus natalis LeSueur, Mem. Mus., 1819, 154, North America.
Silurus lividus and var. *fuscus* Rafinesque, Quarterly Jour. Sci. Lond., 1820, 48, Ohio River.
Silurus cupreus Rafinesque, loc. cit., 1820, 51, Ohio River.
Pimelodus cupreus Rafinesque, Ichth. Ohiensis, 1820, 65, Ohio River.
Pimelodus cœnosus Richardson, Fauna Bor.-Amer., III, 1836, 132, Lake Huron.
Pimelodus felinus et *antoniensis* Girard, Pac. R. R. Surv., X, 1858, 209, Canadian and San Antonio Rivers, Tex.
Pimelodus cupresoides Girard, Proc. Acad. Nat. Sci. Phila., XI, 1859, 159, Aux Plaines, Ill.
Ameiurus natalis analis Jordan, Bull. U. S. Nat. Mus., X, 1877, 81, Arkansas River.
Ameiurus bolli Cope, Bull. U. S. Nat. Mus., XX, 1880, 35, Little Wichita River, Tex.

1163. Ameiurus vulgaris (Thompson).
Vermont to Minnesota and Illinois, chiefly northward. A doubtful species.
Pimelodus vulgaris Thompson, Hist. Vermont, 1842, 138, Lake Champlain.
P[imelodus] dekayi Girard, Proc. Acad. Nat. Sci. Phila., XI, 1859, 160, Oswego, N. Y.
Pimelodus ailurus Girard, Pac. R. R. Surv., X, 1858, 210, Lake Amelia. Minn.

1164. Ameiurus nebulosus (LeSueur). *Horned pout; Common bullhead; Small catfish; Schuylkill cat; Sacramento cat.*
Great Lakes, Ohio Valley, eastward to Maine, southwestward to Texas and southwestward to Florida; introduced about 1877 into the Humboldt, Sacramento, San Joaquin, and Gila Rivers, where it is now excessively abundant.
Pimelodus nebulosus LeSueur, Mem. Mus., V, 1819, 149, Lake Ontario.
Pimelodus atrarius DeKay, N. Y. Fauna: Fishes, 1842, 185, Wappingers Creek, Dutchess County, N. Y.
Pimelodus felis Agassiz, Lake Superior, 1850, 281, Lake Superior.
Pimelodus vulpeculus Girard, Proc., Acad. Nat. Sci. Phila., XI, 1859, 160, Charleston, S. C.
Pimelodus hoyi Girard, loc. cit., 159, Racine, Wis.
Ameiurus mispilliensis Cope, Proc., Amer. Phil. Soc., 1870, 486, Mispillion Creek, Del.

1165. Ameiurus nebulosus catulus (Girard).
Streams of Texas; abundant.
Pimelodus catulus Girard, Pac. R. R. Surv., X, 1858, Pt. 4, Fishes, 208, Fort Smith, Ark.

1166. Ameiurus prosthistius Cope.
New Jersey.
Amiurus prosthistius Cope, Proc. Acad. Nat. Sci. Phila., XXXV, 1883, 133, Batsto River, N. J.

1167. Ameiurus platycephalus (Girard). *Mud cat; Brown cat.*
Streams of the Carolinas and eastern Georgia, Cape Fear to the Chattahoochee.
Pimelodus platycephalus Girard, Proc. Acad. Nat. Sci. Phila., XI, 1859, 161, Anderson, S. C.
Amiurus brunneus Jordan, Ann. Lyc. Nat. Hist. N. Y., XI, 1877, 366, Ocmulgee River, Flat Shoals, Ga.; the young of *platycephalus*.

1168. Ameiurus brachyacanthus Cope.
Streams of Texas.
Amiurus brachyacanthus Cope, Bull. U. S. Nat. Mus., XVII, 1880, 35, Wallace Creek, Bandera County, Tex.

1169. Ameiurus melas (Rafinesque). *Black bullhead; Small catfish.*
Northern New York (Genesee River) to Kansas and Texas; common especially west of the Mississippi.
Silurus melas Rafinesque, Quarterly Jour. Sci. Lond., 1820, 51, Ohio River.
Silurus xanthocephalus Rafinesque, loc. cit., 1820, 51, Ohio River.
Pimelodus pullus DeKay, N. Y. Fauna: Fishes, 1842, 184, Lake Pleasant, Janet, N. Y.
Pimelodus confinis Girard, Proc. Acad. Nat. Sci. Phila., XI, 1859, 159, Racine, Wis.
Amiurus obesus Gill, Proc. Bost. Soc. Nat. Hist., 1862, 45, Nebraska.
Amiurus cragini Gilbert, Bull., Washburn Lab. Nat. Hist., I, 1884, 10, Garden City, Kans.

1170. Ameiurus marmoratus (Holbrook).
Lowland streams and swamps from southwestern Indiana (Switz City) southward and eastward to Florida.
Pimelodus marmoratus Holbrook, Jour. Acad. Nat. Sci. Phila., III, 1855, 54, South Carolina.

Genus 376. GRONIAS Cope. *Blind catfishes.*
Gronias Cope, Proc. Acad. Nat. Sci. Phila., XVI, 1864, 231 (*G. nigrilabris* Cope.

1171. Gronias nigrilabris Cope.
Cave streams tributary to Conestoga River in eastern Pennsylvania
Gronias nigrilabris Cope, Proc. Acad. Nat. Sci. Phila., XVI, 1864, 231, Conestoga River, Pa.

Genus 377. OPLADELUS Rafinesque.
?*Pilodictis* Rafinesque, Jour. Phys., 1819, 422 (*P. limosa* Rafinesque, after Audubon; drawing of an imaginary catfish).
Leptops Rafinesque, Ichth. Ohiensis, 1820, 64 (*Pimelodus viscosus* Rafinesque = *Silurus olivaris* Rafinesque).
Opladelus Rafinesque, loc. cit., 64 (*Pimelodus nebulosus* Rafinesque = *Silurus olivaris* Rafinesque); name chosen by first reviser.
Ilictis Rafinesque, loc. cit., 66 (*Pimelodus nebulosus* Rafinesque = *Silurus olivaris* Rafinesque).
Hopladelus and *Pelodichthys*, corrected spelling.

1172. Opladelus olivaris (Rafinesque). *Mud cat; Yellow cat; Bashaw; Russian cat; "Hoosier" at New Boston, Ill.; Goujon.*
Silurus olivaris Rafinesque, Amer. Month. Mag., 1818, 355, Ohio River.
Silurus nebulosus, viscosus and *limosus* Rafinesque, Quarterly Jour. Sci. Lond., 1820, 50, Ohio River.
Pylodictis limosus Rafinesque, Ichth. Ohiensis, 1820, 67, Ohio and Mississippi Rivers; based on a drawing by Audubon.
Pimelodus punctulatus Cuvier and Valenciennes, Hist. Nat. Poiss., XV, 1840, 134, New Harmony, Ind.
Pimelodus æneus Cuvier and Valenciennes, loc. cit., 135, New Orleans.

Genus 378. NOTURUS Rafinesque. *Stone cats.*
Noturus Rafinesque, Amer. Month. Mag., November, 1818, 41 (*N. flavus* Rafinesque).

1173. Noturus flavus Rafinesque. *Stone cat.*
Great Lakes region, westward to Montana and Wyoming and south to Texas.
Noturus flavus Rafinesque, Amer. Month. Mag., 1818, 41, falls of Ohio River.
Noturus luteus Rafinesque, Jour. Phys., 1819, 421, Ohio River.
Noturus occidentalis Gill, Proc. Bost. Soc. Nat. Hist., VIII, 1862, 45, Platte River.
Noturus platycephalus Günther, Cat., V, 1864, 104, North America.

Genus 379. SCHILBEODES Bleeker. *Tadpole cats.*
Schilbeodes Bleeker, Ichth. Archip. Indici. Prodr. Siluri, 1858, 258 (*Silurus gyrinus* Mitchill).

1174. Schilbeodes gyrinus (Mitchill).
Hudson River and westward through almost the entire Mississippi Valley, and Great Lakes region.
Silurus gyrinus Mitchill, Amer. Month. Mag., 1818, 322, Walkill River, N. Y.
Noturus sialis Jordan, Bull. U. S. Nat. Mus., X, 1877, 102, White River, Ind.

Genus 380. TROGLOGLANIS Eigenmann.
Trogloglanis Eigenmann, Proc. Amer. Phil. Soc., LVIII, 1919, 397 (*T. pattersoni* Eigenmann).

1175. Trogloglanis pattersoni Eigenmann.
Artesian well in San Antonio, Tex.
Trogloglanis pattersoni Eigenmann, Proc. Amer. Phil. Soc., LVIII, 1919, 397, figs. 1 and 2.

Genus 381. RABIDA Jordan and Evermann. *Mad toms.*
Rabida Jordan and Evermann, Fishes North and Mid. Amer., 1896, 146 (*Noturus furiosus* Jordan and Meek).
Pimelodon (LeSueur) Vaillant, Bull. Soc. Philom., 1896, 28 (*Pimelodon insignarius* LeSueur, unpublished plate of 1819; probably *Pimelodus insigne* Richardson, the *lemniscatus* = *Pimelode insigne* of LeSueur).

Subgenus PIMELODON.

1176. Rabida leptacantha (Jordan).
Gulf States, in sandy streams; basins of Ogeechee, Alabama, and Pearl Rivers.
Noturus leptacanthus Jordan, Ann. Lyc. Nat. Hist. N. Y., XI, 1876, 352, Silver Creek, branch of Etowah River, Rome, Ga.

1177. Rabida nocturna (Jordan and Gilbert).
Sandy streams, among weeds, in lower Mississippi Valley; known from the lower Wabash in Indiana and from the Poteau, Washita, and Saline Rivers, Ark.
Noturus nocturnus Jordan and Gilbert, Proc. U. S. Nat. Mus., IX, 1886, 6, Saline River at Benton, Ark.

1178. Rabida funebris (Jordan and Swain).
Tributary of Black Warrior River, Tuscaloosa, Ala.
Noturus funebris Jordan and Swain, Bull. U. S. Fish Com., IX, 1889, 153, North River, Tuscaloosa, Ala.

1179. Rabida exilis (Nelson).
Wisconsin to Missouri and Kansas; common in prairie streams.
Noturus exilis Nelson, Bull. Ill. Lab. Nat. Hist., 1876, 51, Illinois River.
Noturus elassochir Swain and Kalb, Proc. U. S. Nat. Mus., V, 1882, 639, Naperville, Ill.

1180. Rabida insignis (Richardson). *Mad tom.*
Pennsylvania to South Carolina; very common in streams east of the Alleghenies.
Pimelodus insignis Richardson, Fauna Bor.-Amer., III, 1836, 32, based on *Pimelode livree* LeSueur, Mem. Mus., V, 1819, 155, locality not known.
Noturus marginatus Baird, in Cope, Jour. Acad. Nat. Sci. Phila., VI, 1869, 237, Pa.
Pimelodon insignarius LeSueur, in Vaillant, Bull. Soc. Philom., 1896, 28.

1181. Rabida gilberti (Jordan and Evermann).
Roanoke River in southern Virginia, locally abundant.
Noturus gilberti Jordan and Evermann, Proc. U. S. Nat. Mus., XI, 1888, 352, Roanoke River, Roanoke, Va.

1182. Rabida miura (Jordan).
Mississippi Valley and tributaries of Lake Michigan, south to Louisiana; common in the Ohio Valley.
Noturus miurus Jordan, Ann. Lyc. Nat. Hist. N. Y., XI, 1877, 371, White River, Ind.

1183. Rabida eleuthera (Jordan).
Mississippi Valley, rare, but widely distributed; tributaries of French Broad River (Big Pigeon River, Clifton, Tenn., French Broad at Hot Springs, N. C.); White River, Gosport, Ind.; Green River, Greensburg, Ky.; Schriner Lake, Columbia City, Ind.; White River, Fayettesville, Ark.; Sallisaw River, Indian Territory [Okla.]. Only a few specimens known.
Noturus eleutherus Jordan, Ann. Lyc. Nat. Hist. N. Y., XI, 1877, 371, Big Pigeon River, Clifton, Tenn.

1184. Rabida furiosa (Jordan and Meek).
Eastern North Carolina; known from the Neuse, Tar, and Little Rivers.
Noturus furiosus Jordan and Meek, Proc. U. S. Nat. Mus., XI, 1888, 351, Neuse River, N. C.

Family 94. PIMELODIDÆ. South American catfishes; Bagres de Rio

Genus 382. CONORHYNCHOS Bleeker.
Conorhynchos Bleeker, Vissch. Ind. Archipel. Siluri, 1858, 191 (*Pimelodus conirostris* Cuvier and Valenciennes); not *Conorhynchus* Nozeman, a pre-Linnæan name (1757) revived by Gill (1861).
Conorhynchichthys Regan, *Conorhynchos* being regarded as preoccupied.

1185. Conorhynchos nelsoni Evermann and Goldsborough.
Rio Usumacinta, Yucatan.
Conorhynchus nelsoni Evermann and Goldsborough, Bull. U. S. Fish Com., XXI, 1901 (1902), 140, fig. 1, Rio Usumacinta at Monte Cristo, Yucatan.

Genus 383. RHAMDIA Bleeker. *Bagrés de Rio.*
Pteronotus Swainson, Nat. Hist. Fishes, Amphib., etc., II, 1839, 309 (*Heterobranchus sextentaculatus* Agassiz, preoccupied in mollusks).
Rhamdia Bleeker, Vissch. Ind. Archipel.: Siluri, 1858, 197 (*Pimelodus quelon* Quoy and Gaimard).
Rhamdella Eigenmann and Eigenmann, Proc. Calif. Acad. Sci., 2d ser., I, 1888, 172 (*R. eriarcha* Eigenmann and Eigenmann).

1186. Rhamdia wagneri (Günther). *Barbudo.*
Rivers of Central America, on both sides of the mountains; very abundant.
Pimelodus wagneri Günther, Fish. Cent. Amer., 1869, 474, Atlantic and Pacific rivers of Panama.
Rhamdia bransfordi Gill, Proc. Acad. Nat. Sci. Phila., XXVIII, 1876, 337, Panama.

1187. Rhamdia oaxacæ Meek. *Bagre.*
Streams of Mexico on the Atlantic side south of Vera Cruz.
Rhamdia oaxacæ Meek, Field Col. Mus., Zool., III, 74 (figured in plate V, loc. cit., V, 1905) Rio Quiotepec, Cuicatlan, Mexico.

1188. Rhamdia baronis-mülleri (Troschel).
"Pacific Ocean" in Mexico.
Pimelodus baronis-mülleri Troschel, in Müller's Beitr. Gesch. Statis. und Zool. Mexico, III, 1865, 636, no definite locality.

1189. Rhamdia motaguensis (Günther).
Rio Motagua, Guatemala.
Pimelodus motaguensis Günther, Cat., V, 1864, 127, Rio Motagua, Guatemala.

1190. Rhamdia guatemalensis (Günther).
Huamuchal, Guatemala.
Pimelodus guatemalensis Günther, Cat., V, 1864, 122, Rio Huamuchal, Guatemala.
Pimelodus brachypterus Cope, Trans. Amer. Phil. Soc., XIII, 1866, 404, Orizaba, Mexico.

1191. Rhamdia salvini (Günther).
Rio San Geronimo, Guatemala.
Pimelodus salvini Günther, Cat., V, 1864, 130, Rio San Geronimo, Guatemala.

1192. Rhamdia hypselura (Günther).
Mexico.
Pimelodus hypselurus Günther, Cat., V, 1864, 126, Mexico.

1193. Rhamdia brachycephala (Regan).
Mexico.
Pimelodus brachycephalus Regan, Ann. Mag. Nat. Hist., XIX, 1907, 258, Guatemala, Rio Nacasil.

1194. Rhamdia laticauda (Heckel).
Mexico.
Pimelodus laticaudus Heckel, in Kner, Sitzungsb Kais. Akad. Wiss. Wien, XXVI, 1857, 420, Mexico.

1195. Rhamdia godmani (Günther).
Valley of Rio Usumacinta, Guatemala.
Pimelodus godmani Günther, Cat., V, 1864, 124, Rio Usumacinta, Guatemala.

1196. Rhamdia nicaraguensis (Günther).
Lake Nicaragua.
Pimelodus nicaraguensis Günther, Cat., V, 1864, 125, Lake Nicaragua, Nicaragua.

1197. Rhamdia microptera (Günther).
Rio San Geronimo, Guatemala.
Pimelodus micropterus Günther, Cat., V, 1864, 124, Rio San Geronimo, Guatemala.

1198. Rhamdia managuensis (Günther).
Lake Managua, Nicaragua.
Pimelodus managuensis Günther, Fish. Cent. Amer., 1869, 474, Lake Managua, Nicaragua.

1199. Rhamdia cabreræ Meek.
Lake Amatitlan, Guatemala.
Rhamdia cabreræ Meek, Field Mus. Nat. Hist., Zool., VII, 1906, 93, Lake Amatitlan, Nicaragua.

1200. **Rhamdia barbata** Meek. *Chuchin.*
Lakes of Nicaragua.
Rhamdia barbata Meek, Field Mus. Nat. Hist., Zool., VII, 1907, 106, San Francisco, Nicaragua.

1201. **Rhamdia sacrificii** Barbour and Cole.
Chichen-Itza, Yucatan.
Rhamdia sacrificii Barbour and Cole, Bull. Mus. Comp. Zool., L, 1906, No. 5, 156, Sacrificial Cenote, near Chichen-Itza, Yucatan.

1202. **Rhamdia depressa** Barbour and Cole.
Near Chichen-Itza, Yucatan.
Rhamdia depressa Barbour and Cole, Bull. Mus. Comp. Zool., L, 1906, No. 5, 155, pl. 1, Ikil Cenote, near Chichen-Itza, Yucatan.

1203. **Rhamdia heteracantha** Regan.
Costa Rica.
Rhamdia heteracantha Regan, Biol. Centrali-Amer., Pisces, 1907, 134, Juan Viñas, Costa Rica.

1204. **Rhamdia polycaula** (Günther).
Rio San Geronimo.
Pimelodus polycaulus Günther, Cat., V, 1864, 131, Rio San Geronimo.

1205. **Rhamdia petenensis** (Günther).
Lake Peten, Yucatan.
Pimelodus petenensis Günther, Cat., V, 1864, 126, Lake Peten, Yucatan.

1206. **Rhamdia parryi** Eigenmann.
Rio Zanalenco, Chiapas.
Rhamdia parryi Eigenmann, Proc. Calif. Acad. Sci., 2d ser., I, 1888, 130, Rio Zanalenco, Chiapas.

1207. **Rhamdia underwoodi** Regan.
Costa Rica.
Rhamdia underwoodi Regan, Biol. Centrali-Amer., Pisces, 1907, 135, pl. 23, fig. 4, Juan Viñas, Costa Rica.

1208. **Rhamdia rogersi** (Regan).
Pimelodus rogersi Regan, Ann. Mag. Nat. Hist., XIX, 1907, 259, Irazu, Costa Rica.
Rhamdia regani Meek, Field Mus. Nat. Hist., Zool., VII, 1907, 144, Rio Tiribi, San José.

Genus 384. CÆCORHAMDIA Norman.
Cæcorhamdia J. R. Norman, Ann. Mag. Nat. Hist., ser. 9, XVIII, 1926, 324 (*C. urichi* Norman).

1209. **Cæcorhamdia urichi** Norman.
Guacharo Cave, Trinidad.
Cæcorhamdia urichi J. R. Norman, Ann. Mag. Nat. Hist., ser. 9, XVIII, 1926, 324, Guacharo Cave, Trinidad.

Genus 385. PIMELODELLA Eigenmann and Eigenmann.
Pimelodella Eigenmann and Eigenmann, Proc. Calif. Acad. Sci., 2d. ser., I, 1888, 131 (*Pimelodus cristatus* Müller and Troschel).

1210. **Pimelodella chagresi** (Steindachner).
Rio Chagres.
Pimelodus chagresi Steindachner, Ichth. Beitr., IV, 1876, 34, Rio Chagres at Obispo, Canal Zone.

Genus 386. PIMELODUS Lacépède
Pimelodus Lacépède, Hist. Nat. Poiss., V, 1803, 94 (*P. maculatus* Lacépède, as restricted by authors=*Silurus clarias* Bloch).
Pseudariodes Bleeker, Nederl. Tijdschr. Dierk., 1863, 99 (*Silurus clarias* Bloch).
Pseudorhamdia Bleeker, Versl. Akad. Amsterdam, XIV, 1862, 384 (*Pimelodus ascita* Bleeker).

1211. Pimelodus clarias (Bloch).
Rio Mamoni (Panama) and southeastward to Rio de la Plata.
Silurus clarias Linnæus, Syst. Nat., ed. X, 1758, 306, in part, not the type.
Pimelodus maculatus Lacépède, Hist. Nat. Poiss., V, 1803, 94, 107, Rio de la Plata.
Piramutana blochii Günther, Cat., V, 1864, III, Cayenne; Surinam.
Pimelodus rigidus Spix, in Agassiz, Pisc. Brasil., 1829, 19, Brazil.
Pimelodus macronema Bleeker, Silures de Suriname, 1864, 79, pl. 14, Surinam.
Pseudaroides pantherinus Lütken, Meddel. Nat. Hist. Forem., 1874, Nos. 1, 2, p. 194, Venezuela.
Pseudorhamdia piscatrix Cope, Proc. Amer. Phil. Soc. Phila., XI, 1870, 569, Pebas.
Piramutana macrospila Günther, Ann. and Mag. Nat. Hist., 5th ser., VI, July, 1880, 10, Pl. II, Pirana, Rio de la Plata.
Megalonema punctatum Meek and Hildebrand, Field Mus. Nat. Hist., Zool., X, 1913, 77, Rio Tuyra, Marrigante, Panama.
Megalonema robustum Meek and Hildebrand, loc. cit., 78, Rio Tuyra, Marrigante, Panama.

Genus 387. TRACHCORYSTES Bleeker.
Trachcorystes Bleeker, Vissch. Ind. Archipel. Siluri, 1858, 20 (*T. typus* Bleeker).
Paraucheniperus Bleeker, Nederl. Tijdschr. Dierk., I, 1863, 7 (*Silurus galeatus* L.).

1212. Trachcorystes amblops (Meek and Hildebrand).
Rio Tuyra Basin, Panama.
Felichthys amblops Meek and Hildebrand, Field Mus. Nat. Hist., Zool., X, 1913, 77, Rio Tuyra, Marrigante, Panama.

Genus 388. AGENEIOSUS Lacépède.
Ageneiosus Lacépède, Hist. Nat. Poiss., V, 1803, 132 (*A. armatus* Lacépède=*Silurus militaris* Linnæus).
Pseudageneiosus Bleeker, Nederl. Tijdschr. Dierk., I, 1863, 14 (*Ageneiosus brevifilis* Cuvier and Valenciennes).

1213. Ageneiosus caucanus Steindachner.
Lower Rio Tuyra, Marrigante, Panama.
Ageneiosus caucanus Steindachner, Denkschr. Kais Akad. Wiss. Wien, XLI, 1880, 61, Pl. VI, figs. 1, 2, Rio Cauca, Panama.

Family 95. PYGIDIIDÆ

Genus 389. PYGIDIUM Meyen.
Pygidium Meyen, Reise in Peru, I, 1835, 475 (*P. fuscum* Meyen).

1214. Pygidium striatum Meek and Hildebrand.
Upper Tuyra Basin, Panama.
Pygidium striatum Meek and Hildebrand, Field. Mus. Nat. Hist., Zool., X, 1913, 78, Rio Cana, Cana, Panama.

Family 96. ASTROBLEPIDÆ

Genus 390. ASTROBLEPUS[31] Humboldt. *Cave catfishes.*
Astroblepus Humboldt, Obs. Zool. Phil. Mag., XXIV, 1806, 19, 331 (*A. grixalvii* Humboldt).
Cyclopium Swainson, Nat. Hist. Fish., Amphib., etc., II, 1839, 305 (*Pimelodus cyclopum* Humboldt=*Cyclopium humboldti* Swainson).
Arges Cuvier and Valenciennes, Hist. Nat. Poiss., XV, 1840, 333 (*A. sabalo* Cuvier and Valenciennes).
Brontes Cuvier and Valenciennes, loc. cit., 341 (*B. prenadilla* Cuvier and Valenciennes, preoccupied).
Strephon Gistel, Thierreich., VIII, 1848 (*Brontes prenadilla* Cuvier and Valenciennes, preoccupied).
Stygogenes Günther, Cat., V, 1864, 223 (*S. humboldti* Günther).

[31] According to Eigenmann, all these names belong to the same genus.

1215. Astroblepus pirrensis (Meek and Hildebrand).
Tuyra River Basin.
Cyclopium pirrense Meek and Hildebrand, Field Mus. Nat. Hist., Zool., X, 1913, 83, Rio Cana, Cana, Panama (Pl. XVI, Field Mus. Nat. Hist., Zool., X).

Family 97. CALLICHTHYIDÆ

Genus 391. HOPLOSTERNUM Gill.
Hoplosternum Gill, Ann. Lyc. Nat. Hist. N. Y., VI, 1858, 395 (*Callichthys lævigatus* Cuvier and Valenciennes=*Callichthys littoratus* Hancock).

1216. Hoplosternum punctatus Meek and Hildebrand.
Rio Marte Arnade, Panama.
?*Callichthys* (*Hoplosternum*) *thoracatus* (not Cuvier and Valenciennes), Steindachner, Sitzungsb., Kais. Akad. Wiss. Wien, XLI, 1880, 66, Cauca, near Caceres.
Hoplosternum punctatum Meek and Hildebrand, Field Mus. Nat. Hist., Zool., X, 1916, 264, Rio Marte Arnade, 6 miles east of Panama City.

Family 98. LORICARIIDÆ. Mailed catfishes

Genus 392. HYPOSTOMUS (Lacépède).
Plecostomus Gronow, Zoophyl., 1763, 127 (*Plecostomus dorso dipterygio* Gronow); not binomial.
Hypostomus Lacépède, Hist. Nat. Poiss., V, 1803, 144 (*Hypostomus guacari* Lacépède).

1217. Hypostomus plecostomus (Linnæus).
Both slopes of Panama, south to Uruguay.
Loricaria plecostomus Linnæus, Syst. Nat., ed. XII, I, 1766, 508, America.
Hypostomus guacari Lacépède, Hist. Nat. Poiss., V, 1803, 145, America.
Loricaria flava Shaw, Gen. Zool., V, 1805, 38, pl. 101.
Hypostomus robinii Gill, Ann. Lyc. Nat. Hist. N. Y., VI, 1858, 46, Trinidad.
Hypostomus brasiliensis Bleeker, Silures de Suriname, 1864, 7, Surinam.
Plecostomus seminudus Eigenmann and Eigenmann, Proc. Calif. Acad. Sci., 2nd ser., I, 1888, 169, Brazil.
Plecostomus boulengeri Eigenmann and Kennedy, Proc. Acad. Nat. Sci. Phila., LV, 1903, 502, Paraguay.

Genus 393. THYSANOCARA Regan.
Thysanocara Regan, Ann. Mag. Nat. Hist., ser. 7, XVII, 1906, 95 (*Hypostomus cirrhosus* Cuvier and Valenciennes).

1218. Thysanocara spinosa (Meek and Hildebrand).
Rare, male taken at mouth of Rio Yape, the female (type) in Rio Calobre, Panama.
Ancistrus spinosus Meek and Hildebrand, Field Mus. Nat. Hist., Zool., X, 1916, 252, Rio Calobre, tributary of the Rio Bayano, Panama.

Genus 394. XENOCARA Regan.
Xenocara Regan, Trans. Zool. Soc. Lond., XVII, 1903, 251 (*Chætostomus latifrons* Günther).

1219 Xenocara chagresi (Eigenmann and Eigenmann).
Rio Chagres, Panama.
Ancistrus chagresi Eigenmann and Eigenmann, Proc. Calif. Acad. Sci., 2nd ser., II, 1889, 47, Rio Chagres, Panama.

Genus 395. CHÆTOSTOMA Heckel.
Chætostoma Heckel, in Tschudi, Fauna Peruana, 1846, 25 (*C. loborhynchus* Heckel).
Chætostomus Kner and authors generally; needlessly altered spelling.

1220. Chætostoma fischeri (Steindachner). *Couchu.*
Rio Mamoni, near Panama.
Chætostomus fischeri Steindachner, Flussfische Südamerikas, I, 1879, 14, Rio Mamoni, Panama.

Genus 396. LASIANCISTRUS Regan.
Lasiancistrus Regan, Trans. Zool. Soc. Lond., XVII, Pt. III, 1904, 224 and 237 (*Chætostomus heteracanthus* Günther).

1221. Lasiancistrus planiceps (Meek and Hildebrand).
Rio Tuyra Basin, Panama.
Ancistrus planiceps Meek and Hildebrand, Field Mus. Nat. Hist., Zool., X, 1913, 79, Pl. X; loc. cit., 1916, Rio Tuyra, Boca de Cupe, Panama.

Genus 397. LEPTOANCISTRUS Meek and Hildebrand.
Leptoancistrus Meek and Hildebrand, Field. Mus. Nat, Hist., Zool., X, 1916, 254 (*Ancanthias canescens* Meek and Hildebrand).

1222. Leptoancistrus canensis (Meek and Hildebrand).
Mountain streams near Cana, Panama.
Acanthicus canensis Meek and Hildebrand, Field Mus. Nat. Hist., Zool., X, 1913, 80, Rio Cana, Cana, Panama.

Genus 398. STURISOMA Swainson.
Sturisoma Swainson, Nat. Hist. Fish., Amphib., etc., II, 1839, 304 (*Loricaria rostrata* Spix).
Hemiodon Kner, Panzerwelse, Denkschr., Kais. Akad. Wiss. Wien, 1854, 65 (*H. depressus* Kner).

1223. Sturisoma rostrata (Spix).
Rivers of eastern South America, from Panama to the Paraguay; widely distributed and abundant.
Loricaria rostrata Spix, Pisc. Brasil., 1829, 5, Pl. III, Rio Blanco, Brazil.
Loricaria acuta Cuvier and Valenciennes, Hist. Nat. Poiss., XV, 1840, 349 (472), pl. 452, Barra di Rio Negro.
?*Loricaria barbata* Kner, Panzerwelse, Denkschr. Kais. Akad. Wiss. Wien, 1853, 87, Rio Cujuba.

Genus 399. ANCISTRUS Bleeker.
Ancistrus Kner, Denkschr., Kais. Akad. Wiss. Wien, VII, 1854, 272 (abstract issued in 1853; *Ancistrus medians* Kner, as first restricted by Gill).
Hemiancistrus Bleeker, Nederl. Tijdschr. Dierk., I, 1862 (1863), 78 (*Ancistrus mediana* Kner).

1224. Ancistrus guacharote (Cuvier and Valenciennes).
Porto Rico.
Hypostomus guacharote Cuvier and Valenciennes, Hist. Nat. Poiss., XV, 1840, 375 (508), Porto Rico.

1225. Ancistrus aspidolepis (Günther).
Veragua, Central America.
Chætostomus aspidolepis Günther, Trans. Zool. Soc. Lond., VI, 1868 (Nov. 27), 477, Veragua.

Genus 400. LORICARIA Linnæus.
Loricaria Linnæus, Syst. Nat., ed. X, 1758, 307(*L. cataphracta* Linnæus).
Hemiodon Kner, Denkschr. Akad. Wiss. Wien, 1854, about 65 (*H. depressus* Kner).
Loricariichthys Bleeker, Nederl. Tijdschr. Dierk., I, 1863, 3 (*Loricaria maculata* Bloch)
Pseudoloricaria Bleeker, loc. cit., 3 (*Loricaria læviuscula* Cuvier and Valenciennes).
Parahemiodon Bleeker, loc. cit., 3 (*P. typus* Bleeker).
Hemioloricaria Bleeker, loc. cit., 3 (*H. caracasenses* Bleeker).
Pseudohemiodon Bleeker, loc. cit., 3 (*Hemiodon platycephalus* Kner).

1226. Loricaria variegata Steindachner.
Rio Mamoni, Panama.
Loricaria variegata Steindachner, Flussfische Südamerikas, I, 1879, 15, Rio Mamoni, Panama.

1227. **Loricaria uracantha** Kner and Steindachner.
Rio Chagres, Panama.
Loricaria uracantha Kner and Steindachner, Abhandl., Bayer. Acad. Wiss., 1865, 56, Rio Chagres, Panama.
Loricaria bransfordi Gill, Proc. Acad. Nat. Sci. Phila., XXVIII, 1876, 338, Empire Station, Isthmus Railway, Panama.

1228. **Loricaria latiura** Eigenmann and Vance.
Rio Tuyra and Rio Atrato Basins, Panama; probably not in Pacific streams.
Loricaria filamentosa latiura Eigenmann and Vance, Ind. Univ. Stud., No. 16, 1912, 13, Boca de Certegai, Panama.
Loricaria tuyrensis Meek and Hildebrand, Field Mus. Nat. Hist., Zool., X, 1913, 81, Rio Capeti, Panama.

1229. **Loricaria capetensis** Meek and Hildebrand.
Rio Tuyra Basin, Panama.
Loricaria capetensis Meek and Hildebrand, Field Mus. Nat. Hist., Zool., X, 1913, 80, Pl. XII; loc. cit., 1916; Rio Capeti, tributary Rio Tuyra, Panama.

1230. **Loricaria fimbriata** Eigenmann and Vance.
Rio Tuyra Basin, Panama.
Locaria fimbriata Eigenmann and Vance, Ind. Univ. Stud., No. 16, 1912, 12; Boca de Certegai and Bernal Creek, Colombia.

1231. **Loricaria altipinnis** Breder.
Tuyra Basin, Pacific slope of Panama.
Loricaria altipinnis C. M. Breder, jr., Amer. Mus. Novitates, CLXXX, 1925, 1, fig. 1, 2, Rio Chucunaque, Panama.

Genus 401. RINELORICARIA Bleeker.
Rineloricaria Bleeker, Nederl. Tijdschr. Dierk., I, 1862 (1863), 80 (*Loricaria lima* Kner).

1232. **Rineloricaria lima** (Kner).
Coastwise streams of Brazil, from the Parahyba northward to Panama; widely distributed and abundant in rocky brooks.
Loricaria lima Kner, Panzerwelse, Denkschr. Kais. Akad. Wiss. Wien, 1853, 89, Brazil.
?*Loricaria strigilata* Hensel, Wiegmann's Archiv, 1868, 368, Santa Cruz.

Genus 402. OXYLORICARIA Bleeker.
Oxyloricaria Bleeker, Nederl. Tijdschr. Dierk., I, 1863, 5 (*Loricaria barbata* Kner).

1233. **Oxyloricaria panamensis** (Eigenmann and Eigenmann).
Pacific slope of Panama and Colombia, south to Ecuador.
Loricaria rostrata (non Spix) Steindachner, Denkschr. Kais. Akad. Wiss. Wien, XLI, 1879, 165, Rio Mamoni, Panama.
Loricaria panamensis Eigenmann and Eigenmann, Proc. Calif. Acad. Sci., ser. 2, II, 1889, 34, Panama.
Loricaria aurea Steindachner, Anz. Kais. Akad. Wiss. Wien, 1900, 206, Rio Magdalena.
Loricaria frenata Boulenger, Ann. Mag. Nat. Hist., ser. 7, IX, 1902, 69, northwestern Ecuador. *L. aurea* and *L. frenata* are extralimital and may not belong here.
Oxyloricaria dariensis Meek and Hildebrand, Field Mus. Nat. Hist., Zool., X, 1913, 81, Rio Tuyra and Rio Bayano Basins, Panama.

1234. **Oxyloricaria citurensis** Meek and Hildebrand.
Rio Bayano and Rio Tuyra Basins, Panama.
Oxyloricaria citurensis Meek and Hildebrand, Field Mus. Nat. Hist., Zool., X, 1913, 82, Pl. XII, loc. cit., 1916, Rio Cituro, Panama.

Order Z. INIOMI

Family 99. SYNODONTIDÆ. Lizardfishes

Genus 403. TRACHINOCEPHALUS Gill.

Trachinocephalus Gill, Cat. Fish. East Coast N. Amer., Suppl., Proc. Acad. Nat. Sci. Phila., XIII, 1861, 53 (*Saurus myops* Cuvier and Valenciennes).

1235. Trachinocephalus myops (Forster). *Ground spearing; Lagarto; Snakefish.*

Tropical parts of the western Atlantic; West Indies and Brazil to coast of South Carolina; occasionally northward to Woods Hole.

Salmo myops Forster, in Bloch and Schneider, Syst. Ichth., 1801, 421, St. Helena.

Osmerus lemniscatus Lacépède, Hist. Nat. Poiss., V, 1803, 236, Martinique; after Plumier.

Saurus truncatus Agassiz, Pisc. Brasil., 1828, 82, Brazil.

Saurus brevirostris Poey, Memorias, II, 1861, 305, Cuba; erroneously stated to have 10 rays.

Genus 404. SYNODUS Gronow. *Lizardfishes.*

Synodus Gronow, in Scopoli, Int. Hist. Nat., 1777, 449 (*S. synodus* L.).

Tirus Rafinesque, Caratteri, 1810, 56 (*T. marmoratus* Rafinesque = *Esox synodus* Linnæus).

Saurus Cuvier, Règne Anim., ed. 1, 1817, 169 (*Salmo saurus* Linnæus).

Alpismaris Risso, Europ. Mérid., III, 1826, 458 (*A. risso* Risso, very young).

1236. Synodus synodus (Linnæus).

Coast of Brazil and Lesser Antilles.

?*Esox synodus* Linnæus, Syst. Nat., ed. XII, 1766, 516, America; based on *Synodus* of Gronow.

1237. Synodus saurus (Linnæus). *Tarentola; Lacerto; Tiru.*

Coasts of southern Europe and neighboring islands, recorded by Doctor Goode from the Bermudas.

Salmo saurus Linnæus, Syst. Nat., Ed. XII, 1766, 511, Mediterranean; after Artedi.

Saurus griseus Lowe, Trans., Zool. Soc. Lond., II, 1841, 188, Madeira.

Saurida mediterranea Swainson, Nat. Hist. Anim., II, 1839, 287, Mediterranean; name only.

Tirus marmoratus Rafinesque, Caratteri, 1810, 56, Palermo.

Alpismaris risso Risso, Europ. Mérid., III, 1826, 458; very young.

Synodus lacerta Goode, Bull., U. S. Nat. Mus., V, 1876, 68, Bermuda specimen; not of Risso.

1238. Synodus fœtens (Linnæus). *Lizardfish; Gallwasp; Lagarto; Soapfish.*

Cape Cod to Brazil, very common from South Carolina southward on sandy coasts.

Salmo fœtens Linnæus, Syst. Nat., ed. XII, 1766, 513, South Carolina.

Osmerus albidus Lacépède, Hist. Nat. Poiss., V, 1803, 229, Carolinas; after Linnæus.

Coregonus ruber Lacépède, loc. cit., 263, Martinique; after Plumier.

Esox salmoneus Mitchill, Trans., Lit. Phil. Soc. N. Y., I, 1815, 442, New York.

Saurus longirostris Agassiz, Spix. Pisc. Brasil., 1828, pl. 43, Brazil.

Saurus mexicanus Cuvier, Règne Anim., ed. 2, 1829, 314, Mexico.

Saurus spixianus Poey, Memorias, II, 1861, 304, Cuba.

1239. Synodus lucioceps (Ayres).

San Francisco to Santa Barbara, rather common in summer.

Saurus lucioceps Ayres, Proc. Calif. Acad. Nat. Sci., I, 1855, 69, San Francisco.

1240. Synodus jenkinsi Jordan and Bollman.

Gulf of California to Galapagos Islands in 16 to 33 fathoms; common.

Synodus jenkinsi Jordan and Bollman, Proc. U. S. Nat. Mus., XII, 1889, 153, off coast of Colombia, Galapagos Islands.

1241. Synodus scituliceps Jordan and Gilbert.
Cape San Lucas to Panama.
Synodus scituliceps Jordan and Gilbert, Proc. U. S. Nat. Mus., IV, 1881, 344, Mazatlan, Mexico.

1242. Synodus lacertinus Gilbert.
Acapulco, Mexico; one specimen known.
Synodus lacertinus Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 55, Acapulco, Mexico.

1243. Synodus poeyi Jordan.
Cuba; abundant.
Synodus poeyi Jordan, Proc. U. S. Nat. Mus., IX, 1886, 526, Habana.

1244. Synodus intermedius (Agassiz). *Sand-diver.*
Coast of southern Florida to Brazil; not rare.
Saurus intermedius Agassiz, Spix, Pisc. Brasil., 1828, 81, Brazil.
Saurus anolis Cuvier and Valenciennes, Hist. Nat. Poiss., XXII, 1849, 483, Bahia, Martinique.

1245. Synodus evermanni Jordan and Bollman.
Mazatlan to coast of Colombia; abundant.
Synodus evermanni Jordan and Bollman, Proc. U. S. Nat. Mus., XII, 1889, 152, Pacific Ocean off coast of Colombia in 33 fathoms.

1246. Synodus simulans Garman.
Off Cocos Island.
Synodus simulans Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 251, Pl. L, fig. 3; towings at surface off Cocos Island.

1247. Synodus acutus Garman.
Off Panama.
Synodus acutus Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 252, off coast of Panama.

Genus 405. BATHYSAURUS Günther.
Bathysaurus Günther, Ann. Mag. Nat. Hist., ser. 5, II, 1878, 181 (*B. ferox* Günther).

1248. Bathysaurus agassizii Goode and Bean.
Gulf Stream, in deep water.
Bathysaurus agassizii Goode and Bean, Bull. Mus. Comp. Zool., X, 1882, No. 5, 215, Gulf Stream, 33° N., in 647 fathoms.

1249. Bathysaurus mollis Günther.
Southern Pacific to coast of Lower California.
Found off Lower California, 23° N., 1,760 fathoms (only N. Amer. record; Townsend and Nichols, Bull. Amer. Mus Nat. Hist., LII, 1925, 10).
Bathysaurus mollis Günther, Ann. Mag. Nat. Hist., 5th ser., II, 1878, 182, middle of South Pacific off Yeddo, in 1,875 and 2,385 fathoms.

Genus 406. BATHYLACO Goode and Bean.
Bathylaco Goode and Bean, Oceanic Ichth., 1895, 57 (*B. nigricans* Goode and Bean).

1250. Bathylaco nigricans Goode and Bean.
Gulf of Mexico; off Santa Cruz, at a depth of 2,393 fathoms; a single specimen known.
Bathylaco nigricans Goode and Bean, Oceanic Ichth., 1895, 57, fig. 69, off Santa Cruz, Mexico.

Genus 407. SAURIDA Cuvier and Valenciennes.
Saurida Cuvier and Valenciennes, Hist. Nat. Poiss., XXII, 1849, 499 (*Salmo tumbil* Bloch).

1251. Saurida nebulosa Cuvier and Valenciennes.
West Indies north to St. Eustatius.
Saurida nebulosa Cuvier and Valenciennes, Hist. Nat. Poiss., XXII, 1849, 504, pl. 649.

Family 100. CHLOROPTHALMIDÆ

Genus 408. CHLOROPTHALMUS Bonaparte.
Chloropthalmus Bonaparte, Icon. Fauna Italica, III, 1834, 144 (*C. agassizi* Bonaparte).
Hyphalonedrus Goode, Proc. U. S. Nat. Mus., III, 1880, 483 (*H. chalybeius* Goode).

1252. Chloropthalmus agassizii Bonaparte.
Atlantic and Mediterranean; western Atlantic.
Chloropthalmus agassizii Bonaparte, Fauna Italica, 1840, pl. 121, Italy.

1253. Chloropthalmus chalybeius (Goode).
Gulf Stream, in from 85 to 167 fathoms.
Hyphalonedrus chalybeius Goode, Proc. U. S. Nat. Mus., III, 1880 (Feb. 16, 1881), 484, Gulf Stream off Rhode Island.

1254. Chloropthalmus truculentus Goode and Bean.
One specimen, *Blake* station LII, off Barbados.
Chloropthalmus truculentus Goode and Bean, Oceanic Ichth., 1895, 61, fig. 72, off Barbados in 158 fathoms.

1255. Chloropthalmus mento Garman.
Off Panama.
Chloropthalmus mento Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 254, 3, Pl. LIV, figs. 1-1c, *Albatross* stations 3385, 3386, and 3389 in 210 to 286 fathoms.

Family 101. SUDIDÆ

Genus 409. SUDIS Rafinesque.
Sudis Rafinesque, Caratteri, 1810, 60 (*S. hyalina* Rafinesque).

1256. Sudis ringens Jordan and Gilbert.
Santa Barbara Channel, Calif., the only specimen known taken from the stomach of a hake, itself found in the stomach of a long-finned albicore (*Germo*).
Sudis ringens Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880, 273, Santa Barbara Channel.

1257. Sudis intermedius (Poey).
Matanzas, Cuba; one specimen known.
Paralepis intermedius Poey, Repertorio, II, 1867, 416, Mantanzas, Cuba.

Genus 410. ARCTOZENUS Gill.
Arctozenus Gill, Proc. Acad. Nat. Sci. Phila., XVI, 1864, 188 (*Paralepis borealis* Reinhardt).

1258. Arctozenus borealis (Reinhardt).
Deep waters of Arctic America.
Paralepis borealis Reinhardt, Vidensk. Selsk. Naturv. Math. Afhandl., VII, 1832, 115, Greenland.

1259. Arctozenus coruscans (Jordan and Gilbert).
Puget Sound; one specimen known.
Paralepis coruscans Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880, 411, Port Townsend, Wash.

Genus 411. PARALEPIS Risso.
Paralepis Risso, in Cuvier, Règne Anim., ed. 1, 1817 (*Coregonus paralepis* Risso = *Paralepis coregonoides* Risso).

1260. Paralepis coregonoides Risso.
Mediterranean, rare; Gulf stream at *Albatross* station 2393.
Paralepis coregonoides Risso, Europ. Mérid., III, 1826, 472, Pl. VII, fig. 15, Nice.

1261. Paralepis barracudina Fowler and Phillips.
Coast of New Jersey.
Paralepis barracudina Fowler and Phillips, Proc. Acad. Nat. Sci. Phila., LXII, 1910, 403, with figure, Corsons Inlet, Cape May County, N. J.

Genus 412. LESTIDIOPS Hubbs.
Lestidiops Hubbs, Univ. Calif. Publ. Zool., XVI, 1916, 154 (*L. sphyrænops* Hubbs).

1262. Lestidiops sphyrænops Hubbs.
Lestidiops sphyrænops Hubbs, Univ. Calif. Pub. Zool., XVI, 1916, 155, pl. 18, Avalon Bay, Santa Catalina Island.

Family 102. BATHYPTEROIDÆ

Genus 413. BATHYPTEROIS Günther.
Bathypterois Günther, Ann. Mag. Nat. Hist., ser. 5, II, 1878, 83 (*B. longifilis* Günther).
Synapteretmus Goode and Bean, Oceanic Ichth., 1895, 64 (*Bathypterois quadrifilis* Günther).

Subgenus SYNAPTERETMUS Goode and Bean.

1263. Bathypterois quadrifilis Günther.
Brazil; St. Vincent.
Bathypterois quadrifilis Günther, Ann. Mag. Nat. Hist., II, 1878, 184, off coast of Brazil in 500 to 770 fathoms.

1264. Bathypterois pectoralis Garman.
Off Central America in deep water.
Bathypterois pectoralis Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 257, Pl. K, fig. 1, *Albatross* stations 3376, 3393, 3407, and 3431 in 885 to 1,132 fathoms.

1265. Bathypterois ventralis Garman.
Off west coast of Mexico.
Bathypterois ventralis Garman, Mem., Mus. Comp. Zool., XXIV, 1899, Pl. LV, fig. 1, 256, *Albatross* stations 3418 and 3425 in 660 to 680 fathoms.

Family 103. BENTHOSAURIDÆ

Genus 414. BENTHOSAURUS Goode and Bean.
Benthosaurus Goode and Bean, Bull. Mus. Comp. Zool., XII, 1886, No. 5, 168 (*B. grallator* Goode and Bean).

1266. Benthosaurus grallator Goode and Bean.
Gulf of Mexico and Gulf Stream, in lat. 24° 33′ N., long. 84° 23′ W., and lat. 39° 3′ 15″ N., long 70° 50′ 45″ W.
Benthosaurus grallator Goode and Bean, Bull. Mus. Comp. Zool., XII, 1886, No. 5, 168, Gulf Stream.

Family 104. MYCTOPHIDÆ.[32] Lanternfishes

Genus 415. MACROSTOMA Risso.
Macrostoma Risso, Europ. Mérid., III, 1826, 447 (*Macrostoma angustidens* Risso); not *Macrostomus* Wied., a genus of insects.
Notoscopelus Günther, Cat., V, 1864, 405 (*Lampanyctus resplendens* Richardson), to replace *Macrostoma*, regarded as preoccupied.
Catablemella Eigenmann and Eigenmann, Proc. Calif. Acad. Sci., III, 1890, 3, 24, (*C. brachychir* Eigenmann and Eigenmann).

1267. Macrostoma angustidens Risso. *Prickfish; Maire d'Amplora.*
Atlantic and Indian Oceans, Norway and Greenland.
Macrostoma angustidens Risso, Europ. Mérid., III, 1826, 448, off Nice.

1268. Macrostoma quercinum (Goode and Bean).
Western Atlantic; Mediterranean.
Notoscopelus quercinus Goode and Bean, Oceanic Ichth., 1895, 83, fig. 97, Grand Banks, Newfoundland.

1269. Macrostoma margaritiferum (Goode and Bean).
Grand Banks of Newfoundland.
Notoscopelus margaritiferus Goode and Bean, Oceanic Ichth., 1895, 84, fig. 98, off Banquereau.

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[32] Several species recently described as *Myctophum* may prove to belong to other genera.

1270. Macrostoma castaneum (Goode and Bean).
Grand Banks.
Notoscopelus castaneus Goode and Bean, Oceanic Ichth., 1895, 84, fig. 95, Grand Banks, Newfoundland.

Genus 416. CERATOSCOPELUS Günther.
Ceratoscopelus Günther, Cat., V, 1864, 405 and 412 (*Scopelus madeirensis* Lowe).

1271. Ceratoscopelus madeirensis (Lowe).
Atlantic and Mediterranean; west to the Grand Banks.
Scopelus madeirensis Lowe, Proc. Zool. Soc. Lond., 1839, 87, Madeira.

Genus 417. LAMPANYCTUS Bonaparte.
Lampanyctus Bonaparte, Fauna Italica, Fasc. XXVII, 1840 (*L. bonapartei* Bonaparte).

1272. Lampanyctus guntheri Goode and Bean.
Grand Banks.
Lampanyctus guntheri Goode and Bean, Oceanic Ichth., 1895, 79, fig. 90, Grand Banks.

1273. Lampanyctus gemmifer Goode and Bean.
Gulf Stream.
Lampanyctus gemmifer Goode and Bean, Oceanic Ichth., 1895, 80, fig. 88, Grand Banks, in lat. 39° 40′ N., long. 71° 35′ W., in 538 fathoms.

1274. Lampanyctus lacerta Goode and Bean.
Gulf of Mexico.
Lampanyctus lacerta Goode and Bean, Oceanic Ichth., 1895, 81, fig. 89, Gulf of Mexico, in lat. 28° 38′ 30″ N., long. 85° 52′ 30″ W.

1275. Lampanyctus ritteri Gilbert.
Coast of California; Monterey Bay; San Clemente.
Lampanyctus ritteri Gilbert, Proc. U. S. Nat. Mus., XLVII, 1915, 318, pl. 15, fig. 3, Monterey Bay; San Clemente Island, Calif.

Genus 418. NYCTIMASTER Jordan.
Nyctimaster Jordan, Proc. U. S. Nat. Mus., LIX, 1921, 645 (*Lampanyctus jordani* Gilbert).
Most of the species hitherto referred to *Lampanyctus*, having the scales of the lateral line not larger than the others, should be referred to *Nyctimaster*.

1276. Nyctimaster townsendi (Eigenmann and Eigenmann).
Cortez Banks near San Diego, in 45 fathoms.
Myctophum townsendi Eigenmann and Eigenmann, West Amer. Scientist, 1889, 125, Cortez Banks, off San Diego, Calif.

1277. Nyctimaster alatus (Goode and Bean).
Gulf of Mexico.
Lampanyctus alatus Goode and Bean, Oceanic Ichth., 1895, 79, Gulf Stream.

Genus 419. LAMPADENA Goode and Bean.
Lampadena Goode and Bean, Oceanic Ichth., 1895, 85 (*L. speculigera* Goode and Bean).

1278. Lampadena speculigera Goode and Bean.
Gulf Stream.
Lampadena speculigera Goode and Bean, Oceanic Ichth., 1895, 85, fig. 99, Gulf Stream, lat. 39° 48′ N., long. 70° 36′ W., in 551 fathoms.

Genus 420. NANNOBRACHIUM Günther.
Nannobrachium Günther, Deep Sea Fishes, *Challenger*, 1887, 199, (*N. nigrum* Günther).

1279. Nannobrachium nannochir (Gilbert).
Alaska to Santa Barbara Islands, in deep water.
Myctophum nannochir Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 51, off Washington, *Albatross* stations 2925, 3072, and others, in 266 to 685 fathoms.

1280. **Nannobrachium leucopsarum** (Eigenmann and Eigenmann).
Pacific coast of America, from Alaska to San Diego.
Myctophum (*Stenobrachius*) *leucopsarum* Eigenmann and Eigenmann, Proc. Calif. Acad. Sci., 2d ser., III, 1890, 5, off Point Loma, Calif., in stomachs of *Sebastodes*.

1281. **Nannobrachium macdonaldi** Goode and Bean.
Gulf Stream.
Nannobrachium macdonaldi Goode and Bean, Oceanic Ichth., 1895, 94, fig. 110, Gulf Stream.

1282. **Nannobrachium regale** (Gilbert).
Santa Barbara Channel, in deep water.
Myctophum regale Gilbert, Proc. U. S. Nat. Mus., XIV, 1891, 544, Santa Barbara Channel, *Albatross* station 2923, in 822 fathoms.

1283. **Nannobrachium mexicanum** (Gilbert).
Coast of Lower California, in deep water.
Myctophum mexicanum Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 51, off Lower California, at *Albatross* stations 3008 and 3009 in 306 and 857 fathoms.

Genus 421. ÆTHOPRORA Goode and Bean.
Æthoprora Goode and Bean, Oceanic Ichth., 1895, 86 (*Scopelus metopoclampus* Cocco).

1284. **Æthoprora effulgens** Goode and Bean.
Western Atlantic.
Æthoprora effulgens Goode and Bean, Oceanic Ichth., 1895, 87, fig. 103, Browns Bank and *Albatross* station 2127, 19° 45′ N., 75° W., in 689 fathoms.

1285. **Æthoprora lucida** Goode and Bean.
Gulf Stream.
Æthoprora lucida Goode and Bean, Oceanic Ichth., 1895, 87, fig. 102, Gulf Stream, lat. 19° 45′ N., long. 75° 4′ W.

Genus 422. COLLETTIA Goode and Bean.
Collettia Goode and Bean, Oceanic Ichth., 1895, 88 (*Myctophum rafinesquei* Cocco).

1286. **Collettia rafinesquei** (Cocco).
Mediterranean and Atlantic; Gulf Stream off the New England coast.
Nyctophus rafinesquei Cocco, Alcuni Salmon, etc., 1820, 20, Messina.

1287. **Collettia nocturna** (Poey).
Coast of Cuba.
Myctophum nocturnum Poey, Memorias, II, 1861, 426, Cuba.

Genus 423. DIAPHUS Eigenmann and Eigenmann.
Diaphus Eigenmann and Eigenmann, Proc. Calif. Acad. Sci., 2d ser., III, 1890, 3 (*Scopelus engraulis* Günther).

1288. **Diaphus theta** Eigenmann and Eigenmann.
Point Loma, near San Diego, Calif., to coast of Oregon.
Diaphus theta Eigenmann and Eigenmann, Proc. Calif. Acad. Sci., 2d. ser., III, March, 1890, 4, Point Loma, near San Diego.
Myctophum protoculus Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 52, July 2, coast of Washington, in 584 fathoms, *Albatross* station 3072, in 584 fathoms.

Genus 424. RHINOSCOPELUS Lütken.
Rhinoscopelus Lütken, Vidensk. Selsk. Naturv. Copenhagen, VII, 1892, 237 (*Scopelus coccoi* Cocco).
Alysia Lowe, Proc. Zool. Soc. Lond., 1839, 87 (*A. loricata* Lowe= *Scopelus coccoi* Cocco; name preoccupied).

1289. **Rhinoscopelus andreæ** (Lütken).
Open Atlantic and Indian Ocean; Gulf Stream.
Scopelus andreæ Lütken, Spolia Atlantica, 1892, 25, North Atlantic.

1290. **Rhinoscopelus rarus** (Lütken).
Open Atlantic, west to 50° W., 33° N.
Scopelus rarus Lütken, Spolia Atlantica, II, 1892, 26, North Atlantic.

1291. Rhinoscopelus coccoi (Cocco).
West Atlantic, Gulf Stream, Mediterranean, ranging from Newfoundland to Africa.
Scopelus coccoi Cocco, Giorn. Sci. Litt. Art. Sicilia (No. 77), Palermo, 1829, 143 ("Scopelo de Cocco"), Palermo.
Alysia loricata Lowe, Proc. Zool. Soc. Lond., 1839, 87, Madeira.

Genus 425. MYCTOPHUM Rafinesque. *Lanternfishes.*
Myctophum Rafinesque, Indice, 1810, 56 (*M. punctatum* Rafinesque).
Scopelus Cuvier, Règne Anim., ed. 1, 1817, 56 (*Gasteropelecus humboldtii* Risso).
Nyctophus Cocco, Giorn. Sci. Litt. Art. Sicil., 1829, 44 (*N. rafinesquei*, substitute for *Myctophum*).

1292. Myctophum punctatum Rafinesque.
Warmer parts of the Atlantic, Grand Banks, and from the Gulf Stream to the Mediterranean.
Myctophum punctatum Rafinesque, Indice, 1810, 56, Pl. II, fig. 5, Palermo.
Scopelinus caninianus Cuvier and Valenciennes, Hist. Nat. Poiss., XXII, 1849, 445, coast of Italy.

1293. Myctophum affine (Lütken).
Open Atlantic west to 63° W., 38° N., and in the open Pacific. Perhaps more than one species included.
Scopelus affine Lütken, Spolia Atlantica, II, 1892, 32, open Atlantic.
Myctophum nitidulum Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 266, Pl. LVI, fig. 3, lat. 27° 50′ N., long. 145° 45′ 30″ W.
Rhinoscopelus oceanicus Jordan and Evermann, Bull. U. S. Fish Com., XX, 1902, 168, Hawaiian Islands.
Myctophum margaritatum Gilbert, loc. cit., XXIII, pt. 2, 1905, p. 596, pl. 68, fig. 2, off south coast of Molokai, Hawaiian Islands.

1294. Myctophum humboldti (Risso).
Open seas, Mediterranean, and Atlantic on both shores.
Gasteropelecus humboldtii Risso, Ichth. Nice, 1810, 358, Nice.

1295. Myctophum californiense Eigenmann and Eigenmann.
Cortez Banks, San Diego, Calif.
?*Myctophum boops* Richardson, Voy. *Erebus* and *Terror*, 1845, 39, open sea between Australia and New Zealand.
Myctophum californiense Eigenmann and Eigenmann, West Amer. Scientist, Nov. 9, 1889, 124, San Diego, Calif.

1296. Myctophum gracile (Lütken).
Open Atlantic, west to 48° W., 23° N.
Scopelus gracilis Lütken, Spolia Atlantica, II, 1892, 35, open Atlantic.
?*Myctophum hians* Richardson, Voy. *Erebus* and *Terror*, 1845, 41, pl. 27, open sea, locality unknown.

1297. Myctophum benoiti (Cocco).
Mediterranean to Norway and Greenland.
Scopelus benoiti Cocco, Lett. su Salmon., 1838, 12, pl. 2, fig. 4, Messina.

1298. Myctophum hygomi (Lütken).
North Atlantic, occasional in our waters.
Scopelus hygomi Lütken, Spolia Atlantica, 1892, 257, North Atlantic.
Myctophum remiger Goode and Bean, Oceanic Ichth., 1895, 75, western Atlantic.

1299. Myctophum oculeum Garman.
Off Panama in deep water.
Myctophum oculeum Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 260, Pl. LVI, fig. 2, numerous stations of the *Albatross*.

1300. Myctophum atratum Garman.
Off western Mexico in the open sea.
Myctophum atratum Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 268, *Albatross* station 3433, lat. 25° 26′ 15″ N., long. 109° 48′ W., in 1,218 fathoms.

1301. Myctophum laternatum Garman.
Off Pacific coast of Mexico in open sea.
Myctophum laternatum Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 267, Pl. LVI, fig. 7, several stations of the *Albatross*.

1302. Myctophum aurolaternatum Garman.
Off Panama.
Myctophum aurolaternatum Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 264, Pl. LV, fig. 3, *Albatross* station 3382, lat. 6° 21′ N., long. 80° 41′ W. at surface.

1303. Myctophum luminosum Garman.
Off Panama.
Myctophum luminosum Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 263, Pl. LV, fig. 2, *Albatross* station 3042, lat. 0° 57′ 30″ S., long. 89° 3′ 30″ W., in 421 fathoms.

1304. Myctophum tenuiculum Garman.
Off Panama in deep water.
Myctophum tenuiculum Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 262, pl. 5, fig. 5, *Albatross* station 3382, lat. 6° 21′ N., 80° 41′ W., at surface.

Genus 426. BENTHOSEMA Goode and Bean.
Benthosema Goode and Bean, Oceanic Ichth., 1895, 76 (*Scopelus muelleri* Gmelin).

1305. Benthosema arcticum (Lütken).
Davis Straits, Greenland.
Scopelus arcticus Lütken, Spolia Atlantica, 1892, 29, Davis Straits.

1306. Benthosema mulleri (Gmelin).
North Atlantic, occasional from Norway to Greenland, more abundant southward to South Carolina; probably always in very deep water.
Salmo mülleri Gmelin, Syst. Nat., 1788, 1378, Norway; after Strom.
Scopelus glacialis Reinhardt, Overs, 1835, 36, Greenland.

Genus 427. SCOPELENGYS Alcock.
Scopelengys Alcock, Ann. Mag. Nat. Hist., ser. 6, VI, 1890, 302 (*S. tristis* Alcock).

1307. Scopelengys dispar Garman.
Off Panama in deep water.
Scopelengys dispar Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 254, Pl. LIV, figs. 2–2d, *Albatross* stations 3353, 3360, 3382, and 3383, in from 695 to 1,832 fathoms.

Genus 428. TARLETONBEANIA Eigenmann and Eigenmann.
Tarletonbeania Eigenmann and Eigenmann, Proc. Calif. Acad. Sci., IV, 1891, 6 (*T. tenua* Eigenmann and Eigenmann).

1308. Tarletonbeania crenularis (Jordan and Gilbert).
San Diego and vicinity.
Myctophum crenulare Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880, 274, Santa Barbara, Calif.
Myctophum procellarium Bean, in Jordan and Gilbert, loc. cit., 467, off Straits of Fuca.
Tarletonbeania tenua Eigenmann and Eigenmann, Proc. Calif. Acad. Sci., IV, 1890, 7, Coronado Islands near San Diego, Calif.

Family 105. IPNOPIDÆ

Genus 429. IPNOPS Günther.
Ipnops Günther, Ann. Mag. Nat. Hist., II, 1878, 187 (*I. murrayi* Günther).

1309. Ipnops murrayi Günther.
Bottom fish, at about 2,000 fathoms; coast of Brazil, Tristan da Cunha, Celebes, in tropical America (24° 36′ N., 84° W.) and off Bequia, Windward Islands.
Ipnops murrayi Günther, Ann. Mag. Nat. Hist., II, 1878, 187, coast of Brazil, etc.

1310. Ipnops agassizi Garman.
Pacific coast of Central America in deep water.
Ipnops agassizii Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 259, Pl. H, figs. 2, 2a, *Albatross* station 3413, lat. 2° 34′ N., long. 92° 6′ W., in 1,360 fathoms.

Family 106. OMOSUDIDÆ

Genus 430. OMOSUDIS Günther.
Omosudis Günther, *Challenger* Rept., XXII, 1887, 201 (*O. lowii* Günther).

1311. Omosudis lowii Günther.
Open sea; Gulf Stream at *Albatross* station 2392.
Omosudis lowii Günther, *Challenger* Rept., XXII, 1887, 201, pl. 52, figs. C, C′, Philippine Islands, Magdalena.

Family 107. ALEPISAURIDÆ. Handsawfishes

Genus 431. ALEPISAURUS Lowe.
Plagyodus Steller, in Pallas, Zoogr. Rosso-Asiat., III, 1811, 383 (no type named, doubtless *P. æsculapius* Bean); given in oblique form only, as *Plagyodontem.*
Alepisaurus Lowe, Proc. Zool. Soc. Lond., I, 1833 (*A. ferox* Lowe).

1312. Alepisaurus ferox Lowe. *Lancetfish.*
Deep waters of the Atlantic; occasional off the coasts of Nova Scotia, Massachusetts, and on the Grand Banks.
Alepisaurus ferox Lowe, Trans. Zool. Soc. Lond., I, 1833, 395, Madeira.
Alepisaurus azureus Cuvier and Valenciennes, Hist. Nat. Poiss., XXII, 1849, 530, Canaries.

1313. Alepisaurus æsculapius (Bean). *Wolffish; Subotka.*
Coast of Alaska southward to California.
Plagyodus Steller in Pallas, Zoogr. Rosso.-Asiat., III, 1811, 383, Kurile Islands.
Alepidosaurus æsculapius Bean, Proc. U. S. Nat. Mus., V, 1882, 661, Iliuliuk, Unalaska.

Genus 432. CAULOPUS Gill. *Handsawfishes.*
Caulopus Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 128 (*Alepidosaurus borealis* Gill).

1314. Caulopus altivelis (Poey).
Cuba, in deep water.
Alepisaurus altivelis Poey, Memorias, II, 1861, 302, Cuba.
Alepidosaurus (*Caulopus*) *poeyi* Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 131, Cuba.

1315. Caulopus borealis (Gill). *Handsawfish; Serra.*
Pacific coast of America from Alaska to Puget Sound.
Alepidosaurus borealis Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 128, Puget Sound.
Alepidosaurus serra Gill, loc. cit., 129. "Monterey, Lower California.'

Order AA. CETUNCULI

Family 108. RONDELETIIDÆ

Genus 433. RONDELETIA Goode and Bean.
Rondeletia Goode and Bean, Proc. U. S. Nat. Mus., XVII, 1894, 454 (*R. bicolor* Goode and Bean).

1316. Rondeletia bicolor Goode and Bean.
Gulf Stream.
Rondeletia bicolor Goode and Bean, Proc. U. S. Nat. Mus., XVII, 1894 (1895), 454, pl. 17, fig. 7, and Oceanic Ichth., 1895, 68, fig. 77, at *Albatross* station 2724 in 1,641 fathoms.

Family 109. CETOMIMIDÆ

Genus 434. CETOMIMUS Goode and Bean.
Cetomimus Goode and Bean, Proc. U. S. Nat. Mus., XVII, 1894, 453 (*C. gillii* Goode and Bean).

1317. Cetomimus gillii Goode and Bean.
Gulf Stream.
Cetomimus gillii Goode and Bean, Proc. U. S. Nat. Mus., XVII, 1894 (1895), 452, pl. 17, fig. 2, and in Oceanic Ichth., 1895, 69, fig. 78, Gulf Stream, in lat. 39° 35′ N., long. 71° 24′ 30″ W.

1318. Cetomimus storeri Goode and Bean.
Gulf Stream.
Cetomimus storeri Goode and Bean, Proc. U. S. Nat. Mus., XVII, 1894 (1895), 453, pl. 17, fig. 3, and in Oceanic Ichth., 1895, 69, fig. 79, Gulf Stream at *Albatross* station 2222 in 1,535 fathoms.

Order BB. XENOMI

Family 110. DALLIIDÆ. Alaska blackfish

Genus 435. DALLIA Bean.
Dallia Bean, Proc. U. S. Nat. Mus., II, 1879, 358 (*D. pectoralis* Bean).

1319. Dallia pectoralis Bean. *Alaska blackfish; Charnia ryba.*
Streams and ponds of northern Alaska and Siberia.
Dallia pectoralis Bean, Proc. U. S. Nat. Mus., II, 1879, 358, St. Michaels, Alaska.
Umbra delicatissima Smitt, Offer. Kongl. Vetensk. Akad. Forh. Arg., Stockholm, 1881, 38, pl. 5, fig. 1, Pittlekag, Siberia.

Order CC. HAPLOMI

Family 111. ESOCIDÆ. Pikes

Genus 436. ESOX Linnæus.
Esox Linnæus, Syst. Nat., ed. X, 1758, 313 (*E. lucius* Linnæus).
Lucius Geoffroy, Descr. de 719 Plantes, etc., 1767, 407 (*Esox lucius* Linnæus).
Lucius Rafinesque, Caratteri, 1810, 59 (*Esox lucius* Linnæus=*L. vorax* Rafinesque).
Picorellus Rafinesque, Ichth. Ohiensis, 1820, 70 (*Esox vittatus* Rafinesque, a mythical species).
Mascalongus Jordan, Klippart's rept., Ohio Fish Com., 1878, 92 (*Esox masquinongy* Mitchill=*Esox nobilior* Thompson).
Kenoza Jordan and Evermann, Fishes North and Mid. Amer., 1896, 626 (*Esox americanus* Gmelin).

Subgenus MASCALONGUS Jordan.

1320. Esox masquinongy Mitchill. *Muskallunge,*[33] *Muskellunge; Maskinongy; Muscalonge; Great pike.*
Great Lakes region; Upper Mississippi Valley and northward.
Esox masquinongy Mitchill, "Mirror," 1824, 297, Lake Erie.
Esox masquinongy Mitchill, in Kirtland, Fishes of Ohio, 1838, 194, Lake Erie.
Esox nobilior Thompson, Proc. Bost. Soc. Nat. Hist., III, 1850, 163, Lake Champlain.
Esox nobilis Kirtland, Proc. Cleveland Acad. Nat. Sci., 1854, 84, Lake Erie; name a slip of the pen for *Esox nobilior.*

1321. Esox masquinongy ohiensis Kirtland.
Ohio River and its tributaries; Chautauqua Lake, N. Y.
Esox salmoneus Rafinesque, Amer. Month. Mag., III, 1818, 447, Ohio River; not *Esox salmoneus* Mitchill 1815=*Synodus fœtens.*
Esox ohiensis Kirtland, Proc. Cleveland Acad. Nat. Sci., Feb. 7, 1854, Mahoning River, Ohio.

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[33] The common names of the fishes of the pike family, and of the pike perches, with which they are confused, are too numerous to be given here. As Weed, who gives many of them (Field Mus. Nat. Hist., Zool. leaflet No. 9, 1927) remarks, "There are as many as 80 names for 1 fish and 7 fish for one name."

1322. Esox masquinongy immaculatus Garrard. *Great northern pike.*
Lakes of Wisconsin and Minnesota.
Esox immaculatus Garrard, MS.; noticed in various fishing journals; Eagle Lake, northern Wisconsin.

Subgenus ESOX Linnæus.

1323. Esox estor [34] LeSueur. *American pike.*
Northern North America; eastern United States south to New York and the Ohio River.
Esox estor LeSueur, Jour. Acad. Nat. Sci. Phila., I, 1818, 413, Lake Erie at Buffalo.
??*Esox vittatus* Rafinesque, Amer. Month. Mag., III, 1818, 447, Ohio River; mythical; described from hearsay.
??*Esox australis* Cuvier and Valenciennes, Hist. Nat. Poiss., XVII, 1846, 323, locality unknown; thought to be Van Diemen's Land (Tasmania).
Esox depraudus LeSueur in Cuvier and Valenciennes, Hist. Nat. Poiss., XVIII, 1846, 336, Wabash River, New Harmony, Ind.
Esox lugubris LeSueur, loc. cit., 338, Crab Orchard, Ky.
Esox boreus Agassiz, Lake Superior, 1850, 317, Lake Superior.
Esox lucoides Agassiz and Girard, in Herbert Forrester's Fish and Fishing, 1850, 154, Lake Superior.

Subgenus KENOZA Jordan and Evermann.

1324. Esox niger LeSueur. *Eastern pickerel; Green pike; Jack.*
Massachusetts to Florida, in lowland streams and swamps.
Esox reticulatus LeSueur, Jour. Acad. Nat. Sci. Phila., I, 1818, 414, Connecticut River, Adams, Mass.; Philadelphia; name preoccupied in Europe.
?*Esox phaleratus* Say in LeSueur, loc. cit., 416, St. Augustine, Fla.; unidentifiable.
Esox niger LeSueur, loc. cit., 415, South Carolina.
Esox tridecemlineatus Mitchill, "Mirror," 1825, 361, Oneida Lake, N. Y.

1325. Esox vermiculatus LeSueur. *Little pickerel; Grass pike.*
Mississippi Valley and tributaries of Lake Erie and Lake Michigan, south to Mississippi and Arkansas.
Esox vermiculatus LeSueur in Cuvier and Valenciennes, Hist. Nat. Poiss., XVIII, 1846, 333, Wabash River, New Harmony, Ind.
Esox lineatus LeSueur, loc. cit., 335, Wabash River, New Harmony, Ind.
Esox crassus Agassiz, Amer. Jour. Sci. Arts, 1854, 308, Tennessee River, Huntsville, Ala.
Esox umbrosus Kirtland, Proc. Cleveland Acad. Nat. Sci., 1854, 79, small Bay of Rocky River, Rockport, near Cleveland, Ohio.
Esox cypho Cope, Proc. Acad. Nat. Sci. Phila., XVII, 1865, 78, Waterford, Oakland County, Mich.
Esox porosus Cope, Trans. Amer. Phil. Soc. Phila., XIII, 1866, 408, Waterford, Oakland County, Mich.; substitute for *cypho* regarded as an inept name.

1326. Esox americanus Gmelin. *Barred pickerel.*
Esox lucius americanus Gmelin, Syst. Nat., 1788, 1390, Long Island, N. Y.; after Schöpf.
Esox scomberius Mitchill, Amer. Month. Mag., 1818, 322, Murderers Creek, N. Y.
Esox fasciatus DeKay, New York Fauna: Fishes, 1842, 224, Murderers Creek and other streams near New York.
Esox ornatus Girard, "Proc. Bost. Soc. Nat. Hist., V, 1854, 41," Proc. Acad. Nat. Sci., Phila., XXXVII, 1885, 369, 41; Charles River, Mass.
Esox raveneli Holbrook, Ichth. South Carolina, 1860, 201, Charleston, S. C.

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[34] Not clearly separated from *Esox lucius* L. of Europe.

Family 112. UMBRIDÆ. Mud minnows

Genus 437. UMBRA Müller.

Umbra Krämer, MS., in Müller, Anim. Austr. Infer., 1756; Müller, Abhandl. Akad. Wiss. Wien, 1842, 188 (*crameri*).

Melanura Agassiz, Amer. Jour. Sci. Arts, XVI, 1853, 135 (*M. annulata* Agassiz, not *Exoglossum annulatum* Rafinesque, etc.=*Leuciscus pygmæus* DeKay).

1327. Umbra limi (Kirtland). *Mud minnow; Dogfish.*

Great Lakes region and upper Mississippi Valley in weedy streams and ponds; Lake Champlain to Minnesota. A hardy and attractive aquarium fish.

Hydrargira lima Kirtland, Bost. Jour. Nat. Hist., III, 1840, 277, streams in northern Ohio.

Hydrargyra fusca Thompson, Hist. Vermont, 1842, 137, Lake Champlain.

Hydrargira atricauda DeKay, N. Y. Fauna: Fishes, 1842, 220, Lake Champlain.

1328. Umbra pygmæa (DeKay). *Striped mud minnow; Eastern mud minnow.*

Lowland streams and swamps coastwise, from Long Island to the Neuse River, N. C.; locally abundant.

Leuciscus pygmæus DeKay, New York Fauna: Fishes, 1842, 214, Tappan, Rockland County, N. Y.

Fundulus fuscus Ayres, Bost. Jour. Nat. Hist., IV, 1843, 296, Brookhaven, Long Island.

Umbra pygmæa bilineata Shufeldt, Aquatic Life, July, 1917, tributaries of Chesapeake Bay; slight color variation.

Order DD. CYPRINODONTES. (Microcyprini)

Family 113. CYPRINODONTIDÆ. Killifishes

Genus 438. PROFUNDULUS Hubbs.

Profundulus Hubbs, Misc. Pub. 13, Mus. Zool. Univ. Mich., Jan. 18, 1924, 12 (*Fundulus punctatus* Günther).

1329. Profundulus punctatus (Günther).

Southern Mexico and Central America in streams and lakes, south to Ecuador.

Fundulus punctatus Günther, Cat., VI, 1866, 320, Chiapas.

Fundulus guatemalensis Günther, loc. cit., 321, Lake Duenas.

Fundulus pachycephalus Günther, loc. cit., 321, Lake Atitlan, Guatemala.

1330. Profundulus labialis (Günther).

Rivers of Guatemala in Atlantic drainage, Lake Yzabal, Rio Chisoy and Rio San Geronimo.

Fundulus labialis Günther, Cat., VI, 1866, 319, Rio San Geronimo, Guatemala, Yzabal.

1331. Profundulus oaxacæ (Meek).

Streams of Oaxaca, Mexico.

Fundulus oaxacæ Meek, Pub., Field Col. Mus., Zool., III, 1902, 90, Oaxaca, Mexico.

1332. Profundulus candalarius Hubbs.

Profundulus candalarius Hubbs, Misc. Pub. 13, Mus. Zool., Univ. Mich., Jan. 18, 1924, 15, Candalaria, Guatemala, Rio Chiapas Basin, Atlantic drainage.

Genus 439. CUBANICHTHYS Hubbs.

Cubanichthys Hubbs, Misc. Pub. Univ. Mich. Mus. Zool., No. 16, July 9, 1926, 4 (*Fundulus cubensis* Eigenmann).

1333. Cubanichthys cubensis (Eigenmann).

Streams of Pinar del Rio, Cuba.

Fundulus cubensis Eigenmann, Bull. U. S. Fish Com., XXII, 1902 (1903), 222, Pinar del Rio, Cuba.

Genus 440. LEPTOLUCANIA Myers.

Leptolucania Myers, Amer. Mus. Novitates, June 6, 1924, 8 (*Heterandria ommata* Jordan=*Zygonectes mannii* Hay).

1334. Leptolucania ommata (Jordan).
Florida; Indian River and Santa Fe River, and their tributaries.
Heterandria ommata Jordan, Proc. U. S. Nat. Mus., VII, 1884, 323, Indian River, Fla.
Zygonectes mannii Hay, loc. cit., VIII, 1885, 555, Yellow Water River, Fla.

Genus 441. CHRIOPEOPS Fowler.
Chriopeops Fowler, Proc. Acad. Nat. Sci. Phila., LXVIII, 1916, 425 (*Lucania goodei* Jordan).

1335. Chriopeops goodei (Jordan).
Waters of the Florida Everglades; locally abundant.
Lucania goodei Jordan, Proc. U. S. Nat. Mus., II, 1879, 240, Arlington River, Fla., a tributary of the St. Johns.

Genus 442. LUCANIA Girard.
Lucania Girard, Proc. Acad. Nat. Sci. Phila., XI, 1859, 118 (*Limia venusta* Girard); not *Lucanus*, a genus of beetles.

1336. Lucania parva (Baird and Girard). *Rainwaterfish; Little killifish.*
Atlantic coast from Connecticut to Key West, Texas, and Mexico.
Cyprinodon parvus Baird and Girard, Ninth Smithson. Rept., 1854 (1855), 345, Long Island.
Limia venusta Girard, U. S. Mex. Bound. Surv., Ichth., 1859, 71, pl. 39, figs. 20–23, Indianola, Tex.
Lucania affinis Girard, Proc. Acad. Nat. Sci. Phila., XI, 1859, 118, Matamoras, Mexico.

Genus 443. FUNDULUS Lacépède.
Fundulus Lacépède, Hist. Nat. Poiss., V, 1803, 37 (*Fundulus mudfish* Lacépède=*Cobitis heteroclita* Linnæus).
Hydrargyra Lacépède, loc. cit., 378 (*H. swampina* Lacépède=*Fundulus majalis* Walbaum).
Borborys (Broussonet) Goode and Bean, Proc. U. S. Nat. Mus., VIII, 1885, 205 (*Cobitis heteroclitus* Linnæus).
Gambusinus Jordan and Evermann, Fish. North and Mid. Amer., 1896, 633 (*Fundulus rathbuni* Jordan and Meek).
Galasaccus Fowler, Proc. Acad. Nat. Sci. Phila., LXVIII, 1916, 417 (*Hydrargyra similis* Baird and Girard).

1337. Fundulus heteroclitus (Linnæus). *Common killifish; Minnow; Pike minnow; Mummichog; Mud-minnow; Muddabbler; Cobbler.*
Coast of Maine to the Rio Grande; Gulf coast; common in brackish waters.
Cobitis heteroclita Linnæus, Syst. Nat., ed. XII, 1766, 500, Charleston, S. C.
Pœcilia cœnicola Bloch and Schneider, Syst. Ichth., 1801, 452, Carolinas.
Fundulus mudfish Lacépède, Hist. Nat. Poiss., V, 1803, 37, Carolinas.
Hydrargyra swampina Lacépède, loc. cit., 378, South Carolina.
Fundulus nisorius Cope, Proc. Amer. Phil. Soc. Phila., XI, 1870, 456, reported from Gaboon, West Africa, appears to be *heteroclitus*, wrong locality.

1338. Fundulus heteroclitus fonticola Cuvier and Valenciennes.
West Indies.
Fundulus fonticola Cuvier and Valenciennes, Hist. Nat. Poiss., XVIII, 1846, 148 (198), mountain springs of Porto Rico.
Fundulus antillarum Fowler, Proc. Acad. Nat. Sci. Phila., LXVIII, 1916, 418, fig. 1, St. Martins, West Indies.

1339. Fundulus heteroclitus bermudæ Günther. *Mangrove minnow.*
Bermudas.
Fundulus bermudæ Günther, Ann. Mag. Nat. Hist., ser. 4, XIV, 1874, 370, Bermudas.
Fundulus rhizophoræ Goode, Amer. Jour. Sci. Arts, XIII, 1877, 298, Basden Pond, Bermudas.

1340. Fundulus heteroclitus macrolepidotus (Walbaum). *Common cobbler; Killifish; Catfish; Dogfish; Killy; Killie; River minnow; Mummichog; Blunthead.*

Maine to Virginia; common in brackish waters. Hardly distinct from *F. heteroclitus*, of which it is the northern representative.

Cobitis macrolepidota Walbaum, Artedi Pisc., III, 1792, 11, Long Island; after Schöpf.

Cobitis killifish Walbaum, loc. cit., 12, Long Island; after Schöpf.

Esox pisciculus Mitchill, Trans. Lit. Phil. Soc. N. Y., I, 1815, 440, New York.

Esox pisculentus Mitchill, loc. cit., 441, New York.

Hydrargyra nigrofasciata LeSueur, Jour. Acad. Nat. Sci. Phila., I, 1817, 133, Newport, R. I.

Fundulus viridescens DeKay, New York Fauna: Fishes, 1842, 217, New York.

Fundulus zebra DeKay, loc. cit., 218, New York.

Hydrargyra ornata LeSueur, loc. cit., 131, Delaware River, near Philadelphia.

1341. Fundulus heteroclitus grandis Baird and Girard.

Gulf coast of the United States.

Fundulus grandis Baird and Girard, Proc. Acad. Nat. Sci. Phila., VI, 1853, 389, Indianola, Tex.

Fundulus floridensis Girard, loc. cit., XI, 1859, 157, Charlotte Bay, Fla.

Zygonectes funduloides Evermann, Bull. U. S. Fish Com., XI, 1891, 85, pl. 35, fig. 3, Dickinson Bayou, Dickinson, Tex.

1342. Fundulus heteroclitus badius Garman.

Gulf of St. Lawrence.

Fundulus heteroclitus badius Garman, Mem. Mus. Comp. Zool., XIX, 1895, Grand Manan.

1343. Fundulus majalis (Walbaum). *Killifish; Mayfish; Rockfish; Catfish; Bass killy.*

Cape Cod to Florida, chiefly marine in shallow bays.

Cobitis majalis Walbaum, Artedi Pisc., II, 1792, 12, Long Island; after *Mayfish* Schöpf.

Esox flavulus Mitchill, Trans. Lit. Phil. Soc. N. Y., I, 1815, 439, New York.

Esox zonatus Mitchill, loc. cit., 443, New York.

Hydrargyra trifasciata Storer, Jour. Bost. Soc. Nat. Hist., I, 1837, 417, Massachusetts.

Hydrargyra vernalis Cuvier and Valenciennes, Hist. Nat. Poiss., XVIII, 1846, 154 (206), pl. 531; probably South Carolina.

1344. Fundulus ocellaris Jordan and Gilbert.

Pensacola to Fort Myers, Fla.

Fundulus ocellaris Jordan and Gilbert, Proc. U. S. Nat. Mus., V, 1882, 254, Pensacola, Fla.

1345. Fundulus parvipinnis Girard.

Coast of California from Point Conception southward to Lower California.

Fundulus parvipinnis Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 154, San Diego, Calif.

1346. Fundulus parvipinnis brevis Osburn and Nichols.

Magdalena Bay, Lower California.

Fundulus parvipinnis brevis Osburn and Nichols, Bull. Amer. Mus. Nat. Hist., XXV, 1916, 150, fig. 5, Magdalena Bay, Lower California.

1347. Fundulus pallidus Evermann.

Galveston Bay near Swan Lake, Tex.

Fundulus pallidus Evermann, Bull. U. S. Fish Com., XI, 1891 (1892), 84, pl. 35; Galveston Bay near Swan Lake, Tex.

1348. Fundulus vinctus Jordan and Gilbert.

Coast of Lower California.

Fundulus vinctus Jordan and Gilbert, Proc. U. S. Nat. Mus., V, 1882, 355, Cape San Lucas, Lower California.

1349. Fundulus confluentus Goode and Bean.
Streams of Florida.
Fundulus confluentus Goode and Bean, Proc. U. S. Nat. Mus., II, 1879, 118, Lake Monroe, Fla.

1350. Fundulus albolineatus Gilbert.
Tennessee Basin in Alabama.
Fundulus albolineatus Gilbert, Bull. U. S. Fish Com., IX, 1889 (1891), 149, Spring Creek, Huntsville, Ala.

Subgenus GALASACEUS Fowler.

1351. Fundulus similis (Baird and Girard). *Sac-à-lait.*
Coast of the Gulf States.
Hydrargyra similis Baird and Girard, Proc. Acad. Nat. Sci. Phila., VI, 1853, 389, Indianola, Tex.

Genus 444. ZYGONECTES Agassiz.
Zygonectes Agassiz, Amer. Jour. Sci. Arts, 1854, 135 (*Semotilus olivaceus* Raf. = *Semotilus notatus* Raf.).

1352. Zygonectes notatus (Rafinesque). *Top minnow.*
Michigan to Alabama, Mississippi, and Texas; generally abundant in ponds and canals.
Semotilus notatus Rafinesque, Ichth. Ohiensis, 1820, 86, tributaries of Ohio River in Kentucky; vaguely described but recognizable.
Pœcilia olivacea Storer, Proc. Bost. Soc. Nat. Hist., II, 1845 (1848), 51, Florence, Ala.
Fundulus tenellus Baird and Girard, Proc. Acad. Nat. Sci. Phila., VI, 1853, 389, Prairie Mer Rouge, La., and Russellville, Ky.
Zygonectes lateralis Agassiz, Amer. Jour. Sci. Arts, XVII, 1854, 353, Mobile, Ala.
Zygonectes zonatus Agassiz, loc. cit., 353, St. Louis, Mo.
Zygonectes pulchellus Girard, Proc. Acad. Nat. Sci. Phila., XI, 1859, 113, Sugar Loaf Creek, Ark.
Fundulus aureus Cope, loc. cit., XVII, 1865, 78, Sugar Loaf Creek, Ark.

1353. Zygonectes sciadicus (Cope).
Middle Missouri River Basin; abundant in ponds and sluggish creeks in eastern Nebraska and southeastern South Dakota.
Fundulus sciadicus Cope, Proc. Acad. Nat. Sci. Phila., XVII, 1865, 78, Platte River, Nebr.
Haplochilus floripinnis Cope, Proc. Amer. Phil. Soc., XIV, 1874, 138, Platte River, at Denver, Colo.
Zygonectes lineatus Garman, Bull. Mus. Comp. Zool., VIII, 1881, 88, northeastern Wyoming.
Zygonectes macdonaldi Meek, Bull. U. S. Fish Com., IX, 1889, 122, pl. 42, fig. 1, Jones Creek, Dixon, Mo., Osage fork of Gasconade River at Mansfield, Mo.
Fundulus scartes Meek, loc. cit., XV, 1895, 347, St. Francis River, Big Bay, Ark.

1354. Zygonectes chrysotus (Holbrook).
Coastwise swamps, South Carolina to Florida; rather common.
Fundulus chrysotus Holbrook, in Günther, Cat., VI, 1866, 317, Charleston, S. C.
Zygonectes henshalli Jordan, Proc. U. S. Nat. Mus., II, 1879, 237, San Sebastian River, Fla.
Gambusia arlingtonia Goode and Bean, loc. cit., 118, Arlington River, Fla.

1355. Zygonectes cingulatus (Cuvier and Valenciennes).
New Jersey to Florida, in coastwise swamps, not rare; Escambia River at Flomaton, Ala.
Fundulus cingulatus Cuvier and Valenciennes, Hist. Nat. Poiss., XVIII, 1846, 147 (197), United States.
Zygonectes rubrifrons Jordan, Proc. U. S. Nat. Mus., II, 1879, 237, San Sebastian River, Fla.
Zygonectes auroguttatus Hay, loc. cit., VIII, 1885, 556, Westville, Fla.

1356. **Zygonectes dispar** Agassiz. *Top minnow.*
Northern Ohio to Illinois, south to Mississippi; Maumee, Wabash, Big Black and Pearl Rivers.
Zygonectes dispar Agassiz, Amer. Jour. Sci. Arts, XVII, 1854, 353, creeks opposite St. Louis; Beardstown, Ill.

1357. **Zygonectes nottii** Agassiz. *Star-headed minnow; Top minnow.*
Swamps and streams of Florida and neighboring States; not rare.
Zygonectes nottii Agassiz, Amer. Jour. Sci. Arts, XVII, 1854, 353, Mobile, Ala.
Zygonectes lineolatus Agassiz, loc. cit., 353, Augusta, Ga.
Zygonectes hieroglyphicus Agassiz, loc. cit., 353, Mobile, Ala.
Fundulus zonatus Cuvier and Valenciennes, Hist. Nat. Poiss., XVIII, 1846, 146 (196), interior of South Carolina; not *Esox zonatus* Mitchill.
Zygonectes craticula Goode and Bean, Proc. U. S. Nat. Mus., V, 1882, 433, Elbow Creek, a tributary of Indian River, eastern Florida.
Zygonectes zonifer Jordan and Meek, loc. cit., VII, 1884, 482, Allapaha River, Nashville, Ga.

1358. **Zygonectes guttatus** Agassiz.
Alabama.
Zygonectes guttatus Agassiz, Amer. Jour. Sci. Arts, XVII, 1854, 353, Mobile, Ala.
Zygonectes escambiæ Bollman, Proc. U. S. Nat. Mus., IX, 1886, 463, Escambia River, Flomaton, Ala.

1359. **Zygonectes luciæ** (Baird).
Atlantic coast from Long Island to Virginia; rare.
Hydrargyra luciæ Baird, Ninth Smithson. Rept., 1854, 344, Beesleys Point, N. J.

1360. **Zygonectes pulvereus** Evermann.
Coast of Texas.
Zygonectes pulvereus Evermann, Bull. U. S. Fish Com., XI, 1891 (1892), 85, Dickinson Bayou; Buffalo Bayou at Houston; Oso Creek at Corpus Christi, Tex.

1361. **Zygonectes jenkinsi** Evermann.
Coast of Texas.
Zygonectes jenkinsi Evermann, Bull. U. S. Fish Com., XI, 1891 (1892), 86, Dickinson Bayou, arm of Galveston Bay, Tex.

1362. **Zygonectes limi** (Vaillant).
Fundulus limi Vaillant, Bull. Soc. Philom. (8), VI, 1894, 71, Lower California.
Fundulus meeki Evermann, Proc. Biol. Soc. Wash., XXI, 1908 (Jan. 23), 25, fig. 1, San Ignacio, central Lower California.

1363. **Zygonectes melapleurus** (Gosse). *Ticky-ticky.*
Streams of Jamaica.
Pœcilia melapleura Gosse, Naturalists' Sojourn in Jamaica, 1851, 84, Jamaica.

Subgenus FONTICOLA Jordan and Evermannn.

1364. **Zygonectes seminolis** (Girard).
Florida.
Fundulus seminolis Girard, Proc. Acad. Nat. Sci. Phila., XI, 1859, 60, Palatka, eastern Florida.

Subgenus MENONA Jordan and Evermann.

1365. **Zygonectes diaphanus** (LeSueur).
Maine to North Carolina in river mouths; New York to northern Illinois in lakes.
Hydrargyra diaphana LeSueur, Jour. Acad. Nat. Sci. Phila., I, 1817, 130, Saratoga Lake, N. Y.
Hydrargyra multifaciata LeSueur, loc. cit., 131, Saratoga Lake, N. Y.

1366. **Zygonectes diaphanus menona** (Jordan and Copeland).
Streams and lakes of Ohio to Iowa, Minnesota, and South Dakota.
Fundulus menona Jordan and Copeland, Proc. Acad. Nat. Sci. Phila., XXIX, 1877, 68, Catfish River, Dane County, Wis., outlet of Lake Menona, Madison, Wis.

Subgenus GAMBUSINUS Jordan and Evermann.

1367. **Zygonectes rathbuni** (Jordan and Meek).
Eastern North Carolina, abundant in spring brooks, not descending to salt water.
Fundulus rathbuni Jordan and Meek, Proc. U. S. Nat. Mus., XI, 1888, 356, Reedy Fork, Allemance Creek, Buffalo Creek, and other tributaries of the Cape Fear River, about Greensboro, N. C.

1368. **Zygonectes extensus** (Jordan and Gilbert).
Coast of Lower California.
Fundulus extensus Jordan and Gilbert, Proc. U. S. Nat. Mus., V, 1882, 355, Cape San Lucas, Lower California.

Genus 445. XENISMA Jordan.
Xenisma Jordan, Bull. Buffalo Soc. Nat. Hist., 1876, 142 (*X. stellifera* Jordan).

1369. **Xenisma catenatum** (Storer). *Studfish.*
Tennessee and Cumberland Rivers and clear streams of the Ozark Mountains.
Pœcilia catenata Storer, Synopsis, 1846, 430, Tennessee River, Florence, Ala.

1370. **Xenisma stellifer** Jordan. *Studfish.*
Alabama River and tributaries.
Xenisma stellifera Jordan, Ann. Lyc. Nat. Hist. N. Y., XI, 1876, 322, Etowah and Oostanaula Rivers, Rome, Ga.

Genus 446. PLANCTERUS Garman.
Plancterus Garman, Mem. Mus. Comp. Zool., XIX, 1895, 96 (*Fundulus kansæ* Garman).

1371. **Plancterus zebra** (Girard).
Kansas, western Iowa and South Dakota to Texas and New Mexico, in upper tributaries of Kansas and Red Rivers.
Hydrargyra zebra Girard, Proc. Acad. Nat. Sci. Phila., XI, 1859, 61, tributaries of Rio Grande "between Fort Defiance and Fort Union, N. Mex.," name preoccupied in *Fundulus*.
Fundulus adinia Jordan and Gilbert, Synopsis, 1883, 335, Rio Grande at Brownsville, Tex.

1372. **Plancterus kansæ** (Garman).
Kansas.
Fundulus kansæ Garman, Mem. Mus. Comp. Zool., XIX, 1895, 103, pl. 2, fig. 10, Kansas.
Fundulus zebrinus Jordan and Gilbert, Synopsis, 1882, 891; not of Girard.

Genus 447. OXYZYGONECTES Fowler.
Oxyzygonectes Fowler, Proc. Acad. Nat. Sci. Phila., LXVIII, 1916, 425 (*Haplochilus dovii* Günther).

1373. **Oxyzygonectes balboæ** (Fowler).
Panama; only one example known.
Fundulus balboæ Fowler, Proc. Acad. Nat. Sci. Phila., LXVIII, 1916, 423, fig. 2, Panama.

1374. **Oxyzygonectes dovii** (Günther).
Coast of Costa Rica.
Haplochilus dovii Günther, Cat., VI, 1866, 316, Punta Arenas, Costa Rica.

Genus 448. RIVULUS Poey.
Rivulus Poey, Memorias, II, 1861, 307, (*R. cylindraceus* Poey).
Cynodonichthys Meek, Field Col. Mus. Zool., V, 1904, 101 (*C. tenuis* Meek).

1375. **Rivulus cylindraceus** Poey.
Cuba.
Rivulus cylindraceus Poey, Memorias, II, 1861, 308, stream at Mardazo, near Habana, Cuba.
Rivulus marmoratus Poey, Anal. Soc. Española Hist. Nat., IX, 1880, 248, Cuba.

1376. Rivulus heyei *Nichols.*
Haiti.
Rivulus heyei Nichols, Bull. Amer. Mus. Nat. Hist., XXXII, 1914, 143, Haiti.

1377. Rivulus isthmensis Garman.
Streams of Panama and Costa Rica.
Rivulus isthmensis Garman, Mem. Mus. Comp. Zool., XIX, 1895, 140, Rio San Jose, Costa Rica.

1378. Rivulus brunneus Meek and Hildebrand.
Panama.
Rivulus brunneus Meek and Hildebrand, Field Mus. Nat. Hist., Zool., X, 1913, 86, Toro Point, Canal Zone, Panama.

1379. Rivulus flabellicauda Regan.
Streams of Costa Rica.
Rivulus flabellicauda Regan, Ann. Mag. Nat. Hist., XIX, 1907, 64, Juan Vinas, Costa Rica.

1380. Rivulus godmanni Regan.
Rivulus godmanni Regan, Ann. Mag. Nat. Hist., 7th ser., XIX, 1907, 65, Guatemala.

1381. Rivulus tenuis (Meek).
Cynodontichthys tenuis Meek, Field Col. Mus., Zool., V, 1904, 101, El Hule, Oaxaca, Mexico.

1382. Rivulus harti (Boulenger). *Rainfish; Small guabin.*
Mountain streams of Trinidad and Granada in rain-water pools.
Haplochilus harti Boulenger, Proc. Zool. Soc. Lond., I, 1906, 389, Pl. XXI, fig. 2, Trinidad.

1383. Rivulus chucunaque Breder.
Tuyra Basin, Pacific slope of Panama.
Rivulus chucunaque Breder (C. M.), Amer. Mus. Novitates, No. CLXXX, July 6, 1925, fig. 6, Rio Chucunaque, near Yavisa, Darien, Panama.
Rivulus chucunaque sucubti Breder, loc. cit., 8, fig. 7, Rio Sucubti, Darien, Panama.

Genus 449. ADINIA Girard.
Adinia Girard, Proc. Acad. Nat. Sci. Phila., XI, 1859, 117 (*A. multifasciata* Girard).

1384. Adinia multifasciata Girard.
Gulf Coast, west Florida to Texas; locally abundant in shallow lagoons.
Adinia multifasciata Girard, Proc. Acad. Nat. Sci. Phila., XI, 1859, 118, Galveston; St. Joseph Island, Indianola, Tex.
Fundulus xenicus Jordan and Gilbert, Proc. U. S. Nat. Mus., V, 1882, 255, Laguna Grande, Pensacola, Fla.; substitute for *multifasciata*, preoccupied in *Fundulus* but not in *Adinia*.

Genus 450. FLORIDICHTHYS Hubbs.
Floridichthys Hubbs, Univ. Mich. Mus. Zool. Misc. Pub. No. 16, July 9, 1926, 16 (*Cyprinodon carpio* Günther).

1385. Floridichthys carpio (Günther).
Florida to Texas.
Cyprinodon carpio Günther, Cat., VI, 1866, 306, America.
Cyprinodon mydrus Goode and Bean, Proc. U. S. Nat. Mus., V, 1882, 433, Pensacola, Fla.

Genus 451. JORDANELLA Goode and Bean.
Jordanella Goode and Bean, Proc. U. S. Nat. Mus., II, 1879, 117 (*Jordanella floridæ* Goode and Bean).

1386. Jordanella floridæ Goode and Bean.
Streams from Florida to Yucatan.
Jordanella floridæ Goode and Bean, Proc. U. S. Nat. Mus., II, 1879, 117, Lake Monroe, Fla.

Genus 452. CYPRINODON Lacépède.
Cyprinodon Lacépède, Hist. Nat. Poiss., V, 1803, 486 (*C. variegatus* Lacépède).
Prinodon Rafinesque, Anal. Nat., 1815, 88 (*Cyprinodon variegatus* Lacépède).
Encrotes Gistel, Thierreich, IX, 1848 (*Cyprinodon variegatus* Lacépède).
Trifarcius Poey, Memorias, II, 1861, 306 (*T. riverendi* Poey).

1387. Cyprinodon variegatus Lacépède. *Killifish; Pursy minnow; Sheepshead minnow; Variegated minnow; Mummichog.*
Cape Cod to Rio Grande, in bays, rarely entering streams.
Cyprinodon variegatus Lacépède, Hist. Nat. Poiss., V, 1803, 486, South Carolina.
Esox ovinus Mitchill, Trans. Lit. Phil. Soc. N. Y., I, 1815, 441, New York.
Lebias ellipsoidea LeSueur, Jour. Acad. Nat. Sci. Phila., II, 1821, 6, Florida.
Lebias rhomboidalis Valenciennes, in Humboldt, Obs. Zool. Phil. Mag., II, 1810 (1811), 100, Lake Pontchartrain, La.
Cyprinodon gibbosus Baird and Girard, Proc. Acad. Nat. Sci. Phila., VI, 1853, 390, Indianola, Tex.

1388. Cyprinodon riverendi (Poey).
Cuba and Florida Keys; common at Key West in shallow shore waters.
Trifarcius riverendi Poey, Memorias, II, 1861, 306, Habana; scarcely distinct from *C. variegatus*.

1389. Cyprinodon dearborni Meek.
Curaçao, Dutch West Indies.
Cyprinodon dearborni Meek, Field Mus. Nat. Hist., Zool., VII, 1909, 208, Willemstad, Curaçao, Dutch West Indies.

1390. Cyprinodon felicianus (Poey).
Cuba.
Trifarcius felicianus Poey, Synopsis, 1867, 412, Habana, Cuba.

1391. Cyprinodon latifasciatus Garman.
Parras, Coahuila, Mexico.
Cyprinodon latifasciatus Garman, Bull. Mus. Comp. Zool., VIII, 1881, No. 3, 92, Parras, Coahuila, Mexico.

1392. Cyprinodon bovinus Baird and Girard.
Leon Spring in southwestern Texas.
Cyprinodon bovinus Baird and Girard, Proc. Acad. Nat. Sci. Phila., VI, 1853, 389, Leon Spring, Tex.

1393. Cyprinodon martæ Steindachner.
Santa Marta, coast of Colombia, South America.
Cyprinodon martæ Steindachner, Ichth. Beitr., IV, 1875, 61, Santa Marta, Rio Cauca.

1394. Cyprinodon rubrofluviatilis Fowler.
Streams of Texas.
Cyprinodon bovinus rubrofluviatilis Fowler, Proc. Acad. Nat. Sci. Phila., LXVIII, 1916, 430, fig. 4, Rio Brazos, Seymour, Tex., and Red River, Tulip and Clarenden, Tex.

1395. Cyprinodon elegans Baird and Girard.
Tributaries of the Rio Grande.
Cyprinodon elegans Baird and Girard, Proc. Acad. Nat. Sci. Phila., VI, 1853, 389, Comanche Spring, Tex.
Cyprinodon eximius Girard, loc. cit., XI, 1859, 158, Chihuahua River, Mexico.

1396. Cyprinodon macularius Baird and Girard.
Springs and streams of the desert, from southern Nevada to Sonora, locally abundant, often found in Artesian water and desert water holes in southwestern California.
Cyprinodon macularius Baird and Girard, Proc. Acad. Nat. Sci. Phila., VI, 1853, 389, Rio San Pedro, Ariz.
Cyprinodon californiensis Girard, loc. cit., XI, 1859, 158, San Diego County, Calif., probably from Salt Springs in the desert (now Imperial County).
Lucania browni Jordan and Richardson, Proc. U. S. Nat. Mus., XXXIII, 1908, 319, hot spring in southeastern California.

1397. Cyprinodon nevadensis Eigenmann.
Death Valley.
Cyprinodon nevadensis Eigenmann, Proc. Calif. Acad. Sci., I, 1889, 270, Saratoga Springs, Death Valley, Inyo County, Calif.

1398. Cyprinodon baileyi Gilbert.
Pahranagat Valley, Nev.
Cyprinodon macularius baileyi Gilbert, Death Valley Exped., 1893, 233, Pahranagat Valley, Nev.

Family 114. EMPETRICHTHYIDÆ

Genus 453. EMPETRICHTHYS[34] **Gilbert.**
Empetrichthys Gilbert, Death Valley Exped., Fishes, 1893, 233 (*E. merriami* Gilbert.

1399. Empetrichthys merriami Gilbert.
Death Valley in southeastern California.
Empetrichthys merriami Gilbert, Death Valley Exped., in North American Fauna, No. 7, May 31, 1893, 234, Ash Meadows, Amargosa Desert, on boundary between California and Nevada.

Family 115. GOODEIDÆ

Genus 454. ZOOGONETICUS Meek.
Zoogoneticus Meek, Field Col. Mus., Zool., III, 1902, 91 (*Z. diazi* Meek).

1400. Zoogoneticus dugesii (Bean).
Guanajuato, Mexico.
Fundulus dugesii Bean, Proc. U. S. Nat. Mus., X, 1887, 373, pl. 20, Guanajuato, Mexico.

1401. Zoogoneticus diazi Meek.
Lakes of Michoacan, Mexico.
Zoogoneticus diazi Meek, Field Col. Mus., Zool., III, 1902, 93, figured in Field Col. Mus., Zool., V, 1904, 114, fig. 32, Lake Patzcuaro, Mexico.
Zoogoneticus miniatus Meek, Field Mus. Nat. Hist., Zool., V, 1914, 115, fig. 33, Lake Zirahuen, Mexico.

1402. Zoogoneticus robustus (Bean).
Rio Lerma, Guanajuato.
Fundulus robustus Bean, Proc. U. S. Nat. Mus., XV, 1892, 285, pl. 44, fig. 2, Guanajuato, Mexico.
Zoogoneticus maculatus Regan, Ann. Mag. Nat. Hist. (7), XIII, 1904, 256, Rio Santiago (Lerma), Mexico.

1403. Zoogoneticus quitzeoensis (Bean).
Rio Lerma, Mexico.
Platypœcilus quitzeoensis Bean, Proc. U. S. Nat. Mus., XXI, 1899 (Nov. 21, 1898), 540, fig. 1, Lake Quitzeo, Lerma Basin.

Genus 455. GIRARDINICHTHYS Bleeker.
Girardinichthys Bleeker, Act Soc. Sci. Indo-Nederl., VII, 1860, 481 (*G. innominatus* Bleeker, after a "*Lucania* sp." of Girard).
Limnurgus Günther, Cat., VI, 1866, 309 (*L. variegatus* Günther = *Girardinichthys* Bleeker).

1404. Girardinichthys innominatus Bleeker.
Valley of Mexico.
Lucania sp., Girard, Proc. Acad. Nat. Sci. Phila., XI, 1859, 118, City of Mexico.
Girardinichthys innominatus Bleeker, Act. Soc. Sci. Indo-Nederl., VII, 1860, 481, City of Mexico.
Limnurgus variegatus Günther, Cat., VI, 1866, 309, City of Mexico.
Characodon geddesi Regan, Ann. Mag. Nat. Hist., (7), XIII, 1904, 257, Xochomilco, Morelos, Mexico.

Genus 456. CHARACODON Günther.
Characodon Günther, Cat., VI, 1866, 308 (*C. lateralis* Günther).

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[34] This genus apparently a desert derivative of the extinct genus, *Parafundulus*, has probably no affinity with *Orestias* of Peru.

1405. Characodon variatus Bean.
Tributaries of Rio Lerma about Guanajuato, Mexico; locally common.
Characodon variatus Bean, Proc. U. S. Nat. Mus., X, 1887, 370, pl. 20, fig. 1, Guanajuato, Mexico.
Characodon ferrugineus Bean, loc. cit., 372, pl. 20, figs. 3 and 4, Guanajuato, Mexico.
Characodon eiseni Rutter, Proc. Calif. Acad. Sci., 2d ser., VI, 1896, 266, branch of the Rio Grande de Santiago at Tepic, Mexico.

1406. Characodon lateralis Günther.
Streams of Central America.
Characodon lateralis Günther, Cat., VI, 1866, 308, Central America.

1407. Characodon garmani Jordan and Evermann.
Tributaries of Rio Grande in Coahuila, Mexico.
Characodon garmani Jordan and Evermann, Fish. North and Mid. Amer., III, 1898, 2831, Parras, Coahuila, Mexico.

1408. Characodon furcidens Jordan and Gilbert.
Cape San Lucas southward to Colima, Mexico.
Characodon furcidens Jordan and Gilbert, Proc. U. S. Nat. Mus., V, 1882, 354, Cape San Lucas, Lower California.

Genus 457. LERMICHTHYS Hubbs.
Lermichthys Hubbs, Univ. Mich. Mus. Zool. Misc. Pub. No. 16, July 9, 1926, 18 (*Characodon multiradiatus* Meek).

1409. Lermichthys multiradiatus (Meek).
Rio Lerma Basin, Mexico.
Characodon multiradiatus Meek, Field Col. Mus., Zool., V, 1904, 119, Rio Lerma, Mexico.
Girardinichthys limnurgus Jordan and Evermann, Proc. Calif. Acad. Sci., 4th ser., XVI, Apr. 27, 1927, 502, Lake Lerma, Mexico.

Genus 458. BALSADICHTHYS Hubbs.
Balsadichthys Hubbs, Univ. Mich. Mus. Zool., Misc. Pub. No. 16, July 9, 1926, 19 (*Goodea whitei* Meek).

1410. Balsadichthys whitei (Meek).
Rio de las Balsas Basin, Mexico.
Goodea whitei Meek, Field Col. Mus., Zool., V, 1904, 137, fig. 40, Rio Balsas, Yantepec, Cuautla, Mexico.

Genus 459. SKIFFIA Meek.
Skiffia Meek, Field Col. Mus., Zool., III, 1902, 102 (*S. lermæ* Meek).

1411. Skiffia variegata Meek.
Lake Zirahuen, Mexico.
Skiffia variegata Meek, Field Col. Mus., Zool., V, 1904, 143, Lake Zirahuen, Mexico.

1412. Skiffia lermæ Meek.
Skiffia lermæ Meek, Field Col. Mus., Zool., III, 1902, 102, Lake Patzcuaro (Rio Lerma), Mexico.

1413. Skiffia bilineata (Bean).
Rio Lerma, Guanajuato, Mexico.
Characodon bilineatus Bean, Proc. U. S. Nat. Mus., X, 1887, 371, Guanajuato, Rio Lerma, Mexico.

1414. Skiffia multipunctata (Pellegrin).
Rio Lerma system; Lake Chapala, Mexico.
Xenendum multipunctatum Pellegrin, Bull. Mus. Hist. Nat., Paris, 1901, 205, Jalisco, Mexico.

Genus 460. GOODEA Jordan.
Goodea Jordan, Proc. U. S. Nat. Mus., II, 1879, 299 (*G. atripinnis* Jordan).
Xenendum Jordan and Snyder, Bull. U. S. Fish Com., XIX, 1899, 128, fig. 9 (1906) (*X. xaleicone*=*Characodon luitpoldi* Steindachner).

1415. Goodea atripinnis Jordan.
Tributaries of Rio Lerma, Pacific slope, Mexico.
Goodea atripinnis Jordan, Proc. U. S. Nat. Mus., II, 1879, 299, Leon, Guanajuato, Mexico.

1416. Goodea calientis (Jordan and Snyder).
Streams of central Mexico.
Xenendum caliente Jordan and Snyder, Bull. U. S. Fish Com., XIX, 1899, 127, fig. 8, Aguas Calientes, Mexico.

1417. Goodea luitpoldi (Steindachner).
Basin of Rio Lerma, Mexico.
Characodon luitpoldi Steindachner, Einige Fischarten Mexicos, 1895, 12, pl. 3, figs. 3–36, Lago de Patzcuaro, Michoacan, Mexico.
Xenendum xaliscone Jordan and Snyder, Bull. U. S. Fish Com., XIX, 1899 (1901), 128, fig. 9, Laguna de Chapala, near Ocotlan, Jalisco, Mexico.

1418. Goodea toweri Meek.
Rio Panuco, San Luis Potosi, Mexico.
Goodea toweri Meek, Field Col. Mus., Zool., V, 1904, 138, fig. 41, Rio Verde, San Luis Potosi, Mexico.

1419. Goodea captiva Hubbs.
Panuco Basin, Mexico.
Goodea captiva Hubbs, Occ. Papers, Mus. Zool., Univ. Mich., No. 148, 1924, 4; upper tributary of the Rio Panuco at Jesus Maria, Mexico.

Family 116. PŒCILIIDÆ. Top minnows

Genus 461. BELONESOX Kner.
Belonesox Kner, Sitzungsber., Kais. Akad. Wiss. Wien, 1860, XL, 419 (*B. belizanus* Kner).

1420. Belonesox belizanus Kner.
Southern Mexico, Honduras, and Guatemala.
Belonesox belizanus Kner, Sitzungsber., Kais. Akad. Wiss. Wien, XL, 1860, 419, with figure, Belize; largest of the Pœciliidæ.

Genus 462. CHAPALICHTHYS Meek.
Chapalichthys Meek, Field Col. Mus., Zool., III, 1902, 97 (*Characodon encaustus* Jordan and Snyder).

1421. Chapalichthys encaustus (Jordan and Snyder).
Lake Chapala, Mexico.
Characodon encaustus Jordan and Snyder, Bull. U. S. Fish Com., XIX, 1899 (1901), 126, Laguna de Chapala, near Ocotlan, Jalisco, Mexico.

Genus 463. HETEROPHALLUS Regan.
Heterophallus Regan, Ann. Mag. Nat. Hist., (8), XV, 1914, 66 (*H. rachovii* Regan).

1422. Heterophallus rachovii Regan.
Streams of eastern Mexico.
Heterophallus rachovii Regan, Ann. Mag. Nat. Hist., (8), XV, 1914, 66, Fig. A, Vera Cruz, Mexico.

Genus 464. GAMBUSIA Poey. *Guajacones.*
Gambusia Poey, Memorias, I, 1854, 382 (*G. punctata* Poey).
Hemiziphophorus Bleeker, Nat. Tijdschr. Neder.-Indie, XX, 1854, 440; type not named.
Paragambusia Meek, Field Col. Mus., Zool., V, 1904, 133 (*Gambusia nicaraguensis* Günther).
Heterophallina Hubbs (subgenus), Univ. Mich. Mus. Zool. Misc. Pub. No. 16, July 9, 1926 (*Gambusia regani* Hubbs).
Arthrophallus Hubbs (subgenus), loc. cit., 38 (*Heterandria patruelis* Baird and Girard).
Schizophallus Hubbs (subgenus), loc. cit., 40 (*Gambusia holbrookii* Girard).

1423. Gambusia patruelis (Baird and Girard). *Top minnow; Mosquitofish.*
Ditches, marshes, and lagoons, South Atlantic and Gulf States, lowland streams of the southwest; lower Mississippi from St. Louis to Louisiana and the Rio Grande. Introduced from Galveston into Hawaii, California, Formosa, Luzon, etc., a very effective mosquito killer.
Heterandria patruelis Baird and Girard, Proc., Acad. Nat. Sci. Phila., VI, 1853, 390, Rio Sabinal, Rio Nueces, and Elm Creek, Tex.
Heterandria affinis Baird and Girard, loc. cit., 390, Rio Medina and Rio Salado, Tex.
?*Gambusia speciosa* Girard, loc. cit., 1859, 121, Rio San Diego, Nuevo Leon, Mexico.
?*Gambusia gracilis* Girard, loc. cit., 1859, 121, Matamoros, Mexico; name preoccupied.
Gambusia humilis Günther, Cat., VI, 1866, 334; substitute for *gracilis*.
Haplochilus melanops Cope, Proc. Amer. Phil. Soc., 1870, 457, Neuse River, N. C.
Zygonectes (*Micristius*) *brachypterus* Cope, Bull., U. S. Nat. Mus., XX, 1880, 34, Trinity River, Fort Worth, Tex.
Zygonectes inurus Jordan, Proc., U. S. Nat. Mus., 1882, 143, Cache Creek, southern Illinois.
Gambusia modesta Ahl, Blätter für Aquarium- und Terrariakunde, XXXVI, 1923, 220,
Gambusia myersi Ahl, loc. cit., 1925, 36, with figure (substitute for *modesta* preoccupied).

1424. Gambusia holbrooki (Girard). *Holbrook's top minnow.*
New Jersey to Florida and Alabama.
Heterandria holbrooki Agassiz, in Girard, Proc. Acad. Nat. Sci. Phila., XI, 1859, 61, Charleston, S. C.
Haplochilus melanops Cope, Proc. Amer. Phil. Soc., XI, 1870, 457, Neuse River, N. C.
Zygonectes atrilatus Jordan and Brayton, Bull. U. S. Nat. Mus., XII, 1878, 84, Neuse River, Goldsboro, N. C.

1425. Gambusia nobilis (Baird and Girard).
Heterandria nobilis Baird and Girard, Proc. Acad. Nat. Sci. Phila., VI, 1853, 390, Leona and Comanche Spring, Rio Grande, Tex.

1426. Gambusia senilis Girard.
Rio Grande Basin.
Gambusia senilis Girard, Proc. Acad. Nat. Sci. Phila., XI, 1859, 122, Chihuahua, Mexico.

Subgenus HEMIXIPHOPHORUS Bleeker.

1427. Gambusia gracilis (Heckel).
Lowland streams of eastern Mexico.
Xiphophorus gracilis Heckel, Sitzungsber. Kais. Akad. Wiss. Wien, I, 1848, 300, taf. 9, figs. 3 and 4, Orizaba, Mexico.
Gambusia heckeli Bleeker, Fam. Cypr., 1860, 485.

Subgenus GAMBUSIA Poey.

1428. Gambusia punctata Poey. *Guajacon.*
Cuba.
Gambusia punctata Poey, Memorias, I, 1854, 384, Rio Almendares, Cuba.
Gambusia picturata Poey, Repertorio, 1868, 410, San Diego de los Baños, Cuba.
Gambusia punctata punctulata Garman, Mem. Mus. Comp. Zool., XIX, 1895, 87, Remedios, Cuba.

1429. Gambusia puncticulata Poey.
Streams of Cuba.
Gambusia puncticulata Poey, Memorias, I, 1854, 386, Cuba.

1430. Gambusia melapleura (Gosse). *Ticky-ticky.*
Streams of Jamaica; locally common.
Pœcilia melapleura Gosse, Naturalist's Sojourn in Jamaica, 1851, 84, Jamaica.

1431. **Gambusia nicaraguensis** Günther.
Southern Mexico and Central America.
Gambusia nicaraguensis Günther, Cat., VI, 1866, 366, Lake of Nicaragua.
Gambusia dovii Regan, Proc. Zool. Soc. Lond., 1913, 986, Lake Nicaragua.
Gambusia yucatana Regan, Ann. Mag. Nat. Hist., 8th ser., XIV, 1914, 67, Progreso, Yucatan.

1432. **Gambusia mcnieli** Fowler.
Panama.
Gambusia mcnieli Fowler, Proc. Acad. Nat. Sci. Phila., LXVIII, 1916, 433, Panama.

1433. **Gambusia wrayi** Regan.
Jamaica.
Gambusia wrayi Regan, Proc. Zool. Soc. Lond., 1913, 988, Pl. XCIX, figs. 3, 4 and text fig. 168B, Jamaica.

1434. **Gambusia caymanensis** Regan.
West Indies.
Gambusia caymanensis Regan, Proc. Zool. Soc. Lond., 1913, 990, Grand Cayman, West Indies.

1435. **Gambusia gracilior** Regan.
Jamaica.
Gambusia gracilior Regan, Proc. Zool. Soc. Lond., 1913, 989, Pl. XCIX, figs. 5, 6, and text fig. 168C, Jamaica.

1436. **Gambusia dominicensis** Regan.
Haiti.
Gambusia dominicensis Regan, Proc. Zool. Soc. Lond., 1913, 989, Pl. XCIX, fig. 7 and text fig. 169C, San Domingo.

1437. **Gambusia oligosticta** Regan.
Jamaica.
Gambusia oligosticta Regan, Proc. Zool. Soc. Lond., 1913, 988, Pl. XCIX, figs. 1, 2, and text fig. 169B, Jamaica.

1438. **Gambusia manni** Hubbs.
Bahamas.
Gambusia manni Hubbs, Copeia, 1927, 62, New Providence, one of the Bahamas.

Subgenus HETEROPHALLINA Hubbs.

1439. **Gambusia regani** Hubbs.
Rio Panuco, northwestern Mexico.
Gambusia regani Hubbs, Univ. Mich. Mus. Zool., Misc. Pub. No. 16, July 9, 1926, 28, Forlon, Tamaulipas, Mexico, in the River Forlon.

1440. **Gambusia vittata** Hubbs.
Santa Engracia, Tamaulipas, Mexico.
Gambusia vittata Hubbs, Univ. Mich. Mus. Zool. Misc. Pub. No. 16, July 9, 1926, 26, Rio Forlon, at Forlon, Tamaulipas, Mexico.

1441. **Gambusia panuco** Hubbs.
Rio Panuco, Mexico.
Gambusia panuco Hubbs, Univ. Mich. Mus. Zool. Misc. Pub. No. 16, July 9, 1926, 30, Rio Valles, at Valles, San Luis Potosi, Mexico.

Genus 465. BRACHYRHAPHIS Regan.
Brachyrhaphis Regan, Proc. Zool. Soc. Lond., 1913, 997 (*Gambusia rhabdophora* Regan).

1442. **Brachyrhaphis terrabensis** (Regan).
Pacific streams of Costa Rica.
Gambusia terrabensis Regan, Ann. Mag. Nat. Hist., (7), XIX, 1907, 260, Rio Grande de Terraba, Costa Rica.

1443. **Brachyrhaphis rhabdophora** (Regan).
Costa Rica.
Gambusia rhabdophora Regan, Ann. Mag. Nat. Hist., (8), II, 1908, 457 Volcano of Tenorio and Rio Grande de Terraba, Costa Rica.

1444. Brachyrhaphis olomina (Meek).
Valley of the Rio Grande de Tarcoles, Costa Rica.
Priapichthys olomina Meek, Field Mus. Nat. Hist., Zool., X, 1912, 114, Las Cañas, Alajuela, Costa Rica.

1445. Brachyrhaphis episcopi (Steindachner).
Isthmus of Panama at Obispo station, and streams of the Pacific slope of Panama.
Gambusia episcopi Steindachner, Ichth. Beitr., VI, 1878, 9, Obispo near Panama.
Gambusia latipunctata Meek and Hildebrand, Field Mus. Nat. Hist., Zool., X, 1913, 87, Arrijan, Panama.

1446. Brachyrhaphis cascajalensis (Meek and Hildebrand).
Streams of Atlantic slope of Panama.
Gambusia cascajalensis Meek and Hildebrand, Field Mus. Nat. Hist., Zool., X, 1913, 86, Rio Cascajal, Panama.

1447. Brachyrhaphis parismina (Meek).
Costa Rica.
Gambusia parismina Meek, Field Mus. Nat. Hist., Zool., X, 1912, 71, Costa Rica.

Genus 466. TRIGONOPHALLUS Hubbs.
Trigonophallus Hubbs, Univ. Mich. Mus. Zool. Misc. Pub. No. 16, July 9, 1926, 48 (*T. punctifer* Hubbs).

1448. Trigonophallus punctifer Hubbs.
Streams of Pacific coast of Panama.
Trigonophallus punctifer Hubbs, Univ. Mich. Mus. Zool. Misc. Pub. No. 16, July 9, 1926, 49, Quibari Creek, Rio Secamola at Kakintin.

Genus 467. PRIAPICHTHYS Regan.
Priapichthys Regan, Proc. Zool. Soc. Lond., 1913, 991 (*Gambusia annectans* Regan).

1449. Priapichthys annectens (Regan).
Streams of Atlantic slope of Costa Rica.
Gambusia annectens Regan, Ann. Mag. Nat. Hist., (7), XIX, 1907, 250, Costa Rica.

1450. Priapichthys annectens hesperis Hubbs.
Streams of the Pacific slope of Costa Rica.
Priapichthys annectens hesperis Hubbs, Univ. Mich. Mus. Zool. Misc. Pub. No. 13, Jan. 18, 1924, 22, Rio Maria Aquilar, Rio Grande de Tancoles, and their mountain tributaries.

1451. Priapichthys huberi Fowler.
Nicaragua.
Priapichthys huberi Fowler, Proc. Acad. Nat. Sci. Phila., LXXV, 1923, 27, Marceligo Creek, tributary of the Tunky River, at Miranda, Nicaragua.

Genus 468. PANAMICHTHYS Hubbs.
Panamichthys Hubbs, Univ. Mich. Mus. Zool. Misc. Pub. No. 13, Jan. 18, 1924, 8 (*Priapichthys panamensis* Meek and Hildebrand).

1452. Panamichthys panamensis (Meek and Hildebrand).
Priapichthys panamensis Meek and Hildebrand, Field Mus. Nat. Hist., Zool., X, 1916, 322, Panama.

Genus 469. PSEUDOXIPHOPHORUS Bleeker.
Pseudoxiphophorus Bleeker, Ichth. Indice Prodr. Cypr., in Acata Societ. Scient. Indo-Neer., VII, 1859, 483 (*Xiphophorus bimaculatus* Heckel).
Pœcilodes Steindachner, Sitzungsber. Kais. Akad. Wiss. Wien, XLVIII, 1863, 176 (*P. bimaculatus* Steindachner).

1453. Pseudoxiphophorus bimaculatus (Heckel).
Central Mexico; Rio Blanco, Orizaba.
Xiphophorus bimaculatus Heckel, Sitzungsber. Kais. Akad. Wiss. Wien, I, 1848, pt. 3, 169, taf. 6, figs. 1 and 2, Mexico.
Pseudoxiphophorus reticulatus Troschel, in Miller's Reisen Vereinigten Staaten, Canada, Mexico, III, 1865, 638, no locality.

1454. Pseudoxiphophorus bimaculatus tæniatus Regan.
Streams of the Atlantic slope of southeastern Mexico.
Pseudoxiphophorus bimaculatus tæniatus Regan, Ann. Mag. Nat. Hist., (7), XVI, 1905, 303, Rio Touto and San Domingo de Guzman.

1455. Pseudoxiphophorus bimaculatus jonesi (Günther).
Streams of southeastern Mexico.
Mollienisia jonesi Günther, Ann. Mag. Nat. Hist., (4), XIV, 1874, 371, Lake Alcuhuaca, Huamanita, Mexico.
Pseudoxiphophorus pauciradiatus Regan, Ann. Mag. Nat. Hist., (7), X, 1904, 14, 296, Orizaba, Mexico.

Genus 470. HETERANDRIA Agassiz.
Heterandria Agassiz, Amer. Jour. Sci. Arts, XVI, 1853, 135 (*H. formosus* Agassiz MS.; *H. holbrooki* Agassiz MS.).

1456. Heterandria formosa Agassiz.
Streams of South Carolina to Florida; one of the smallest of fishes.
Heterandria formosa Agassiz, in Girard, Proc. Acad. Nat. Sci. Phila., XI, 1859, 62, Charleston, S. C.; Palatka, Fla.

Genus 471. PRIAPELLA Regan.
Priapella Regan, Proc. Zool. Soc. Lond., 1913, 992 (*Gambusia bonita* Meek).

1457. Priapella bonita (Meek).
Streams of western Mexico; Rio Papaloapam, Motzorongo.
Gambusia bonita Meek, Field Col. Mus., Zool., V, 1904, 132, fig. 39, 104, Refugio, Vera Cruz, Mexico.

Genus 472. ALLOGAMBUSIA Hubbs.
Allogambusia Hubbs, Univ. Mich. Mus. Zool. Misc. Pub. No. 13, Jan. 18, 1924, 8 (*Gambusia tridentiger* Garman).

1458. Allogambusia cana (Meek and Hildebrand).
Streams of the Pacific slope of Panama.
Gambusia cana Meek and Hildebrand, Field Mus. Nat. Hist., Zool., X, 1913, 87, Rio Satiganti, Cana, Panama.

1459. Allogambusia tridentiger (Garman).
Rivers of Panama.
Gambusia tridentiger Garman, Mem. Mus. Comp. Zool., XIX, 1895, 89 (Pl. IV, fig. 10, teeth), rivers of Panama.

Genus 473. TOXUS Eigenmann.
Toxus Eigenmann, Bull. U. S. Fish Com., XXII, 1902 (1903), 226 (*T. riddlei* Eigenmann).

1460. Toxus riddlei Eigenmann.
Streams of western Cuba.
Toxus riddlei Eigenmann, Bull. U. S. Fish Com., XXII, 1902 (1903), 226, San Cristobal, Cuba.

1461. Toxus cubensis (Eigenmann).
Streams of western Cuba.
Heterandria cubensis Eigenmann, Bull. U. S. Fish Com., XXII, 1902 (1903), 227, Los Palacios, Cuba.

Genus 474. GLARIDICHTHYS Garman.
Glaridodon Garman, Mem. Mus. Comp. Zool., XIX, 1895, 40 (*latidens*); name preoccupied.
Glaridichthys Garman, Amer. Nat., XXX, 1896, 232 (same type).

1462. Glaridichthys uninotatus (Poey).
Cuba.
Girardinus uninotatus Poey, Memorias, II, 1861, 309, Cuba.

1463. Glaridichthys torralbasi Eigenmann.
Streams of Pinar del Rio, Cuba.
Glaridichthys torralbasi Eigenmann, Bull. U. S. Fish Com., XXII, 1902 (1903), 225, fig. 4, Pinar del Rio, Cuba.

1464. Glaridichthys falcatus Eigenmann.
Streams of western Cuba.
Glaridichthys falcatus Eigenmann, Bull. U. S. Fish Com., XXII, 1902 (1903), 224, San Cristobal, Palacios, Pinar del Rio, Cuba.

Genus 475. GIRARDINUS Poey.
Girardinus Poey, Memorias, I, 1854, 383 (*G. metallicus* Poey).

1465. Girardinus metallicus Poey.
Streams of Cuba.
Girardinus metallicus Poey, Memorias, I, 1854, 387, Cuba.
Girardinus denticulatus Garman, Mem. Mus. Comp. Zool., XIX, 1895, 47, Remedios, Cuba.
Girardinus creolus Garman, loc. cit., 47, Cuba.
Girardinus garmani Eigenmann, Bull. U. S. Fish Com., XXII, 1902 (1903), 296, Pinar del Rio, Palacios, Cuba.

Genus 476. DARIENICHTHYS Hubbs.
Darienichthys Hubbs, Univ. Mich. Mus. Zool., Misc. Pub. No. 13, Jan. 18, 1924, 8 (*Gambusia darienensis* Meek and Hildebrand).

1466. Darienichthys darienensis (Meek and Hildebrand).
Streams of Pacific slope, Panama.
Gambusia darienensis Meek and Hildebrand, Field Mus. Nat. Hist., Zool., X, 1913, 116, 88, Rio Capeti (Tuyra River Basin), Panama.

Genus 477. PŒCILIOPSIS Regan.
Pœciliopsis Regan, Proc. Zool. Soc. Lond., 1913, 996 (*Pœcilia presidionis* Jordan and Culver).
Leptorhaphis Regan, loc. cit., 980, 998 (*Gambusia infans* Woolman).

1467. Pœciliopsis occidentalis (Baird and Girard).
Gila Basin, Ariz., and basins of Yaqui and Sonora Rivers, Sonora.
Heterandria occidentalis Baird and Girard, Proc. Acad. Nat. Sci. Phila., VI, 1853, 390, Rio Santa Cruz, near Tucson, Ariz.
Girardinus sonoriensis Girard, loc. cit., XI, 1859, 120, San Bernardino Creek, a tributary of the Rio Yaqui, Sonora.

1468. Pœciliopsis infans (Woolman).
Rio Lerma, Salamanca, Mexico.
Gambusia infans Woolman, Bull. U. S. Fish Com., XIV, 1894, 62, Rio Lerma, Salamanca, Mexico.

1469. Pœciliopsis balsas Hubbs.
Balsas Basin, Mexico.
Pœciliopsis balsas Hubbs, Univ. Mich. Mus. Zool. Misc. Pub. No. 16, July 9, 1926, 66, Rio Balsas, Guerrero, Mexico.

1470. Pœciliopsis latidens (Garman).
Chihuahua.
Glaridodon latidens Garman, Mem. Mus. Comp. Zool., XIX, 1895, 40, Chihuahua, Mexico.

1471. Pœciliopsis fasciata (Meek).
Atlantic streams of southern Mexico.
Gambusia fasciata Meek, Field Col. Mus., Zool., V, 1904, 129, fig. 37, San Geronimo, Oaxaca, Mexico.

1472. Pœciliopsis turrubarensis (Meek).
Costa Rica.
Gambusia turrubarensis Meek, Field Mus. Nat. Hist., Zool., X, 1912, 71, Rio Turrubara, Costa Rica.
Heterandria colombianus Eigenmann and Henn, Indiana Univ. Stud., No. 8, 1912, 27, brackish water, mouth of Rio Dagua, Colombia.
Priapichthys fosteri Hildebrand, Bull. U. S. Bur. Fish., XLI, 1925, 260, figs. 14 and 15, Rio Lempa, San Marcos, El Salvador, Central America.

1473. Pœciliopsis presidionis (Jordan and Culver).
Rio Presidio, Sinaloa, Mexico.
Pœcilia presidionis Jordan and Culver, in Jordan, Fishes of Sinaloa, Proc., Calif. Acad. Sci., V, 1895, 413, pl. 29, Rio Presidio, Sinaloa, Mexico.

Genus 478. PŒCILISTES Hubbs.
Pœcilistes Hubbs, Univ. Mich. Mus. Zool. Misc. Pub. No. 16, July 9, 1926, 68 (*Heterandria lutzi* Meek).

1474. Pœcilistes pleurospilus (Günther).
Streams of Guatemala.
Girardinus pleurospilus Günther, Cat., VI, 1866, 353, Lake Dueñas, Guatemala.
Heterandria lutzi Meek, Field Col. Mus., Zool., V, 1904, 148, fig. 47, Orizaba, Mexico.
Priapichthys letonai Hildebrand, Bull. U. S. Bur. Fish., XLI, 1925, 258, Rio San Miguel, San Salvador.

Genus 479. AULOPHALLUS Hubbs.
Aulophallus Hubbs, Univ. Mich. Mus. Zool. Misc. Pub. No. 16, July 9, 1926, 69 (*Pœcilia elongata* Günther).

1475. Aulophallus elongatus (Günther).
Panama, a large marine species quite unlike *Pœcilia* in habits.
Pœcilia elongata Günther, Cat., VI, 1866, 342, Panama.

Genus 480. PHALLICHTHYS Hubbs.
Phallichthys Hubbs, Univ. Mich. Mus. Zool. Misc. Pub. 13, Jan. 18, 1924, 10, (*Pœciliopsis isthmensis* Regan).

1476. Phallichthys amates (Miller).
Motagua Basin, Guatemala.
Pœcilia amates Miller, Bull. Amer. Mus. Nat. Hist., XXIII, 1907, 108, fig. 1, pond and its outlet, Los Amates, an affluent of the Motagua River, Guatemala.

1477. Phallichthys pittieri (Meek).
Costa Rica.
Pœcilia pittieri Meek, Field Mus. Nat. Hist., Zool., X, 1912, 71, La Junta, Costa Rica.
Pœciliopsis isthmensis Regan, Proc., Zool. Soc. Lond., 1913, 997, Pl. C, figs. 3, 4, and text fig. 171B, Colon, Panama.

Genus 481. XENOPHALLUS Hubbs.
Xenophallus Hubbs, Mus. Zool. Univ. Mich. Misc. Pub. 13, Jan. 18, 1924, 10 (*Gambusia umbratilis* Meek.)

1478. Xenophallus umbratilis (Meek).
Streams of Costa Rica.
Gambusia umbratilis Meek, Field Mus. Nat. Hist., Zool., X, 1912, 70, Costa Rica.

Genus 482. PŒCILIA Schneider.
Pœcilia Schneider, ed. Bloch, Syst. Ichth. 1801, 452 (*P. vivipara* Bloch and Schneider); not *Pœcilus* of genus of beetles.
Alazon Gistel, Thierreich, X, 1848 (*Pœcilia vivipara* Schneider); substitute for *Pœcilia*, regarded as preoccupied.
Acropœcilia Hilgendorf, Sitzungsb. Naturf. Freunde, 1889, 52 (*Pœcilia tridens* Hilgendorf).
Neopœcelia Hubbs, Univ. Mich. Mus. Zool., Misc. Pub. 13, 1924 (*N. holacanthus* Hubbs).

1479. Pœcilia vivipara Bloch and Schneider.
Rivers of Brazil; Guiana; Martinique; Porto Rico.
Pœcilia vivipara Bloch and Schneider, Syst. Ichth., 1801, 452, pl. 86, fig. 2, Surinam.
Pœcilia surinamensis Valenciennes, Humboldt, Observ. Zool., II, 1817, 158, pl. 51, fig. 1, Surinam.
Pœcilia schneideri Cuvier and Valenciennes, Hist. Nat. Poiss., XVIII, 1846, 102 (135), Surinam.
Neopoecilia holacanthus Hubbs, Univ. Mich. Mus. Zool., Misc. Pub. No. 13, Jan. 18, 1924, 11, based on material recorded as *Pœcilia vivipara* Evermann and Marsh, Bull., U. S. Fish Com., XX, 1900, first part (1902), 97, from Porto Rico (Ponce, Fijaro, Arroyo, and Hucares).

1480. Pœcilia tridens Hilgendorf.
Streams of Haiti.
Pœcilia (*Acropœcilia*) *tridens* Hilgendorf, Sitzungsb. Naturf. Freunde, 1889, 52, Port au Prince.

Genus 483. LIMIA Poey.
Limia Poey, Memorias, I, 1854, 388 (*L. cubensis* Poey=*Pœcilia vittata* Guichenot).

1481. Limia heterandria Regan.
Santo Domingo.
Limia heterandria Regan, Proc. Zool. Soc. Lond., 1913, 1017, Pl. CI, "Venezuela"; locality probably wrong.
Heterandria zonata Nichols, Bull. Amer. Mus. Nat. Hist., XXXIV, 1915, 603, fig. 3, Santo Domingo.

1482. Limia vittata (Guichenot). *Faguito; Guajica.*
Streams of Cuba.
Pœcilia vittata Guichenot, in Ramon de la Sagra, Hist. Nat. Cuba, Poiss., 1853, 146, pl. 5, fig. 1, Cuba.
Limia cubensis Poey, Memorias, I, 1854, 388, Habana.
Limia pavonina Poey, Enumeratio, 1876, 142, Habana.

1483. Limia perugiæ (Evermann and Clark).
Santo Domingo.
Platypœcilus perugiæ Evermann and Clark, Proc. U. S. Nat. Mus., XXX, 1906, 851, Santo Domingo.

1484. Limia caudofasciata Regan.
Jamaica.
Limia caudofasciata Regan, Proc., Zool. Soc. Lond., 1913, 1017, Jamaica.

1485. Limia nigrofasciata Regan.
Limia nigrofasciata Regan, Proc., Zool. Soc. Lond., 1913, 1015, Pl. CI, figs. 1, 2, 1913, Haiti.
Limia arnoldi Regan, loc. cit., 1016, Miragoâne, Haiti; young of *nigrofasciata.*

1486. Limia ornata Regan.
Limia ornata Regan, Proc. Zool. Soc. Lond., 1913, 1016, Haiti.

1487. Limia dominicensis (Cuvier and Valenciennes).
Santo Domingo and Barbados.
Pœcilia dominicensis Cuvier and Valenciennes, Hist. Nat. Poiss., XVIII, 1846, 99 (131), pl. 525, Santo Domingo.
Pœcilia melanogaster Günther, Cat., VI, 1866, 345, locality unknown.
Platypœcilus dominicensis Evermann and Clark, Proc. U. S. Nat. Mus., XXX, 1906, 852, fig. 2, streams in San Francisco Mountains, Santo Domingo.

1488. Limia melanonotata Nichols and Myers.
Santo Domingo.
Limia melanonotata Nichols and Myers, Amer. Mus. Novitates, No. 79, 1923, 1, Hispaniola.

1489. Limia versicolor (Günther).
Rivers of Haiti.
Girardinus versicolor Günther, Cat., VI, 1866, 352, Santo Domingo.

Genus 484. LEBISTES De Filippi
Lebistes de Filippi, Arch. Zool. Anat. Fisiol., I, 1862, 69 (*L. pœciloides* de Filippi).
Acanthophacelus Eigenmann, Proc. U. S. Nat. Mus., XXXII, 1907, 426 (*Pœcilia reticulatus* Peters).

1490. Lebistes reticulatus (Peters). *Millions; Bellyfish; Guppy and rainbowfish of aquarists.*
Pools and streams of Barbados, Trinidad, and Venezuela.
Pœcilia reticulata Peters, Monatsber. Akad. Wiss. Berlin, 1859, 412, Caracus, Venezuela.
Lebistes pœciloides de Filippi, Arch. Zool. Anat. Fisiol., I, 1861, 69, Pl. IV, fig. 6, Barbados.
Girardinus guppii Günther, Cat., VI, 1866, 353, Trinidad; Venezuela.
Acanthophacelus melanzonus Eigenmann, Ann. Carnegie Mus., VI, 1909, 51, Georgetown Trenches, British Guiana.

Genus 485. MOLLIENESIA LeSueur.
Mollienesia LeSueur, Jour. Acad. Nat. Sci. Phila., II, 1821, 2 (*Mollinesia latipinna* LeSueur).

1491. Mollienesia latipinna LeSueur. *Mudfish.*
South Carolina to northern Mexico, in lowland swamps and streams.
Mollinesia latipinna LeSueur, Jour. Acad. Nat. Sci. Phila., II, 1821, 3, New Orleans.
Pœcilia multilineata LeSueur, loc. cit., 4, New Orleans.
Pœcilia lineolata Girard, U. S. Mex. Bound. Surv., Ichth., 1859, 70, pl. 35, figs. 9 to 11, Rio Grande near Brownsville, Tex.
Limia pœciloides Girard, loc. cit., 70, pl. 38, figs. 8 to 14, Indianola, Tex.
Limia matamorensis Girard, Proc. Acad. Nat. Sci. Phila., XI, 1859, 117, Matamoras.

1492. Mollienesia gracilis Regan.
Lake Peten, Guatemala.
Mollinesia petenensis Günther, Cat., VI, 1866, 348, Lake Peten; not *Pœcilia petenensis* Günther, also a *Mollienesia*.
Mollinesia gracilis Regan, Proc. Zool. Soc. Lond., 1913, 1012; substitute name.

1493. Mollienesia petenensis (Günther).
Lake Peten, Guatemala.
Pœcilia petenensis Günther, Cat., VI, 1866, 342, Lake Peten, Guatemala; not *Mollinesia petenensis* Günther, loc. cit., 348.

1494. Mollienesia formosa (Girard).
Mexico; Lake Alcohuaca, Huamantla, Mexico; Palo Alto.
Limia formosa Girard, Proc. Acad. Nat. Sci. Phila., XI, 1859, 115, Palo Alto, Mexico.

1495. Mollienesia spilura (Günther).
Streams of Central America.
Pœcilia spilurus Günther, Cat., VI, 1866, 345, Central America.

1496. Mollienesia velifera Regan.
Yucatan.
Mollinesia velifera Regan, Ann. Mag. Nat. Hist., 8th ser., XIII, 1914, 338, Progreso, Yucatan.

1497. Mollienesia sphenops (Cuvier and Valenciennes).
Lowland streams of Mexico and Central America.
Pœcilia sphenops Cuvier and Valenciennes, Hist. Nat. Poiss., XVIII, 1836, 98 (130), 525, Vera Cruz.
Molinesia fasciata Müller and Troschel, Monatsber. Akad. Wiss. Berlin, 1844, 36, Mexico.
Pœcilia mexicana Steindachner, Sitzungsb., Kais. Akad. Wiss. Wien, XLVIII, 1863, 178, taf. 4, fig. 2, southern Mexico.
Pœcilia thermalis Steindachner, loc. cit., 181, warm springs in Central America.
Xiphophorus gillii Kner and Steindachner, Abhandl. Bayer. Akad. Wiss., X, 1864, 28, taf. 4, fig. 1 (1866), Rio Chagres, Panama.
Gambusia modesta Troschel, in Müller's Reisen Vereinigten Staaten, Canada and Mexico, III, 1865, 639, Mexico.
Pœcilia chisoyensis Günther, Cat., VI, 1866, 342, Rio Chisoy, Vera Paz.
Gambusia plumbea Troschel, loc. cit., III, 1865,640, Mexico.
Pœcilia dovii Günther, loc. cit., VI, 1866, 344, Lake Nicaragua; Lake Amatitlan.
Platypœcilus mentalis Gill, Proc. Acad. Nat. Sci. Phila., XXVIII, 1876, 335, Isthmus of Panama.
Pœcilia boucardi Steindachner, Ichth. Beitr., VI, 1878, 8, Colon (or Aspinwall).
Pœcilia limantouri Jordan and Snyder, Bull. U. S. Fish Com., XIX, 1899, 129, fig. 10, Rio Tamesin, Tampico, Mexico.
Pœcilia butleri Jordan, Proc. U. S. Nat. Mus., XI, 1888, 330, Rio Presidio, Mazatlan.
Platypœcilus tropicus Meek, Field Col. Mus., Zool., VII, 1907, 146, Turrialba, Costa Rica.
Pœcilia tenuis Meek, loc. cit., 147, San Jose, Costa Rica.
Pœcilia salvatoris Regan, Ann. Mag. Nat. Hist., (7), XIX, 1907, 65, Salvador.
Pœcilia spilonota Regan, loc. cit., 8th ser., II, 1908, 460, San Jose.

1498. Mollienesia sphenops cuneata (Garman).
Turbo, Gulf of Darien.
Pœcilia cuneata Garman, Mem., Mus. Comp. Zool., XIX, 1895, 62, Pl. V, fig. 3, teeth, Turbo, Gulf of Darien.

1499. Mollienesia sphenops vandepolli (Van Lindth de Jeude).
Tropical America, abundant in fresh-water pools.
Pœcilia vandepolli Van Lindth de Jeude, Notes, Leyden Mus., IX, 1887, 137, Freshwater, Curaçao.
Pœcilia vandepolli arubensis Van Lindth de Jeude, loc. cit., 138, Aruba, one of the Leeward Islands.

Genus 486. ALFARO Meek.
Petalosoma Regan, Ann. Mag. Nat. Hist., (8), II, 1908, 462 (*P. cultratum* Regan, name preoccupied).
Alfaro Meek, Field Mus. Nat. Hist., Zool., X, September, 1912, 72 (*A. acutiventris* Meek).
Petalurichthys Regan, Ann. Mag. Nat. Hist., X, November 1912, 494 (*Petalosoma cultratum* Regan; substitute for *Petalosoma* preoccupied).

1500. Alfaro cultratus (Regan).
Streams of Costa Rica.
Petalosoma cultratum Regan, Ann. Mag. Nat. Hist., XI, 1908, 458, Rio Iroquois, Costa Rica.
Alfaro acutiventralis Meek, Field Mus. Nat. Hist., Zool., X, 1912, 72, Costa Rica.

Genus 487. PLATYPŒCILUS Günther.
Platypœcilus Günther, Cat., VI, 1866, 350 (*P. maculatus* Günther).

1501. Platypœcilus maculatus Günther. *Moonfish of the aquarists.*
Mexico.
Platypœcilus maculatus Günther, Cat., VI, 1866, 350, Mexico.
Platypœcilus variatus Meek, Field Col. Mus., Zool., V, 1904, 145, 146, San Luis Potosi, Mexico.
Platypœcilus maculatus immaculatus Myers, Copeia, No. 113, Dec. 20, 1922, 89, a form developed in an aquarium, therefore without standing in scientific nomenclature.

1502. Platypœcilus couchianus (Girard).
Rio Grande Basin.
Limia couchiana Girard, Proc. Acad. Nat. Sci. Phila., XI, 1859, 116, Rio San Juan, at Cadereita and Monterey, in Nuevo Leon, Mexico.

Genus 488. XIPHOPHORUS Heckel.
Xiphophorus Heckel, Sitzungsb. Kais. Akad. Wiss. Wien, I, 1848, pt. 3, 163 (*X. helleri* Heckel).

1503. Xiphophorus helleri Heckel. *Swordtail.*
Lowland streams of southern Mexico and Guatemala, of Atlantic drainage.
Xiphophorus helleri Heckel, Sitzungsb. Kais. Akad. Wiss. Wien, I, 1848, pt. 3, 163, pl. 5, Rio Chisoy, Guatemala.
Xiphophorus jalapæ Meek, Field Col. Mus., Zool., III, 1902, 107, Jalapa.

1504. Xiphophorus helleri guntheri (Jordan and Evermann).
Rivers of eastern slope of Guatemala.
Xiphophorus guntheri Jordan and Evermann, Fish. North and Mid. Amer., 1896, 702, Rio Chisoy (Usumacinta), Guatemala.

1505. Xiphophorus helleri strigatus (Regan).
Atlantic slope of southern Mexico.
Xiphophorus strigatus Regan, Ann. Mag. Nat. Hist., (7), XIX, 1907, 65; streams of Atlantic slope of southern Mexico; Cordoba, Oaxaca, etc.

1506. Xiphophorus helleri rachovii (Regan).
Atlantic slope of Guatemala.
Xiphophorus rachovii Regan, Ann. Mag. Nat. Hist., (8), VIII, 1911, 374, Puerto Barrios between Lake Yzabal and Rio Motagua.

1507. Xiphophorus helleri brevis (Regan).
British Honduras.
Xiphophorus brevis Regan, Ann. Mag. Nat. Hist., (7), XIX, 1907, 65, British Honduras.

1508. Xiphophorus montezumæ Jordan and Snyder.
Rio Panuco, eastern Mexico.
Xiphophorus montezumæ Jordan and Snyder, Bull. U. S. Fish Com., XIX, 1899 (1900), 131, fig. 11, Rio Panuco, Mexico.

Family 117. ANABLEPIDÆ. Four-eyed fishes

Genus 489. ANABLEPS (Gronow) Scopeli.
Anableps Gronow, in Scopeli, Introd. Hist. Nat., 1777, 450 (no type mentioned; *A. anableps* L. understood).

1509. Anableps anableps Linnæus. *Cuatro ojos; Four-eyed fish.*
Trinidad to Brazil; in streams.
Anableps anableps Linnæus, Syst. Nat., ed. 9, 1756, 55.
Anableps tetrophthalmus Bloch, Naturgesch. Ausl. Fische, VIII, 1794, 7, pl. 361.

1510. Anableps dowei Gill. *Cuatro ojos.*
Streams of Central America, locally common (Salvador–Chiapas, Guatemala).
Anableps dowei Gill, Proc. Acad. Nat. Sci. Phila., XIII, 1861, 4, La Union, Salvador.

Family 118. AMBLYOPSIDÆ. Cave blindfishes

Genus 490. CHOLOGASTER Agassiz.
Chologaster Agassiz, Amer. Jour. Sci. Arts, XVI, 1853, 135 (*C. cornutus* Agassiz).

1511. Chologaster cornutus Agassiz. *Fish of the rice ditches of South Atlantic States.*
Lowland swamps of the Southern States, from the Dismal Swamp to the Okefinokee Swamp; locally very abundant.
Chologaster cornutus Agassiz, Amer. Jour. Sci. Arts, XVI, 1853, 135, ditch in a rice field in South Carolina.

1512. Chologaster avitus Jordan and Jenkins. *Fish of Dismal Swamp.*
Streams and swamps from southeast Virginia southward, probably varying into *C. cornutus*.
Chologaster avitus Jordan and Jenkins, Proc. U. S. Nat. Mus., XI, 1888, 356, pl. 44, fig. 8, outlet of Lake Drummond, Dismal Swamp, near Suffolk, Va.

Genus 491. FORBESELLA Jordan and Evermann.
Forbesella Jordan and Evermann, Proc., Calif. Acad. Sci., 4th ser., XVI, 1927 (Apr. 27), 503 (*Chologaster papilliferus* Forbes).
This genus stands between the ancient type of *Chologaster* well colored and with developed eyes, and the colorless blind fishes of the caves of the middle west. From *Chologaster*, *Forbesella* differs in the presence of tactile papillæ as in *Amblyopsis*.

1513. Forbesella papillifera (Forbes). *Cavefish.*
Cave springs, Union and Pope Counties, Ill.
Chologaster papilliferus Forbes, Amer. Nat., XVI, January, 1882, 1, cave spring in Union County, southern Illinois.

1514. Forbesella agassizii (Putnam).
Underground streams of Tennessee and Kentucky.
Chologaster agassizii Putnam, Amer. Nat., VI, 1872, 30, Pl. 2, figs. 4, 4a, 4b, from a well at Lebanon, Tenn.

Genus 492. TYPHLICHTHYS Girard.
Typhlichthys Girard, Proc. Acad. Nat. Sci. Phila., XI, 1859, 63 (*T. subterraneus* Girard).

1515. Typhlichthys subterraneus Girard. *Small blindfish.*
Subterranean streams in limestone regions of Indiana, Kentucky, Tennessee, Missouri, and Alabama.
Typhlichthys subterraneus Girard, Proc. Acad. Nat. Sci. Phila., XI, 1859, 63, well at Bowling Green, Ky.

1516. Typhlichthys osborni Eigenmann.
Horse Cave, near Mammoth Cave, Ky.
Typhlichthys osborni Eigenmann, Biol. Bull., VIII, 1905, 65, figs. 3 and 4, Horse Cave, Ky.

1517. Typhlichthys wyandotte Eigenmann.
Well near Corydon, Ind.
Typhlichthys wyandotte Eigenmann, Biol. Bull., VIII, 1905, 63, Corydon, Ind.

Genus 493. TROGLICHTHYS Eigenmann.
Troglichthys Eigenmann, A Case of Convergence, Science, new series, IX, 1899, 282 (*Typhlichthys rosæ* Eigenmann).

1518. Troglichthys rosæ (Eigenmann). *Missouri cavefish.*
Typhlichthys rosæ Eigenmann, Science, new series, IX, 1899, No. 217, 282, caves in Missouri.

Genus 494. AMBLYOPSIS DeKay.
Amblyopsis DeKay, New York Fauna: Fishes, 1842, 187 (*A. spelæus* DeKay).

1519. Amblyopsis spelæus DeKay. *Mammoth Cave blindfish.*
Subterranean streams of the limestone regions of Kentucky and Indiana; River Styx, Mammoth Cave; the largest species of the group.
Amblyopsis spelæus DeKay, New York Fauna: Fishes, 1842, 187, Mammoth Cave, Ky.

Order EE. SYNENTOGNATHI

Family 119. BELONIDÆ. Houndfishes; Needlefishes

Genus 495. STRONGYLURA Van Hasselt.
Strongylura Van Hasselt, Bull. Sci. Nat. Ferussac., II, 1824, 374 (*S. caudimaculata* Van Hasselt=*Belone strongylura* Van Hasselt, 1823).

1520. Strongylura notata (Poey). *Needlefish; Longjaws; Gar.*
West Indies, north to Pensacola; common about Key West.
Belone notata Poey, Memorias, II, 1861, 293, Cuba.

1521. Strongylura scapularis (Jordan and Gilbert).
Panama.
Tylosurus scapularis Jordan and Gilbert, Bull. U. S. Fish Com., I, 1881, 307, Panama.

1522. Strongylura timucu (Walbaum). *Timucu; Peixe agulha.*
Florida Keys to Brazil; not rare.
Timucu or *Peixe agulha* Marcgrave, Hist. Pisc. Brasil., 1648, 168, Brazil.
Esox timucu Walbaum, Artedi Pisc., III, 1792, 88, Brazil; after *Timucu* of Marcgrave.
Belone subtruncata Poey, Memorias, II, 1860, 295, Habana.
Belone depressa Poey, loc. cit., 296, Cuba.
Tylosurus sagitta Jordan and Gilbert, Proc. U. S. Nat. Mus., VII, 1884, 25, Key West.
Belone ardeola Cuvier and Valenciennes, Hist. Nat. Poiss., XVIII, 1846, 315 (425), Porto Rico.
Belone cigonella Cuvier and Valenciennes, loc. cit., 323 (436), Porto Rico.
Belone almeida Quoy and Gaimard, Voy. *Uranie*, Zool., 1824, 226, Bay of Rio Janeiro.
Belone timucu Cuvier and Valenciennes, Hist. Nat. Poiss., XVIII, 1846, 316 (426), Rio de Janeiro.

1523. Strongylura argalus (LeSueur).
West Indies.
Belone argalus LeSueur, in Cuvier and Valenciennes, Hist. Nat. Poiss., XVIII, 1846, 326 (439), Guadeloupe, West Indies.

1524. Strongylura euryops (Bean and Dresel). *Longjaw.*
Cuba and Jamaica.
Tylosurus euryops Bean and Dresel, Proc. U. S. Nat. Mus., VII, 1884, 168, Jamaica.

1525. Strongylura diplotænia (Cope).
St. Martins Island, West Indies.
Belone diplotænia Cope, Trans. Amer. Phil. Soc., XIV, 1871, 481, St. Martins.

1526. Strongylura microps (Günther).
Coast of Guiana.
Belone microps Günther, Cat., VI, 1866, 237, Surinam, British Guiana.

1527. Strongylura angusticeps (Günther).
Coast of Ecuador.
Belone angusticeps Günther, Cat., VI, 1866, 238, Ecuador.

1528. Strongylura stolzmanni (Steindachner). *Sierrita.*
Pacific coast of America from Guaymas and Mazatlan to Peru.
Belone stolzmanni Steindachner, Ichth. Beitr., VII, 1878, 21, Tumbez, Peru.
Tylosurus sierrita Jordan and Gilbert, Proc. U. S. Nat. Mus., IV, 1881, 458, Mazatlan.

1529. Strongylura exilis (Girard). *Needlefish; California garfish.*
Coast of southern California, from Point Conception southward to Cedros Island, Mexico.
Belone exilis Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 149, San Diego.

1530. Strongylura pterura (Osburn and Nichols).
Gulf of California.
Tylosurus pterurus Osburn and Nichols, Bull. Amer. Mus. Nat. Hist., XXXV, 1916, 152, fig. 6, Carmen Island, Gulf of California.

1531. Strongylura marina (Walbaum). *Garfish; Billfish; Needlefish; Agujón; Salt-water gar; Silver gar; Swordfish; Green gar; Skippick; Sea pike; Harvest pike; Silvery gar.*
Coast of Maine to Texas; Atlantic and Gulf coasts, entering rivers.
Esox marinus Walbaum, Artedi Pisc., III, 1792, 88; after Schöpf.
Esox longirostris Mitchill, Amer. Month. Mag., II, 1818, 322, Hudson River.
Belone truncata LeSueur, Jour. Acad. Nat. Sci. Phila., II, 1821, 126, New York Bay.
Belone scutator Girard, U. S. Mex. Bound. Surv., Ichth., 1859, 30, pl. 13, Brazos Santiago and St. Joseph Island, Tex.

1532. Strongylura guianensis (Müller and Troschel).
Tylosurus guianensis Müller and Troschel in Schomburgk's Reise, III, 1848, 626, coast of Guiana.

Genus 496. TYLOSURUS Cocco.
Tylosurus Cocco, Giorn. Sci. Litt. Art. Sicilia, XVII, 1829, 18 (*T. cantraini* Cocco=?*Sphyræna acus* Lacépède).

1533. Tylosurus fodiator Jordan and Gilbert. *Agujón.*
Pacific coast of Mexico.
Tylosurus fodiator Jordan and Gilbert, Proc. U. S. Nat. Mus., IV, 1881, 459, Mazatlan.

1534. Tylosurus raphidoma (Ranzani). *Houndfish; Aguja de Casta; Guardfish.*
West Indies, Florida Keys to Brazil; north to Ocean City, N. J., and North Carolina.
Belone raphidoma Ranzani, Nov. Com. Acad. Sci. Bonon., V, 1842, 359, pl. 37, fig. 1, Brazil.
Belone gerania Cuvier and Valenciennes, Hist. Nat. Poiss., XVIII, 1846, 325 (437), Martinique.
Belone crassa Poey, Memorias, II, 1861, 291, Cuba.
Belone melanochirc Poey, loc. cit., 294, Cuba.
Tylosurus gladius Bean, Proc. U. S. Nat. Mus., V, 1882, 239, 430, Pensacola, Fla.

1535. Tylosurus galeatus (Cuvier and Valenciennes).
Cayenne, French Guiana.
Belone galeata Cuvier and Valenciennes, Hist. Nat. Poiss., XVIII, 1846, 319 (429), Cayenne, French Guiana.

1536. Tylosurus pacificus (Steindachner).
Acapulco to Panama.
Belone pacifica Steindachner, Ichth. Beitr., III, 1875, 65, Panama.

1537. Tylosurus acus (Lacépède). *Houndfish; Agujón.*
West Indies and occasionally northward.
Sphyræna acus Lacépède, Hist. Nat. Poiss., V, 1803, 6, pl., 1 fig. 3, Martinique.
?*Esox imperialis* Rafinesque, Caratteri, 1810, 59, Palermo.
?*Tylosurus cantrainii* Cocco, Giorn. Sci. Litt. Art. Sicilia, XVII, 1829, 18, pl. 1, fig. 4, Messina.
Belone latimana Poey, Memorias, II, 1861, 290, Habana.
Belone jonesi Goode, Amer. Jour. Sci. Arts., XIII, 1877, 295, Bermuda.

1538. Tylosurus caribbæus (LeSueur).
West Indies.
Belone caribbæa LeSueur, Jour. Acad. Nat. Sci. Phila., II, 1821, 127, Caribbean Sea.
Belone altipinna Poey, Memorias, II, 1861, 293, Cuba.

Genus 497. ABLENNES Jordan and Fordice.
Athlennes Jordan and Fordice, Proc. U. S. Nat. Mus., IX, 1886, 342 (*Belone hians* Cuvier and Valenciennes); error of transcription for *Ablennes*.

1539. Ablennes hians (Cuvier and Valenciennes).
West Indies, ranging from Florida to Brazil; generally common; also recorded from Acapulco and Hawaii.
Belone hians Cuvier and Valenciennes, Hist. Nat. Poiss., XVIII, 1846, 321 (432), pl. 548, Bahia; common at Habana.
Belone maculata Poey, Memorias, II, 1861, 290, Cuba.

Family 120. SCOMBERESOCIDÆ

Genus 498. SCOMBERESOX Lacépède. *Sauries.*
Scomberesox Lacépède, Hist. Nat. Poiss., V, 1803, 344 (*S. camperii* Lacépède).
Sayris Rafinesque, Caratteri, 1810, 60 (*S. recurvirostra* Rafinesque= *Esox saurus* Walbaum).
Grammiconotus Costa, Ann. Mus. Zool. Univ. Napoli, I, 1862, 55 (*G. bicolor* Costa; said to lack the air bladder.

1540. Scomberesox saurus (Walbaum). *Saury; Skipper; Billfish; Skipjack.*
Temperate parts of Atlantic Ocean; common in schools especially north of Cape Cod and France.
Esox saurus Walbaum, Artedi Pisc., III, 1792, 93, Cornwall; after the saury pike of Pennant.
Scomberesox camperii Lacépède, Hist. Nat. Poiss., V, 1803, 345, locality unknown.
Sayris recurvirostra Rafinesque, Caratteri, 1810, 61; substitute for *camperi*.
Sayris hians Rafinesque, loc. cit., 61, Palermo.
Sayris bimaculatus Rafinesque, loc. cit., 62, Palermo.
Scomberesox scutellatum LeSueur, Jour. Acad. Nat. Sci. Phila., II, 1821 (1823), 132, Newfoundland.
Scomberesox storeri DeKay, N. Y. Fauna: Fishes, 1842, 229, pl. 35, fig. 3, Banks of Newfoundland; coast of Massachusetts; New York.
Scomberesox equirostrum LeSueur, Jour. Acad. Nat. Sci. Phila., II, 1821 (1823), 132, locality unknown.
Scomberesox rondeletii Cuvier and Valenciennes, Hist. Nat. Poiss., XVIII, 1846, 350 (472), Mediterranean.
Grammiconotus bicolor Costa, Ann. Mus. Zool. Univ. Napoli, I, 1862, 55, Naples.
? *Scomberesox forsteri* Cuvier and Valenciennes, Hist. Nat. Poiss., XVIII, 1846, 357 (481), New Zealand.
Sayris serrata Rafinesque, Caratteri, 1810, 61, after Rondelet.

Genus 499. **COLOLABIS** Gill.
Cololabis Gill, Proc. U. S. Nat. Mus., XVIII, 1895, 176 (*Scomberesox brevirostris* Peters).

1541. **Cololabis brevirostris** (Peters).
Coast of California, south to San Diego in the open sea; often in schools.
Scomberesox brevirostris Peters, Monatsberichte Akad. Wiss. Berlin, July, 1866, 521, Tomales Bay, Calif.; perhaps not separable from the Japanese *Cololabis saira* Brevoort.

Family 121. HEMIRAMPHIDÆ. Halfbeaks

Genus 500. **EULEPTORHAMPHUS** Gill.
Euleptorhamphus Gill, Proc. Acad. Nat. Sci. Phila., XI, 1859, 156 (*E. brevoorti* Gill=probably *E. velox* Poey).

1542. **Euleptorhamphus longirostris** (Cuvier).
East Indies; Galapagos Islands.
Hemiramphus longirostris Cuvier, Règne Anim., ed. 2, II, 1829, 286, warm seas of both hemispheres.

1543. **Euleptorhamphus velox** Poey. *Slender halfbeak.*
West Indies, occasionally northward in the Gulf Stream to Massachusetts.
? *Euleptorhamphus brevoortii* Gill, Proc. Acad. Nat. Sci. Phila., XI, 1859, 156, no locality.
Euleptorhamphus velox Poey, Synopsis, 1867, 383, Cuba; perhaps identical with the preceding.

Genus 501. **HYPORHAMPHUS** Gill. *Halfbeaks.*
Hyporhamphus Gill, Proc. Acad. Nat. Sci. Phila., XI, 1859, 131 (*H. tricuspidatus* Gill=*Hemirhamphus unifasciatus* Ranzani).

1544. **Hyporhamphus unifasciatus** (Ranzani). *Common halfbeak; Escribano; Pajarito.*
Tropical seas on both coasts of America from Brazil north to Rhode Island, New Jersey, Guaymas, and Mazatlan; generally common from Key West to Rio de Janeiro; also from Guaymas to the Galapagos; variable; but the distinction into two or more species not trustworthy.
Hemirhamphus unifaciatus Ranzani, Nov. Com. Acad. Sci. Bonon., V, 1842, 326, Brazil.
? *Hemirhamphus picarti* Cuvier and Valenciennes, Hist. Nat. Poiss., XIX, 1846, 18 (25), Bono, Algiers.
Hemirhamphus richardi Cuvier and Valenciennes, loc. cit., 19 (26), St. Croix, Antilles.
Hyporhamphus tricuspidatus Gill. Proc. Acad. Nat. Sci. Phila., XI, 1859, 131, Barbados.
Hemirhamphus fasciatus Poey, Memorias, II, 1861, 299, Cuba; not of Bleeker.

1545. **Hyporhamphus roberti** [35] (Cuvier and Valenciennes).
Both coasts of tropical America; West Indies and Brazil north to Rhode Island, and on the Pacific coast from Gulf of California to the Galapagos.
Hemiramphus roberti Cuvier and Valenciennes, Hist. Nat. Poiss., XIX, 1846, 18 (24), Cayenne.

1546. **Hyporhamphus gilli** Meek and Hildebrand.
Acapulco to the Galapagos.
Hyporhamphus gilli Meek and Hildebrand, Field Mus. Nat. Hist. Pub. 215, Zool. Ser., XV, Dec. 20, 1923, 240, Pl. XVII, fig. 1, Panama Bay, Balboa.

1547. **Hyporhamphus rosæ** (Jordan and Gilbert).
Coast of southern California and probably southward.
Hemiramphus rosæ Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880, 335, San Diego, Calif.

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[35] This species is slenderer than *H. unifasciatus*, with longer beak and more numerous gill rakers, 28 to 31 on lower limb (21 in *H. unifasciatus*).

1548. Hyporhamphus snyderi Meek and Hildebrand.
Lower California to Panama.
Hyporhamphus snyderi Meek and Hildebrand, Field Mus. Nat. Hist. Pub. 215, Zool., Ser. XV, Dec. 20, 1923, 240, Pl. XVII, fig. 2, Balboa, Panama Bay.

Genus 502. HEMIRAMPHUS Cuvier.
Hemiramphus Cuvier, Règne Anim., ed. 1, II, 1817, 186 (*Esox brasiliensis* Linnæus).

1549. Hemiramphus brasiliensis (Linnæus). *Balao; Escribano; Red-tailed balao.*
West Indies, generally abundant from Key West southward to Bahia.
Esox brasiliensis Linnæus, Syst. Nat., ed. X, 1758, 314, Jamaica; after Browne; the *Timucu* of Macgrave wrongly included in the synonymy; Bloch, Ichth., 1801, 391, corrected synonymy and description.
Hemiramphus brownii Cuvier and Valenciennes, Hist. Nat. Poiss., XIX, 1846, 10 (13), Guadeloupe, Martinique.
Hemiramphus pleii Cuvier and Valenciennes, loc. cit., 15 (19), Martinique, San Domingo.
Macrognathus brevirostris Gronow, Cat. Fish., 1854, 148, America; after Browne.
Hemirhamphus filamentosus Poey, Memorias, II, 1861, 297, Cuba.

1550. Hemirhamphus balao LeSueur. *Balao; Piper; Blue-tailed balao.*
Cuba; also known from Panama; Guadeloupe; Martinique.
Hemirhamphus balao LeSueur, Jour. Acad. Nat. Sci. Phila., II, 1823, 136, Lesser Antilles, Guadeloupe, Martinique.
Hemirhamphus macrochirus Poey, Memorias, II, 1861, 299, Cuba.

1551. Hemirhamphus saltator Gilbert and Starks.
Panama; Galapagos Islands.
Hemirhamphus saltator Gilbert and Starks, Mem. Calif. Acad. Sci., IV, 1904, 53, Pl. IX, fig. 16, Panama.

Genus 503. CHRIODORUS Goode and Bean. *Hardheads.*
Chriodorus Goode and Bean, Proc. U. S. Nat. Mus., V, 1882, 431 (*C. atherinoides* Goode and Bean).

1552. Chriodorus atherinoides Goode and Bean. *Hardhead.*
Florida Keys and vicinity.
Chriodorus atherinoides Goode and Bean, Proc. U. S. Nat. Mus., V, 1882, 432, Key West, Fla.

Genus 504. HEMIEXOCŒTUS Fowler.
Hemiexocœtus Fowler, Proc. Acad. Nat. Sci. Phila., LIII, 1901, 293 (*H. caudimaculatus* Fowler).

1553. Hemiexocœtus caudimaculatus Fowler.
Mazatlan, Mexico.
Hemiexocœtus caudimaculatus Fowler, Proc. Acad. Nat. Sci. Phila., LIII, 1901, 294, Mazatlan, Mexico.

Family 122. EXOCŒTIDÆ. Flyingfishes

Genus 505. FODIATOR Jordan and Meek.
Fodiator Jordan and Meek, Proc. U. S. Nat. Mus., VIII, 1885, 45 (*Exocœtus acutus* Cuvier and Valenciennes).

1554. Fodiator acutus (Cuvier and Valenciennes). *Sharp-nosed flyingfish.*
Both shores of tropical America; Gulf of California; San Luis Gonzales; Panama; Nice.
Exocœtus acutus Cuvier and Valenciennes, Hist. Nat. Poiss., XIX, 1846, 91 (125), Surinam; Nice.

Genus 506. EVOLANTIA Heller and Snodgrass.
Evolantia Heller and Snodgrass, Proc. Wash. Acad. Sci., V, 1903, 189 (*Exocœtus micropterus* Cuvier and Valenciennes).

1555. Evolantia microptera (Cuvier and Valenciennes). *Malolo.*
Galapagos Islands.
Exocœtus micropterus Cuvier and Valenciennes, Hist. Nat. Poiss., XIX, 1846, 92 (127), Port King George, New Holland, etc.

Genus 507. PAREXOCŒTUS Bleeker.
Parexocœtus Bleeker, Nederl. Tijdschr. Dierk., III, 1866, 126 (*Exocœtus mento* Cuvier and Valenciennes).

1556. Parexocœtus mesogaster (Bloch).
Tropical seas; East Indies and West Indies; Hawaiian Islands; Newport, Rhode Island; Carolina coast.
Exocœtus mesogaster Bloch. Naturgesch. Ausl. Fisch., IX, 1795, 17, Martinique; on a drawing by Plumier, in which the pectorals and ventrals are much too long.
Exocœtus orbignianus Cuvier and Valenciennes, Hist. Nat. Poiss., XIX, 1846, 95 (131), Montevideo.
Exocœtus hillianus Gosse, Naturalist's Sojourn in Jamaica, II, 1851, Pl. I, fig. 1, Jamaica.
Exocœtus gryllus Klunzinger, Verhandl. Zool. Botan. Gesell. Wien, 1871, 586, Red Sea.

Genus 508. EXOCŒTUS Linnæus. *Flyingfishes.*
Exocœtus Linnæus, Syst. Nat., ed. X, 1758, 316 (*E. volitans*).

1557. Exocœtus volitans Linnæus. *Sharp-finned flyingfish.*
Warm seas; Atlantic coast north to Newfoundland; England; Hawaiian Islands and Japan, largely pelagic.
Exocœtus volitans Linnæus, Syst. Nat., ed. X, 1758, 316, Atlantic Ocean; not of Cuvier and Valenciennes.
Exocœtus evolans Linnæus, loc. cit., ed. XII, 1766, 521; after Gronow.
Exocœtus splendens Abel, Narr. Voy. China, 1818, 4, China.
Exocœtus georgianus Cuvier and Valenciennes, Hist. Nat. Poiss., XIX, 1846, 139, equatorial America.
Exocœtus chiliensis Abbott, Proc. Acad. Nat. Sci. Phila., XII, 1860, 472, Chile.

1558. Exocœtus obtusirostris Günther.
Tropical Atlantic; recorded from Cape Verde Islands, New Orleans, and Miami, Fla.
Exocœtus obtusirostris Günther, Cat., VI, 1866, 283, Cape Verde Islands, etc.; according to Nichols (Copeia, No. 108, 1922, 49), this is different from *E. volitens*.

Genus 509. EXONAUTES Jordan and Evermann.
Exonautes Jordan and Evermann, Rept. U. S. Fish Com., 1895, 322 (*Exocœtus exsiliens* P. L. S. Müller).

1559. Exonautes exsiliens (P. L. S. Müller).
Open seas; rare on our Atlantic coast.
Exocœtus exsiliens Philip Ludwig Statius Müller, Nürnberg, ed. Linnæus, Syst. Nat., 1776, 209, Carolinas.
Exocœtus fasciatus LeSueur, Jour. Acad. Nat. Sci. Phila., II, 1821, 8, pl. 4, fig. 2, Atlantic.
Exocœtus lamellifer Kner and Steindachner, Neue Fische Godeffroy Mus., 1866, 29, Atlantic 12° S., 39° W.

1560. Exonautes rondeletii (Cuvier and Valenciennes).
Tropical seas; Florida; France; Acapulco; West Indies; southern Europe; perhaps the adult of *E. exsiliens*.
Exocœtus rondeletii Cuvier and Valenciennes, Hist. Nat. Poiss., XIX, 1846, 84 (115), pl. 562, Naples; Sicily; Canaries.
Exocœtus brachycephalus Günther, Cat., VI, 1866, 297, China.
Exocœtus volador Jordan, Proc. U. S. Nat. Mus., VII, 1884, 34 Pensacola, Fla.

1561. Exonautes vinciguerræ (Jordan and Meek).
Open Atlantic; southern Europe; Newfoundland; St. Martins; Gulf of Mexico.
Exocœtus vinciguerræ Jordan and Meek, Proc. U. S. Nat. Mus., VIII, 1885, 56, open sea off Newfoundland, 46° N., 61° W.

1562. Exonautes rubescens (Rafinesque).
Atlantic Ocean, north to Newfoundland; also in the Pacific if *E. speculiger* is the same.
Exocœtus rubescens Rafinesque, Amer. Month. Mag., 1818, 205, Banks of Newfoundland.
? *Exocœtus speculiger* Cuvier and Valenciennes, Hist. Nat. Poiss., XIX, 1846, 69 (63), Friendly Islands, Pacific coast of South America, etc.
Exocœtus roberti Müller and Troschel, Schomburgk's Hist. Barbados, 1848, 675, Barbados.
? *Exocœtus quadriremus* Gronow, Cat. Fish., 1854, 145, Spain and India.
Exocœtus volitans of various authors; not of Linnæus.

1563. Exonautes affinis (Günther).
West Indies to Africa; locally common.
Exocœtus affinis Günther, Cat., VI, 1866, 288, West Africa; Cuba.

1564. Exonautes rufipinnis (Cuvier and Valenciennes).
Tropical America; Payta; Panama; Tabasco; Barbados.
Exocœtus rufipinnis Cuvier and Valenciennes, Hist. Nat. Poiss., XIX, 1846, 72 (99), Payta, Peru.
Exocœtus dowii Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 167, near Panama.
Exocœtus scylla Cope, Trans. Amer. Phil. Soc., XIV, 1871, 481, Tabasco, Mexico.

Genus 510. CYPSELURUS Swainson.
Cypsilurus Swainson, Class. Fishes, etc., II, 1839, 296 (*Exocœtus nuttalli* LeSueur); misprint for *Cypselurus*, according to decision Int. Com. Zool. Nom.

1565. Cypselurus heterurus (Rafinesque). *Flyingfish; Single-bearded flyingfish.*
Atlantic Ocean, generally common southward to Newfoundland and to England.
Exocœtus heterurus Rafinesque, Caratteri, 1810, 58, Palermo.
Exocœtus comatus Mitchill, Trans. Lit. Phil. Soc. N. Y., 1815, 448, pl. 5, fig. 1, New York.
Exocœtus noveboracensis Mitchill, Amer. Month. Mag., II, 1818, 333, New York.
Exocœtus appendiculatus Wood, Jour. Acad. Nat. Sci. Phila., IV, 1824, 283, pl. 17, fig. 2, locality unknown.
Exocœtus melanurus Cuvier and Valenciennes, Hist. Nat. Poiss., XIX, 1846, 74 (101), New York.

1566. Cypselurus lutkeni (Jordan and Evermann).
Coast of Cuba.
Exocœtus lutkeni Jordan and Evermann, Fishes North and Mid. Amer., 1896, 736, Cape San Antonio, Cuba.

1567. Cypselurus furcatus (Mitchill). *Double-bearded flyingfish.*
Warm seas, north to Cape Cod and the Mediterranean, generally common.
Exocœtus furcatus Mitchill, Trans. Lit. Phil. Soc. N. Y., I, 1815, 449, New York.
Exocœtus nuttalli LeSueur, Jour. Acad. Nat. Sci. Phila., II, 1821, 10, Pl. IV, fig. 1, Gulf of Mexico.
Exocœtus (*Cypsilurus*) *procne* De Filippie Verany, Mem. Acad. Sci. Torino, ser. 2, XVIII, 1857, 10, fig. 5, Nice.
Exocœtus maculipinnis Vinciguerra, Ann. Mus. Genov., XVIII, 1883, pl. 1, fig. 6, 577, Tunis.

1568. Cypselurus nigricans (Bennett).
Tropical seas, north to Cuba, Central America, and France.
Exocœtus nigricans Bennett, Whaling Voyage, II, 1840, 287, taken in both the Atlantic and Pacific Oceans, in lat. 5° N.
Exocœtus bicolor Cuvier and Valenciennes, Hist. Nat. Poiss., XIX, 1846, 81 (111), Atlantic.
Exocœtus spilopus Cuvier and Valenciennes, loc. cit., 86 (118), La Rochelle; St. Helena; West Indies; India; Arabia; De Witt Land.

1569. Cypselurus xenopterus (Gilbert).
Clarion Island, one of the Revillagigedo Islands.
Exocœtus xenopterus Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 58, Clarion Island.

1570. Cypselurus lineatus (Cuvier and Valenciennes).
Tropical Atlantic; Gorea; the Canaries; Madeira and Bermuda.
Exocœtus lineatus Cuvier and Valenciennes, Hist. Nat. Poiss., XIX, 1846, 67 (92), Gorea; Canaries.

1571. Cypselurus cyanopterus (Cuvier and Valenciennes).
Coasts of Brazil and Caribbean Sea; not common.
Exocœtus cyanopterus Cuvier and Valenciennes, Hist. Nat. Poiss., XIX, 1846, 71 (98), American seas.
Exocœtus albidactylus Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 167, Caribbean Sea.

1572. Cypselurus bahiensis (Ranzani).
Tropical Atlantic; north to Cuba.
Exocœtus bahiensis Ranzani, Nov. Com. Acad. Sci. Bonon., V, 1842, 362, pl. 38, Bahia.
Exocœtus vermiculatus Poey, Memorias, II, 1861, 300, Cuba.
? *Exocœtus parræ* Poey, Synopsis, 1868, 385, Cuba.

1573. Cypselurus spilonotopterus (Bleeker).
Tropical Pacific, north to Hawaii and Galapagos Islands.
Exocœtus spilonotopterus Bleeker, Nederl. Tijdschr. Dierk., III, 1863, 113, Sumatra.

1574. Cypselurus californicus (Cooper). *Great flyingfish; Volador.*
Southern California; Point Conception to Cape San Lucas; Santa Barbara Islands; locally very abundant.
Exocœtus californicus Cooper, Proc. Calif. Acad. Nat. Sci., III, 1863, 93, fig. 20, Santa Catalina Island.

1575. Cypselurus callopterus (Günther).
Panama.
Exocœtus callopterus Günther, Cat., VI, 1866, 292, Panama.

1576. Cypselurus fucorum (Zugmayer).
Mid-Atlantic.
Exocœtus fucorum Zugmayer, Bull. 193, Inst. Oceanogr., Jan. 20, 1911, in 31° 38′ N., 42° 38′ W., at surface.

1577. Cypselurus holubi (Steindachner).
Exocœtus holubi Steindachner, in Collett, Voy. *Hirondelle*, 1896, 123, Pl. IV, fig. 18, Newfoundland.

1578. Cypselurus gibbifrons (Cuvier and Valenciennes).
Atlantic Ocean; Newport, R. I.
Exocœtus gibbifrons Cuvier and Valenciennes, Hist. Nat. Poiss., XIX, 1846, 86 (118), Atlantic.

Order FF. ANACANTHINI

Family 123. MACROURIDÆ (Coryphænoididæ). Grenadiers; Rat-tails

Genus 511. GADOMUS Regan.
Gadomus Regan, Ann. Mag. Nat. Hist., XII, 1903, 459, 466 (*Bathygadus longifilis* Goode and Bean).

1579. Gadomus arcuatus (Goode and Bean).
Gulf of Mexico, in deep water.
Bathygadus arcuatus Goode and Bean, Bull. Mus. Comp. Zool., XII, 1886, No. 5, 158, off Martinique in 334 fathoms.

1580. Gadomus longifilis (Goode and Bean).
Deep waters of the Gulf of Mexico.
Bathygadus longifilis Goode and Bean, Proc. U. S. Nat. Mus., VIII, 1885, 599, Gulf of Mexico at *Albatross* station 2392, lat. 28° 47′ 30″ N., long. 87° 27′ W., in 724 fathoms.

Genus 512. BATHYGADUS Günther.
Bathygadus Günther, Ann. Mag. Nat. Hist., II, 1878, 23 (*B. cottoides* Günther).
Melanobranchus Regan, loc. cit., (7), XI, 1903, 459 (*Bathygadus melanobranchus* Vaillant).

1581. Bathygadus favosus Goode and Bean.
Off Martinique, in deep water.
Bathygadus favosus Goode and Bean, Bull. Mus. Comp. Zool., XII, 1886, No. 5, 160, off Martinique at *Blake* station 80 in 472 fathoms.

1582. Bathygadus macrops Goode and Bean.
Deep waters of the Gulf of Mexico.
Bathygadus macrops Goode and Bean, Proc. U. S. Nat. Mus., VIII, 1885, 598, at *Albatross* station 2396 in lat. 28° 34′ N., long. 86° 48′ W., in 335 fathoms.

Genus 513. STEINDACHNERIA Goode and Bean.
Steindachneria Goode and Bean, in Agassiz, Three Cruises of the *Blake*, II, 1888, 26 (diagnosis but no type named); not *Steindachneria* Eigenmann 1888=*Steindachneridion* Eigenmann and Eigenmann, 1919.
Steindachnerella Eigenmann and Eigenmann, Amer. Nat., XXXI, 1897, 159 (*Steindachneria argentea* Goode and Bean).

1583. Steindachneria argentea Goode and Bean.
Gulf of Mexico.
Steindachneria argentea Goode and Bean, Oceanic Ichth., 1896, 419, fig. 351, off delta of Mississippi River in 68 fathoms.

Genus 514. TRACHYRINCUS Giorna.
Trachyrincus Giorna, Mem. Acad. Imp. Turin, XVI, 1805, 4, 179, (*Lepidolepsus trachyrincus* Risso, not mentioned).

1584. Trachyrincus helolepis (Gilbert).
Off the Pacific coast of Central America.
Trachyrhynchus helolepis Gilbert, Proc. U. S. Nat. Mus., XIV, 1891, 562, Pacific coast of Central America, at *Albatross* station 2818, in deep water.

Genus 515. DOLLOA Jordan.
Moseleya Goode and Bean, Oceanic Ichth., 1895, 417 (*Macrurus longifilis* Günther); name preoccupied.
Dolloa Jordan, Amer. Nat., XXXIV, 1900, 877 (*Macrurus longifilis* Günther).

1585. Dolloa cyclolepis (Gilbert).
Coast of British Columbia.
Nematonurus cyclolepis Gilbert, Rept. U. S. Fish Com., XIX, 1893 458, off Queen Charlotte Island in 1,588 fathoms.

Genus 516. NEMATONURUS Günther.
Nematonurus Günther, *Challenger* Rept., Deep Sea Fishes, XXII, 1887, 124, 150 (*N. armatus* Hector).

1586. Nematonurus goodii (Günther).
Gulf Stream from Cape Cod to Habana; generally abundant.
Macrurus asper Goode and Bean, Bull. Mus. Comp. Zool., X, 1883, No. 5, 196, Gulf Stream, south of New England in 1,242 fathoms.
Macrurus goodii Günther, *Challenger* Report, XXII, 1887, 36; substitute for *Macrurus asper*, preoccupied.

1587. Nematonurus suborbitalis (Gill and Townsend).
Bering Sea.
Macrurus suborbitalis Gill and Townsend, Proc. Biol. Soc. Wash., XI, 1897, 234, Bering Sea, southwest of Pribilof Islands, in 1,771 fathoms.

1588. Nematonurus acrolepis (Bean).
Straits of Juan de Fuca; off Bogoslof Island, north of Aleutian Islands; once taken at Monterey (W. F. Thompson).
Macrurus acrolepis Bean, Proc. U. S. Nat. Mus., VI, 1883, 362, Port Townsend, Wash.

1589. Nematonurus abyssorum Gilbert.
Off southern California in deep water.
Nematonurus abyssorum Gilbert, Proc. U. S. Nat. Mus., XLVIII, 1915, 374, pl. 21, off Santa Catalina in 1,350 to 2,182 fathoms.

Genus 517. ALBATROSSIA Jordan and Evermann.
Albatrossia Jordan and Evermann, Fishes North and Mid. Amer., 1898, 2573 (*Macrourus pectoralis* Gilbert).

1590. Albatrossia pectoralis (Gilbert).
Off coast of Oregon.
Macrourus (*Malacocephalus*) *pectoralis* Gilbert, Proc. U. S. Nat. Mus., XIV, 1891, 563, off coast of Oregon, at *Albatross* stations 3071, 3074, and 3075, in 685 to 877 fathoms.
Macrurus (*Nematonurus*) *magnus* Gill and Townsend, Proc. Biol. Soc. Wash., XI, 1897, 234, Bering Sea, southwest of Pribilof Islands.

Genus 518. BOGOSLOVIUS Jordan and Evermann.
Bogoslovius Jordan and Evermann, Fish. North and Mid. Amer., 1898, 2574 (*B. clarki* Jordan and Gilbert).

1591. Bogoslovius clarki Jordan and Gilbert.
Bering Sea.
Bogoslovius clarki Jordan and Gilbert, in Jordan and Evermann, Fishes North and Mid. Amer., 1898, 2575, Bering Sea off Bogoslof Island in 664 fathoms.

1592. Bogoslovius firmisquamis (Gill and Townsend).
Bering Sea.
Macrurus firmisquamis Gill and Townsend, Proc. Biol. Soc. Wash., XI, 1897, 234, Bering Sea southwest of Pribilof Islands.

Genus 519. CHALINURA Goode and Bean.
Chalinura Goode and Bean, Bull. Mus. Comp. Zool., X, 1882, No. 5, 198 (*C. simula* Goode and Bean).
Chalinurus Günther, altered spelling.

1593. Chalinura occidentalis (Goode and Bean).
Atlantic Ocean off Cape Hatteras and Caribbean Sea.
Malacocephalus occidentalis Goode and Bean, Proc. U. S. Nat. Mus., VIII, 1885, 597, off Cape Hatteras in 132 fathoms.

1594. Chalinura serrula Bean.
East of Prince of Wales Island in deep water.
Chalinura serrula Bean, Proc. U. S. Nat. Mus., XIII, 1890, 37, east of Prince of Wales Island, at *Albatross* station 2859 in 1,569 fathoms.

1595. Chalinura filifera Gilbert.
Off Queen Charlotte Island, in deep water.
Chalinura filifera Gilbert, Rept. U. S. Fish Com., XIX, 1893 (1896), 458, off Queen Charlotte Island, at *Albatross* station 3342.

1596. Chalinura simula Goode and Bean.
Gulf Stream.
Chalinura simula Goode and Bean, Bull. Mus. Comp. Zool., X, No. 5, 1883, 199, Gulf Stream, about latitude 40°.

1597. Chalinura brevibarbis Goode and Bean.
Atlantic Basin.
Chalinura brevibarbis Goode and Bean, Oceanic Ichth., 1895, 413, Atlantic Ocean in 1,255 fathoms.

1598. Chalinura spinulosa Gilbert and Burke.
East coast of Kamchatka.
Chalinura spinulosa Gilbert and Burke, Bull. U. S. Bur. Fish., XXX, 1910, 92, fig. 36, Avatcha Bay.

Genus 520. CORYPHÆNOIDES[86] Gunner.
Coryphænoides Gunner, Trondhj. Selsk, Skrift., III, 1765, 50 (*C. rupestris* Gunner).

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[86] The name *Coryphænoides* is older than *Macrourus*, the term usually applied to the species of this genus. The distinction between *Coryphænoides* and *Macrourus* is rather slight, the mouth in *Macrourus* being smaller and more inferior. Gilbert and Hubbs unite the two groups as *Coryphænoides*. Many species have been described from the deep waters of America. These we leave in *Coryphænoides* or in *Macrourus* as their describers have placed them. Some of the genera accepted here are of questionable value.

1599. Coryphænoides rupestris Gunner.
Banks of Newfoundland to Norway.
Coryphænoides rupestris Gunner, Trondhj. Selsk. Skrift., III, 1765, 50.
Lepidolepus norvegicus Nilsson, Prodr. Ichth. Scand., 1832, 51, Norway.

1600. Coryphænoides carapinus Goode and Bean.
Gulf Stream.
Coryphænoides carapinus Goode and Bean, Bull., Mus. Comp. Zool., X, 1883, No. 5, 197, Gulf Stream, about lat. 40°, in deep water.

Genus 521. MACROURUS [37] **Bloch.**
Macrourus Bloch, Naturgesch. Ausl. Fische, II, 1786, 150 (*Coryphæna rupestris* Fabricius = *Macrourus berglax* Lacépède); not *Coryphænoides rupestris* Gunner.
Macrurus Günther, and of most authors; corrected spelling.

1601. Macrourus berglax Lacépède.
Massachusetts to Greenland and Norway.
?*Coryphæna rupestris* Fabricius, Fauna Grœnlandica, 1780, 154, Greenland.
Macrourus berglax Lacépède, Hist. Nat. Poiss., III, 1802, 170, Greenland.

1602. Macrourus bairdi Goode and Bean. *Common rat-tail.*
West Indies to Massachusetts Bay; excessively common north in deep water.
Macrourus bairdi Goode and Bean, Amer. Jour. Sci. Arts., XIII, 1877, 471, Massachusetts Bay.

1603. Macrourus stelgidolepis Gilbert.
Pacific Ocean off Point Conception, Calif.
Macrurus (*Macrourus*) *stelgidolepis* Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 116, *Albatross* station 2960, lat. 34° 10′ 45″ N., long. 120′ 16′ 45″ W., in 267 fathoms.

1604. Macrourus cinereus Gilbert. *Popeye.*
North Pacific and Bering Sea; very abundant.
Macrurus cinereus Gilbert, Rept. U. S. Fish Com., XIX, 1893 (1896), 457, at *Albatross* stations 3307, 3329, and 3340, lat. 54° to 55° N. and long. 155° to 171° W., in 399 to 1,033 fathoms.

1605. Macrourus bulbiceps Garman.
Off Cocos Islands in deep water.
Macrurus bulbiceps Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 194, Pl. XLIV, off Cocos Islands.

1606. Macrourus bucephalus Garman.
Off Galapagos Islands to Gulf of California, in deep water.
Macrurus bucephalus Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 195, Pl. XLIV, Gulf of California.

1607. Macrourus barbiger Garman.
Gulf of California in deep water.
Macrurus barbiger Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 197, Pl. XLV, Gulf of California.

1608. Macrourus capito Garman.
Off Panama in deep water.
Macrurus capito Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 200, off Bay of Panama.

1609. Macrourus leucophæus Garman.
Off Panama in deep water.
Macrurus leucophæus Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 201, off Bay of Panama.

1610. Macrourus boöps Garman.
Off Panama in deep water.
Macrurus boöps Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 202, off Bay of Panama.

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[37] The many deep-sea forms described by Garman are nearly all referred to *Macrourus* without reference to the closely related minor genera proposed for forms allied to *Macrourus* and *Coryphænoides*, the two principal genera of the family, and themselves barely separable.

1611. **Macrourus fragilis** Garman.
Off Panama in deep water.
Macrurus fragilis Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 203, Pl. XLV, off coast of Panama.

1612. **Macrourus carminifer** Garman.
Off Panama in deep water.
Macrurus carminifer Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 204, Pl. XLVI, off Bay of Panama.

1613. **Macrourus gracilicauda** Garman.
Off Panama in deep water.
Macrurus gracilicauda Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 206, Pl. H, off Bay of Panama.

1614. **Macrourus orbitalis** Garman.
Off Panama in deep water.
Macrurus orbitalis Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 207, Pl. XLVII, off Bay of Panama.

1615. **Macrourus cuspidatus** Garman.
Gulf of California in deep water.
Macrurus cuspidatus Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 209, Gulf of California.

1616. **Macrourus convergens** Garman.
Off Panama in deep water.
Macrurus convergens Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 210, Pl. XLVIII, off Bay of Panama.

1617. **Macrourus latirostratus** Garman.
Off Panama in deep water.
Macrurus latirostratus Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 211, Pl. XLVIII, off Bay of Panama.

1618. **Macrourus latinasutus** Garman.
Gulf of California in deep water.
Macrurus latinasutus Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 214, Gulf of California.

1619. **Macrourus anguliceps** Garman.
From Galapagos Islands to Gulf of California in deep water.
Macrurus anguliceps Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 212, Pl. G; off Bay of Panama.

1620. **Macrourus trichurus** Garman.
Off Panama in deep water.
Macrurus trichurus Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 215, off Bay of Panama.

1621. **Macrourus tenuicauda** Garman.
Off Panama in deep water.
Macrurus tenuicauda Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 216, Pl. XLIX, off Bay of Panama.

1622. **Macrourus canus** Garman.
Off Panama in deep water.
Macrurus canus Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 217, Pl. XLIX, off Bay of Panama.

1623. **Macrourus albatrossus** Townsend and Nichols.
Off Lower California in deep water.
Macrourus albatrossus Townsend and Nichols, Bull. Amer. Mus. Nat. Hist., LII, 1925, 17, lat. 31° W., southwest of San Diego in 1,076 fathoms.

1624. **Macrourus ingolfi** Lütken.
Iceland and Greenland in deep water.
Macrurus ingolfi Lütken, Ichth. Ingolf Exped., 1898, 27, south of Iceland.

1625. Macrourus lepturus Gill and Townsend.
Bering Sea, St. Paul Island, Yunaska Island.
Macrourus lepturus Gill and Townsend, Proc. Biol. Soc. Wash., XI, 1897, 233, Bering Sea, southwest of the Pribilof Islands, in 1,401 fathoms.
Macrurus dorsalis Gill and Townsend, loc. cit., 233, Bering Sea, southwest of Pribilof Islands, in 1,401 fathoms.

Genus 522. CŒLORHYNCHUS Giorna.
Cœlorhynchus Giorna, Mem. Acad. Nat. Sci. Turin, XVI, 1805, 179, pl. 1, figs. 3 and 4 (*C. laville* Giorna).

1626. Cœlorhynchus occa (Goode and Bean.)
Gulf of Mexico in deep water.
Macrurus occa Goode and Bean, Proc. U. S. Nat. Mus., VIII, 1885, 595, Gulf of Mexico in 335 fathoms.

1627. Cœlorhynchus carminatus (Goode). *Grenadier.*
Caribbean Sea, north in the Gulf Stream to Long Island.
Macrurus carminatus Goode, Proc. U. S. Nat. Mus., III. 1880, 346, Gulf Stream, 40° 02′ 54″ N., 70° 23′ 40″ W., in 115 fathoms.

1628. Cœlorhynchus caribbæus (Goode and Bean).
West Indies to northern part of Gulf of Mexico.
Macrurus caribbæus Goode and Bean, Proc. U. S. Nat. Mus., VIII, 1885, 594, northern part of Gulf of Mexico in 210 fathoms.

1629. Cœlorhynchus scaphopsis (Gilbert).
Gulf of California in deep water.
Macrurus (*Cœlorhynchus*) *scaphopsis* Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 115, Gulf of California at *Albatross* station 3015, lat. 29° 19′ N., long. 112° 50′ W., in 145 fathoms.

Genus 523. TRACHONURUS Günther.
Trachonurus Günther, *Challenger* Rept., Deep-sea Fishes, XXII, 1887, 124 (*Macrurus villosus* Günther).

1630. Trachonurus sulcatus (Goode and Bean).
West Indies and Gulf of Mexico in deep water.
Coryphænoides sulcatus Goode and Bean, Proc. U. S. Nat. Mus., VIII, 1885, 596, Gulf of Mexico in 420 fathoms.

Genus 524. LIONURUS Günther.
Lionurus Günther, *Challenger* Rept., Deep-sea Fishes, XXII, 1887, 124 (*Coryphænoides filicauda* Günther).

1631. Lionurus liolepis (Gilbert).
Off southern California in deep water.
Macrurus (*Lionurus*) *liolepis* Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 117, coast of California at *Albatross* station 2980, lat. 33° 49′ 45″ N., long. 119° 24′ 30″ W. in 600 fathoms.

Genus 525. HYMENOCEPHALUS Giglioli and Issel.
Hymenocephalus Giglioli and Issel, Pelagos, Genoa, 1884, 228 (*H. italicus* Giglioli and Issel).

1632. Hymenocephalus cavernosus (Goode and Bean).
Gulf of Mexico in deep water.
Bathygadus cavernosus Goode and Bean, Proc. U. S. Nat. Mus., VIII, 1885, 598, *Albatross* station 2398, lat. 28° 45′ N., long. 86° 26′ W. in 227 fathoms.

Genus 526. ATELEOBRACHIUM Gilbert and Burke.
Ateleobrachium Gilbert and Burke, Bull. U. S. Bur. Fish., XXX, 1910, 94 (*A. pterotum* Gilbert and Burke).

1633. Ateleobrachium pterotum Gilbert and Burke.
East coast of Kamchatka.
Ateleobrachium pterotum Gilbert and Burke, Bull. U. S. Bur. Fish., XXX, 1910, 94, Avatcha Bay.

Family 124. BREGMACEROTIDÆ

Genus 527. BREGMACEROS (Cantor) Thompson.
Bregmaceros Thompson, in Charlesworth's Mag. Nat. Hist., IV, 1840, I, 184 (*B. macclellandii* Thompson).
Calloptilum Richardson, Voy. *Sulphur*, 94, 1843, 16 (*C. mirum* Richardson).
Asthenurus Tickell, Jour. Asiat. Soc. Bengal, 1865, 32 (*A. atripinnis* Tickell).

1634. Bregmaceros bathymaster Jordan and Bollman.
South Pacific and Indian Oceans; also off coast of Panama.
?*Bregmaceros macclellandii* Cantor, in Charlesworth's Mag. Nat. Hist., IV, 1840, 184, fig. 185, India.
?*Asthenurus atripinnis* Tickell, Jour., Asiat. Soc. Bengal, 1865, 32, with plate, Bay of Bengal.
Bregmaceros bathymaster Jordan and Bollman, Proc. U. S. Nat. Mus., XII, 1889, 173, southwest of Panama.

1635. Bregmaceros atlanticus Goode and Bean.
Blake stations 99, off Granada, 113, off Nevis; and 185.
Bregmaceros atlanticus Goode and Bean, Bull., Mus. Comp. Zool., XII, 1886, No. 5, 165, off Nevis and Granada, West Indies.

1636. Bregmaceros longipes Garman.
Off coast of Acapulco, Mexico, in shallow water.
Bregmaceros longipes Garman, Mem., Mus. Comp. Zool., XXIV, 1899, 191, Pl. XLIII, off Pacific coast of Mexico.

Family 125. GAIDROPSARIDÆ. Rocklings

Genus 528. GAIDROPSARUS Rafinesque. *Three-bearded rocklings.*
Gaidropsarus Rafinesque, Indice, II, 1810, 51 (*G. mustellurus*=*Enchelyopus mediterraneus* Schneider).
Dropsarus Rafinesque, Anal. Nat., 1815, 88, shortened form; same type.
Les Mustèles Cuvier, Règne Anim., ed. 1, II, 1817, 215 (*tricirrhatus*=*mediterraneus*).
Mustela Oken, Isis, 1817 (for *les Mustèles*, not *Mustela* L., a genus of weasels).
Onos Risso, Hist. Europ. Mérid., III, 1826, 214 (*Gadus mustela* Bloch).
Mustela Stark, Elem. Nat. Hist., I, 1828, 425; after *les Mustèles*.
Motella Cuvier, Règne Anim., ed. 2, II, 1829, 334 (*Gadus mustela* L.); substitute for *Mustela* Cuvier.
Onus Günther, corrected spelling; not of Rafinesque.

1637. Gaidropsarus ensis (Reinhardt). *Rockling; Three-bearded rockling.*
New York to Greenland.
Motella ensis Reinhardt, Dansk. Vidensk. Selsk. Afhandl., VII, 1838, 116, 128, Greenland.
Onos rufus Gill, Proc. U. S. Nat. Mus., VI, 1883, 259, Gulf Stream.

1638. Gaidropsarus septentrionalis (Collett).
Coasts of Norway and Greenland.
Motella septentrionalis Collett, Ann. Mag. Nat. Hist., 4th ser., XV, 1875, 82, Lofoton, Floro, Bergen, coast of Norway and Bodö, lat. 67° 15′ N., in 30 fathoms.

Genus 529. CILIATA Couch. *Five-bearded rocklings.*
Ciliata Couch, Mag. Nat. Hist., V, 1822, 15 (*C. glauca* Couch, the "mackerel midge," larva of *Gadus mustela* L.)
Couchia Thompson, Nat. Hist. Ireland, IV, 1856, 288 (*C. minor* Thompson=larva of *Gadus mustela* L.).
Molvella Kaup, Archiv Natur., XXIV, 1858, I, 90 (*Molvella borealis* Kaup=*Gadus mustela* L.).

1639. Ciliata argentata (Reinhardt). *Silvery rockling; Mackerel midge; Five-bearded rockling.*
Coasts of Greenland, south to Faröe and Bear Islands.
Motella argentata Reinhardt, Dansk. Vidensk. Selsk. Afhandl., VII, 1838, 116, 128, Greenland.
Motella reinhardti Kröyer, in Collett, Forhandl. Vidensk. Selsk. Chr., No. 14, 1878, 83, Greenland.

Genus 530. ENCHELYOPUS[38] **Bloch and Schneider.** *Four-bearded rocklings.*
Enchelyopus Bloch and Schneider, Syst. Ichth., 1801, 50 (*Gadus cimbrius* L.); not of Gronow, which is nonbinomial.
Rhinonemus Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 241 (*Gadus cimbrius* L.).

1640. Enchelyopus cimbrius (Linnæus). *Four-bearded rockling.*
North Atlantic on both coasts, south in deep water to the Gulf Stream; common in Massachusetts Bay.
Gadus cimbrius Linnæus, Syst. Nat., ed. 12, I, 1766, 440, Atlantic Ocean; Scania.
Motella caudacuta Storer, Proc. Bost. Soc. Nat. Hist., III, 1848, 5, Long Point, Provincetown, Mass.

Family 126. GADIDÆ. Codfishes

Genus 531. BOREOGADUS Günther.
Boreogadus Günther, Cat., IV, 1862, 336 (*Gadus fabricii* Richardson = *Gadus saida* Lepechin).

1641. Boreogadus saida (Lepechin).
Arctic seas, Greenland to Alaska and northern Russia; common in the far north.
Gadus saida Lepechin, Nov. Comm. Acad. Sci. Petropol., XVIII, 1774, 512, Russia.
Merlangus polaris Sabine, Suppl. Parry's Voy., CCXI, 1824, Baffin's Bay.
Gadus fabricii Richardson, Fauna Bor.-Amer., III, 1836, 245, northern bays of Greenland.
Gadus agilis Reinhardt, Danske Vidensk. Selsk. Afhandl., VII, 1838, 126, Greenland.

Genus 532. POLLACHIUS Nilsson. *Pollacks.*
Pollachius Nilsson, in Bonaparte, Cat. Metod. Pesci. Europ., 1846, 45 (*Gadus pollachius* Linnæus).

1642. Pollachius virens (Linnæus). *Pollack; Coalfish; Green cod.*
North Atlantic; common northward on both coasts, south to Cape Cod.
Gadus virens Linnæus, Syst. Nat., ed. X, 1758, 253, oceans of Europe.
Gadus carbonarius Linnæus, loc. cit., 254, seas of Europe.
Gadus colinus Lacépède, Hist. Nat. Poiss., II, 1800, 416, England, etc.
Gadus purpureus Mitchill, Trans. Lit. Phil. Soc. N. Y., I, 1815, 370, New York.
Merlangus leptocephalus DeKay, New York Fauna: Fishes, 1842, 288, pl. 45, fig. 146, Long Island.

Genus 533. THERAGRA Lucas.
Theragra Lucas, in Jordan and Gilbert, Rept. Fur-seal Invest., III, 1896, 486 (*Gadus chalcogrammus* Pallas).

1643. Theragra chalcogramma (Pallas). *Alaska pollack.*
North Pacific, south to Sitka.
Gadus chalcogrammus Pallas, Zoogr. Rosso.-Asiat., III, 1811, 198, Kamchatka.
Gadus periscopus Cope, Proc. Amer. Phil. Soc., XIII, 1873, 30, Unalaska.

1644. Theragra fucensis (Jordan and Gilbert). *Wall-eyed pollack; Puget Sound pollack.*
Puget Sound.
Pollachius chalcogrammus fucensis Jordan and Gilbert, Proc. U. S. Nat. Mus., XVI, 1893, 315, Puget Sound at Tacoma, Wash.

Genus 534. ELEGINUS Fischer.
Eleginus Fischer, Mem. Soc. Nat. Moscow, 2d ed., V, 1813, 4, 252-257 (*Gadus nawaga* Kölreuter).

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[38] The name *Enchelyopus* ("eels without ventral fins") has been used variously since first proposed by Gronow; Gronow applied the name to *Zoarces*, Klein to *Trichiurus*; as both these writers were nonbinomial we recognize its first binomial use, that of Schneider, for *Gadus cimbrius* L.

1645. Eleginus nawaga (Kölreuter). *Wachna cod.*
Puget Sound to Bering Sea.
Gadus nawaga Kölreuter, Nov. Com. Acad. Sci. Petropol., XIV, 1770, 484, pl. 12, coast of northern Russia.
Gadus gracilis Tilesius, Mém. Acad. Sci. Imp. St. Petersb., II, 1810, 354, Kamchatka.
Gadus wachna Pallas, Zoogr. Rosso.-Asiat., III, 1811, 182, Kamchatka.

Genus 535. MICROGADUS Gill. *Tomcods.*
Microgadus Gill, Proc. Acad. Nat. Sci. Phila., XVII, 1865, 69 (*Gadus proximus* Girard).

1646. Microgadus tomcod (Walbaum). *Tomcod; Frostfish.*
East coast of North America, from Virginia to Labrador.
Gadus tomcod Walbaum, Artedi Pisc., III, 1792, 133, Long Island; after Schöpf.
Gadus frost Walbaum, loc. cit., 134, North America.
Gadus tomcodus pruinosus Mitchill, Trans. Lit. Phil. Soc. N. Y., I, 1815, 269, New York.
Gadus tomcodus fuscus Mitchill, loc. cit., 369, New York.
Gadus tomcodus luteus Mitchill, loc. cit., 369, New York.
Gadus tomcodus mixtus Mitchill, loc. cit., 369, New York.
Gadus polymorphus Mitchill, loc. cit., 369, New York.
Morrhua americana Storer, Rept. Fish. Mass., 1839, 120, coast of Massachusetts.

1647. Microgadus proximus (Girard). *California tomcod.*
West coast of North America, from Monterey to Alaska.
Gadus proximus Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 141, San Francisco.
Morrhua californica Ayres, Proc. Calif. Acad. Nat. Sci., I, 1854, 8, San Francisco.

Genus 536. GADUS Linnæus. *Codfishes.*
Gadus (Artedi) Linnæus, Syst. Nat., ed. X, 1758, 251 (*Gadus morrhua* L.).
Morrhua Oken, Isis, 1817, 1182, after "Les Morrhues" Cuvier (*Gadus morrhua* L.).
Cephus Swainson, Nat. Hist. Class. Fish., II, 1839, 300 (*Gadus macrocephalus* Tilesius).
Cerdo Gistel, Thierreich, X, 1848 (*Gadus morrhua* L., by implication).

1648. Gadus morrhua Linnæus. *Common codfish.*
North Atlantic, south to Virginia.
Gadus callarias Linnæus, Syst. Nat., ed. X, 1758, 252, Baltic Sea and ocean off Europe; young.
Gadus morrhua Linnæus, loc. cit., seas of Europe; name preferred by first reviser.
Gadus vertagus Walbaum, Artedi Pisc., III, 1792, 143; after Jägershen.
?*Gadus heteroglossus* Walbaum, loc. cit., 144; after Hornbogen of Klein.
Gadus arenosus Mitchill, Trans. Lit. Phil. Soc. N. Y., I, 1815, 368, New York.
Gadus rupestris Mitchill, loc. cit., 368, New York.
?*Gadus nanus* Faber, Natur. Fische Islands, 1829, 112, 182, Iceland.

1649. Gadus macrocephalus Tilesius. *Alaska codfish; Pacific cod.*
Bering Sea, south to coast of Oregon.
Gadus macrocephalus Tilesius, Mem. Acad. Sci. St. Petersb., II, 1810, 360, Bering Sea.
Gadus pygmæus Pallas, Zoogr. Ross.-Asiat., III, 1811, 199, Kamchatka.
Gadus auratus Cope, Proc. Amer. Phil. Soc., XIII, 1873, 30, Unalaska.

1650. Gadus ogac Richardson. *Greenland codfish; Ogac.*
Greenland; Godhaven.
Gadus ogac Richardson, Fauna Bor.-Amer., III, 1836, 246, Greenland.

Genus 537. MELANOGRAMMUS Gill.
Melanogrammus Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 280 (*Gadus æglefinus* Linnæus).
Æglefinus Malm, Göteborg och Bohusläns Fauna, 1877, 481 (*Gadus æglefinus* L.=*Æglefinus linnæi* Malm).

1651. Melanogrammus æglefinus (Linnæus). *Haddock.*
North Atlantic, on both coasts.
Gadus æglefinus Linnæus, Syst. Nat., ed. X, 1758, 251, ocean off Europe.
Morrhua puctatus Fleming, Brit. Anim., 1828, 191.
Æglefinus linnæi Malm, Göteborg Bohusläns Fauna, 1877, 481.

Genus 538. LEPIDION Swainson.
Lepidion Swainson, Nat. Hist. Class'n Anim., I, 1838, 318, and II, 1839, 300 (*L. rubescens* Swainson=*Gadus lepidion* Risso); nct *Lepidia* Savigny, 1817,
Haloporphyrus Günther, Cat., IV, 1862, 358 (*Gadus lepidion* Risso).

1652. Lepidion verecundum Jordan and Cramer.
Off Pacific coast of Mexico.
Lepidion verecundum Jordan and Cramer, Proc. U. S. Nat. Mus., XIX, 1896, 456, Clarion Island, Mexico.

Genus 539. MICROLEPIDIUM Garman.
Microlepidium Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 180, (*M. grandiceps* Garman).

1653. Microlepidium grandiceps Garman.
Gulf of California in deep water.
Microlepidium grandiceps Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 181, Pl. XLIII, Gulf of California.

Genus 540. ANTIMORA Günther.
Antimora Günther, Ann. Mag. Nat. Hist., 5th ser., II, 1878, 18 (*A. rostrata* Günther).

1654. Antimora viola (Goode and Bean).
Banks of Newfoundland and southward.
Haloporhyrus viola Goode and Bean, Proc. U. S. Nat. Mus., I, 1878, 257, LaHave Bank in 400 fathoms.

1655. Antimora microlepis Bean.
Pacific Ocean, off Queen Charlotte Islands.
Antimora microlepis Bean, Proc. U. S. Nat. Mus., XIII, 1890, 38, lat. 51° 00′ 23″ N., long. 130° 34′ W., off Cape St. James, Queen Charlotte Islands, in 875 fathoms.

1656. Antimora rhina Garman.
Off Panama in deep water.
Antimora rhina Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 185, off Bay of Panama.

Genus 541. GADELLA Lowe.
Gadella Lowe, Proc. Zool. Soc. Lond., 1843, 91 (*G. gracilis* Lowe).
Uraleptus Costa, Wiegmann's Archiv Naturgesch., 1858, 87 (*Gadus maraldi* Risso).

1657. Gadella maraldi (Risso).
Nice; Madeira; Naples and Catania; also off island of Nevis in the West Indies.
Gadus maraldi Risso, Ichth. Nice, 1810, 123, pl. 6, fig. 13, Nice.
Gadella gracilis Lowe, Proc. Zool. Soc. Lond., 1843, 91, Madeira.

Genus 542. LOTELLA Kaup.
Lotella Kaup, Wiegmann's Archiv, 1858, 88 (*Lota phycis* Temminck and Schlegel).

1658. Lotella maxillaris Bean.
Gulf Stream.
Lotella maxillaris Bean, Proc. U. S. Nat. Mus., VII, 1884, 241, lat. 39° 55′ N., long. 70° 28′ W., in 396 fathoms.

Genus 543. PHYSICULUS Kaup.
Physiculus Kaup, Wiegmann's Archiv, 1858, 88 (*P. dalwigkii* Kaup).

1659. Physiculus kaupi Poey.
Cuba.
Physiculus kaupi Poey, Repertorio, I, 1865, 186, Matanzas, Cuba.

1660. Physiculus fulvus Bean.
Caribbean Sea and north in the Gulf Stream to latitude 35°.
Physiculus fulvus Bean, Proc. U. S. Nat. Mus., VII, 1884, 240, lat. 40° 1′ N., long. 69° 56′ W., 79 fathoms.

1661. Physiculus nematopus Gilbert.
On both coasts of Lower California, in deep water.
Physiculus nematopus Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 114, on both coasts of Lower California, at *Albatross* stations 2997, 3011, 3015, and 3016, in 71 to 221 fathoms.

1662. Physiculus rastrelliger Gilbert.
Off Panama to southern California in deep water.
Physiculus rastrelliger Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 113, coast of southern California.

1663. Physiculus longipes Garman.
Off Panama in deep water.
Physiculus longipes Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 188, Pl. XLII, off Bay of Panama.

Genus 544. LOTA Cuvier. *Burbots.*
Les Lottes Cuvier, Règne Anim., ed. 1, II, 1817, 215 (*Gadus lota* L.).
Lota Oken, Isis, 1817, 1182 (*Gadus lota* L.).

1664. Lota maculosa (LeSueur). *Burbot; Lake lawyer; Ling; Alekey trout; Eel pout and Long-tailed cat* (trade names at Sandusky, Ohio); *Mud blower.*
Rivers and lakes of New England and the Great Lakes region, north to Arctic seas, and west to the upper Missouri and Columbia River Basins.
Gadus maculosus LeSueur, Jour. Acad. Nat. Sci. Phila., I, 1817, 83, Lake Erie.
Gadus compressus LeSueur, loc. cit., 84, Connecticut River.
Gadus lacustris Mitchill, Amer. Month. Mag., II, 1818, 244, Sebago Lake, Maine; not of Walbaum.
Molva huntia LeSueur, Mém. Mus. Hist. Nat. Paris, V, 1819, 161, Connecticut River.
Lota inornata DeKay, New York Fauna: Fishes, 1842, 283, pl. 45, fig. 145, Hudson River, Lansingburgh, N. Y.
Lota brosmiana Storer, Bost. Jour. Nat. Hist., IV, 1841, 58, pl. 5, fig. 1, Lake Winnipissiogee, N. H.

Genus 545. MOLVA Fleming. *Lings.*
Molva Fleming, Hist. Brit. Anim., 1828, 192 (*Gadus molva* L.=*Molva vulgaris* Fleming).
Molva Nilsson, Scandinavian Fauna, IV, 1832, 573 (*Gadus molva* L.).

1665. Molva molva (Linnæus). *Ling; Iverksoak.*
Spitzbergen to Gulf of Gascony, Arcachon; San Juan de Luz; Iceland; Greenland; Faroe Islands.
Gadus molva Linnæus, Syst. Nat., ed. X, 1758, 254, seas of Europe.

Genus 546. PHYCIS Röse. *Codlings.*
Phycis Röse, Synonomia, etc., ed. II, 1793 (Φυκις Aristotle=*Phycis tinca* Schroeder); not *Phycis* Fabricius, 1798, a genus of insects.
Phycis Rafinesque, Amer. Month. Mag., 1818, 242 (*Phycis marginatus* Rafinesque=*Blennius chisso* Walbaum).

1666. Phycis earlli Bean.
Charleston, S. C.
Phycis earlli Bean, Proc. U. S. Nat. Mus., III, 1880, 69, Charleston, S. C.

1667. Phycis cirratus Goode and Bean.
Deep waters of the Gulf of Mexico.
Phycis cirratus Goode and Bean, Oceanic Ichth., 1896, 358, Gulf of Mexico, at lat. 29° 03′ 15″ N., long. 88° 16′ W.

Genus 547. UROPHYCIS Gill.

Phycis Bloch and Schneider, Syst. Ichth., 1801, 56 (*tinca*=*blennioides*), not *Phycis* Fabricius, 1798, a genus of Lepidoptera.

Urophycis Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 240 (*Blennius regius* Walbaum).

Emphycus Jordan and Evermann, Fish. North and Mid. Amer., 1898, 2552 (*Gadus tenuis* Mitchill).

1668. Urophycis floridanus (Bean and Dresel).

Pensacola, Fla.

Phycis floridanus Bean and Dresel, Proc. Biol. Soc. Wash., II, 1884, 100, Pensacola, Fla.

1669. Urophycis regius (Walbaum). *Spotted codling; Spotted hake.*

North Atlantic, south to Cape Fear.

Blennius regius Walbaum, Artedi Pisc., III, 1792, 186; after Schöpf.

Enchelyopus regalis Bloch and Schneider, Syst. Ichth., 1801, 53; after Schöpf.

Gadus punctatus Mitchill, Trans., Lit. Phil. Soc. N. Y., I, 1815, 372, New York.

1670. Urophycis tenuis (Mitchill). *Codling; Squirrel hake; Hake; Ling, Thimble-eyed ling; White hake; Old English hake.*

North Atlantic, south to Virginia; abundant northward.

Gadus tenuis Mitchill, Trans. Lit. Phil. Soc. N. Y., I, 1815, 371, New York.

Phycis dekayi Kaup, Wiegmann's Archiv, 1858, Pt. I, 89, North America.

?*Phycis rostratus* Günther, Cat., IV, 1862, 353, no locality.

1671. Urophycis chuss (Walbaum). *Codling; Squirrel hake; Thimble-eyed ling; Old English hake; Chuss; Fork-beard; Red hake.*

Atlantic coast, chiefly northward.

Blennius chuss Walbaum, Artedi Pisc., III, 1792, 186, Long Island; after Schöpf.

Enchelyopus americanus Bloch and Schneider, Syst. Ichth., 1801, 53; after Schöpf.

Gadus longipes Mitchill, Trans. Lit. Phil. Soc. N. Y., I, 1815, 372, pl. 1, fig. 4, New York.

Phycis marginatus Rafinesque, Amer. Month. Mag., II, 1818, 205, Point Judith, R. I.

1672. Urophycis chesteri (Goode and Bean).

Off Massachusetts, in deep water; abundant.

Phycis chesteri Goode and Bean, Proc. U. S. Nat. Mus., I, 1878, 256, off Cape Ann, in 140 fathoms.

Genus 548. LÆMONEMA Günther.

Læmonema Günther, Cat., IV, 1862, 356 (*Phycis yarrellii* Lowe).

1673. Læmonema barbatulum Goode and Bean.

Gulf Stream.

Læmonema barbatula Goode and Bean, Bull. Mus. Comp. Zool., X, 1883, No. 5, 204, Gulf Stream, in lat. 32° 43′ 25″ N., long. 77° 20′ 30″ W., in 230 fathoms, and 38° 35′ N., 73° 13′ W.

1674. Læmonema melanurum Goode and Bean.

Caribbean Sea, north to New York.

Læmonema melanurum Goode and Bean, Oceanic Ichth., 1895, 363, lat. 30° 44′ N., long. 79° 26′ W., in 440 fathoms.

1675. Læmonema gracillipes Garman.

Galapagos Islands to Bay of Panama in deep water.

Læmonema gracillipes Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 187, Pl. XLII; off Galapagos Islands.

Genus 549. BROSME Oken. *Cusk.*

Brosme Oken, Isis, 1817, 1182 (*Gadus brosme* Müller); after Les Brosmes Cuvier.

Brosmerus LeSueur, Mém. Mus. Hist. Nat. Paris, 1819, 158, Pl. XVI (*Brosmerus flavesny* LeSueur=*Gadus brosme* Müller).

Brosmius Cuvier, Regne Anim., ed. 2, II, 1829, 354 (*Gadus brosme* Müller).

1676. Brosme brosme (Müller). *Cusk; European cusk; Nejorpallujak; Torsk; Tusk.*
Polar regions, south to Cape Cod.
Gadus brosme Müller, Prodr. Zool. Dan., 1776, 41, Denmark.
Gadus torsk Bonnaterre, Encycl. Meth. Ichth., 1788, 51, Sundmer, Norway; after Ström.
Brosmerus flavesny LeSueur, Mém., Mus. Hist. Nat. Paris, V, 1819, 158, Banks of Newfoundland; Marblehead, Mass.

Family 127. MERLUCIIDÆ. Hakes

Genus 550. MERLUCCIUS Rafinesque. *Hakes.*
Merluccius Rafinesque, Caratteri, 1810, 25 (*M. smiridus* Rafinesque= *Gadus merluccius* L.).
Onus Rafinesque, Indice, 1810, 12; substitute for *Merluccius.*
Merlangus Rafinesque, loc. cit., 167, another substitute for *Merluccius.*
Merlus Gay, in Guichenot, Pesces de Chile, II, 1848, 238 (*Merlus gayi* Guichenot).
Epicopus Günther, Cat., II, 1860, 248 (*Merlus gayi* Guichenot).

1677. Merluccius merluccius (Linnæus). *European hake.*
Coasts of Europe, straying to Greenland.
Gadus merluccius Linnæus, Syst. Nat., ed. X, 1758, 254, no locality; Europe.
Gadus ruber Lacépède, Hist. Nat. Poiss., V, 1803, 673, Scotland; Dieppe.
Gadus merlus Risso, Ichth. Nice, 1810, 122, Nice; after Linnæus.
Onus riali Rafinesque, Indice, 1810, 12, 67; substitute for *Gadus merluccius.*
Merlucius esculentus Risso, Europ. Mérid., III, 1826, 220, Nice.
Merluccius ambiguus Lowe, Proc. Zool. Soc. Lond., 1840, 37, Madeira.
Merlucius lanatus Gronow, Cat. Fishes, ed. Gray, 1854, 130, Mediterranean.

1678. Merluccius bilinearis (Mitchill). *Silver hake; New England hake; Whiting; Old England hake; Silverfish; American hake; Stockfish.*
Coast of New York and northward.
Stomodon bilinearis Mitchill, Rept. Fish. N. Y., 1814, 7, New York.
Gadus albidus Mitchill, Jour. Acad. Nat. Sci. Phila., I, 1817, 409, New York.

1679. Merluccius productus (Ayres).
Pacific coast, from San Diego northward to Washington.
Merlangus produtus Ayres, Proc. Calif. Acad. Nat. Sci., I, 1855, 64 (65), no locality given; types from San Francisco market, probably from San Francisco Bay.
Homalopomus trowbridgii Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 132, Astoria, Oreg.

1680. Merluccius angustimanus Garman.
Off Panama, in deep water.
Merluccius angustimanus Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 183, Pl. XLI, fig. 1, off Bay of Panama.

Order GG. SALMOPERCÆ

Family 128. PERCOPSIDÆ. Sand rollers; Trout perch

Genus 551. PERCOPSIS Agassiz.
Percopsis Agassiz, Lake Superior, 1850, 284 (*P. guttatus* Agassiz= *Salmo omiscomaycus* Walbaum).
Salmoperca Thompson, App. Hist. Vermont, 1853, 33 (*S. pellucida* Thompson=*Salmo omiscomaycus* Walbaum).

1681. Percopsis omiscomaycus (Walbaum). *Sand roller; Trout perch.*
Lake Champlain and Delaware River to Ohio River, Kansas, and northward; Great Lakes; Hudson Bay; Red River of the North; Saskatchewan River.
Salmo omiscomaycus Walbaum, Artedi Pisc., 1792, 65, Hudson Bay.
Percopsis guttatus Agassiz, Lake Superior, 1850, 286, Lake Superior.
Salmoperca pellucida Thompson, App. Hist. Vermont, 1853, 33, Lake Champlain.
Percopsis hammondii Gill, Proc. Acad. Nat. Sci. Phila., XVI, 1864, 151, Kansas.

Genus 552. COLUMBIA Eigenmann and Eigenmann.
Columbia Eigenmann and Eigenmann, Science, XX, Oct. 21, 1892, 233 (*C. transmontana* Eigenmann and Eigenmann).

1682. Columbia transmontana Eigenmann and Eigenmann.
Columbia River Basin; Umatilla and Wallula Rivers.
Columbia transmontana Eigenmann and Eigenmann, Science, XX, 1892, 233, mouth of Umatilla River, Oreg.

Order HH. XENARCHI

Family 129. APHREDODERIDÆ. Pirate perches

Genus 553. APHREDODERUS LeSueur. *Pirate perches.*
Aphredoderus LeSueur, in Cuvier and Valenciennes, Hist. Nat. Poiss., IX, 1833, 329 (445), (*A. gibbosus* LeSueur=*Scolopsis sayanus* Gilliams).
Sternotremia Nelson, Bull. Ill. Lab. Nat. Hist., I, 1876, 39 (*S. isolepis* Nelson); young with the vent posterior.
Asternotremia Nelson, in Jordan, Bull. U. S. Nat. Mus., X, 1877, 51.
Aphododerus, attempted correction.

1683. Aphredoderus sayanus (Gilliams). *Pirate perch; Pirate; Mud perch.*
From New York in coastwise streams to Texas; also in the Mississippi Basin, north to Michigan; abundant in sluggish waters.
Scolopsis sayanus Gilliams, Jour. Acad. Nat. Sci. Phila., IV, 1824, 81, near Philadelphia.
Aphredoderus gibbosus LeSueur, in Cuvier and Valenciennes, Hist. Nat. Poiss., IX, 1833, 331 (448), Lake Pontchartrain, La.
Sternotremia isolepis Nelson, Bull. Ill. Lab. Nat. Hist., I, 1876, 39, Calumet River, Ill.; young with vent posterior.
Aphododerus cookianus Jordan, Proc. Acad. Nat. Sci. Phila., XXIX, 1877, 60, Sawyers Creek, Kendallville, Ind.
Asternotremia mesotrema Jordan, Bull. U. S. Nat. Mus., X, 1877, 52, Flint River, Ga.

Order II. ALLOTRIOGNATHI

Suborder HISTICHTHYES

Family 130. LOPHOTIDÆ

Genus 554. LOPHOTES Giorna.
Lophotes Giorna, Mém. Acad. Sci. Torino, XVI, 1805, 19 (*L. cepedianus* Giorna).
Leptopus Rafinesque, Specchio Scienze Palermo, I, 1814, 16 (*L. peregrinus* Rafinesque=*Lophotes cepedianus* Giorna).
Podoleptus Rafinesque, Anal. Nat., 1815, 93; a substitute for *Leptopus;* same type.

1684. Lophotes cepedianus Giorna.
Open seas north to Long Beach, Calif. (W. F. Thompson), and to Japan, if *Lophotes capellei* is the same.
Lophotes cepedianus Giorna, Mém. Acad. Sci. Torino, XVI, 1803, 19, Mediterranean.
Leptopus peregrinus Rafinesque, Specchio Scienze Palermo, I, 1814, 16, Palermo.
?*Lophotes capellei* Schlegel, Fauna Japonica, 1845, 132, pl. 71, Japan.

Suborder TÆNIOSOMI

Family 131. TRACHIPTERIDÆ. King of the herrings

Genus 555. TRACHIPTERUS Gouan.

Trachipterus Gouan, Hist. Nat. Poiss., 1770, 103 (*T. gouani* Gouan = *Cephola trachyptera* Gmelin).

Trachypterus of authors; corrected spelling.

Bogmarus Schneider, Syst. Ichth., 1801, 518 (*B. islandicus* Schneider = *Trachipterus arcticus*).

Vogmarus Reid, Ann. Mag. Nat. Hist., III, 1849, 456 (*B. islandicus* Schneider); substitute name as the Danish name is Vaagmær.

1685. Trachipterus arcticus (Brünnich). *Dealfish; Vaagmär.*

Arctic Sea, Iceland to Norway.

Gymnogaster arcticus Brünnich, Nya. Handl., Dansk. Vidensk. Selsk. Skrifter, III, 1788, 408, Tab. B, figs. 1–3.

Bogmarus islandicus Schneider, Syst. Ichth., 1801, 518, Tab. 101.

Trachypterus bogmarus Cuvier and Valenciennes, Hist. Nat. Poiss., X, 1827?, 346.

Trachypterus vogmarus Reinhardt, Dansk. Vidensk. Selsk. Skrifter, VII, 1838, 71, with fig.

1686. Trachipterus rex-salmonorum Jordan and Gilbert. *King of the salmon.*

Off coast of California.

Trachypterus rex-salmonorum Jordan and Gilbert, Proc. Calif. Acad. Sci., 2d ser., IV, 1894, 144, pl. 9, open sea, outside Bay of San Francisco.

Trachypterus seleniris Snyder, Proc. Acad. Nat. Sci. Phila., LX, 1908, 319, Monterey; adult form.

1687. Trachipterus trachyurus Poey.

Cuba.

Trachypterus trachyurus Poey, Memorias, II, 1861, 420, Cuba.

Suborder ATELAXIA

Family 132. STYLEPHORIDÆ

Genus 556. STYLEPHORUS Shaw.

Stylephorus Shaw, Trans. Linn. Soc. Lond., I, 1791, 90 (*S. chordatus* Shaw).

1688. Stylephorus chordatus Shaw.

Open sea, Atlantic; very rare.

Stylephorus chordatus Shaw, Trans., Linn. Soc. Lond., I, 1791, 90, pl. 6, Atlantic, between Cuba and Martinique.

Order JJ. SELENICHTHYES

Family 133. LAMPRIDÆ. Opah; Moonfish

Genus 557. LAMPRIS Retzius.

Lampris Retzius, Vetensk. Akad. Nya Handl., XX, 1799, 91 (*Zeus guttatus* Brünnich = *Zeus regius* Bonnaterre).

Chrysotosus Lacépède, Hist. Nat. Poiss., III, 1803 (*Zeus luna* Gmelin).

Echemythes Gistel, Thierreich, X, 1848 (*Zeus luna* Gmelin).

1689. Lampris regius (Bonnaterre). *Mariposa; Opah; Moonfish; San Pedro fish; Cravo; Jerusalem haddock; Glancefish; Gudlax; Poisson lune.*

Open seas, Atlantic and Pacific; Madeira; Newfoundland; Maine; Cuba; Monterey; Hawaii; Japan; recently taken off San Pedro.

Zeus regius[39] Bonnaterre, Encycl. Meth. Ichth., 1788, 72, pl. 39, Torbay, England.

Zeus guttatus Brünnich, Danske Skrifter, III, 1788, 403, Elsinore, Denmark.

Zeus luna Gmelin, Syst. Nat., ed. XIII, 1789, 1225, Normandy.

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[39] The name *regius* certainly has priority over *luna* and probably over *guttatus* also.

Zeus stroemii Walbaum, Artedi Pisc., ed. 2, 1792, 398, Norway; after Ström.
Scomber gunneri Bloch and Schneider, Syst. Ichth., 1801, 38, Throndhjem.
Zeus imperialis Shaw, Nat. Misc., IV, 1803, pl. 140, Torbay; after Pennant.
Zeus opah Shaw, Gen. Zool., IV, 1803, 287, Torbay; after Pennant.
Lampris lauta Lowe, Fishes Madeira, 1843, 27, Madeira.

Order KK. HETEROSOMATA. Flounders; Flatfishes

Family 134. BOTHIDÆ

Genus 558. LOPHOPSETTA Gill. *Windowpanes.*
Lophopsetta Gill, Proc. Acad. Nat. Sci. Phila., XVI, 1864, 220 (*Pleuronectes maculatus* Mitchill).

1690. Lophopsetta maculata (Mitchill). *Windowpane.*
Atlantic coast of United States, from Casco Bay to South Carolina; common.
Pleuronectes maculatus Mitchill, Rept. in part, Fish. N. Y., 1814, 9, New York.
Pleuronectes aquosus Mitchill, Trans. Lit. Phil. Soc. N. Y., I, 1815, 389, pl. 2, fig. 3, New York.

Genus 559. PLATOPHRYS Swainson.
Platophrys Swainson, Nat. Hist. Fish., Reptiles and Amphib., II, 1839, 302 (*Pleuronectes ocellatus* Spix and Agassiz).
Peloria Cocco, Intorn. Alcuni Pesci, etc., 1844, 21 (*P. heckeli* Cocco).
Coccolus Bonaparte loc. cit., 21 (*C. annectens* Cocco, a larva of *Platophrys*).
Bothus Bonaparte, Cat. Metod., 1846, 49 (*podas*); not of Rafinesque.
Rhomboidichthys Bleeker, Act. Soc. Sci. Indo-Neder., I, 1856, 67 (*R. myriaster* Bleeker).

1691. Platophrys spinosus (Poey).
West Indies.
Rhomboidichthys spinosus Poey, Synopsis, 1868, 409, Cuba.

1692. Platophrys constellatus Jordan.
Galapagos Islands.
Platophrys constellatus Jordan, in Jordan and Goss, Rept. U. S. Fish Com., XIV, 1886 (1889), 266, James Island, Galapagos Islands.

1693. Platophrys ocellatus (Agassiz).
Tropical America; sandy shores from Long Island to Rio Janeiro.
Rhombus ocellatus Agassiz, in Spix, Pisc. Brasil., 1829, 85, pl. 46, Brazil.
Rhombus bahianus Castelnau, Anim. Amer. Sud, 1855, Bahia.
Platophrys nebularis Jordan and Gilbert, Proc. U. S. Nat. Mus., VII, 1884, 31, Key West, Fla.

1694. Platophrys maculifer (Poey).
West Indies.
?*Pleuronectes maculiferus* Poey, Memorias, II, 1861, 316, Cienfuegos, Cuba.

1695. Platophrys ellipticus (Poey).
West Indies.
Pleuronectes ellipticus Poey, Memorias, II, 1861, 315, Cuba.

1696. Platophrys lunatus (Linnæus). *Peacock flounder.*
West Indies.
Solea lunata et *punctata* (the sole) Catesby, Nat. Hist. Carolinas, 1725, Tab. 27, Bahamas.
Pleuronectes lunatus Linnæus, Syst. Nat., ed. X, 1758, 269, Bahamas; based on Catesby and the various copyists.
Pleuronectes argus Bloch, Ichthyologia, 1783, Tab. 48, Martinique; after Plumier.
?*Pleuronectes surinamensis* Bloch and Schneider, Syst. Ichth., 1801, 156, Surinam; *satis parva* et *glabra*.

1697. Platophrys leopardinus (Günther).
Gulf of California.
Rhomboidichthys leopardinus Günther, Cat., IV, 1862, 434, locality unknown.
Platophrys leopardinus Jordan, Proc. U. S. Nat. Mus., VII, 1884, 260, specimen from Guaymas, Sonora, Mexico.

Genus 560. SYACIUM Ranzani.
Syacium Ranzani, Nov. Spec. Pisc., 1840, 20 (*S. micrurum* Ranzani).
Hemirhombus Bleeker, Versl. Akad. Amsterdam, XIII, 1862, 425 (*H. guineensis* Bleeker).
Aramaca Jordan and Goss, in Jordan, Cat. Fish. N. Amer., 1885, 133 (*Citharichthys pætulus* Jordan and Gilbert=*Pleuronectes aramaca* Dönndorf=*Pleuronectes papillosus* Linnæus).

1698. Syacium papillosum (Linnæus).
West Indies.
Aramaca Marcgrave, Hist. Pisc. Brasil., 1648, 181, Brazil.
Pleuronectes papillosus Linnæus, Syst. Nat., ed. X, 1758, 271, Brazil; based on Marcgrave.
Rhombus soleæformis Agassiz, in Spix, Pisc. Brasil., 1829, 86, Tab. 47, Atlantic Ocean.

1699. Syacium micrurum Ranzani.
West Indies; Key West to Rio Janeiro.
Syacium micrurum Ranzani, Nov. Spec. Pisc. Diss. Sec., 1840, 20, pl. 5, Brazil.
Hippoglossus ocellatus Poey, Memorias, II, 1861, 314, Cuba.
Hemirhombus aramaca Günther, Cat., IV, 1862, 42, Cuba; Jamaica; not *Rhombus aramaca* Cuvier.
Citharichthys æthalion Jordan, Proc. U. S. Nat. Mus., IX, 1886, 52, Habana.

1700. Syacium latifrons (Jordan and Gilbert).
Pacific coast of tropical America; Panama.
Citharichthys latifrons Jordan and Gilbert, Bull. U. S. Fish Com., I, 1881, 334, Panama.

1701. Syacium ovale (Günther).
Pacific coast of tropical America; Mazatlan to Panama.
Hemirhombus ovalis Günther, Proc. Zool. Soc. Lond., 1864, 154, Panama.

Genus 561. CITHARICHTHYS Bleeker. *Whiffs.*
Citharichthys Bleeker, Versl. Akad. Amsterd., XIII, 1862, 427 (*C. cayennensis* Bleeker=*C. spilopterus* Günther).
Orthopsetta Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 330 (*Psettichthys sordidus* Girard).
Metonops Gill, loc. cit., XVI, 1864, 198 (*M. cooperi* Gill=*Psettichthys sordidus* Girard).

Subgenus ORTHOPSETTA Gill.

1702. Citharichthys sordidus (Girard).
Pacific coast of North America, in water of moderate depth from British Columbia to Lower California.
Psettichthys sordidus Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 142, San Francisco; Tomales Bay.
Metaponops cooperi Gill, loc. cit., XVI, 1864, 198, Santa Barbara; shriveled specimen.

1703. Citharichthys fragilis Gilbert.
Gulf of California.
Citharichthys fragilis Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 120, Gulf of California, east coast of Lower California.

1704. Citharichthys xanthostigmus Gilbert.
Magdalena Bay, west coast of Lower California to Hermosa Beach, southern California, and in Gulf of California.
Citharichthys xanthostigma Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 120, Gulf of California, west coast of Lower California, and Magdalena Bay.

1705. **Citharichthys stigmæus** Jordan and Gilbert.
Coast of southern California.
Citharichthys stigmæus Jordan and Gilbert, Proc. U. S. Nat. Mus., V, 1882, 410, 411, Santa Barbara, Calif.

Subgenus CITHARICHTHYS.

1706. **Citharichthys dinoceros** Goode and Bean.
Deep waters of Gulf of Mexico.
Citharichthys dinoceros Goode and Bean, Bull. Mus. Comp. Zool., XII, No. 5, 157, off Martinique, St. Lucia, and Barbados.

1707. **Citharichthys platophrys** Gilbert.
Southwest of Panama; one specimen known.
Citharichthys platophrys Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 454, *Albatross* station 2799, southwest of Panama.

1708. **Citharichthys arctifrons** Goode.
Deep waters of Gulf Stream.
Citharichthys arctifrons Goode, Proc. U. S. Nat. Mus., III, 1880, 341, 472, Gulf Stream off southern coast of New England.

1709. **Citharichthys unicornis** Goode.
Deep waters of Gulf Stream.
Citharichthys unicornis Goode, Proc. U. S. Nat. Mus., III, 1880, 342, Gulf Stream off southeast of New England.

1710. **Citharichthys uhleri** Jordan.
West Indies.
Citharichthys uhleri Jordan, Rept. U. S. Fish Com., XIV, 1886, 273, Haiti.

1711. **Citharichthys macrops** Dresel.
South Atlantic and Gulf coasts of the United States.
Citharichthys macrops Dresel, Proc. U. S. Nat. Mus., VII, 1884, 539, Pensacola, Fla.

1712. **Citharichthys spilopterus** Günther.
Both coasts of tropical America, north to New Jersey and Mazatlan.
Citharichthys spilopterus Günther, Cat., IV, 1862, 421, New Orleans, San Domingo, Jamaica.
Citharichthys cayennensis Bleeker, Compt. Rend. Acad. Sci. Amsterdam, XIII, 1862, 6, Cayenne, name only.
Citharichthys guatemalensis Bleeker, Nederl. Tijdschr. Dierk., 1864, 73, Guatemala.
Hemirhombus fuscus Poey, Synopsis, 1868, 406, Habana.

1713. **Citharichthys arenaceus** Evermann and Marsh.
Porto Rico and Santo Domingo.
Citharichthys arenaceus Evermann and Marsh, Bull. U. S. Fish Com., XX, first part, 1900 (1902), 326, fig. 106, Mayaguez, Porto Rico.

1714. **Citharichthys gilberti** Jenkins and Evermann.
Pacific coast of tropical America, from Gulf of California to Panama.
Citharichthys gilberti Jenkins and Evermann, Proc. U. S. Nat. Mus., XI, 1888, 157, Guaymas, Mexico.
Citharichthys sumichrasti Jordan and Goss, Rept. U. S. Fish Com., XIV, 1886 (1889) 276, Rio Zanatenco, Chiapas, Mexico.

Genus 562. ETROPUS Jordan and Gilbert.
Etropus Jordan and Gilbert, Proc. U. S. Nat. Mus., IV, 1881, 364 (*E. crossotus* Jordan and Gilbert).

1715. **Etropus microstomus** (Gill).
Coast of New Jersey.
Citharichthys microstomus Gill, Proc. Acad. Nat. Sci. Phila., XVI, 1864, 223, Beesleys Point, N. J.

1716. **Etropus micros** (Fowler).
Citharichthys micros Fowler, Proc. Acad. Nat. Sci. Phila., LXIII, 1911, 200, with figure, Corsons Inlet, Cape May, N. J.

1717. Etropus rimosus Goode and Bean.
Gulf of Mexico.
Etropus rimosus Goode and Bean, Proc. U. S. Nat. Mus., VIII, 1885, 593, coast of Florida between Pensacola and Cedar Keys, in 21 fathoms.

1718. Etropus crossotus Jordan and Gilbert.
Tropical America on both coasts, north to Guaymas, Mexico, and Cape Hatteras, N. C.
Etropus crossotus Jordan and Gilbert, Proc. U. S. Nat. Mus., IV, 1881, 364, Mazatlan, Mexico.

Genus 563. PERISSIAS Jordan and Evermann.
Perissias Jordan and Evermann, Fishes North and Mid. Amer., 1898, 2667 (*Platophrys tæniopterus* Gilbert).

1719. Perissias tæniopterus (Gilbert).
Gulf of California and western coast of Lower California.
Platophrys tæniopterus Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 118, Gulf of California north of La Paz, at *Albatross* station 2298, lat. 24° 51′ N., long. 110° 39′ W., in 40 fathoms.

Genus 564. ENGYOPHRYS Jordan and Bollman.
Engyophrys Jordan and Bollman, Proc. U. S. Nat. Mus., XII, 1889 (1890), 176 (*E. sancti-laurentii* Jordan and Bollman).

1720. Engyophrys sancti-laurentii Jordan and Bollman.
Pacific Ocean off coast of Colombia.
Engyophrys sancti-laurentii Jordan and Bollman, Proc., U. S. Nat. Mus., XII, 1889, 176, Pacific Ocean off coast of Colombia, at *Albatross* station 2805, 7° 56′ N., 79° 41′ 30″ W., and station 2795, lat. 7° 57′ N., long. 78° 55′ W., in 33 and 51 fathoms.

Genus 565. TRICHOPSETTA Gill.
Trichopsetta Gill, Proc. U. S. Nat. Mus., XI, 1888, 601 (*Arnoglossus ventralis* Goode and Bean).

1721. Trichopsetta ventralis (Goode and Bean).
Gulf of Mexico, in deep water.
Citharichthys ventralis Goode and Bean, Proc. U. S. Nat. Mus., VIII, 1885, 592, Gulf of Mexico, *Albatross* station 2386, lat. 29° 15′ N., long. 88′ 6° W., in 60 fathoms.

Genus 566. MONOLENE Goode.
Monolene Goode, Proc., U. S. Nat. Mus., III, 1880, 338 (*M. sessilicauda* Goode).
Thyris Goode, loc. cit., 344 (*T. pellucidus* Goode); larva of *Monolene*.
Delothyris Goode, loc. cit., VI, 1883, 110; substitute for *Thyris*, preoccupied.

1722. Monolene sessilicauda Goode.
Deep waters of the Gulf Stream.
Monolene sessilicauda Goode, Proc. U. S. Nat. Mus., III, 1880, 337, 338, deep sea south of New England.
Thyris pellucidus Goode, loc. cit., 344, Gulf Stream off the coast of Rhode Island.

1723. Monolene atrimana Goode and Bean.
Deep waters of the Caribbean Sea.
Monolene atrimana Goode and Bean, Bull. Mus. Comp. Zool., XII, 1886, 155, deep waters off Barbados.

Genus 567. CYCLOPSETTA Gill.
Cyclopsetta Gill, Proc. U. S. Nat. Mus., XI, 1888, 601 (*Hemirhombus fimbriatus* Goode and Bean).

1724. Cyclopsetta fimbriata (Goode and Bean).
Deep waters of the Gulf of Mexico.
Hemirhombus fimbriatus Goode and Bean, Proc. U. S. Nat. Mus., VIII, 1885, 591, deep waters of the Gulf of Mexico, between the Mississippi Delta and Cedar Keys, Fla.

1725. Cyclopsetta querna (Jordan and Bollman).
Pacific coast of America, off coast of Colombia.
Azevia querna Jordan and Bollman, Proc. U. S. Nat. Mus., XII, 1889, 174, Pacific Ocean off coast of Colombia, at *Albatross* station 2802, lat. 8° 38′ N., long. 79° 31′ 30″ W.

1726. Cyclopsetta chittendeni B. A. Bean.
Trinidad Island.
Cyclopsetta chittendeni B. A. Bean, Proc. U. S. Nat. Mus., XVII, 1894, 635, Trinidad Island.

Genus 568. AZEVIA Jordan and Goss.
Azevia Jordan and Goss, Rept. U. S. Fish Com., XIV, 1886 (1888), 271 (*Citharichthys panamensis* Steindachner).

1727. Azevia panamensis (Steindachner).
Pacific coast of Central America.
Citharichthys panamensis Steindachner, Ichth. Beitr., III, 1875, 62, Panama.

Genus 569. PLATOTICHTHYS Nichols.
Platotichthys Nichols, Bull. Amer. Mus. Nat. Hist., XLIV, 1921, 21 (*P. chartes* Nichols).

1728. Platotichthys chartes Nichols.
Bahamas.
Platotichthys chartes Nichols, Bull. Amer. Mus. Nat. Hist., XLIV, 1921, 21, pl. III, Turk Island, Bahamas.

Family 135. HIPPOGLOSSIDÆ. Halibuts

Genus 570. ATHERESTHES Jordan and Gilbert.
Atheresthes Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880, 51 (*Platysomatichthys stomias* Jordan and Gilbert).

1729. Atheresthes stomias (Jordan and Gilbert). *Arrow-toothed halibut.*
San Francisco to Alaska.
Platysomatichthys stomias Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880, 301, off San Francisco, Calif.

Genus 571. REINHARDTIUS Gill.
Reinhardtius Gill, Cat. Fishes East Coast N. Amer., Suppl. Proc. Acad. Nat. Sci. Phila., XIII, 1861, 50 (*Pleuronectes cynoglossus* Fabricius; not of Linnæus = *Pleuronectes hippoglossoides* Walbaum).
Platysomatichthys Bleeker, Versl. Akad. Amsterdam, XIII, 1862, 426 (*Pleuronectes pinguis* Fabricius).

1730. Reinhardtius hippoglossoides (Walbaum). *Greenland halibut.*
Arctic parts of the Atlantic, south to Finland and Grand Banks.
Pleuronectes cynoglossus Fabricius, Fauna Grœnlandica, 1780, 163, Greenland; not of Linnæus.
Pleuronectes hippoglossoides Walbaum, Artedi Pisc., 1792, 115; based on Fabricius.
Pleuronectes pinguis Fabricius, Zoologiske Bidrag., 1824, 43, Greenland.
Hippoglossus grœnlandicus Günther, Cat., IV, 1862, 404, Greenland.

Genus 572. HIPPOGLOSSUS Cuvier. *Halibut.*
Hippoglossus Cuvier, Règne Anim., ed. 1, II, 1817, 221 (*Pleuronectes hippoglossus* Linnæus).

1731. Hippoglossus hippoglossus (Linnæus). *Common halibut.*
All northern seas, southward in deep waters to France, Sandy Hook, and northern California.
Pleuronectes hippoglossus Linnæus, Syst. Nat., ed. X, 1758, 269, European oceans.
Hippoglossus maximus Gottsche, Archiv für Naturgesch., 1835, 164, no locality.
Hippoglossus gigas Swainson, Nat. Hist. Class'n Anim., II, 1839, 302, no locality.
Hippoglossus ponticus Bonaparte, Cat. Metod., 1846, 47, Black Sea; after Pallas.

Genus 573. LYOPSETTA Jordan and Goss.
Lyopsetta Jordan and Goss, in Jordan, Cat. Fish. N. Amer., 1885, 135 (*Hippoglossoides exilis* Jordan and Gilbert).

1732. Lyopsetta exilis (Jordan and Gilbert).
North Pacific, in rather deep water; San Francisco to Alaska.
Hippoglossoides exilis Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880, off San Francisco, between the Golden Gate and Point Reyes, Calif.

Genus 574. HIPPOGLOSSOIDES Gottsche.
Hippoglossoides Gottsche, Archiv für Naturgesch., 1835, 164 (*Pleuronectes limanda* Linnæus).
Citharus Reinhardt, Köng. Dansk. Vid Selsk., 1838, 116 (*Pleuronectes platessoides* Fabricius; not *Citharus* Bleeker, 1862).
Drepanopsetta Gill, Cat. Fish. East Coast N. Amer., Suppl. Proc. Acad. Nat. Sci. Phila., XIII, 1861, 50 (*Pleuronectes platessoides* Fabricius).
Pomatopsetta Gill, Proc., Acad. Nat. Sci. Phila., XVI, 1864, 217 (*Platessa dentata* = *Pleuronectes platessoides* Fabricius).

1733. Hippoglossoides platessoides (Fabricius). *Sand dab; Dab.*
North Atlantic, south to Cape Cod, and coasts of England and Scandinavia.
Pleuronectes linguatula Müller, Prodr. Zool. Dan., 1776, 45; not of Linnæus.
Pleuronectes platessoides Fabricius, Fauna Grœnlandica, 1780, 164, Greenland.
Pleuronectes limandoides Bloch, Naturgesch. Ausl. Fische, III, 1787, 24, Tab. 186, Europe.

1734. Hippoglossoides elassodon Jordan and Gilbert.
Puget Sound and northward.
Hippoglossoides elassodon Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880, 278, Puget Sound at Seattle and Tacoma, Wash.

1735. Hippoglossoides robustus Gill and Townsend.
Bering Sea.
Hippoglossoides robustus Gill and Townsend, Proc. Biol. Soc. Wash., XI, 1897 (Sept. 17), Bering Sea, lat. 56° 14′ N., long. 164° 08′ W., *Albatross* station 3541 in 49 fathoms.

1736. Hippoglossoides hamiltoni Jordan and Gilbert.
Off Dalnoi Point, Kamchatka.
Hippoglossoides hamiltoni Jordan and Gilbert, Rept. Fur-seal Invest., 1898, 489, Dalnoi Point, Avatcha Bay, Kamchatka, in 16 fathoms.

Genus 575. EOPSETTA Jordan and Goss.
Eopsetta Jordan and Goss, in Jordan, Cat. Fish. N. Amer., 1885, 135 (*Hippoglossoides jordani* Lockington).

1737. Eopsetta jordani (Lockington). *California sole.*
West coast of United States, from Puget Sound to Monterey.
Hippoglossoides jordani Lockington, Proc. U. S. Nat. Mus., II, 1879, 73, San Francisco.

Genus 576. PSETTICHTHYS Girard.
Psettichthys Girard, Proc. Acad. Nat. Sci. Phila., VI, 1854, 140 (*P. melanostictus* Girard).

1738. Psettichthys melanostictus Girard.
Pacific coast of North America from Alaska south to Monterey.
Psettichthys melanostictus Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 140, San Francisco; Astoria, Oreg.

Family 136. PARALICHTHYIDÆ. Bastard halibuts

Genus 577. HIPPOGLOSSINA Steindachner.
Hippoglossina Steindachner, Ichth. Beitr., V, 1876, 13 (*H. macrops* Steindachner).

1739. **Hippoglossina stomata** Eigenmann and Eigenmann.
Off San Diego, Calif.
Hippoglossina stomata Eigenmann and Eigenmann, Proc. Calif. Acad. Sci., 2d ser., III, 1890, 22, San Diego, Calif.

1740. **Hippoglossina macrops** Steindachner.
Pacific coast of Mexico at Mazatlan.
Hippoglossina macrops Steindachner, Ichth. Beitr., V, 1876, 13, pl. 3, Mazatlan, Mexico.

1741. **Hippoglossina bollmani** Gilbert.
Pacific coast off Colombia.
Hippoglossina macrops Jordan and Bollman, Proc. U. S. Nat. Mus., XII, 1889, 175; not of Steindachner.
Hippoglossina bollmani Gilbert, loc. cit., XIII, 1890, 122, off coast of Colombia at *Albatross* station 2805, lat. 7° 56′ N., long. 79° 41′ 30″ W. in 51½ fathoms.

1742. **Hippoglossina sabanensis** Boulenger.
Isthmus of Panama.
Hippoglossina sabanensis Boulenger, Bolletino Mus. Zool. Univ. Torino, XIV, 1899, 4, Rio Sabana, Darien.

Genus 578. LIOGLOSSINA Gilbert.
Lioglossina Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 122 (*L. tetrophthalma* Gilbert).

1743. **Lioglossina tetrophthalma** Gilbert.
Gulf of California.
Lioglossina tetrophthalmus Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 122, Gulf of California, *Albatross* stations 3014 and 3016, in 29 and 76 fathoms.

Genus 579. VERASPER Jordan and Gilbert.
Verasper Jordan and Gilbert, Rept. Fur-seal Invest., 1898, 490 (*V. moseri* Jordan and Gilbert).

1744. **Verasper moseri** Jordan and Gilbert.
Kuril Islands.
Verasper moseri Jordan and Gilbert, Rept. Fur-seal Invest., 1898, 490, Pl. LXXXV, Shana Bay, Iturup Island, Kuril Group.

Genus 580. XYSTREURYS Jordan and Gilbert.
Xystreurys Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880, 34 (*X. liolepis* Jordan and Gilbert).

1745. **Xystreurys liolepis** Jordan and Gilbert.
Coast of California, from Point Conception southward.
Xystreurys liolepis Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880, 34, Santa Barbara, Calif.

Genus 581. PARALICHTHYS Girard. *Bastard halibuts.*
Paralichthys Girard, Pac. R. R. Surv., X, 1859, 146 (*P. maculosus* Girard).
Chænopsetta Gill, Proc. Acad. Nat. Sci. Phila., XVI, 1864, 218 (*Platessa oblonga* Storer).
Pseudorhombus Bleeker, Compt. Rend. Acad. Sci. Amsterdam, XIII, 1862, 5 (*Rhombus polyspilos* Bleeker).
Uropsetta Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 330 (*Hippoglossus californicus* Ayres),

1746. **Paralichthys californicus** (Ayres). *Bastard halibut; Monterey halibut.*
Coast of California, Tomales Bay to San Diego.
Hippoglossus californicus Ayres, Proc. Calif. Acad. Nat. Sci., ser. 1, II, 1859, 29, and 1860, fig. 10, San Francisco.

1747. **Paralichthys magdalenæ** Abbott.
Coast of Lower California.
Paralichthys magdalenæ Abbott (James Francis), in Jordan and Evermann, Fishes North and Mid. Amer., 1898, 2871, Magdalena Bay, Lower California.

1748. Paralichthys æstuarius Gilbert and Scofield.
Mouth of Colorado River, Gulf of California.
Paralichthys æstuarius Gilbert and Scofield, Proc. U. S. Nat. Mus., XX, 1898, 499, Pl. XXIX, Shoal Point, mouth of the Colorado River.

1749. Paralichthys brasiliensis (Ranzani).
Atlantic coast of South America; said to range northward to Guatemala.
Hippoglossus brasiliensis Ranzani, Nov. Spec. Pisc., 1840, 10, Tab. 3, Brazil.
Pseudorhombus vorax Günther, Cat., IV, 1862, 429, South America.

1750. Paralichthys woolmani Jordan and Williams.
Guaymas to Panama.
Paralichthys woolmani Jordan and Williams, in Gilbert, Proc. U. S. Nat. Mus., XIX, 1896, 457, Galapagos Islands.

1751. Paralichthys sinaloæ Jordan and Abbott.
Pacific coast of Mexico.
Paralichthys sinaloæ Jordan and Abbott (J. F.), in Jordan and Evermann, Fish. North and Mid. Amer., 1898, 2872, Mazatlan and La Paz.

1752. Paralichthys dentatus (Linnæus). *Summer flounder; Fluke.*
Atlantic coast of United States from Cape Cod to Florida.
Pleuronectes dentatus Linnæus, Syst. Nat., ed. XII, 1766, and of numerous copyists.
Pleuronectes melanogaster Mitchill, Trans. Lit. Phil. Soc. N. Y., I, 1815, 390, New York; doubled example.
Platessa ocellaris DeKay, N. Y. Fauna: Fishes, 1842, 300, p. 47, fig. 152, New York.
Paralichthys ophryas Jordan and Gilbert, Synopsis, 1883, 822, Charleston, S. C.

1753. Paralichthys lethostigmus Jordan and Gilbert. *Southern flounder.*
South Atlantic and Gulf coasts of the United States, north to New York.
Platessa oblonga DeKay, N. Y. Fauna: Fishes, 1842, 299, pl. 48, fig. 156, New York; not *Pleuronectes oblongus* Mitchill.
Paralichthys lethostigma Jordan and Gilbert, Proc. U. S. Nat. Mus., VII, 1884, 237, Jacksonville, Fla.

1754. Paralichthys oblongus (Mitchill). *Four-spotted flounder.*
Coasts of New England and New York.
Pleuronectes oblongus Mitchill, Trans. Lit. Phil. Soc. N. Y., I, 1815, 391, New York.

1755. Paralichthys squamilentus Jordan and Gilbert.
South Atlantic and Gulf coasts of United States.
Paralichthys squamilentus Jordan and Gilbert, Proc. U. S. Nat. Mus., V, 1882, 303, Pensacola, Fla.

1756. Paralichthys albiguttus Jordan and Gilbert. *Gulf flounder.*
South Atlantic and Gulf coasts of the United States.
Paralichthys albigutta Jordan and Gilbert, Proc. U. S. Nat. Mus., V, 1882, 302, Pensacola, Fla., and Beaufort, N. C.

Genus 582. ANCYLOPSETTA Gill.
Ancylopsetta Gill, Proc. Acad. Nat. Sci. Phila., XVI, 1864, 224 (*A. quadrocellatus* Gill).

1757. Ancylopsetta quadrocellatus Gill.
South Atlantic and Gulf coasts of the United States.
Ancylopsetta quadrocellatus Gill, Proc. Acad. Nat. Sci. Phila., XVI, 1864, 224, Pensacola; not *Platessa quadrocellata* Storer.
Paralichthys ommatus Jordan and Gilbert, Proc. U. S. Nat. Mus., V, 1882, 616, Charleston, S. C.

Genus 583. RAMULARIA Jordan and Evermann.
Ramularia Jordan and Evermann, Fishes North and Mid. Amer., 1898, 2633 (*Ancylopsetta dendritica* Gilbert).

1758. Ramularia dendritica (Gilbert).
Gulf of California.
Ancylopsetta dendritica Gilbert, Proc., U. S. Nat. Mus., XIII, 1890, 121, Gulf of California, at *Albatross* station 3022, lat. 30° 58′ 30″ N., long. 113° 17′ 15″ W., in 11 fathoms.

Genus 584. NOTOSEMA Goode and Bean.
Notosema Goode and Bean, Bull. Mus. Comp. Zool., X, 1882, 193 (*N. dilecta* Goode and Bean).

1759. Notosema dilectum Goode and Bean.
Gulf Stream.
Notosema dilecta Goode and Bean, Bull. Mus. Comp. Zool., X, 1883, 193, Gulf Stream off the coast of South Carolina.

Genus 585. GASTROPSETTA B. A. Bean.
Gastropsetta Bean, Proc. U. S. Nat. Mus., XVII, 1894, 633 (*G. frontalis* Bean).

1760. Gastropsetta frontalis B. A. Bean.
Key West and Apalachicola, Fla.
Gastropsetta frontalis B. A. Bean, Proc. U. S. Nat. Mus., XVII, 1894, 633, Key West and Apalachicola, at *Albatross* stations 2317 and 2783, in 45 fathoms.

Family 137. PLEURONECTIDÆ

Genus 586. PLEURONICHTHYS Girard.
Pleuronichthys Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1854, 139 (*P. cænosus* Girard).
Heteroprosopon Bleeker, Versl. Akad. Amsterdam, XIII, 1862 (*Pleuronectes cornutus* Temminck and Schlegel).
Parophrys Günther, Cat., IV, 1862, 454; not of Girard.

1761. Pleuronichthys decurrens Jordan and Gilbert.
Pacific coast of United States, south to Monterey.
Pleuronichthys decurrens Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880, 453, San Francisco; Monterey Bay.

1762. Pleuronichthys verticalis Jordan and Gilbert.
Coast of California, in deep water.
Pleuronichthys verticalis Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880, 49, San Francisco.

1763. Pleuronichthys cœnosus Girard.
Alaska, southward to San Diego; most common about Puget Sound.
Pleuronichthys cœnosus Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 139, San Francisco.

1764. Pleuronichthys nephelus Starks and Thompson.
Puget Sound.
Pleuronichthys nephelus Starks and Thompson, Proc. U. S. Nat. Mus., XXXVIII, 1911, 282, fig. 1, San Juan Islands, Wash.

1765. Pleuronichthys ritteri Starks and Morris.
San Diego Bay.
Pleuronichthys ritteri Starks and Morris in Starks & Thompson, Proc. U. S. Nat. Mus., XXXVIII, 1811, 287, San Diego, Calif.

1766. Pleuronichthys ocellatus Starks and Thompson.
Gulf of California.
Pleuronichthys ocellatus Starks and Thompson, Proc. U. S. Nat. Mus., XXXVIII, 1911, 285, fig. 2, Gulf of California.

Genus 587. HYPSOPSETTA Gill.
Hypsopsetta Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 330 (*Pleuronichthys guttulatus* Girard).

1767. Hypsopsetta guttulata (Girard). *Diamond flounder.*
Coast of California, Cape Mendocino to Magdalena Bay.
Pleuronichthys guttulatus Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 137, Tomales Bay, Calif.
Parophrys ayresi Günther, Cat., IV, 1862, 457, San Francisco.

Genus 588. PAROPHRYS Girard.
Parophrys Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 139 (*P. vetulus* Girard).

1768. Parophrys vetulus Girard.
Pacific coast of North America, Alaska to Santa Barbara.
Parophrys vetulus Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 140, California.
Pleuronectes diagrammus Günther, Cat., IV, 1862, 445, Victoria, British Columbia.
Parophrys hubbardii Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 281, San Francisco.

Genus 589. PLEURONECTES Linnæus. *Plaice.*
Pleuronectes Artedi, Genera Pisc., in part, 1738, 16.
Pleuronectes Linnæus, Syst. Nat,. ed. X, 1758, 268; after Artedi (*P. platessa* Linnæus).
Platessa Cuvier, Règne Anim., ed. I, II, 1817, 220 (*Pleuronectes platessa* L.).

1769. Pleuronectes quadrituberculatus Pallas.
Coasts of Alaska and Kamchatka.
Pleuronectes quadrituberculatus Pallas, Zoogr. Rosso.-Asiat., III, 1811, 423, sea between Kamchatka and Alaska.
Pleuronectes pallasii Steindachner, Ichth. Beitr., VIII, 1879, Kamchatka.

Genus 590. PLATICHTHYS Girard. *Starry flounders.*
Platichthys Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 139 (*P. rugosus* Girard=*Pleuronectes stellatus* Pallas).

1770. Platichthys stellatus (Pallas). *Great flounder; California flounder.*
Pacific coast of America, from Point Conception to the Arctic Ocean, and south to Sakhalin Island.
Pleuronectes stellatus Pallas, Zoogr. Rosso.-Asiat., III, 1811, 416, Kamchatka, Aleutian and Kuril Islands.
Platichthys rugosus Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 139, 155, San Francisco, Presidio; Petaluma, Calif.

Genus 591. INOPSETTA Jordan and Goss.
Inopsetta Jordan and Goss, Rept. U. S. Fish Com., 1885 (1887), 924 (136 of inside paging) (*Parophrys ischyrus* Jordan and Gilbert).

1771. Inopsetta ischyra (Jordan and Gilbert).
Puget Sound, probably northward to Alaska.
Parophrys ischyrus Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880, 276, 453, Puget Sound.

Genus 592. LEPIDOPSETTA Gill.
Lepidopsetta Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 330 (*Psettichthys umbrosus* Girard).

1772. Lepidopsetta bilineata (Ayres).
Pacific coast of North America, Alaska to Monterey and northern Japan.
Platessa bilineata Ayres, Proc. Calif. Acad. Nat. Sci., I, 1855, 40 (39 of reprint), San Francisco.
Platichthys umbrosus Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 136, Puget Sound.
Pleuronectes perarcuatus Cope, Proc. Amer. Phil. Soc. Phila., XIII, 1873, 32, Unalaska.

Genus 593. ISOPSETTA Lockington.
Isopsetta Lockington, in Jordan and Gilbert, Bull. U. S. Nat. Mus., XVI, 1882, 832 (*Lepidopsetta isolepis* Lockington).

1773. Isopsetta isolepis (Lockington).
Puget Sound to Point Conception, in rather deep water.
Lepidopsetta isolepis Lockington, Proc. U. S. Nat. Mus., III, 1880, 325, San Francisco.

Genus 594. LIMANDA Gottsche. *Mud dabs.*
Limanda Gottsche, Archiv für Naturgesch., 1835, 100 (*Pleuronectes limanda* Linnæus).
Myzopsetta Gill, Proc. Acad. Nat. Sci. Phila., XVI, 1864, 217 (*Platessa ferruginea* Storer).

1774. **Limanda ferruginea** (Storer).
Atlantic coast of North America, Labrador to New York.
Platessa ferruginea D. H. Storer, Rept. Fish. Mass., 1839, 141, pl. 2, Cape Ann.
Platessa rostrata H. R. Storer, Bost. Jour. Nat. Hist., VI, 1850, 268, Labrador.

1775. **Limanda aspera** (Pallas).
Coasts of Alaska and Kamchatka.
Pleuronectes asper Pallas, Zoogr. Rosso.-Asiat., III, 1811, 425, east coast of Siberia.

1776. **Limanda proboscidea** Gilbert.
Bristol and Herendeen Bays, Alaska.
Limanda proboscidea Gilbert, Rept. U. S. Fish Com., XIX, 1893 (1896), 460, pl. 33, Bristol and Herendeen Bays, Alaska.

1777. **Limanda beanii** Goode.
Deep water, off coast of New England.
Limanda beanii Goode, Proc. U. S. Nat. Mus., III, 1880 (Feb. 16, 1881), 473 southern coast of New England, *Fish Hawk* stations 875, 876.

Genus 595–596. **PSEUDOPLEURONECTES Bleeker.** *Winter flounders.*
Pseudopleuronectes Bleeker, Versl. Akad. Amsterdam, XIII, 1862, 428 (*Platessa plana* Mitchill = *Pleuronectes americanus* Walbaum).

1778. **Pseudopleuronectes americanus** (Walbaum). *Common flatfish; Winter flounder; Roughback.*
Atlantic coast of North America, from Labrador to Cape Lookout.
Flounder Schöpf, Schrift. Gesellsch. Naturf. Freunde, VIII, 1788, 148, New York.
Pleuronectes americanus Walbaum, Artedi Pisc., 1792, 113; based on the *Flounder* of Schöpf.
Pleuronectes planus Mitchill, Trans. Lit. Phil. Soc. N. Y., I, 1815, 387, New York.
Platessa pusilla DeKay, New York Fauna: Fishes, 1842, 296, pl. 47, fig. 153, New York.

1779. **Pseudopleuronectes dignabilis** Kendall. *Lemon-yellow flounder.*
North Atlantic coast, Newfoundland to Cape Cod.
Pseudopleuronectes dignabilis Kendall, Bull. U. S. Fish Com., XXX, 1910 (1912), 392, Georges Bank.

Genus 597. **LIOPSETTA Gill.**
Liopsetta Gill, Proc. Acad. Nat. Sci. Phila., XVI, 1864, 216 (*Platessa glabra* Storer).
Euchalarodus Gill, loc. cit., 221 (*E. putnami* Gill, the male of *Liopsetta glabra* Storer).

1780. **Liopsetta glacialis** (Pallas). *Arctic flounder.*
Arctic Ocean and Bering Sea south to St. Michaels, Alaska.
Pleuronectes glacialis Pallas, Itin., III, App., 1776, 706; mouth of the Obi River.
Pleuronectes cicatricosus Pallas, Zoogr. Rosso.-Asiat., III, 1811, 424, sea between Kamchatka and Alaska; male.
?*Platessa dvinensis* Lilljeborg, Veb. Ab. Handl., 1850, 360, Tab. 20, mouth of River Dwina.
Pleuronectes franklini Günther, Cat., IV, 1862, 442, Arctic seas of America; female.

1781. **Liopsetta putnami** (Gill). *Eel-back flounder.*
Atlantic coast of North America, from Cape Cod northward to Labrador and beyond.
Platessa glabra Storer, Proc. Bost. Soc. Nat. Hust., 1843, 130, Massachusetts; female; not *Platessa glabra* of Rathke, 1837, a species of *Flesus*.
Euchalarodus putnami Gill, Proc. Acad. Nat. Sci. Phila., XVI, 1864, 216, 221, Salem, Mass.

1782. Liopsetta obscura (Herzenstein).
Sea of Okhotsk.
Pleuronectes obscurus Herzenstein, Mélanges Biologiques, 1890, 127, Manchuria.

Genus 598. MICROSTOMUS Gottsche. *Smear dabs.*
Microstomus Gottsche, Archiv für Naturgesch., 1835, 150 (*M. latidens* Gottsche); not *Microstoma* Risso, 1826.
Cynicoglossus Bonaparte, Fauna Italica, 1837, fasc. XIX (*Pleuronectes cynoglossus* Nilsson); not of Linnæus=*Pleuronectes kitt* Walbaum.
Cynoglossa Bonaparte, Cat. Metod., 1845, 48 (*Pleuronectes cynoglossus* Linnæus).
Brachyprosopon Bleeker, Versl. Akad. Amsterdam, XIII, 1862, 428 (*Pleuronectes microcephalus* Donovan=*P. kitt* Walbaum).
Cynicoglossus Jordan and Gilbert, Synopsis, 1883, 460 (*Pleuronectes microcephalus* Donovan), *microstomus* being regarded as preoccupied.

1783. Microstomus kitt (Walbaum). *Smear dab.*
Arctic Europe, west to the sea between Greenland and Iceland.
Rhombus lævis cornubiensis Jago in Ray, "Syn. Pisc., 1713, 162, Tab. 1, fig. 1."
Smear dab Pennant, British Zoology, III, 1776, 230, pl. 41.
Pleuronectes kitt Walbaum, Artedi Pisc., III, 1792, 120; after Ray.
Pleuronectes quenseli Hölböll, Bohusläns, Sweden.
Pleuronectes quadridens Fabricius, Afhandl., Kongl. Dank. Vid. Selsk., I, 1824, 39, Iceland.
Microstomus latidens Gottsche, Archiv für Naturgesch., 1835, 150, Zealand.
Pleuronectes gilli Steindachner, Ichth. Notizen, VII, 1868, polar sea, north of Iceland.

1784. Microstomus pacificus (Lockington).
Pacific coast of North America, Monterey to Vancouver Island and probably northward.
Glyptocephalus pacificus Lockington, Rept. Calif. Com. Fish., 1878–79, 43, off Point Reyes, Calif.

Genus 599. EMBASSICHTHYS Jordan and Evermann.
Embassichthys Jordan and Evermann, Check List, 1895 (1896), 506 (*Cynicoglossus bathybius* Gilbert).

1785. Embassichthys bathybius (Gilbert).
Coast of California, south of Point Conception.
Cynicoglossus bathybius Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 123, Santa Barbara Channel at *Albatross* station 2980, lat. 33° 49′ 45″ N., long. 119° 24′ 30″ W., in 603 fathoms.

Genus 600. GLYPTOCEPHALUS Gottsche.
Glyptocephalus Gottsche, Archiv für Naturgesch., 1835, 156 (*Pleuronectes saxicola* Fabricius=*P. cynoglossus* Linnæus).

1786. Glyptocephalus cynoglossus (Linnæus). *Craig fluke; Pole flounder; Gray sole; Lemon sole.*
North Atlantic, chiefly in deep water, south to Cape Cod and France.
Pleuronectes cynoglossus Linnæus, Syst. Nat., ed. X, 1758, 269; after Gronow.
Pleuronectes saxicola Faber, Tidsskr. für Naturv., 5 B., 1828, 244, Denmark.
Glyptocephalus acadianus Gill, Proc. Acad. Nat. Sci. Phila., XXV, 1873, 360, Nova Scotia.

Genus 601. ERREX Jordan.
Errex Jordan, Proc. Acad. Nat. Sci. Phila., LXXI, 1919, 343 (*Glyptocephalus zachirus* Lockington).

1787. Errex zachirus (Lockington). *Rex sole; Long-finned sole.*
Waters of moderate depth of the northern Pacific; from San Francisco northward.
Glyptocephalus zachirus Lockington, Proc. U. S. Nat. Mus., II, 1879, 88, San Francisco.

Family 138. ACHIRIDÆ. Broad soles

Subfamily GYMNACHIRINÆ

Genus 602. GYMNACHIRUS Kaup.
Gymnachirus Kaup, Wiegmann's Archiv, I, 1858, 101 (*Gymnachirus nudus* Kaup).

1788. Gymnachirus nudus Kaup.
Coast of Brazil; once taken at Tisbury Great Pond, Martha's Vineyard Island, Mass. (Vinal N. Edwards).
Gymnachirus nudus Kaup, Wiegmann's Archiv, I, 1858, 101, Brazil

1789. Gymnachirus fasciatus Günther.
West Indies; very rare, north to Long Key, Fla. (W. C. Kendall).
Gymnachirus fasciatus Günther, Cat., IV, 1862, 488, locality unknown.

Subfamily ACHARINÆ

Genus 603. ACHIRUS Lacépède.
Achirus Lacépède, Hist. Nat. Poiss., IV, 1803, 658 (*Pleuronectes achirus* Linnæus).
Trinectes Rafinesque, Atlantic Jour. and Friend of Knowledge, I, 1832 (*T. scabra* Rafinesque=*Pleuronectes mollis* Mitchill).
Grammichthys Kaup, Arch. Naturgesch., 1858, 94 (*Achirus lineatus* Linnæus).
Baiostoma Bean, Proc. U. S. Nat. Mus., V, 1882, 413 (*B. brachialis* Bean).

Subgenus ACHIRUS Lacépède.

1790. Achirus achirus (Linnæus).
Atlantic coasts of tropical America.
Pleuronectes oculis dextris corpore glabro, pinnis pectoralibus nullus Gronow, Museum, I, No. 42, Surinam.
Pleuronectes achirus Linnæus, Syst. Nat., ed. X, 1758, 268, Surinam; based on Gronow.
Solea gronovii Günther, Cat., IV, 1862, 472, Surinam.

1791. Achirus inscriptus Gosse.
West Indies, north to Key West.
Achirus inscriptus Gosse, Nat. Sojourn Jamaica, 1851, 52, pl. 1, fig. 4, Jamaica.
Monochir reticulatus Poey, Memorias, II, 1861, 317, Cuba.

Subgenus GRAMMICHTHYS Kaup.

1792. Achirus klunzingeri (Steindachner).
Pacific coast of tropical America, Panama to Guayaquil.
Solea klunzingeri Steindachner, Zur Fische des Cauca und der Flüsse bei Guayaquil, 1879, 44, Guayaquil.

Subgenus TRINECTES Rafinesque.

1793. Achirus fasciatus Lacépède. *American sole; Hogchoker.*
Atlantic coast of United States, from Cape Cod to Texas; often ascending streams.
Achirus fasciatus Lacépède, Hist. Nat. Poiss., IV, 1803, 659, Charleston, S. C.
Pleuronectes mollis Mitchill, Trans. Lit. Phil. Soc. N. Y., I, 1815, 388, pl. 2, fig. 4, New York.
Pleuronectes apoda Mitchill, Amer. Month. Mag. and Crit. Rev., Feb., 1818, 244, Straits of Bahama.
Trinectes scabra Rafinesque, Atlantic Jour. and Friend of Knowledge, I, 1832, Pennsylvania, in fresh water.
Solea browni Günther, Cat., IV, 1862, 477, New Orleans; Texas.

1794. Achirus scutum (Günther).
Pacific coast of Central America.
Solea scutum Günther, Cat., IV, 1862, 474, Gulf of Fonseca, Panama.

1795. Achirus fonsecensis (Günther).
Pacific coast of tropical America, Mazatlan to Fonseca.
Solea fonsecensis Günther, Cat., IV, 1862, 475, Gulf of Fonseca.
Solea panamensis Steindachner, Ichth. Beiträge, V, 1876, 10, Taf. II, Panama.
Solea fischeri Steindachner, Beiträge Kenntniss Fluss-Fische Sudamer., I, 1879, 13, Rio Mamone near Panama.

1796. Achirus mazatlanus (Steindachner). *Mexican sole; Teipalcate.*
Pacific coast of tropical America.
Solea mazatlana Steindachner, Ichth. Notizen, IX, 1869, 23, Mazatlan, Mexico.
Solea pilosa Peters, Berliner Monatsber., 1869, 709, Mazatlan, Mexico.

1797. Achirus comifer Jordan and Gilbert.
Key West, Fla.
Achirus comifer Jordan and Gilbert, Proc. U. S. Nat. Mus., VII, 1884, 31, Key West, Fla.

1798. Achirus lineatus (Linnæus).
Florida to Brazil.
Passer lineis transversis notatus Sloane, Jamaica, 2, 1725, 77, pl. 246, fig. 2, Jamaica.
Pleuronectes fuscus subrotundus glaber Browne, Jamaica, 1756, 445, Jamaica.
Pleuronectes lineatus Linnæus, Syst. Nat., ed. X, 1758, 268, Jamaica; based on Browne and Sloane; not of ed. XII, which is *Achirus fasciatus*.
Monochir maculipinnis Agassiz, Spix, Pisc. Brasil., 1829, 88, pl. 49, Brazil.
Baiostoma brachialis Bean, Proc., U. S. Nat. Mus., V, 1882, 413, Appalachicola Bay and south Florida.

1799. Achirus barnharti Jordan.
Coast of southern California; Coronado Islands.
Achirus barnharti Jordan, Univ. Calif. Pub. Zool., XXVI, 1923, 10, Pl. I, Coronado Islands in about 400 feet depth of water.

Genus 604. APIONICHTHYS Kaup.
Apionichthys Kaup, Wiegmann's Archiv, 1858, 104 (*A. dumerili* Kaup).
Soleotalpa Günther, Cat., IV, 1862, 489 (*S. unicolor* Günther).

1800. Apionichthys dumerili Kaup.
West Indies.
Apionichthys dumerili Kaup, Wiegmann's Archiv, 1858, 104, no locality; description of species included in that of the genus.
Soleotalpa unicolor Günther, Cat., IV, 1862, 489, West Indies.
Apionichthys nebulosus Peters, Berliner Monatsb., 1869, 709, Surinam.

Family 139. CYNOGLOSSIDÆ. Tonguefishes

Genus 605. SYMPHURUS Rafinesque. *Tonguefishes.*
Symphurus Rafinesque, Indice, 1810, 13, 52 (*S. nigrescens* Rafinesque).
Bibronia Cocco, Alcuni Pesci del Mare di Messina, 1844, 15 (*B. ligulata* Cocco, larval form of *Symphurus*).
Plagusia Cuvier, Règne Animal, ed. 2, II, 1829, 344; based on *Plagusia* of Browne; name preoccupied in crustaceans, Latreille, 1806.
Plagiusa Bonaparte, Cat. Metod., 1846, 51 (*P. lactea*); name a substitute for *Plagusia*.
Aphoristia Kaup, Archiv für Natur., 1858, 106 (*Achirus ornatus* Lacépède).
Glossichthys Gill, Cat. Fish. E. Coast N. Amer., 1861, 51 (*Pleuronectes plagusia* Linnæus).
Ammopleurops Günther, Cat., IV, 1862, 490 (*Plagusia lactea* Bonaparte).
?*Bascanius* Schiödte, Naturhist. Tijdskr., V, 1867, 269 (*B. tædifer* Schiödte; larval).

1801. Symphurus piger (Goode and Bean).
West Indies and Gulf of Mexico in deep water.
Aphoristia pigra Goode and Bean, Bull. Mus. Comp. Zool., XII, No. 5, 1886, 154, St. Kitts, in about 250 fathoms.

1802. Symphurus marginatus (Goode and Bean.)
West Indies.
Aphoristia marginata Goode and Bean, Bull. Mus. Comp. Zool., XII, No. 5, 1886, 153, off St. Vincent, West Indies.

1803. Symphurus atramentatus Jordan and Bollman.
Off coast of Colombia.
Symphurus atramentatus Jordan and Bollman, Proc. U. S. Nat. Mus., XII, 1889, 177, off coast of Colombia at *Albatross* station 2795, lat. 7° 57′ N., long. 78° 55′ W., in 33 fathoms.

1804. Symphurus fasciolaris Gilbert.
Gulf of California.
Symphurus fasciolaris Gilbert, Proc. U. S. Nat. Mus., XIII, 1891, 506, Gulf of California.

1805. Symphurus elongatus (Günther).
Pacific coast of tropical America.
Aphoristia ornata var. *elongata* Günther, Fishes Cent. Amer., 1869, 473, Panama.

1806. Symphurus atricaudus (Jordan and Gilbert). *San Diego sole.*
Lower California, north to San Diego.
Aphoristia atricauda Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880, 23, San Diego, Calif.

1807. Symphurus leei Jordan and Bollman.
Off the coast of Colombia.
Symphurus lei Jordan and Bollman, Proc. U. S. Nat. Mus., XII, 1889, 178, off coast of Colombia at *Albatross* station 2804, lat. 8° 16′ 30″ N., long. 79° 37′ 45″ W., in 47 fathoms.

1808. Symphurus plagusia (Bloch and Schneider). *Acedia.*
West Indies, south to Rio Janeiro.
Plagusia Browne, Jamaica, No. 1, 1756, 445, Jamaica.
Pleuronectes plagusia Bloch and Schneider, Syst. Ichth., 1801, 162, Jamaica; after Browne.
Achirus ornatus Lacépède, Hist. Nat. Poiss., IV, 1803, 659; on a specimen "presented by Holland to France."
Plagusia tessellata Quoy and Gaimard, Voyage *Uranie*, Zoology, 1824, 240, Rio Janeiro.
Plagusia brasiliensis Agassiz, in Spix, Pisc. Brasil., 1827, 89, tab. 50, Brazil.

1809. Symphurus plagiusa (Linnæus). *Tonguefish.*
South Atlantic and Gulf coasts of United States.
Pleuronectes plagiusa Linnæus, Syst. Nat., ed. XII, 1766, 455, on a specimen from Doctor Garden, probably from Charleston.
Plagusia fasciata Holbrook, in DeKay, New York Fauna: Fishes, 1842, 304, Charleston, S. C.

1810. Symphurus pusillus (Goode and Bean).
Off Atlantic coast of United States in deep water.
Aphoristia pusilla Goode and Bean, Proc. U. S. Nat. Mus., VIII, 1885, 590, Gulf Stream, lat. 40° N., in deep water.

1811. Symphurus diomedeanus (Goode and Bean).
Gulf of Mexico, off Key West, Fla.
Aphoristia diomedeana Goode and Bean, Proc. U. S. Nat. Mus., VIII, 1885, 589, Gulf of Mexico, lat. 25° 4′ 30″ N., long. 82° 59′ 15″ W.

1812. Symphurus williamsi Jordan and Culver.
West coast of Mexico.
Symphurus williamsi Jordan and Culver, in Jordan, Proc. Calif. Acad. Sci., 2d ser., V, 1895, 506, pl. 55, Mazatlan, Mexico.

Genus 606. ACEDIA Jordan.
Acedia Jordan, in Jordan and Goss, Rept. U. S. Fish Com., XIV, 1886 (1888) (*Aphoristia nebulosa* Goode and Bean).

1813. Acedia nebulosa (Goode and Bean).
Gulf Stream.
Aphoristia nebulosa Goode and Bean, Bull. Mus. Comp. Zool., X, No. 5, 1883, 192, Gulf Stream, off the coast of the Carolinas.

Superorder ACANTHOPTERYGII

Order LL. ZEOIDEI

Family 140. ZEIDÆ. John dories

Genus 607. ZENOPSIS Gill.
Zenopsis Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 126 (*Zeus nebulosus* Temminck and Schlegel).

1814. Zenopsis ocellata (Storer). *Ocellated dory.*
Off New England coast.
Zeus ocellatus Storer, Proc. Bost. Soc. Nat. Hist., VI, 1858, 386, off Provincetown, Mass.

Genus 608. ZENION Jordan and Evermann.
Zenion Jordan and Evermann, Rept. U. S. Fish Com., XXI, 1895 (1896), 418 (*Cyttus hololepis* Goode and Bean).

1815. Zenion hololepis (Goode and Bean).
West Indies, in deep water.
Cyttus hololepis Goode and Bean, Oceanic Ichth., 1896, 225 figs. 233, 233a, 233b, off Yucatan and Little Bahama Bank.

Genus 609. OREOSOMA Cuvier and Valenciennes.
Oreosoma Cuvier, Règne Animal, ed. 2, II, 1829 (type not named, *Oresoma atlanticum* Cuvier).
Oreosoma Cuvier and Valenciennes, Hist. Nat. Poiss., IV, 1830, 377 (515) (*O. atlanticum* Cuvier and Valenciennes).

1816. Oreosoma atlanticum Cuvier and Valenciennes.
Open Atlantic; only a few specimens known.
Oreosoma atlanticum Cuvier and Valenciennes, Hist. Nat. Poiss., IV, 1829, 377 (515), open Atlantic.
Oreosoma conferrum Cuvier and Valenciennes, loc. cit., pl. 99, same type.

Family 141. GRAMMICOLEPIDÆ

Genus 610. GRAMMICOLEPIS Poey.
Grammicolepis Poey, Anal. Soc. Esp. Hist. Nat., II, 1873 (*G. brachiusculus* Poey).

1817. Grammicolepis brachiusculus Poey.
Cuba; in deep water.
Grammicolepis brachiusculus Poey, Anal. Soc. Española Hist. Nat., II, 1873, Cuba.

Order MM. XENOBERYCES

Family 142. STEPHANOBERYCIDÆ

Genus 611. STEPHANOBERYX Gill.
Stephanoberyx Gill, Proc. U. S. Nat. Mus., VI, 1883, 258 (*S. monæ* Gill).

1818. Stephanoberyx monæ Gill.
Gulf Stream, in deep water.
Stephanoberyx monæ Gill, Proc. U. S. Nat. Mus., VI, 1883, 258, Gulf Stream at *Albatross* station 2077 in 1,255 fathoms.

1819. Stephanoberyx gillii Goode and Bean.
Gulf Stream, in deep water.
Stephanoberyx gillii Goode and Bean, Oceanic Ichth., 1895, 187, fig. 206, Gulf Stream at *Albatross* station 2099 in 2,949 fathoms.

Family 143. MELAMPHAIDÆ

Genus 612. CAULOLEPIS Gill.
Caulolepis Gill, Forest and Stream, XXI, Aug. 30, 1883, and Proc. U. S. Nat. Mus., VI, 1883, 258 (*C. longidens* Gill).

1820. Caulolepis longidens Gill.
Gulf Stream and Pacific Ocean at Cortez Banks off San Diego, Calif.
Caulolepis longidens Gill, Proc. U. S. Nat. Mus., VI, 1883, 258, Atlantic Ocean, lat. 39° 27′ N., long. 69° 56′ 20″ W., in 1,346 fathoms.

Genus 613. ANOPLOGASTER Günther.
Anoplogaster Günther, Cat., I, 1859, 12 (*Hoplostethus cornutus* Cuvier and Valenciennes).

1821. Anoplogaster cornutus (Cuvier and Valenciennes).
Atlantic, in deep water, north and south.
Hoplostethus cornutus Cuvier and Valenciennes, Hist. Nat. Poiss., IX, 1833, 347 (270); from stomach of a shark, taken at 26° lat. S; others taken by the *Albatross* 31° N., 40° W., from the stomach of an albacore.

Genus 614. POROMITRA Goode and Bean.
Poromitra Goode and Bean, Bull. Mus. Comp. Zool., X, No. 5, 1882, 214 (*P. capito* Goode and Bean).

1822. Poromitra capito Goode and Bean.
Deep water in Gulf Stream in latitude 34°.
Poromitra capito Goode and Bean, Bull. Mus. Comp. Zool., X, No. 5, 1882, 215, Gulf Stream.

Genus 615. PLECTROMUS Gill.
Plectromus Gill, Proc. U. S. Nat. Mus., VI, 1883, 257 (*P. suborbitalis* Gill).

1823. Plectromus suborbitalis Gill.
Gulf Stream, in deep water.
Plectromus suborbitalis Gill, Proc. U. S. Nat. Mus., VI, 1883, 258, lat. 38° 52′ N., long. 69° 24′ W., at *Albatross* stations 2036, 2190, and 2535 in 1,149 to 1,800 fathoms.

1824. Plectromus beani (Günther).
Gulf Stream in deep water.
Plectromus crassiceps Bean, Proc. U. S. Nat. Mus., VIII, 1885, 73, Gulf Stream; name preoccupied.
Melamphaës beani Günther, *Challenger* Rept., XXII, 1887, 29, Gulf Stream, in about latitude 40°.

1825. Plectromus crassiceps (Günther).
Mid-Atlantic; Brazil.
Scopelus crassiceps Günther, Ann. Mag. Nat. Hist., II, 1878, 185, deep water in mid-Atlantic and off Pernambuco.

1826. Plectromus cristiceps (Gilbert).
Coast of Washington and Oregon and southeastern Alaska.
Melamphaës cristiceps Gilbert, Proc. U. S. Nat. Mus., XIII, 1890 (1891), 60, coasts of Oregon and Washington and *Albatross* station 3075 in 859 fathoms.

1827. Plectromus lugubris (Gilbert).
Coast of California; off Bay of Panama; Bering Sea.
Melamphaës lugubris Gilbert, Proc. U. S. Nat. Mus., XIII, 1890 (1891), 59, coast of California south of Point Conception, at *Albatross* station 2923 in 822 fathoms.

1828. Plectromus mizolepis (Günther).
Off Bay of Panama in deep water; south of New Guinea and Bay of Bengal.
Scopelus mizolepis Günther, Ann. Mag. Nat. Hist., 11, 1878, 185, south of New Guinea.

1829. Plectromus nycterinus (Gilbert).
Coast of southern California, in deep water.
Melamphaës nycterinus Gilbert, Proc. U. S. Nat. Mus., XLVIII, 1915, 326, pl. 16, off Santa Catalina, 2,113 to 2,259 fathoms.

1830. Plectromus bispinosus (Gilbert).
Coronado Islands, near San Diego, Calif.
Melamphaës bispinosus Gilbert, Proc. U. S. Nat. Mus., XLVIII, 1915, 325, pl. 15, fig. 5; off the Coronado Islands, near San Diego, 642 to 666 fathoms.

Order NN. BERYCOIDEI

Family 144. POLYMIXIIDÆ. Barbudos

Genus 616. POLYMIXIA Lowe.
Polymixia Lowe, Trans., Cambr. Phil. Soc., VI, 1838, 198 (*P. nobilis* Lowe).
Nemabrama Valenciennes, Ichth. Îles Canaries, 1844, 40 (*N. webbi* Valenciennes=*Polymixia nobilis* Lowe):
Dinemus Poey, Memorias, II, 1861, 160 (*D. venustus* Poey=*Polymixia lowei* Günther.

1831. Polymixia lowei Günther. *Barbudo.*
Caribbean Sea; Cuba.
Polymixia lowei Günther, Cat., I, 1859, 17, Caribbean Sea.
Dinemus venustus Poey, Memorias, II, 1861, 161, Cuba.

Family 145. BERYCIDÆ

Genus 617. BERYX Cuvier. *Alfonsinos.*
Beryx Cuvier, Règne Anim., ed. 2, II, 1829, 151 (*B. decadactylus* Cuvier and Valenciennes.

1832. Beryx decadactylus Cuvier and Valenciennes. *Alfonsin a Casta Larga.*
Cosmopolitan, open seas, in rather deep water; Portugal, Madeira, Japan, and Cuba.
Beryx decadactylus Cuvier and Valenciennes, Hist. Nat. Poiss., III, 1829, 165 (222), Madeira or Portugal.

1833. Beryx splendens Lowe. *Alfonsin a Casta; Cumprida.*
Cosmopolitan, in the open seas, at moderate depth; Madeira, Japan, and Gulf Stream at 35° 49′ 30″ N., 74° 34′ 45″ W. in 424 fathoms.
Beryx splendens Lowe, Proc. Zool. Soc. Lond., 1833, 142, Madeira.

Family 146. ANOMALOPIDÆ

Genus 618. KRYPTOPHANARON Silvester and Fowler.
Kryptophanaron Silvester and Fowler, Proc. Acad. Nat. Sci. Phila., LXXVIII, 1926, 245 (*K. alfredi* Silvester and Fowler).

1834. Kryptophanaron alfredi Silvester and Fowler.
Off coast of Jamaica.
Kryptophanaron alfredi Silvester and Fowler, Proc. Acad. Nat. Sci. Phila., LXXVIII, 1926, 246, Pl. XVIII, fig. 1; Pl. XIX, figs. 2 and 4. Off Kingston Harbor, Jamaica, floating on surface.

Family 147. TRACHICHTHYIDÆ

Genus 619. HOPLOSTETHUS Cuvier and Valenciennes.
Hoplostethus Cuvier and Valenciennes, Hist. Nat. Poiss., IV, 1829, 344 (469) (*H. mediterraneus* Cuvier and Valenciennes).

1835. Hoplostethus mediterraneus Cuvier and Valenciennes.
Coasts of southern Europe; Gulf Stream.
Hoplostethus mediterraneus Cuvier and Valenciennes, Hist. Nat. Poiss., IV, 1829, 344 (469), Mediterranean Sea.
Trachichthys pretiosus Lowe, Proc. Zool. Soc. Lond. 1839, 77, Madeira.

Family 148. HOLOCENTRIDÆ. Soldierfishes; Squirrelfishes

Genus 620. OSTICHTHYS Jordan and Evermann.
Ostichthys Langsdorf, in Cuvier and Valenciennes, Hist. Nat. Poiss., III, 130 (174), 1829; name only, passing reference under *Myripristis japonicus* Cuvier.
Ostichthys Jordan and Evermann, Fish. North and Mid. Amer., 1896, 846 (*Myripristis japonicus* Cuvier and Valenciennes).

1836. Ostichthys trachypomus (Günther).
West Indies; Cuba.
Myripristis trachypoma Günther, Cat., I, 1859, 25, Cuba.
Myriopristis fulgens Poey, Memorias, II, 1860, 160, Cuba.

Genus 621. MYRIPRISTIS Cuvier.

Myripristis Cuvier, Règne Anim., ed. 2, II, 1829, 150 (*M. jacobus* Cuvier and Valenciennes).

Rhamphoberyx Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 817 (*R. pœcilopus* Gill); young.

Myripristes of authors; altered spelling.

Myriopristis of authors; altered spelling.

1837. Myripristis jacobus Cuvier and Valenciennes. *Frère Jacques; Candil.*

West Indies to Brazil; common.

Myripristis jacobus Cuvier and Valenciennes, Hist. Nat. Poiss., III, 1829, 121 (162), Martinique.

Rhinoberyx chryseus Cope, Proc. Amer. Phil. Soc., XIV, 1871, 464, St. Croix Island.

1838. Myripristis occidentalis (Gill).

West coast of America, from Cape San Lucas to Panama; Galapagos; Cocos Island.

Myriopristis occidentalis Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 87, Cape San Lucas.

Rhamphoberyx leucopus Gill, loc. cit., 88, Cape San Lucas; immature.

1839. Myripristis pœcilopus (Gill).

West coast of America, from Cape San Lucas to Panama.

Rhamphoberyx pœcilopus Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 87, Cape San Lucas; immature example.

Genus 622. HOLOTRACHYS Günther.

Holotrachys Günther, Jour. Mus. Godeffroy, Band I, 1873, 93 (*Myripristes lima* Cuvier and Valenciennes).

1840. Holotrachys lima (Cuvier and Valenciennes).

South Seas, east to Hawaii and Cocos Island.

Myripristis lima Cuvier and Valenciennes, Hist. Nat. Poiss., VII, 1831, 493, Île de France.

Myripristes humilis Kner and Steindachner, Sitz. Akad. Wiss. Wien, LIV, 1866, 357, pl. 1, fig. 1, Samoa.

Genus 623. HOLOCENTRUS Bloch. *Squirrelfishes; Soldierfishes.*

Holocentrus Gronow, Zoophyl., 1763, 65; nonbinomial.

Holocentrus Bloch, Naturgeschich. Ausländ. Fische, IV, 1790, 61 (*H. sogo* Bloch).

Holocentrum Cuvier, and of most authors; amended spelling.

Rhynchichthys Cuvier and Valenciennes, Hist. Nat. Poiss., VII, 1831, 503 (*R. pelamidis* Cuvier and Valenciennes); young.

Rhinoberyx Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 237 (*Rhynchichthys brachyrhynchus* Bleeker); larval form.

1841. Holocentrus ascensionis[39] (Osbeck). *Matajuelo; Squirrelfish; Soldado; Welchman.*

Islands of the Atlantic and northward from St. Helena and Ascension Island to Florida and Cuba.

?*Perca ascensionis* Osbeck, Iter Chinensis, 1757; reprinted as Reise Ost-Ind. China, 1765, 388, Ascension Island; reprint of a pre-Linnæan paper, hence ineligible.

?*Bodianus pentacanthus* Bloch, Nat. Ausl. Fische, IV, 1790, 40, pl. 225, Brazil; after *Saguaraca* of Marcgrave.

?*Holocentrus sogo* Bloch, loc. cit., 61, pl. 232, Africa.

Sciæna rubra Schneider, Ed. Bloch, Syst. Ichth., 1801, 82; after Catesby.

Amphiprion matejuelo Bloch and Schneider, Syst. Icth., 1801, 206, Cuba; after Parra.

?*Bodianus jaguar* Lacépède, Hist. Nat. Poiss., IV, 1802, 286, Brazil.

?*Holocentrum longipinne* Cuvier and Valenciennes, Hist. Nat. Poiss., III, 1829, 138 (185), Brazil; Martinique; Porto Rico; St. Thomas; San Domingo; Habana.

Holocentrus striatus Gronow, Cat. Fishes, 1854, 173, Antilles.

Holocentrus rostratus Gronow, loc. cit., 173, near the Equator.

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[39] The specific name of the common mataguelo of Cuba is still wholly uncertain if the two forms (the one from Cuba, the other from Brazil) are really distinct. The earliest specific name, *ascensionis*, is apparently ineligible, occurring in reprints of a pre-Linnæan paper. The pertinence of most of the other names is more or less uncertain. Here, as elsewhere where no official decision has been made by the International Commission on Zoological Nomenclature, we follow the rule of not changing current nomenclature unless, as in matters of priority, the case is reasonably clear.

1842. Holocentrus rufus (Walbaum).
The northern form probably varying into *H. ascensionis*, which ranges from the Bahamas to Brazil.
Perca rufa Walbaum, Artedi Pisc., 1792, 351, Bahamas; after *Perca marina rubra* of Catesby.

1843. Holocentrus coruscus (Poey).
Cuba; Bahama Islands; Bermudas; Tortugas.
Holocentrum coruscum Poey, Memorias, II, 1861, 158, Cuba.
Holocentrum sicciferum Cope, Trans. Amer. Phil. Soc., XIV, 1871, 465, Bahamas, New Providence.
?*Holocentrum puncticulatus* Barbour, Bull. Mus. Comp. Zool., XLVI, 1905, 117, Bermudas.
?*Holocentrus tortugæ* Jordan and Thompson, Bull. U. S. Bur. Fish., XXIV, 1904 (1905), 236, fig. 1, Garden Key, Tortugas.

1844. Holocentrus brachypterus Poey.
Cuba.
Holocentrus brachypterus Poey, Repertorio, I, 1866, 184, Cuba.

1845. Holocentrus vexillarius (Poey).
Cuba; Porto Rico.
Holocentrum vexillarium Poey, Memorias, II, 1861, 158, Cuba.
?*Holocentrum riparium* Poey, Enumeratio, 1875, 37, Cuba.

1846. Holocentrus osculus (Poey).
Cuba.
Holocentrum osculum Poey, Memorias, II, 1861, 156, Cuba.
Holocentrum perlatum Poey, loc. cit., 157, Cuba.

1847. Holocentrus sancti-pauli (Günther).
St. Paul Rocks, mid-Atlantic.
Holocentrum sancti-pauli Günther, Shore Fishes, *Challenger* Rept., Zoology, I, part 6, 1880, 4, St. Paul Rocks, mid-Atlantic.

1848. Holocentrus meeki Bean.
Bermudas.
Holocentrus meeki Bean, Proc. Biol. Soc. Wash., XIX, 1906, 31, St. Davids Island, Bermudas.

Genus 624. FLAMMEO Jordan and Evermann.
Flammeo Jordan and Evermann, Fishes North and Mid. Amer., 1898, 2871 (*Holocentrum marianum* Cuvier and Valenciennes).

1849. Flammeo marianus (Cuvier and Valenciennes). *Marian.*
West Indies; Cuba; Jamaica; Martinique.
Holocentrum marianum Cuvier and Valenciennes, Hist. Nat. Poiss., III, 1829, 164 (219), Martinique.
Holocentrum rostratum Poey, Memorias, II, 1861, 157, Cuba.

Genus 625. ADIORYX Starks.
Adioryx Starks, Science, XXVIII, 1908, 614 (*Holocentrum suborbitale* Gill).

1850. Adioryx suborbitalis (Gill). *Mojarra cardinal.*
Mazatlan to Panama; Revillagigedo, Cocos, and Galapagos Islands.
Holocentrum suborbitale Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 86, Cape San Lucas, Lower California.

Genus 626. PLECTRYPOPS Gill.
Plectrypops Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 237 (*Holocentrum retrospinis* Guichenot).

1851. Plectrypops retrospinis (Guichenot).
Cuba.
Holocentrum retrospinis Guichenot, in Ramon de la Sagra, Hist. Cuba, 1853, 35, pl. 1, fig. 3, Cuba.

Order OO. THORACOSTEI

Suborder HEMIBRANCHII

Family 149. GASTEROSTEIDÆ. Sticklebacks

Genus 627. GASTEROSTEUS Linnæus. *Sticklebacks.*

Gasterosteus Linnæus, Syst. Nat., ed. X, 1758, 295 (*G. aculeatus* Linnæus).

Gasteracanthus Pallas, Zoog. Rosso.-Asiat., III, 1811 (*G. cataphractus* Pallas).

Leiurus Swainson, Nat. Hist. Fish., Amphib., etc., II, 1839, 242 (*Gasterosteus aculeatus* Linnæus).

Merriamella Jordan, Univ. Calif. Publ. Geol., V, 1907, 131 (*M. dorysia* Jordan); fossil form.

1852. Gasterosteus aculeatus Linnæus. *Common stickleback.*

Arctic and subarctic regions, in shallow bays and estuaries, very common; also ascending streams, where it loses partially or wholly its bony plates, in Europe, Asia, and America alike. The development of these plates and in some degree of dorsal spines and caudal keel depends on the salinity of the water. Reported *G. williamsoni microcephalus* from irrigation ditch near El Rosario, Lower California, 255 miles south of U. S. border, May 21, 1925, Clinton G. Abbott, collector.

(*1. Forms completely mailed*)

Gasterosteus aculeatus Linnæus, Syst. Nat., ed. X, 1758, 489, Europe.

Gasterosteus cataphractus Pallas, Mém. Acad. Petersb., III, 1811, 325, Kamchatka.

Gasterosteus trachura Cuvier and Valenciennes, Hist. Nat. Poiss., IV, 1829, 481, France.

Gasterosteus teraculeatus Lacépède, Hist. Nat. Poiss., III, 1802, 296.

Gasterosteus obolarius Cuvier and Valenciennes, Hist. Nat. Poiss., IV, 1829, 500, Kamchatka.

Gasterosteus noveboracensis Cuvier and Valenciennes, loc. cit., 502, pl. 98, fig. 3.

Gasterosteus biaculeatus Shaw, Zool., IV, 1839, 608; after Pennant.

Gasterosteus dimidiatus Reinhardt, Fauna Grœnlandica, 1837, 32, 37, Greenland.

Gasterosteus loricatus Reinhardt, loc. cit., 32, 37, Greenland.

Gasterosteus bailloui Blanchard, Poiss. des eaux douces de France, 1866, 231, Abbeville.

Gasterosteus insculptus Richardson, Last Arctic Voyage, 1854, 10, Pl. XXV, figs. 1, 2, and 3, Northumberland and Puget Sounds.

Gasterosteus serratus Ayres, Proc. Calif. Acad. Nat. Sci., I, 1855, 47, San Francisco.

(*2. Forms armed anteriorly only*)

Gasterosteus gymnurus Cuvier, Règne Animal, ed. II, 1829, 170, waters of England and northward.

Gasterosteus leiurus Cuvier and Valenciennes, Hist. Nat. Poiss., IV, 1829, 481, Seine.

Gasterosteus semiarmatus Cuvier and Valenciennes, loc. cit., 493, Havre, France.

Gasterosteus semiloricatus Cuvier and Valenciennes, loc. cit., 494, Baillon.

Gasterosteus spinulosus Jenyns and Yarrell, Man. Brit. Vert., 1835, 350, Edinburgh.

Gasterosteus ponticus Nordmann, in Demidoff, Voy. Russ. Merid., III, 1840, 357, Tauria and Black Sea.

Gasterosteus cuvieri Girard, in Storer's Fishes of Nova Scotia and Labrador, 1849, 254, p. VII, fig. 1, Bras d'Or, Red Bay, Labrador.

Gasterosteus microcephalus Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 133, Four Creek (Kaweah River), a tributary to Tule Lake (Tulare Lake), San Joaquin Valley, Calif.

Gasterosteus plebeius Girard, loc. cit., 147, Presidio, Calif.

Gasterosteus inopinatus Girard, loc. cit., 147, Presidio, Calif.
Gasterosteus pugetti Girard, loc. cit., 1856, 135, Fort Steilacoom, Wash.
Gasterosteus neustrianus Blanchard, Poiss. des eaux douce de France, 1866, 220, Harfleur.
Gasterosteus argentissimus Blanchard, loc. cit., 232, Avignon.
Gasterosteus elegans Blanchard, loc. cit., 234, Cadillac and Langou, 6 pls.
Gasterosteus islandicus Sauvage, Revision des Épinoches, 1874, 20, Iceland.
Gasterosteus atkinsi Bean, Proc. U. S. Nat. Mus., II, 1879, 67, Schoodic Lakes, Maine.

(*3. Forms naked or with one or two plates*)

Gasterosteus williamsoni Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 133, Williamsons Pass, Calif.
Gasterosteus santa-annæ Regan, Ann. Mag. Nat. Hist., 8th ser., IV, 1909, 437, Santa Anna River, Calif.

Genus 628. GLADIUNCULUS Jordan and Evermann.
Gladiunculus Jordan and Evermann, Proc. Calif. Acad. Sci., ser. 4, XVI, 1927 (Apr. 27), 504 (*Gasterosteus gladiunculus* Kendall=*G. bispinosus* Walbaum).

1853. Gladiunculus bispinosus (Walbaum). *Common eastern stickleback.*
Labrador to New Jersey, near the coast, in salt water; very common in New England.
Gasterosteus bispinosus Walbaum, Artedi Pisc., 1792, 450; after Pennant; said to be "New York," but more likely Hudson's Bay.
Gasterosteus wheatlandi Putnam, Proc., Essex Inst., V, 1867, 4, Nahant, Mass.
Gasterosteus gladiunculus Kendall, Proc. U. S. Nat. Mus., XVIII, 1896, off coast of Maine, near Seguin Island.

Genus 629. EUCALIA Jordan.
Eucalia Jordan, Man. Vert., ed. 1, 1876, 248 (*Gasterosteus inconstans* Kirtland).

1854. Eucalia incostans (Kirtland). *Brook stickleback.*
New York to Kansas and northward to the Saskatchewan; Great Lakes region; central Ohio, Indiana, and Illinois.
Gasterosteus inconstans Kirtland, Bost. Jour. Nat. Hist., III, 1841, 273, brooks of Trumball County, Ohio.
Gasterosteus micropus Cope, Proc. Acad. Nat. Sci. Phila., XVII, 1865, 81, Fort Riley, Kans.
Gasterosteus globiceps Sauvage, Revision des Épinoches, 1874, 35, North America.
Eucalia inconstans cayuga Jordan, Man. Vert., ed. 1, 1876, 249, Cayuga Lake, Ithaca, N. Y.

1855. Eucalia pygmæa (Agassiz).
Lake Superior.
A valid species if the fin rays are D. IV–I, 6; A. I, 6. In *E. inconstans* they are D. IV–I, 10; A. I, 10.
Gasterosteus pygmæus Agassiz, Lake Superior, 1850, 314, Lake Superior.

Subfamily GASTEROSTEINÆ

Genus 630. PUNGITIUS Costa. *Nine-spined sticklebacks.*
Pungitius Costa, Mém. Savants Etrangers, Paris, X, 1846 (*Gasterosteus. pungitius* L.).
Pygosteus (Brevoort) Gill, Can. Nat., and Cat. Fish. E. Coast N. A., supplement to Proc. Acad. Nat. Sci. Phila., XIII, 1861, 39 (*Gasterosteus occidentalis* Cuvier and Valenciennes=*G. pungitius* Linnæus).
Gasterostea Sauvage, Révision des Épinoches, 1874, 7 (*Gasterosteus pungitius* Linnæus).

1856. Pungitius pungitius (Linnæus). *Nine-spined stickleback.*
Gasterosteus pungitius Linnæus, Syst. Nat., ed. X, 1758, 296, Europe; after *Gasterosteus aculeis* in *dorso decem* Artedi.
Gasterosteus lævis Cuvier, Règne Animal, ed. 2, II, 1829, 170, streams of France.
Gasterosteus occidentalis Cuvier and Valenciennes, Hist. Nat. Poiss., IV, 1829, 509, Newfoundland; not *G. occidentalis* Linnæus, unrecognized, probably a species of *Carangidæ*.
Gasterosteus concinnus Richardson, Fauna Bor.-Amer., III, 1836, 57, Saskatchewan River and Great Bear Lake.
Gasterosteus nebulosus Agassiz, Lake Superior, 1850, 310, pl. 4, fig. 4, Lake Superior.
Gasterosteus dekayi Agassiz, Lake Superior, 1850, 311, New York.
Gasterosteus lotharingus Blanchard, Poiss. France, 1866, 244, Lorraine.
Gasterosteus breviceps Blanchard, loc. cit., 1866, 245, Caen, France.
Gasterostea blanchardi Sauvage, Révision des Epinoches, 1874, 32, New York.

1857. Pungitius mainensis (Storer).
Kennebec River, Me.; a form or species with seven dorsal spines.
Gasterosteus mainensis Storer, Bost. Jour. Nat. Hist., I, 1837, 464, Kennebec County, Me.

1858. Pungitius brachypoda (Bean).
Baffins Bay, Greenland. A form with 10 dorsal spines and the ventral spines very small.
Gasterosteus pungitius brachypoda Bean, Bull. U. S. Nat. Mus., XV, 1879, 129, Oosooadlin Mountain, Cumberland Gulf, Greenland.

Subfamily APELTINÆ

Genus 631. APELTES DeKay. *Four-spined stickleback.*
Apeltes DeKay, N. Y. Fauna: Fishes, 1842, 87 (*Gasterosteus quadracus* Mitchill).

1859. Apeltes quadracus (Mitchill).
Maine to New Jersey, in salt water only.
Gasterosteus quadracus Mitchill, Trans. Lit. and Phil. Soc., I, 1815, 430, New York.
Gasterosteus apeltes Cuvier and Valenciennes, Hist. Nat. Poiss., IV, 1829, 505, no locality.
Gasterosteus millipunctatus Ayres, Bost. Jour. Nat. Hist., I, 1842, 294, Old Mans Harbor, Long Island.

Subfamily SPINACHIINÆ

Genus 632. SPINACHIA Cuvier.
Spinachia Cuvier, Règne Anim., ed I, 1817, 320 (*Gasterosteus spinachia* Linnæus).
Polycanthus Swainson, Nat. Hist. Fish., Amphib., etc., II, 1839, 242 (*Gasterosteus spinachia* Linnæus).
Gastræa Sauvage, Révision des Epinoches, 1874, 7 (*Gasterosteus spinachia* Linnæus).

1860. Spinachia spinachia (Linnæus).
Coasts of northern Europe; recorded from Newfoundland.
Gasterosteus spinachia Linnæus, Syst. Nat., ed. X, 1758, 442.
Spinachia vulgaris Fleming, Brit. Anim., 1828, 210.
Gasterosteus marinus Gronow, Cat. Fish., 1854, 168.

Family 150. AULORHYNCHIDÆ

Genus 633. AULORHYNCHUS Gill.
Aulorhynchus Gill, Proc. Acad. Nat. Sci. Phila., XIII, 1861, 169 (*A. flavidus* Gill).
Auliscops Peters, Berliner Monatsberichte, 1866, 570 (*A. spinescens* Peters).

1861. Aulorhynchus flavidus Gill.
Coast of California, from San Nicolas Island and Monterey northward to Sitka, Alaska.
Aulorhynchus flavidus Gill, Proc. Acad. Nat. Sci. Phila., XIII, 1861, 169, coast of Washington.

Suborder LOPHOBRANCHII

Family 151. SYNGNATHIDÆ. Pipefishes and seahorses

Subfamily SYNGNATHINÆ

Genus 634. DERMATOSTETHUS Gill.
Dermatostethus Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 283 (*D. punctipinnis* Gill).

1862. Dermatostethus punctipinnis Gill.
San Diego, California.
Dermatostethus punctipinnis Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 283, San Diego, Calif.; not lately recognized; the genus perhaps of doubtful value.

Genus 635. SYNGNATHUS Linnæus.
Syngnathus Linnæus, Syst. Nat., ed. X, 1858, 336 (*Syngnathus acus* L., the proper type as decided by the Internat. Com. Zool. Nomencl.).
Siphostoma Rafinesque, Caratteri, 1810, 18 (*Syngnathus pelagicus* Linnæus).

1863. Syngnathus californiensis Storer. *Great pipefish.*
Santa Barbara to Monterey and northward.
Syngnathus californiensis Storer, Proc. Bost. Soc. Nat. Hist., II, 1845, 73, California.

1864. Syngnathus griseolineatus Ayres.
Pacific coast of the United States, from Monterey northward to Puget Sound and southeastern Alaska.
Syngnathus griseolineatus Ayres, Proc. Calif. Acad. Nat. Sci., I, 1854, 14, San Francisco Bay.
Syngnathus abboti Girard, Pac. R. R. Survey, Fishes, X, 1858, 346, San Francisco.

1865. Syngnathus leptorhynchus Girard.
West coast of America from San Francisco to San Diego.
Syngnathus brevirostris Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 156, San Diego; name preoccupied.
Syngnathus leptorhynchus Girard, loc. cit., 156, San Diego, Calif.
Syngnathus dimidiatus Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 284, San Diego; substitute for *brevirostris*, preoccupied.

1866. Syngnathus arundinaceus Girard.
Coast of California.
Syngnathus arundinaceus Girard, Pac. R. R. Surv., X, 1858, 346, coast of California.

1867. Syngnathus carinatus (Gilbert).
Gulf of California.
Siphostoma carinatum Gilbert, Proc. U. S. Nat. Mus., XIV, 1891, 547, Gulf of California, lat. 31° 31′ N., long. 114° 19′ W., at *Albatross* stations 3027 and 3028.

1868. Syngnathus auliscus (Swain).
Southern California.
Siphostoma auliscus Swain, Proc. U. S. Nat. Mus., V, 1882, 310, Santa Barbara and San Diego, Calif.

1869. Syngnathus barbaræ (Swain).
California coast at Santa Barbara. Rare; not reported recently.
Siphostoma barbaræ Swain, Proc. U. S. Nat. Mus., VII, 1884, 238, Santa Barbara, Calif.

1870. Syngnathus mackayi (Swain and Meek).
Key West to Yucatan.
Siphostoma mackayi Swain and Meek, Proc. U. S. Nat. Mus., VII, 1884, 239, Key West, Fla.

1871. Syngnathus floridæ (Jordan and Gilbert).
Virginia to Texas and Porto Rico.
Siphostoma floridæ Jordan and Gilbert, Proc. U. S. Nat. Mus., V, 1882, 263, Pensacola, Fla.

1872. Syngnathus poeyi (Jordan and Evermann).
Habana.
Syngnathus tenuis Poey, Synopsis, 1867, 444, Cuba; name preoccupied.
Siphostoma poeyi Jordan and Evermann, Fish. North and Mid. Amer., 1896, 766, Habana, Cuba; substitute for *S. tenuis*, preoccupied.

1873. Syngnathus elucens[40] Poey. *Pipefish.*
Cuba; Florida Keys; Porto Rico.
Syngnathus elucens Poey, Synopsis, 1867, 443, Habana.
Syngnathus flavirostris Poey, Enumeratio, 1876, 178, Habana.
Syngnathus picturatus Poey, loc. cit., 178, Habana.
Syngnathus linea Poey, loc. cit., 178, Habana.
Syngnathus marmoreus Poey, loc. cit., 178, Habana.
Syngnathus ascendens Poey, loc. cit., 179, Habana.

1874. Syngnathus rousseau Kaup.
West Indies; known from Jamaica, St. Lucia, and Martinique.
Syngnathus rousseau Kaup, Lophobranchii, 1856, 40, Martinique.

1875. Syngnathus jonesi Günther. *West Indian pipefish.*
Bermudas and Porto Rico.
Syngnathus jonesi Günther, Ann. Mag. Nat. Hist., ser. 4, XIV, 1874, 8, 455, Bermudas.

1876. Syngnathus fistulatus Peters.
Puerto Cabello, near Colon.
Syngnathus fistulatus Peters, Monatsber., Ak. Wiss. Berl., 1868, 456, Puerto Cabello, near Aspinwall.

1877. Syngnathus pelagicus Linnæus.
Open sea in the Atlantic and the Mediterranean; doubtfully recorded from the West Indies; some other species, perhaps *S. fistulata*, being mistaken for it.
Syngnathus pelagicus Linnæus, Syst. Nat., ed. I, 1758, open sea in floating seaweed.
Syngnathus ethon Risso, Eur. Mérid., III, 1826, 182, Nice, France.

1878. Syngnathus robertsi (Jordan and Rutter).
West Indies and Jamaica; Caribbean Sea.
Siphostoma robertsi Jordan and Rutter, Proc. Acad. Nat. Sci. Phila., XLIX, 1897, 97, Jamaica.

1879. Syngnathus brachycephalus Poey.
Tortugas; Cuba.
Syngnathus brachycephalus Poey, Synopsis, 1867, 444, Habana, Cuba.

1880. Syngnathus brevicaudus (Meek).
Boca del Rio, Vera Cruz.
Siphostoma brevicaudum Meek, Field Col. Mus., Zool., V, 1904, 163, Boca del Rio, Mexico.

1881. Syngnathus crinigerum (Bean and Dresel).
Pensacola and Key West, to Abrolhos Reef, Brazil.
Siphostoma crinigerum Bean and Dresel, Proc. Biol. Soc. Wash., II, 1884, 99, Pensacola, Fla.

1882. Syngnathus sinaloæ (Jordan and Starks).
Pacific coast of Mexico.
Siphostoma sinaloæ Jordan and Starks, Proc. Calif. Acad. Sci., 3d ser., VI, 1896, 268, Mazatlan, Mexico.

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[40] Some of the nominal species here included may prove to be valid.

1883. Syngnathus arctus (Jenkins and Evermann).
Gulf of California, Guaymas.
Siphostoma arctum Jenkins and Evermann, Proc. U. S. Nat. Mus., XI, 1888, 137, Bay of Guaymas, Sonora, Mexico.

1884. Syngnathus starksi (Jordan and Culver).
Estuaries about Mazatlan.
Siphostoma starksi Jordan and Culver, Proc. Calif. Acad. Sci., 3d ser., V, 1895, 416, Pl. XXX, Rio Presidio, Mazatlan, Mexico.

1885. Syngnathus dendriticus (Barbour).
Ireland Island, Bermudas.
Siphostoma dendriticum Barbour, Bull. Mus. Comp. Zool., XLVI, No. 7, 1904–1906, 115, Ireland Island, Bermudas.

1886. Syngnathus mindii Meek and Hildebrand.
Panama.
Syngnathus mindii Meek and Hildebrand, Field Mus. Nat. Hist., Zool., XV, 1923, 261, Pl. XVIII, fig. 2; brackish creek near Mindi, Canal Zone, Panama.

1887. Syngnathus elcapitensis Meek and Hildebrand.
Streams, west coast of Panama.
Syngnathus elcapitanense Meek and Hildebrand in Meek, Field Mus. Nat. Hist., Zool., X, 1914, 119, Rio Mamona at El Capitan, Panama.

1888. Syngnathus tweedliei Meek and Hildebrand.
Panama.
Syngnathus tweedliei Meek and Hildebrand, Field Mus. Nat. Hist., Zool., XV, 1923, 259, Pl. XVIII, fig. 1, Chame Point, Panama.

1889. Syngnathus torrei (Nichols).
Cuba.
Siphostoma torrei Nichols, Bull. Amer. Mus. Nat. Hist., XXXI, 1912, 183, fig. 1, Matanzas, Cuba.

Genus 636. SYRICTES Jordan and Evermann.
Syrictes Jordan and Evermann Proc. Calif. Acad. Sci., XVI, Apr. 27, 1927, 504 (*Syngnathus fuscus* Storer).

1890. Syrictes fuscus[41] (Storer). *Common pipefish; Green pipefish; Billfish.*
Atlantic coast of United States from Maine to Virginia; very common northward.
Syngnathus fuscus Storer, Rept. Fish. Mass., 1839, 162, Nahant, Mass.
Syngnathus peckianus Storer, Rept. Fish. Mass., 1839, 163, Holms Hole, Marthas Vineyard.
Syngnathus peckii Storer, Rept. Fish. Mass., 1839, 3; name only.
Syngnathus fasciatus DeKay, N. Y. Fauna: Fishes, 1842, 319, pl. 54, fig. 174, New York.
Syngnathus viridescens DeKay, loc. cit., 321, pl. 54, fig. 176, New York.
Syngnathus dekayi Duméril, Hist. Nat. Poiss., II, 1870, 569, New York.
Syngnathus milbertianus Duméril, loc. cit., 573, New York.

1891. Syrictes affinis (Günther).
Gulf of Mexico, on coast of Louisiana.
Syngnathus affinis Günther, Cat., VIII, 1870, 163, Louisiana.

1892. Syrictes scovelli (Evermann and Kendall).
Coast of Texas and both coasts of Florida.
Siphostoma scovelli Evermann and Kendall, Proc. U. S. Nat. Mus., XVIII, 1895, 113, Shamrock Point, Corpus Christi, Tex.

1893. Syrictes louisianæ (Günther).
Atlantic and Gulf coasts of the United States; North Carolina to Texas and south to Key West.
Syngnathus pelagicus, var., Linnæus, Syst. Nat., ed. XII, 1766, 416, Charleston, S. C.
Syngnathus louisianæ Günther, Cat., VIII, 1870, 160, New Orleans, La.

1894. Syrictes bairdianus (Duméril).
West coast of Lower California.
Syngnathus bairdianus Duméril, Hist. Nat. Poiss., II, 1870, 574, "Coast of Mexico, near California."

[41] The names *fuscus* and *peckianus* are of the same date. The author who first perceived this identity chose the second name in spite of the page priority of *fuscus*.

1895. Syrictes exilis (Osburn and Nichols).
Gulf of California.
Siphostoma exile Osborn and Nichols, Bull. Amer. Mus. Nat. Hist., XXXV, 1916, 153, fig. 7, west San Benito Island, Port San Bartolome.

Genus 637. HIPPICHTHYS Bleeker.
Hippichthys Bleeker, Verh. Batav. Genootsch., XXII, 1849, 15 (*H. heptagonus* Bleeker); not *Hippocampus heptagonus* Rafinesque.
Corythoichthys Kaup, Archiv Naturgesch., 1853, 231 (*C. albirostris* Heckel MS. Kaup).

1896. Hippichthys albirostris (Heckel).
West Indies, north to Pensacola and Key West; south to Bahia, about coral reefs.
Corythöichthys albirostris Heckel in Kaup, Archiv Naturgesch., 1853, 231, Mexico; Bahia; type examined.
Siphostoma zatropis Jordan and Gilbert, Proc. U. S. Nat. Mus., V, 1882, 264, Snapper Banks, Pensacola.

1897. Hippichthys cayorum (Evermann and Kendall).
Key West, Fla.; Porto Rico.
Corythöichthys cayorum Evermann and Kendall, Bull. U. S. Fish Com., XVII, 1897, 128, pl. 7, fig. 7, near Crawfish Bar, Key West, Fla.

1898. Hippichthys spicifer (Rüppell).
Tropical Pacific; recorded from Tehuantepec.
Syngnathus spicifer Rüppell, Neue Wirb., Fische, about 1830, 143.

Genus 638. DORYICHTHYS Kaup.
Doryichthys Kaup, Archiv Naturgesch., 1853, 233 (*D. bilineatus* Heckel).

1899. Doryichthys lineatus Valenciennes.
Tropical parts of Atlantic from Cuba to Brazil.
Doryichthys lineatus Valenciennes, in Kaup, Lophobranchii, 1856, 59, Bahia, Mexico, and Guadeloupe.

Genus 639. DORYRHAMPHUS Kaup.
Doryrhamphus Kaup, Archiv Naturgesch., 1853, 233 (*D. excisus* Kaup).
Choeroichthys Kaup, loc. cit., 1853, 233 (*C. valenciennesi* Kaup).

1900. Doryrhamphus californiensis Gill.
Gulf of California.
Doryrhamphus californiensis Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 284, Cape San Lucas, Lower California.

1901. Doryrhamphus sierra Nichols.
Porto Rico.
Doryrhamphus sierra Nichols, Bull. Amer. Mus. Nat. Hist., XXXIV, 1915, 145, fig. 2, Porto Rico.

Genus 640. ACUS [43] Swainson.
Acus Swainson, Nat. Hist. Fish., Amphib., etc., II, 1839, 333 (*Syngnathus æquoreus* "Yarrell").
Osphyolax Cope, Proc. Acad. Nat. Sci. Phila., XXVII, 1875, 450 (*O. pellucidus* Cope).

1902. Acus æquoreus (Linnæus). *Ocean pipefish.*
Open sea along coasts of Europe; recorded from New Orleans, some other species probably mistaken for it.
Syngnathus æquoreus Linnæus, Syst. Nat., ed. X, 1758, 417, open sea.
Syngnathus sibbaldi Walbaum, Artedi Pisc., 1792, 6, Scotland.
Nerophis maculata Rafinesque, Indice, 1810, 57, Palermo, Italy.
Nerophis anguineus Kaup, Lophobr., 1856, 65, Brownsey, Dorsetshire; Berwick.

1903. Acus martinicensis (Bibron) Kaup.
West Indies.
Nerophis martinicensis (Bibron) Kaup, Lophobr., 1856, 67, Martinique.

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[43] We may adopt the generic name *Acus* for the species of the old genus *Nerophis* (Rafinesque, Indice, Sicil., 1810, 57, type *Syngnathus ophidion* L.) in which a small caudal fin is present, the tail not ending in a filament, as is the case in the type of *Nerophis* (*Syngnathus ophidion* L.) The name *Acus*, variously used by authors, is not preoccupied in binomial nomenclature.

1904. Acus heckeli (Kaup).
Caribbean Sea.
Nerophis heckeli Kaup, Lophobr., 1856, 66, Bogota; evidently not the exact locality.

1905. Acus pellucidus (Cope).
Open Atlantic.
Osphyolax pellucidus Cope, Proc. Acad. Nat. Sci. Phila., XXVII, 1875, 450, pl. 25, figs. 1 to 4, open Atlantic Ocean; a larval form of doubtful relationships and differing from *Acus* in the very short dorsal (D. 16; about 40 in *Acus*).

Subfamily HIPPOCAMPINÆ

Genus 641. NANNOCAMPUS Günther.
Nannocampus Günther, Cat., VIII, 1870, 178 (*N. subosseus* Günther).

1906. Nannocampus nanus Rosen.
Bahama Islands.
Nannocampus nanus Rosen, Arsskr. Univ. Lund, VII, 1912, 50, Bahamas.

Genus 642. HIPPOCAMPUS Rafinesque.
Hippocampus Rafinesque, Caratteri, 1810, 18 (*Syngnathus hippocampus* Linnæus).

1907. Hippocampus hudsonius DeKay. *Common American seahorse; Horsefish.*
Atlantic coast of United States, from Cape Cod to the Tortugas.
Hippocampus hudsonius DeKay, N. Y. Fauna: Fishes, 1842, 322, p. 53, fig. 171, New York.
Hippocampus lævicaudatus Heckel, in Kaup, Lophobranchii, 1856, 16, North America.

1908. Hippocampus ingens Girard. *Caballito del mar.*
Pacific coast from San Diego to Mazatlan; rare.
Hippocampus ingens Girard, Pac. R. R. Surv., Fishes, X, 1858, 342, San Diego, Calif.
Hippocampus gracilis Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 282, Cape San Lucas, Lower California.

1909. Hippocampus brunneus Bean.
Bermudas.
Hippocampus brunneus Bean, Proc. Biol. Soc. Wash., XIX, 1906, 32, Long Bird Island, Bermudas.

1910. Hippocampus punctulatus Guichenot. *Caballito del mar; Seahorse; Horsefish.*
Tropical parts of the Atlantic; common in the West Indies, Brazil, and western Africa; Gulf Stream; Beaufort, N. C.
Hippocampus punctulatus Guichenot in Ramon de la Sagra, Hist. Île. Cuba, Poiss., 1853, 174, pl. 5, fig. 2, Cuba.
Hippocampus marginalis Heckel, in Kaup, Lophobr., 1856, 15, Mexico.
Hippocampus fasciacularis Heckel, in Kaup, loc. cit., 15, Mexico.

1911. Hippocampus stylifer Jordan and Gilbert.
Coasts of Florida; Snapper Banks off Pensacola and Tampa; Gulf Stream.
Hippocampus stylifer Jordan and Gilbert, Proc. U. S. Nat. Mus., V, 1882, 265, Snapper Banks, Gulf of Mexico.

1912. Hippocampus zosteræ Jordan and Gilbert.
Pensacola Bay, Fla.
Hippocampus zosteræ Jordan and Gilbert, Proc. U. S. Nat. Mus., V. 1882, 265, Grand Lagoon, Pensacola, Fla.; smallest of the seahorses,

Order PP. AULOSTOMI

Family 152. AULOSTOMIDÆ. Trumpetfishes

Genus 643. AULOSTOMUS Lacépède.
Aulostomus Lacépède, Hist. Nat. Poiss., V, 1803, 357 (*A. chinensis* Lacépède).
Polypterichthys Bleeker, Nat. Tidschr., Neder-Indie, IV, 1853, 608 (*P. valentini* Bleeker).
Aulostoma Schlegel, change of spelling.

1913. Aulostomus maculatus Valenciennes. *Trompetero; Trumpetfish.*
Caribbean Sea, north to southern Florida.
?*Aulostomus maculatum* Valenciennes, in Cuvier, Règne Anim., III, Poiss., 1845, pl. 92, fig. 2.
Aulostoma coloratum Müller and Troschel, in Schomburgk, History Barbados, 1848, 673, Barbados.

1914. Aulostomus cinereus (Poey).
Cuba.
Aulostoma cinereum Poey, Synopsis, 1867, 386, Cuba.

Family 153. FISTULARIIDÆ. Cornetfishes

Genus 644. FISTULARIA Linnæus.
Fistularia Linnæus, Syst. Nat., ed. X, 1758, 312 (*F. tabacaria* Linnæus).
Cannorhynchus Cantor, Jour. Roy. Asiat. Soc. Bengal, XVIII, 1849 (*Fistularia tabacaria* Linnæus); substitute name, *Fistularia* having been used in 1750 as a pre-Linnæan name for a group of polyps.
Flagellaria Gronow, Cat. Fishes, 1854 (*F. fistularis* Gronow = *Fistularia tabacaria* Linnæus).
Solenostomus (Gronow) Gill, Cat. Fish. East Coast. N. A., Supl. to Proc. Acad. Nat. Sci. Phila., XIII, 1861, 38 (*Fistularia tabacaria* Linnæus).

1915. Fistularia tabacaria Linnæus. *Trumpetfish; Trompetero; Tobacco trumpetfish; Unarmed trumpetfish.*
West Indies and neighboring seas; northward to Carolina and Florida, and occasionally to Long Island.
Fistularia tabacaria Linnæus, Syst. Nat., ed. X, 1758, 312; tropical America.
Fistularia neo-boracensis Mitchill, Trans. Lit. Phil. Soc. Phila., I, 1815, 437, New York.
Aulostome marcgravii Castelnau, Anim. Nouv. Amer. Sud, 1855, 30, Bahia, Rio Janeiro.
Flagellaria fistularis Gronow, Cat. Fish., 1854, 146, American Ocean.

1916. Fistularia serrata [43] Cuvier. *Flutemouth.*
Western Pacific and other warm seas; Bermuda; Cuba.
Fistularia serrata Cuvier, Règne Anim., ed. 1, II, 1817, 389, 34; after Bloch.
?*Fistularia immaculata* Cuvier, loc. cit., 349, Sea of the Indies.
Fistularia commersonii Rüppell, Neue Wirbelthiere, 1834, 142, Red Sea.
Fistularia villosa Klunzinger, Abh. Zool. Ges. Wien, XXI, 1871, 516, Red Sea.

1917. Fistularia petimba Lacépède. *Corneta.*
East Indies; Australia; China; Panama; Lower California; Japan; Hawaii.
Fistularia petimba Lacépède, Hist. Nat. Poiss., V, 1803, 349, New Britain, Isle of Reunion, equatorial Pacific.
Fistularia depressa Günther, *Challenger* rept. Shore Fishes, Zoology, I, pt. 6, 1880, 69, pl. 32, fig. D, Sulu Archipelago, station 200, 255 fathoms.

1918. Fistularia corneta Gilbert and Starks.
Pacific coast of tropical America; Panama.
Fistularia corneta Gilbert and Starks, Mem. Calif. Acad. Sci., IV, 1904, 56, Pl. X, Bay of Panama; Mazatlan.

Family 154. MACRORHAMPHOSIDÆ. Snipefishes

Genus 645. MACRORHAMPHOSUS Lacépède. *Snipefishes.*
Macrorhamphosus Lacépède, Hist. Nat. Poiss., V, 1803, 136 (*Silurus cornutus* Forskål = *Balistes scolopax* Linnæus).
Centriscus Cuvier, Règne Animal, ed. 1, II, 1817, 350; not *Centriscus* Linnæus.
Macrognathus Gronow, Cat. Fishes, 1854, 147 (*Centriscus scolopax* Linnæus).

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[43] Weber calls this species *villosa* but quotes *serrata*? in synonymy. The synonymy of *serrata* and *petimba* seem hopelessly confused.

1919. Macrorhamphosus scolopax (Linnæus). *Snipefish; Trumpetfish; Bellowsfish.*
Mediterannean Sea, northward to southern England, accidental on our North Atlantic Coast.
Balistes scolopax Linnæus, Syst. Nat., ed. X, 1758, 329, Mediterranean.
Silurus cornutus Forskål, Descr. Anim., 1775, 66, Marseilles.

1920. Macrorhamphosus hawaiiensis Gilbert.
Deep waters about Hawaii; once taken off San Pedro, Calif. (W. F. Thompson).
Macrorhamphosus hawaiiensis Gilbert, Bull. U. S. Fish Com., XXIII, 1903 (1905), 613, Laysan Island.

Order QQ. PERCOMORPHI

Suborder PERCESOCES

Family 155. ATHERINIDÆ. Silversides; Hardheads; Pescados del Rey; Peixe Rey

Genus 646. HEPSETIA Bonaparte.
Hepsetia Bonaparte, Fauna Italica, Fasc. 91 (no pages), 1837 (*Atherina boyeri* Risso).
Atherinomorus Fowler, Proc. Acad. Nat. Sci. Phila., LV, 1903, 730 (*Atherina laticeps* Poey = *Atherina stipes* Müller and Troschel).

1921. Hepsetia stipes (Müller and Troschel). *Cabezote, Bristle herring.*
West Indies; common north to western Florida.
?*Atherina tæniata* Spix in Agassiz, Pisc. Bras., 1829, 135, pl. 30, fig. 2, Atlantic Ocean, off Brazil.
Atherina stipes Müller and Troschel, in Schomburgk, Hist. Barbados, 1847, 671, Barbados.
Atherina laticeps, Poey, Memorias, II, 1861, 265, Habana.
Atherina velicana Goode and Bean, Proc. U. S. Nat. Mus., II, 1879, 342, Clear Water Harbor, Fla.

1922. Hepsetia evermanni (Eigenmann).
Cuba; San Cristobal; Pinar del Rio.
Atherina evermanni Eigenmann, Bull. U. S. Fish Com., XXII, 1902, 228, fig. 9, San Cristobal, Cuba.

Genus 647. ATHERINA (Artedi) Linnæus. *Friars.*
Atherina Artedi in Linnæus, Syst. Nat., ed. X, 1758, 315 (*Atherina hepsetus* Linnæus).
Aphia Risso, Europ. Mérid. 1826 (*Aphia meridionalis* Risso = apparently very young of *Atherina hepsetus* L.), but Risso describes their laying of eggs, and may refer to some other species.
Tæniomembras Ogilby, Proc., Linn. Soc. New South Wales, XXIII, 1898, 41 (*Atherina microstoma* Günther).

1923. Atherina arsea Jordan and Gilbert.
Gulf of Mexico at Key West, Cozumel, and south to Caribbean Sea.
Atherina arsea Jordan and Gilbert, Proc. U. S. Nat. Mus., VII, 1884, 27, Key West, Fla.

1924. Atherina harringtonensis Goode.
Bermudas and south to Curaçao.
Atherina harringtonensis Goode, Amer. Jour. Sci. Arts, 3d ser., XIV, No. 82, 1877, 297, Bermuda Islands.

1925. Atherina microps Poey.
Habana.
Atherina microps Poey, Memorias, II, 1861, 266, Habana, Cuba.

1926. Atherina carolina Cuvier and Valenciennes.
South Carolina (reference doubtful).
Atherina carolina Cuvier and Valenciennes, Hist. Nat. Poiss., X, 1835, 330 (445), "Carolinas."

Genus 648. MENIDIA Bonaparte.

Menidia Bonaparte, Fauna Italica, Tome III, Pesci, in description of *Atherina hepsetus* p. 91, 1836, no type, *Atherina menidia* Linnæus intended.

Ischnomembras Fowler, Proc. Acad. Nat. Sci. Phila., LV, 1903, 730, pl. 42, "Gabun River, Gabun County, West Africa," probably an error.

Phoxargyrea Fowler, loc. cit., 1903, 732, *Phoxargyrea dayi* Fowler from "India," doubtless an error.

Subgenus ISCHNOMEMBRAS Fowler.

1927. Menidia beryllina (Cope). *Silverside; Fresh-water silverside.*

Coastwise streams, Massachusetts to Florida and lower Mississippi, north to Tennessee.

?*Atherinichthys gracilis* Günther, Cat., III, 1861, 405, no locality given.

Christoma beryllinum Cope, Trans. Amer. Phil. Soc., 1866, 403, Potomac River, near Washington.

Menidia audens Hay, Bull. U. S. Fish Com., II, 1882, 64, Memphis, Tenn., and Vicksburg, Miss.

Ischnomembras gabunensis Fowler, Proc. Acad. Nat. Sci. Phila., LV, 1903, 731, pl. 42, Gabon River, West Africa; probably an error.

1928. Menidia beryllina cerea Kendall.

Atlantic coast, Massachusetts to South Carolina.

Menidia beryllina cerea Kendall, Rept. U. S. Fish Com., XXVII, 1901, 261, Waquoit Bay, Mass.

1929. Menidia peninsulæ (Goode and Bean).

Florida and Gulf coast, in salt water.

Chirostoma peninsulæ Goode and Bean, Proc. U. S. Nat. Mus., II, 1879, 148, Pensacola.

1930. Menidia peninsulæ atrimentis Kendall.

Florida; South Lake, Lake Monroe, Salt Lake, etc.

Menidia peninsulæ atrimentis Kendall, Rept. U. S. Fish Com., XXVII, 1901, 258, South Lake, Fla.

1931. Menidia menidia (Linnæus).

Atlantic coast, Cape Hatteras to Florida.

Atherina menidia Linnæus, Syst. Nat., ed. XII, 1766, 519, Charleston, S. C.

Atherina boscii Cuvier and Valenciennes, Hist. Nat. Poiss., X, 1835, 345 (465), Charleston.

Menidia dentex Goode and Bean, Proc. U. S. Nat. Mus., V, 1882, 429, St. Johns River, Fla.

1932. Menidia conchorum Hildebrand and Ginsberg.

Key West, Fla.

Menidia conchorum Hildebrand and Ginsberg, Bull. U. S. Bur. Fish., XLII, 1926 (1927), 207, fig. 1, Boca Chica, Key West, Fla.

1933. Menidia notata (Mitchill). *Silversides; Friar; Whitebait.*

Atlantic coast of United States, Nova Scotia to Cape May, intergrading south with *M. menidia.*

Atherina notata Mitchill, Trans. Lit. Phil. Soc. N. Y., I, 1815, 446, New York.

Atherina viridescens Mitchill, loc. cit., 447, New York.

Phoxargyrea dayi Fowler, Proc. Acad. Nat. Sci. Phila., LV, 1903, 732, pl. 41, "India"; no doubt an error in locality.

1934. Menidia starksi Meek and Hildebrand.

Panama.

Menidia starksi Meek and Hildebrand, Field Mus. Nat. Hist., Zool., XV, 267, Pl. XX, fig. 2, Taboga Island, Panama.

1935. Menidia sardina (Jenkins and Evermann). *Pez del rey.*

Gulf of California.

Atherina sardina Jenkins and Evermann, Proc. U. S. Nat. Mus., XI, 1888, 137, Guaymas, Sonora, Mexico.

1936. Menidia clara Evermann and Jenkins.
Gulf of California.
Menidia clara Evermann and Jenkins, Proc. U. S. Nat. Mus., XIII, 1891, 136, Guaymas, Sonora, Mexico.

Genus 649. ARCHOMENIDIA Jordan and Hubbs.
Archomenidia Jordan and Hubbs, Rev. Silversides, 1919, 54 (*Atherinichthys sallæ* Regan).

1937. Archomenidia sallei (Regan).
Mexico.
Atherinichthys sallei Regan, Proc. Zool. Soc. Lond., 1903, 60, Mexico.

Genus 650. HUBBESIA Jordan.
Hubbesia Jordan, Proc. U. S. Nat. Mus., LV, 1920 (May 2, 1919), 310 (*Menidia gilberti* Jordan and Bollman).

1938. Hubbesia gilberti (Jordan and Bollman).
Panama.
Menidia gilberti Jordan and Bollman, Proc. U. S. Nat. Mus., XII, 1889, 155, Panama.

Genus 651. MEMBRAS Bonaparte.
Membras Bonaparte, Fauna Italica, fasc. 91 (not paged), 1837 (type not named directly, *Atherina martinica* Cuvier and Valenciennes being indicated).

1939. Membras martinicus (Cuvier and Valenciennes).
Martinique.
Atherina martinica Cuvier and Valenciennes, Hist. Nat. Poiss., X, 1835, 340 (459), Martinique.

1940. Membras beani (Meek and Hildebrand).
Atlantic waters of Panama.
Kirtlandia beani Meek and Hildebrand, Field Mus. Nat. Hist., Zool., XV, 270, Pl. XXI, Fox Bay, Colon.

Genus 652. KIRTLANDIA Jordan and Evermann.
Kirtlandia Jordan and Evermann, Fishes North and Mid. Amer., 1896, 794 (*Chirostoma vagrans* Goode and Bean).

1941. Kirtlandia vagrans (Goode and Bean). *Rough silverside.*
Gulf of Mexico; Florida to Texas; occasionally northward.
Chirostoma vagrans Goode and Bean, Proc. U. S. Nat. Mus., II, 1879, 148, Pensacola, Fla.

1942. Kirtlandia laciniata (Swain). *Silverfish; Whitebait; Silversides.*
Lower Chesapeake to South Carolina, intergrading with *K. vagrans*.
Menidia vagrans lacinata Swain, in Jordan and Gilbert, Synopsis, 1882, 908, Beaufort, N. C.

Genus 653. THYRINA Jordan and Culver.
Thyrina Jordan and Culver, in Jordan, Proc. Calif. Acad. Sci., 3d ser., V, 1895, 419 (*Atherinella evermanni* Jordan and Culver).
Melaniris Meek, Field Mus.-Zool., III, 1902, 117 (*Melaniris balsanus* Meek).

1943. Thyrina crystallina Jordan and Culver.
Rio Presidio near Mazatlan, Sinaloa.
Thyrina crystallina Jordan and Culver, in Jordan, Proc. Calif. Acad. Sci., 3d ser., V, 1895, 420, Rio Presidio, below Presidio, Sinaloa.

1944. Thyrina evermanni Jordan and Culver.
West coast of Mexico; Mazatlan.
Thyrina evermanni Jordan and Culver, Proc. Calif. Acad. Sci., 3d ser., V, 1895, 419, Mazatlan, Mexico.

1945. Thyrina guija Hildebrand. *Pepesca; Manjuda; Alfiler; Rovalete.*
Lake Guija, Rio del Desague near Lake Guija and Rio Lempa at Suchitoto and San Marcos, El Salvador.
Thyrina guija Hildebrand, Bull. U. S. Bur. Fish., XLI, 1925, 264, fig. 18, Lake Guija, El Salvador.

1946. Thyrina balsana (Meek).
Mexico, Rio Balsas, Guerrero.
Melaniris balsanus Meek, Pub. Field Col. Mus., Zool., III, 1902, 117, Rio Balsas, at Balsas.

1947. Thyrina guatemalensis (Günther).
Lakes of Huamachal.
Atherinichthys guatemalensis Günther, Proc. Zool. Soc. London, 1864, 151, Lakes of Huamachal, Pacific coast of Guatemala.

1948. Thyrina sardina (Meek). *Sardina.*
Lakes Nicaragua and Managua.
Melaniris sardina Meek, Field Col. Mus., Zool., VII, 1907, 114, Lake Managua, Nicaragua.
Chirostoma guatemalensis Gill, Proc. Acad. Nat. Sci. Phila., XXIX, 1877, 187, Lake Nicaragua; not of Günther.

1949. Thyrina chagresi (Meek and Hildebrand).
Streams of Atlantic slope of Panama.
Menidia chagresi Meek and Hildebrand, Field Mus. Nat. Hist., Zool., X, 1914, 119, Rio Chagres at Gorgona, Zent and Parismina, Costa Rica.

1950. Thyrina meeki Miller.
Rio Motagua, Guatemala.
Thyrina meeki Miller, Bull. Amer. Mus. Nat. Hist., XXIII, 1907, 110, fig. 2, Rio Motagua, east coast of Guatemala.

Genus 654. THYRINOPS Hubbs.
Thyrinops Hubbs, Proc. Acad. Nat. Sci. Phila., LXIX, 1918, 306 (*Atherinichthys pachylepis* Günther).

1951. Thyrinops pachylepis (Günther).
Panama.
Atherinichthys pachylepis Günther, Proc. Zool. Soc. Lond., 1864, 25, Panama.

Genus 655. MELANORHINUS Metzelaar.
Melanorhinus Metzelaar, Tropisch Atl. Visschen, 1919, 38 (*M. boeki* Metzelaar).

1952. Melanorhinus boeki Metzelaar.
West Indies.
Melanorhinus boeki Metzelaar, Trop. Atl. Visschen, 1919, 38, Oyster Pond, St. Martin Island.

Genus 656. XENATHERINA Regan.
Xenatherina Regan, Biologia Centrali Amer., Pisces, 1906, 64 (*Menidia lisa* Meek).

1953. Xenatherina lisa (Meek).
Streams of Vera Cruz, Mexico.
Menidia lisa Meek, Field Col. Mus., Pub. Zool., V, 1904, 182, Refugio, Vera Cruz, Basin of Rio Papaloapam, Mexico.

Genus 657. ATHERINELLA Steindachner.
Atherinella Steindachner, Ichth. Beitr., II, 1875, 35 (*A. panamensis* Steindachner).

1954. Atherinella panamensis Steindachner.
Panama.
Atherinella panamensis Steindachner, Ichth. Beitr., II, 1875, 35, Panama.

Genus 658. EURYSTOLE Jordan and Evermann.
Eurystole Jordan and Evermann, Fishes North and Mid. Amer., 1896, 802 (*Atherinella eriarcha* Jordan and Gilbert).

1955. Eurystole eriarcha (Jordan and Gilbert).
West coast of Mexico; Mazatlan.
Atherinella eriarcha Jordan and Gilbert, Proc. U. S. Nat. Mus., IV, 1881, 348, Mazatlan, Mexico.

Genus 659. CHIROSTOMA Swainson. *Pescados blancos.*

Chirostoma Swainson, Class. Fishes, etc., II, 1839, 243 (*Atherina humboldtiana* Cuvier and Valenciennes).

Atherinoides Bleeker, Verh. Bat. Gen., Japan, XXV, 1853, 40 (*Chirostoma vomerina* Cuvier and Valenciennes = *Atherina humboldtiana* Cuvier and Valenciennes).

Atherinichthys Bleeker, loc. cit., 40 (*Atherina humboldtiana* Cuvier and Valenciennes).

Heterognathus Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 198 (*Atherina humboldtiana* Cuvier and Valenciennes).

Lethostole Jordan and Evermann, Fish. North and Mid. Amer., 1896, 792 (*Chirostoma estor* Jordan).

Eslopsarum Jordan, Rept. U. S. Fish Com., XIX, 1895, 330 (*Chirostoma jordani* Woolman).

Subgenus ESLOPSARUM Jordan.

1956. Chirostoma jordani Woolman.

Basin of Rio Lerma and Valley of Mexico.

Chirostoma jordani Woolman, Bull. U. S. Fish Com., XIV, 1894, 62, pl. 2, canals at Salamanca and City of Mexico.

Atherinichthys brevis Therese von Baiern, Anz. Kais. Akad. Wiss. Wien, 1894, 149, Lake Cuitzeo, Mexico.

1957. Chirostoma mezquital Meek.

Durango.

Chirostoma mezquital Meek, Field Col. Mus., pub. 93, V, 1904, 170, Durango, Mexico.

1958. Chirostoma labarcæ Meek.

Rio Lerma, Mexico.

Chirostoma labarcæ Meek, Field Col. Mus., Zool., III, 1902, 113, Rio Lerma, Mexico.

1959. Chirostoma arge (Jordan and Snyder).

Rio Verde, Mexico.

Eslopsarum arge Jordan and Snyder, Bull. U. S. Fish Com., XIV, 1899, 133, fig. 12, Rio Verde, Mexico.

Subgenus CHIROSTOMA Swainson.

1960. Chirostoma bartoni Jordan and Evermann.

Tributary of the Rio Lerma, near Guanajuato, Mexico; Lake Patzcuaro.

Chirostoma bartoni Jordan and Evermann, Fish. North and Mid. Amer., 1896, 793, tributary of the Rio Lerma, near Guanajuato, Mexico.

Chirostoma attenuatum Meek, Field Col. Mus., Zool., III, 1902, 112, Lake Patzcuaro, Mexico.

1961. Chirostoma zirahuen Meek.

Lago de Zirahuen, Mexico.

Chirostoma zirahuen Meek, Field Col. Mus., Zool., III, 1902, 114, Lago de Zirahuen, Mexico.

1962. Chirostoma patzcuaro Meek.

Lago de Patzcuaro, Mexico.

Chirostoma patzcuaro Meek, Field Col. Mus., Zool., III, 1902, 113, Lago de Patzcuaro, Mexico.

1963. Chirostoma humboldtianum (Cuvier and Valenciennes). *Pescado blanco de Chalso.*

Lakes near the City of Mexico; La Laguna, Jalisco, Mexico.

Atherina humboldtiana Cuvier and Valenciennes, Hist. Nat. Poiss., X, 1835, 355 (479), Mexico.

Atherina vomerina Cuvier and Valenciennes, loc. cit., 357 (481), lake near City of Mexico.

1964. Chirostoma regani Jordan and Hubbs.

Valley of Mexico; Lake Patzcuaro.

Chirostoma regani Jordan and Hubbs, Leland Stanford Univ. Pub., Univ. Ser., 1919, 74, Xochomilco, Morelos, Mexico. After *Chirostoma breve* Regan; not of Steindachner.

Subgenus LETHOSTOLE Jordan and Evermann.

1965. Chirostoma chapalæ Jordan and Snyder.
Laguna de Chapala, Mexico.
Chirostoma chapalæ Jordan and Snyder, Bull., U. S. Fish Com., XIX, 1899, 135, fig. 13, Laguna de Chapala, Mexico, at Ocotlan.

1966. Chirostoma consocium Jordan and Hubbs.
Basin of Rio Lerma, Mexico.
Chirostoma consocium Jordan and Hubbs, Rev. Silversides, in Leland Stanford Univ. Pub. Univ. Ser., 1919, 76, Lake Chapala at La Palma, Mexico.

1967. Chirostoma grandoculo (Therese von Baiern).
Lake Patzcuaro, Mexico.
Atherinichthys grandoculis Therese von Baiern, Anz. Kais. Akad. Wiss. Wien, 1894, Lake Patzcuaro, Mexico.

1968. Chirostoma promelas Jordan and Snyder.
Laguna de Chapala; Guadalajara, Mexico.
Chirostoma promelas Jordan and Snyder, Bull. U. S. Fish Com., XIX, 1899, 136, market of Guadalajara, Mexico, from Laguna de Chapala.

1969. Chirostoma lucius Boulenger.
Lake Chapala, Mexico.
Chirostoma lucius Boulenger, Ann. and Mag. Nat. Hist., ser. 7, V, January, 1900, 54, Lake Chapala, Mexico.
Chirostoma crystallinum Jordan and Snyder, Bull. U. S. Fish Com., XIX, 1899 (1900), 139, fig. 16, Laguna de Chapala, Mexico, at Ocotlan.

1970. Chirostoma diazi Jordan and Snyder.
Lake Chapala, Mexico.
Chirostoma diazi Jordan and Snyder, Bull. U. S. Fish Com., XIX, 1899 (1900), 137, fig. 15, Lake Chapala, Mexico.

1971. Chirostoma sphyræna Boulenger.
Lake Chapala, Mexico.
Chirostoma sphyræna Boulenger, Ann. Mag. Nat. Hist., ser. 7, V, 1900, 54, Lake Chapala, Mexico.
Chirostoma lermæ Jordan and Snyder, Bull. U. S. Fish Com., XIX, 1899 (1900), 142, fig. 19.

1972. Chirostoma ocotlane Jordan and Snyder.
Lago de Chapala, Mexico.
Chirostoma ocotlane Jordan and Snyder, Bull. U. S. Fish Com., XIX, 1899 (1900), 140, Lago de Chapala, Mexico.

1973. Chirostoma estor Jordan. *Pescado blanco de Chapala.*
Lake Chapala, Lake Patzcuaro, Lake Zirahuen, and Lake Xochimilco, Mexico.
Chirostoma estor Jordan, Proc. U. S. Nat. Mus., II, 1879, 298, Lake Chapala (an error for Lake Patzcuaro).
Atherinichthys albus Therese von Baiern, Anz. Kais. Akad. Wiss. Wien, 1894, 148, Lake Patzcuaro, Mexico.

Genus 660. LABIDESTHES Cope.
Labidesthes Cope, Proc. Amer. Phil. Soc., XI, 1870, 455 (*Chirostoma sicculum* Cope).

1974. Labidesthes sicculus (Cope). *Brook silverside; Skipjack; Glassfish.*
Lake Ontario and southern Michigan to Iowa, Florida, and Texas, clear streams and lakes.
Chirostoma sicculum Cope, Proc. Acad. Nat. Sci. Phila., XVII, 1865, 81, Grosse Isle, Detroit River, Mich.

Genus 661. LEURESTHES Jordan and Gilbert. *Grunion.*
Leuresthes Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880, 29 (*Atherinopsis tenuis* Ayres).

1975. Leuresthes tenuis (Ayres). *Grunion.*
Sandy coasts of California from San Francisco to Lower California; abundant southward.
Atherinopsis tenuis Ayres, Proc. Calif. Acad. Nat. Sci., II, 1860, 75, San Francisco.
Leuresthes crameri Jordan and Evermann, Fishes North and Mid. Amer., 1896, 802, Ballenas Bay, Lower California.

Genus 662. MUGILOPS Meek and Hildebrand.
Mugilops Meek and Hildebrand, Field Mus. Nat. Hist., Zool., XV, 1923, 271 (*M. cyanellus* Meek and Hildebrand).

1976. Mugilops cyanella Meek and Hildebrand.
Panama Bay.
Mugilops cyanellus Meek and Hildebrand, Field Mus. Nat. Hist., Zool., XV, 1923, 271, Pl. XXII, fig. 1, Balboa, Panama Bay.

1977. Mugilops marina Meek and Hildebrand.
Panama Bay.
Mugilops marinus Meek and Hildebrand, Field Mus. Nat. Hist., Zool., XV, 1923, 272, Pl. XXII, fig. 2, Porto Bello, Panama Bay.

Genus 663. COLPICHTHYS Hubbs.
Colpichthys Hubbs, Proc. Acad. Nat. Sci. Phila., LXVIX, 1917 (1918), 67 (*Atherinops regis* Jenkins and Evermann).

1978. Colpichthys regis (Jenkins and Evermann). *Pez del rey.*
Gulf of California.
Atherinops regis Jenkins and Evermann, Proc. U. S. Nat. Mus., XI, 1888, 138, Bay of Guaymas, Sonora, Mexico.

Genus 664. ATHERINOPS Steindachner. *Pascadillos del rey.*
Atherinops Steindachner, Ichth. Beitr., III, 1875, 61 (*Atherinopsis affinis* Ayres).

1979. Atherinops affinis (Ayres). *Little smelt; Pescadillo del rey.*
Coast of California, and north to Oregon.
Atherinopsis affinis Ayres, Proc. Calif. Acad. Nat. Sci., II, 1860, 73, San Francisco.
Atherinops oregonia Jordan and Snyder, Proc. U. S. Nat. Mus., XLV, 1913, 575, pl. 46, Yachats River, Oreg.

1980. Atherinops insularum Gilbert.
San Clemente and San Nicolas Islands of the Santa Barbara Group; Guadalupe Island.
Atherinops insularum Gilbert, Proc. U. S. Nat. Mus., XIV, 1891, 549, San Clemente, San Nicolas, and Guadalupe Islands.

1981. Atherinops insularum cedroscensis Hubbs.
Shores of Cedros and San Benito Islands, Lower California.
Atherinops insularum cedroscensis Hubbs, Bull. Amer. Mus. Nat. Hist., XXXVIII, 1918, 434, southeast side of Cedros Island, Lower California.

1982. Atherinops insularum guadalupæ Hubbs.
Guadalupe Island, off Lower California.
Atherinops insularum guadalupæ Hubbs, Bull. Amer. Mus. Nat. Hist., XXXVIII, 1918, 435, Guadalupe Island.

Genus 665. ATHERINOPSIS Girard. *Pescado del rey.*
Atherinopsis Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 134 (*A. californiensis* Girard).

1983. Atherinopsis californiensis Girard. *California blue smelt; Pescado del rey; Peixe rey; Pescé rey.*
Coast of California, from Cape Mendocino to Ballenas Bay, Lower California; aburdant.
Atherinopsis californiensis Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 134, San Francisco, Calif.

1984. Atherinopsis sonoræ Osburn and Nichols.
Cedros Island, Lower California.
Atherinopsis sonoræ Osborn and Nichols, Bull. Amer. Mus. Nat. Hist., XXXV, 1916, 156, fig. 8, Cedros Island, Lower California.

Family 156. MUGILIDÆ. Mullets

Genus 666. MUGIL Linnæus. *Striped mullets* (soft dorsal and anal not scaled).
Mugil Artedi, in Linnæus, Syst. Nat., Ed. X, 1758, 316 (*M. cephalus* Linnæus).
Arnion Gistel, Thierreich, 1848, X (*M. cephalus* L.).

1985. Mugil brasiliensis Agassiz. *Liza; Lebrancho; Queriman; Blueback mullet; Fantail mullet.*

Cuba to Patagonia; West Indies; Brazil; Habana, probably north to Virginia.

Mugil brasiliensis Agassiz, in Spix, Pisc. Brasil., 134 (234 by mispaging), 1829, pl. 72, Atlantic Ocean off Brazil.

Mugil liza Cuvier and Valenciennes, Hist. Nat. Poiss., XI, 1836, 61 (83), Brazil; Porto Rico; Maracaibo; Surinam; Martinique.

Mugil lebranchus Poey, Memorias, II, 1861, 260, plate 18, fig. 3 Cuba.

Querimana gyrans Jordan and Gilbert, Proc., U. S. Nat. Mus., VII, 1884, 26, Key West; "the whirligig mullet" a little fish, with two anal spines, now regarded as the young of *Mugil*, but if so of *M. brasiliensis* as the scales are 28 to 29 (41 in *Mugil cephalus*). It is recorded from Woods Hole and Fortress Monroe; in revolving schools, perhaps mixed with the young of *M. cephalus*.

1986. Mugil cephalus Linnæus. *Common mullet; Striped mullet; Céfalo; Macho; Machuto; Lisa cabezuda; Callifaver mullet.*

Cosmopolitan; coasts of southern Europe and northern Africa; Atlantic coast of America from Cape Cod to Brazil; Pacific coast of America from Monterey to Chile; Hawaii; Japan; entering rivers. Perhaps more than one species included, but we fail to detect differences. If different, the American species must be known as *Mugil albula* of the Atlantic and *Mugil mexicanus* of the Pacific.

Mugil cephalus Linnæus, Syst. Nat., Ed. X, 1758, 316, Europe; based on Artedi.

Mugil albula Linnæus, Syst. Nat., Ed. XII, 1766, 520, Charleston, S. C.

?*Mugil tang* Bloch, Ichthyologia, 1794, 171, Africa.

?*Mugil plumieri* Bloch, loc. cit., 173, St. Vincent; on a drawing by Plumier.

Mugil lineatus Mitchill, in Cuvier and Valenciennes, Hist. Nat. Poiss., XI, 1836, 71 (96), New York.

Mugil rammelsbergii Tschudi, Fauna Peruana, Ichth., 1845, 20, Peru.

Mugil berlandieri Girard, U. S. and Mex. Bound. Surv., 1859, 20, pl. 10, figs. 1 to 4, St. Josephs Island, Indianola, Brazos Santiago; Brazos; Galveston; all on coast of Texas.

Mugil guentherii Gill, Proc. Acad. Nat. Sci. Phila., XXI, 1863, 169, western coast of Central America; not of Steindachner.

Mugil mexicanus Steindachner, Ichth. Beitr., III, 1875, 58, Acapulco, Mexico.

Genus 667. QUERIMANA Jordan and Gilbert. *White mullets.* (Soft dorsal and anal closely scaled.)

Querimana Jordan and Gilbert, Proc. U. S. Nat. Mus., V, 1882, 588 (*Myxus harengus* Günther, now regarded as the young of *Mugil curema*).

1987. Querimana curema (Cuvier and Valenciennes). *White mullet; Blueback mullet; Lisa; Lisa blanca.*

Both coasts of America, Cape Cod to Brazil and Mazatlan to Chile.

Mugil curema Cuvier and Valenciennes, Hist. Nat. Poiss., XI, 1836, 64 (87), Brazil; Martinique; Cuba.

Mugil petrosus Cuvier and Valenciennes, loc. cit., 65 (89), Brazil; Surinam; Gulf of Mexico; Cuba.

Myxus harengus Günther, Cat., III, 1861, 467, Pacific coast of Central America; young examples with two anal spines.

1988. Querimana incilis (Hancock). *Trench mullet.*

Waters of Central America; Rio Chagres to Pará and Bahia.

Mugil incilis Hancock, Quart. Jour. Sci., 1830, 127, Guiana.

Mugil güntheri Steindachner, Ichth. Notizen, I, 1864, 12, British Guiana.

1989. Querimana thoburni (Jordan and Starks).

Pacific coast of tropical America, from Guatemala to Galapagos Islands.

Mugil thoburni Jordan and Starks, in Jordan and Evermann, Fishes North and Mid. Amer., 1896, 812, Galapagos Islands.

1990. Querimana hospes (Jordan and Culver). *Lisita.*
West coast of Mexico to Panama Bay.
Mugil hospes Jordan and Culver, in Jordan, Proc. Calif. Acad. Sci., V, 1895, 422, pl. 31, Mazatlan, Mexico.

1991. Querimana gaimardiana (Desmarest). *Redeye mullet; Liza ojo de Perdiz.*
Florida Keys to Cuba; Key West.
Mugil gaimardianus Desmarest, Dict. Class., 1831, pl. 109, Cuba.

1992. Querimana setosus (Gilbert).
Clarion Island of the Revillagigedo Group.
Mugil setosus Gilbert, Proc. U. S. Nat. Mus., XIV, 1891, 549, Clarion Island.

1993. Querimana trichodon (Poey). *Fantail mullet.*
Florida Keys to Brazil; Key West.
Mugil trichodon Poey, Ann. Lyc. Nat. Hist. N. Y., XI, 1875, 66, pl. 8, figs. 4–8, Cuba.

Genus 668. CHÆNOMUGIL Gill.
Chænomugil Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 169 (*Mugil proboscideus* Günther).

1994. Chænomugil proboscideus (Günther).
Pacific coast of tropical America; Mazatlan; Cordova; Panama.
Mugil proboscideus Günther, Cat., III, 1861, 459, Island of Cordova (Cardon), west coast of Central America.

Genus 669. DAJAUS Cuvier and Valenciennes. *Mountain mullets.*
?*Agonostomus* Bennet, Proc. Zool. Soc. Lond., I, 1830, 105 (*A. telfairii* Bennett).
Dajaus Cuvier and Valenciennes, Hist. Nat. Poiss., XI, 1836, 122 (164) (*Mugil monticola* Bancroft).
Neomugil Vaillant, Bull. Soc. Philom., Paris, 1894, 73 (*N. digueti* Vaillant).

1995. Dajaus monticola (Bancroft). *Trucha; Mountain mullet.*
Fresh waters of the West Indies and the Atlantic and Pacific streams of Mexico and Central America.
Mugil monticola Bancroft, in Griffith's ed. Cuvier's Animal Kingdom, Fishes, 1836, 367, pl. 36, Jamaica.
Mugil irretitus Gosse, Nat. Sojourn Jamaica, 1851, 84, Jamaica.
Agonostoma nasutum Günther, Cat., III, 1861, 463, Rio Geronimo, Guatemala.
Neomugil digueti Vaillant, Bull. Soc. Philom., IV, 1894, 73, Lower California.
Agonostomus salvini Regan, Ann. Mag. Nat. Hist., ser. XIX, 1907, 7, and Biol. Cent. Amer., Pisces., 1907, 68, Pl. XI, fig. 2, Nacasil, Guatemala.

1996. Dajaus percoides (Günther).
San Domingo.
Agonostoma percoides Günther, Cat., III, 1861, 464, San Domingo; perhaps not distinct from *Dajaus monticola.*

1997. Dajaus microps (Günther).
West Indies and Central America.
Agonostoma microps Günther, Cat,, III, 1861, 462; probably West Indies.

Genus 670. JOTURUS Poey.
Joturus Poey, Memorias, II, 1861, 263 (*J. pichardi* Poey).
Xenorhynchichthys Regan, Ann. Mag. Nat. Hist., II, 1908, 461 (*Joturus stipes* Jordan and Gilbert).

1998. Joturus pichardi Poey. *Joturo.*
Rivers of Cuba; at the foot of waterfalls.
Joturus pichardi Poey, Memorias, II, 1861, 263, Rio Almendares, near Habana.

1999. Joturus globiceps (Günther). *Bobo.*
Rivers and cataracts of eastern Mexico, from Jalapa to Costa Rica and Panama.
Agonostoma globiceps Günther, Ann. Mag. Nat. Hist., ser. 4, XIV, 1874, 370, Myzantla, Vera Cruz.
Joturus stipes Jordan and Gilbert, Proc. U. S. Nat. Mus., V, 1882, 373, Rio Bayano, near Panama.

Family 157. SPHYRÆNIDÆ. Barracudas

Genus 671. SPHYRÆNA Röse.
Sphyræna Röse, in Artedi Piscium, 1793, 52 (*Esox sphyræna* Linnæus).
Sphyræna Artedi, in Bloch and Schneider, Syst. Ichth., 1801, 109 (*Esox sphyræna* Linnæus).
Agriosphyræna Fowler, Proc. Acad. Nat. Sci. Phila., LV, 1903, 749 (*Esox barracuda* Walbaum).

Subgenus SPHYRÆNA Röse.

2000. Sphyræna sphyræna (Linnæus). *European barracuda; Spet; Sennet.*
Coasts of southern Europe and neighboring islands, west to the Bermudas.
Esox sphyræna Linnæus, Syst. Nat., Ed. X, 1758, 313, Mediterranean Sea.
Esox spet Haüy, Encycl. Metod. Poiss., 1787; after Linnæus.
Sphyræna vulgaris Cuvier and Valenciennes, Hist. Nat. Poiss., III, 1829, 242 (327), Mediterranean.
Sphyræna viridensis Cuvier and Valenciennes, loc. cit., 251 (339), St. Jago, Cape Verde Islands.

2001. Sphyræna argentea Girard. *California barracuda; Barracouta.*
Pacific coast, from San Francisco southward to Cape San Lucas.
Sphyræna argentea Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 144 San Diego, Calif.
Sphyræna lucasana Gill, loc. cit., XV, 1863, 86, Cape San Lucas.

2002. Sphyræna ensis Jordan and Gilbert. *Vicuda.*
Gulf of California to Panama.
Sphyræna ensis Jordan and Gilbert, Bull. U. S. Fish Com., II, 1882, 106, Mazatlan, Mexico.

2003. Sphyræna borealis DeKay. *Northern barracuda; Sennet.*
Atlantic coast of the United States, from Cape Cod to North Carolina.
Sphyræna borealis DeKay, N. Y. Fauna: Fishes, 1842, 39, pl. 60, New York.

2004. Sphyræna guachancho Cuvier and Valenciennes. *Guaguanche pelón; Guanuanche.*
West Indies north to Pensacola; Gulf Stream to Woods Hole.
Sphyræna guachancho Cuvier and Valenciennes, Hist. Nat. Poiss , III, 1829, 252 (342), Habana.
Sphyræna güntheri Haly, Ann. Mag. Nat. Hist., XV, 1875, 270, Colon.

2005. Sphyræna picudilla Poey. *Picudilla; Baracuda.*
West Indies, on the coasts of Cuba; Bahia.
Sphyræna picudilla Poey, Memorias, II, 1861, 162; Habana.

Subgenus AGRIOSPHYRÆNA Fowler.

2006. Sphyræna barracuda (Walbaum). *Great barracuda; Picuda; Becuna; Short barracuda.*
West Indies and Brazil, north to Pensacola, Charleston, and the Bermudas; accidental to Woods Hole, Mass.
Umbra minor, etc. (the barracuda) Catesby, Fishes of Carolina, etc., II, 1743, 1, pl. 1, Bahamas.
Esox barracuda Walbaum, Artedi Piscium, III, 1792, 94; after Catesby.
Sphyræna sphyræna var. *picuda* Bloch and Schneider, ed. Bloch, Syst. Ichth., 1801, 110, Habana; after Parra.
Sphyræna becuna Lacépède, Hist. Nat. Poiss., V, 1803, pl. 9, fig. 3; after drawing by Plumier at Martinique.

Suborder RHEGNOPTERI

Family 158. POLYNEMIDÆ. Threadfins

Genus 672. POLYNEMUS Linnæus. *Barbudos.*

Polynemus (Gronow) Linnæus, Syst. Nat., Ed. X, 1758, 317, (*P. quinquarius*, *virginicus*, and *paradiseus* Linnæus); properly restricted by Günther and by general usage to *Polynemus paradiseus* Linnæus.

Polydactylus Lacépède, Hist. Nat. Poiss., V, 1803, 419 (*P. plumieri* Lacépède=*Polynemus virginicus* Linnæus).

Trichidion Klein, in Gill, Proc. Acad. Nat. Sci. Phila., XIII, 1861, 274 (*Polynemus virginicus* Linnæus).

2007. Polynemus approximans Lay and Bennett. *Raton.*

Pacific coast of tropical America; Guaymas to Panama; Santa Catalina and San Diego.

Polynemus approximans Lay and Bennett, Beechey's Voyage, Zool., Fish., 1839, 57, Mazatlan, Mexico.

Polynemus californiensis Thominot, Bull. de la Soc. Philom. de Paris, Séance, 27 Juin, 1886, (7), X, 161, California.

2008. Polynemus virginicus Linnæus. *Barbudo; Barbu; Catfish.*

West Indies, north to the Florida Keys.

Polynemus virginicus Linnæus, Syst. Nat., Ed. X, 1758, 317, America.

Polydactylus plumierii Lacépède, Hist. Nat. Poiss., V, 1803, 419, Martinique; from a drawing by Plumier.

Polynemus mango Lacépède, loc. cit., 413, America, after Linnæus.

Polynemus americanus Cuvier and Valenciennes, loc. cit., III, 1829, 291 (393), Cayenne, San Domingo, Martinique.

Polynemus oligodon Günther, Cat., II, 1860, 322, Rio Janeiro.

2009. Polydactylus opercularis (Gill).

Pacific coast of tropical America, from Cape San Lucas to Panama.

Trichidion opercularis Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 168, Cape San Lucas.

Polynemus melanopoma Günther, Trans. Zool. Soc. Lond., VI, 1868, 421, San José de Guatemala.

2010. Polynemus octonemus Girard. *Threadfin; Eight-threaded threadfish.*

New York to the Rio Grande.

Polynemus octonemus Girard, Proc. Acad. Nat. Sci. Phila., X, 1858, 167, Brazos Santiago; Galveston.

Trichidion octofilis Gill, loc. cit., XIII, 1861, 280, New York.

Genus 673. PENTANEMUS Günther.

Pentanemus Günther, Cat., II, 1860, 331 (*Polynemus quinquarius* Linnæus).

2011. Pentanemus quinquarius (Linnæus).

Atlantic Ocean; West Indies to coast of Africa; rare.

Polynemus quinquarius Linnæus, Syst. Nat., Ed. X, 1758, 317, America; after Gronow.

Polynemus artedii Bennett, Proc. Zool. Soc. Lond., 1831, 146, Africa.

Polynemus macronemus Pel, Bydrage tot de Dierk., 1851, 9, Africa.

Series SCOMBRIFORMES

Family 159. ACANTHOCYBIIDÆ

Genus 674. ACANTHOCYBIUM Gill. *Petos.*

Acanthocybium Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 125 (*Cybium sara* Bennett).

2012. Acanthocybium petus (Poey). *Peto.*

West Indies north to Key West; recorded from Italy.

Cybium petus Poey, Memorias, II, 1861, 234, pl. 16, fig. 1, Habana.

Cybium verany Döderlein, Giorn. di Sci. Nat., ed. Econ., VIII, 1872, Palermo.

2013. Acanthocybium solandri (Cuvier and Valenciennes). *Ono; Peto.*

Warmer parts of the Pacific; Hawaii; Pacific coast of Mexico; and South Seas.

Cybium solandri Cuvier and Valenciennes, Hist. Nat. Poiss., VIII, 1831, 192, open seas; exact locality unknown; after Solander.

Family 160. CYBIIDÆ [44]

Genus 675. SIERRA Fowler.

Sierra Fowler, Proc. Acad. Nat. Sci. Phila., LVI, 1904 (1905), 766 (*Cybium cavalla* Cuvier).

2014. Sierra cavalla (Cuvier). *Sierra; Kingfish; Cavalla.*

Tropical Atlantic; Florida Keys and Charleston; Cape Cod; Africa; Brazil.

Cybium cavalla Cuvier, Régne Animal, ed. 2, II, 1829, 200; after *Guarapuca* of Marcgrave.

Cybium immaculatum Cuvier and Valenciennes, Hist. Nat. Poiss., VIII, 1831, 140 (191), no locality.

Cybium caballa Cuvier and Valenciennes, loc. cit., 187, Brazil.

Genus 676. SCOMBEROMORUS Lacépède.

Scomberomorus Lacépède, Hist. Nat. Poiss., III, 1802, 292 (*S. plumieri* Lacépède=*Scomber regalis* Bloch).

Polipturus Rafinesque, Anal. de la Nat., 1815, 89; substitute for *Scomberomorus*.

Chriomitra Lockington, Proc. Acad. Nat. Sci. Phila., XXXI, 1879, 133 (*C. concolor* Lockington).

2015. Scomberomorus maculatus (Mitchill). *Spanish mackerel; Spaniard; Spotted cybium; Bay mackerel; Spotted mackerel.*

East coast of America from Cape Ann to Brazil; common in Gulf of Mexico but not recorded from Cuba.

Scomber maculatus Mitchill, Trans. Lit. Phil. Soc. N. Y., I, 1815, 426, New York; not of Couch.

2016. Scomberomorus sierra Jordan and Starks. *Sierra.*

Pacific coast of tropical America.

Scomberomorus sierra Jordan and Starks, in Jordan, Proc. Calif. Acad. Sci., V, 1895, 428, Mazatlan, Mexico.

2017. Scomberomorus regalis (Bloch). *Sierra; Pintado; Cero; Sier; Siering; Searer; Spotted cero; Kingfish; Black-spotted Spanish mackerel.*

Cape Cod to Brazil; Cuba.

Scomber regalis Bloch, Naturgesch. ausl. Fische, VII, 1793, 38, Martinique; after a drawing by Plumier.

Scomberomorus plumieri Lacepédè, Hist. Nat. Poiss., III, 1802, 292, Martinique.

Cybium acervum Cuvier and Valenciennes, Hist. Nat. Poiss., VIII, 1831, 136 (186), Martinique; Cuba; St. Domingo.

2018. Scomberomorus concolor (Lockington). *Monterey Spanish mackerel.*

Coast of California.

Chriomitra concolor Lockington, Proc. Acad. Nat. Sci. Phila., XXXI, 1879, 133, Monterey, Calif.

Family 161. SCOMBRIDÆ

Genus 677. SCOMBER Linnæus.

Scomber Artedi, in Linnæus, Syst. Nat., ed. X, 1758, 297 (*S. scombrus* Linnæus).

Cordylus Gronow, Cat. Fish., 1854, 163 (*Scomber scombrus* L.).

2019. Scomber scombrus Linnæus. *Common mackerel; Boston mackerel; Wawwhunnekesuog; Caballa.*

North Atlantic; Norway and Labrador, south to Spain and Cape Hatteras.

Scomber scombrus Linnæus, Syst. Nat., Ed. X, 1758, 297, Atlantic.

Scomber vernalis Mitchill, Trans. Lit. and Phil. Soc. N. Y., I, 1815, 423, Sandy Hook, N. J.

Genus 678. PNEUMATOPHORUS Jordan and Gilbert.

Pneumatophorus Jordan and Gilbert, Proc. U. S. Nat. Mus., V, 1882, 593 (*Scomber pneumatophorus* De la Roche=*Scomber colias* Gmelin).

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[44] The family name *Cybiidæ* may be applied to the allies of *Scomberomorus* and *Cybium*. The name may be preferred to one derived from *Scomberomorus*, as the genus *Cybium* is also valid. *Cybium commersoni*, the Asiatic type of *Cybium* Cuvier, has but two gillrakers, while in *Scomberomorus* there are 8 to 11 below the angle. *Acanthocybium* (giant fishes with the reticulated gills of a swordfish) should constitute a separate family. The earliest of the many fossils of this type are mainly allies of *Scomberomorus*.

2020. Pneumatophorus grex (Mitchill). *Chub mackerel; Tinker mackerel; Easter mackerel; Thimble-eyed mackerel; Spanish mackerel of England.*
The small mackerel called by the above names is very abundant on our Atlantic coast. It is very close to the similar species of Europe, *Scomber colias* Gmelin.
?*Scomber colias* Gmelin, Syst. Nat., 1788, 1329, Sardinia; after Cetti.
?*Scomber lacertus* Walbaum, Artedi Pisc., 1792, 209, Sardinia; after Cetti.
?*Scomber pneumatophorus* De la Roche, Ann. Mus. Nat. Hist., XIII, 1809, 315, Balearic Islands.
?*Scomber macropthalmus* Rafinesque, Indice, 1810, 20 and 53, Palermo.
Scomber grex Mitchill, Trans. Lit. and Phil. Soc. N. Y., I, 1815, 422, New York.
?*Scomber maculatus* Couch, Mag. Nat. Hist., V, 1832, 22, England.
?*Scomber undulatus* Swainson, Nat. Hist. Fishes, Amphib., etc., II, 1839, 409, Sicily.
?*Scomber gracilis* Swainson, loc. cit., 410, Sicily.
Scomber dekayi Storer, Fishes Mass., 1867, 130, Massachusetts.

2021. Pneumatophorus diego (Ayres).
Coast of California; very abundant southward. Perhaps not separable from the Japanese species, *Scomber japonicus;* some small differences apparently permanent.
?*Scomber japonicus* Houttuyn, Verhand. Holl. Maatsch. Haarl., XX, 1782, 331, Japan.
?*Scomber auratus* Houttuyn, loc. cit., 333, Japan.
Scomber diego Ayres, Proc., Calif. Acad. Nat. Sci., I, 1856, 101, Santa Barbara, Calif.

2022. Pneumatophorus australasicus (Cuvier and Valenciennes).
North coast of Australia, from Moreton Bay, Queensland to Lord Howe Island, Hawaii and Socorro Island off the west coast of Mexico.
Scomber australasicus Cuvier and Valenciennes, Hist. Nat. Poiss., VIII, 1831, 49, Australia.

Family 162. KATSUWONIDÆ. The victor fishes

Genus 679. KATSUWONUS Kishinouye. *Oceanic bonito.*
Katsuwonus Kishinouye, Scombroid Fish. Japan, Coll. Agric. Tokyo, VIII, 1923, 452 (*Scomber pelamis* L.).

2023. Katsuwonus pelamis (Linnæus). *Oceanic bonito.*
Open Atlantic; rarely north to Cape Cod and Bermudas on the Atlantic coast.
Scomber pelamis Linnæus, Syst. Nat., ed. X, 1758, 297, "in Pelago inter Tropicos."
Scomber pelamides Lacépède, Hist. Nat. Poiss., III, 1802, 14; after Linnæus.

2024. Katsuwonus vagans (Lesson). *Aku; Pacific bonito.*
Pacific Ocean, Hawaii, southern California, and Japan; inordinately abundant in open sea.
Thynnus vagans Lesson, Voy. *Coquille*, Zool., II, 1828, 162, pl. 32.
Thynnus affinis Cantor, Cat. Malay Fishes, 1849, 106.

Genus 680. EUTHYNNUS Lütken.
Euthynnus Lütken, Jordan and Evermann, Fishes North and Mid. Amer., 1896, 868 (*Thynnus thunnina* Cuvier and Valenciennes= *Scomber alletteratus* Rafinesque).
This genus proves to be quite distinct from *Gymnosarda*, with which it has been confused. *Gymnosarda* is an Asiatic ally of *Sarda*.

2025. Euthynnus alletteratus (Rafinesque). *Little tunny; Bonito.*
Warm seas; north in Gulf Stream to Cape Cod; rather common at New York in summer: West Indies; Mediterranean; Japan.
Scomber alletteratus Rafinesque, Caratteri, 1810, 46, Palermo.
Thynnus leachianus Risso, Eur. Mérid., III, 1826, 414, Nice.
Scomber quadripunctatus Geoffrey St. Hilaire, Descr. Egypt. Poiss., 1827, pl. 24, fig. 3, Egypt.
Thynnus thunnina Cuvier and Valenciennes, Hist. Nat. Poiss., VIII, 1831, 76, (104), pl. 212, Mediterranean.
Thynnus brasiliensis Cuvier and Valenciennes, loc. cit., 80 (110), Brazil.
Thynnus brevipinnis Cuvier and Valenciennes, loc. cit., 81 (112), Mediterranean.

2026. Euthynnus yaito Kishinouye. *Kawakawa; Yaito.*
Japan; Hawaii; Pacific coast of Mexico.
Euthynnus yaito Kishinouye, Scombroid Fishes, 1923, 420, Japan.

2027. Euthynnus lineatus Kishinouye.
Pacific coast of Mexico.
Euthynnus lineatus Kishinouye, Sici. Gakko, No. 111, 1920, 113; and in Scombroid Fishes, 1923, 430, fig. 2, Manzanillo, Mexico.

Genus 681. AUXIS Cuvier. *Frigate mackerels.*
Auxis Cuvier, Règne Anim., ed. 2, II, 1829, 199 (*Scomber rochei* Risso = *Scomber thazard* Lacépède).

2028. Auxis rochei (Risso). *Frigate mackerel.*
Open Atlantic, at times northward to Cape Cod; perhaps not separable from *A. thazard* (Lacépède) of the South Seas.
Scomber rochei Risso, Ichth. Nice, 1810, 165, Nice.
Scomber bisus Rafinesque, Caratteri, 1810, 45, Palermo.

Family 163. THUNNIDÆ. Tunnies and albacores

Genus 682. SARDA Cuvier. *Bonitos.*
Sarda Cuvier, Régne Animal, ed. 2, II, 1829, 199 (*Scomber pelamys* Brünnich; not of Linnæus = *Scomber sarda* Bloch).
Pelamys Cuvier and Valenciennes, Hist. Nat. Poiss., VIII, 1831, 149 (*Scomber sarda* L.); name preoccupied.
Palamita Bonaparte, Ittiologia Generale, 1831, 107, substitute for *Pelamys.*
Creotroctes Gistel, Thierreich, X, 1848 (*Scomber sarda* L.); substitute for *Pelamys,*

2029. Sarda sarda (Bloch). *Bonito; Bone jack; Bone-eater; Skipjack.*
Atlantic ocean, on both coasts, north to Cape Cod; very abundant.
Scomber sarda Bloch, Naturgesch. Ausl. Fische, VII, 1793, 44, Europe.
Scomber mediterraneus Bloch and Schneider, Syst. Ichth., 1801, 23, Marseilles; after Brünnich.
Scomber pelamitus Rafinesque, Caratteri, 1810, 44, pl. 2, Palermo.

2030. Sarda lineolata[45] (Girard). *California bonito; Skipjack.*
California, Patagonia and Japan; if *S. orientalis* is not distinct.
?*Pelamys chiliensis* Cuvier and Valenciennes, Hist. Nat. Poiss., VIII, 1831, 118 (163), Valparaiso.
?*Pelamys orientalis* Temminck and Schlegel, Fauna Japon., Poiss., 1844, 99, pl. 52, Japan.
Pelamys lineolata Girard, Pac. R. R. Surv., X, 1858, 106, San Diego, Calif.

2031. Sarda velox Meek and Hildebrand.
Panama.
Sarda velox Meek and Hildebrand, Field Mus. Nat. Hist., Zool., XV, 1923, 320, pl. 24, Panama market. Reported by Nichols and Breder from Block Island, R. I.; probably an error.

Genus 683. THUNNUS South. *Great tunnies.*
Thynnus Cuvier, Règne Anim., ed. 1, 1817, 313 (*Scomber thynnus* L.); name preoccupied in Lepidoptera.
Thunnus South, Encyclop. Metropol., V, 1845, 620 (*Scomber thynnus* Linnæus); substitute for *Thynnus.*
Albacora Jordan, Man. Vert., ed. V, 1888, 106 (*Scomber thynnus* L.).
Orycnus Cooper, Proc., Calif. Acad. Nat. Sci., III, 1863, 77 (*Scomber thynnus* L.); not *Orycnus* Gill, 1861, the name originally a misprint for *Orcynus.*

2032. Thunnus saliens Jordan and Evermann. *Leaping tuna.*
Eastern Pacific; lower California, north to mouth of Columbia River; the type locality Santa Catalina Island.
Thunnus saliens Jordan and Evermann, Occ. Papers, Calif. Acad. Sci., XII, Sept. 30, 1926, 10, Santa Catalina Island, Calif.

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[45] This species is well separated from *Sarda sarda* of the Atlantic. *Sarda orientalis* of Japan and Hawaii is nearly related, and both may be inseparable from *S. chilensis* of Chile, as has been assumed by Jordan and Evermann (1896).

2033. Thunnus secundodorsalis Storer.
North Atlantic; New York to Labrador.
Thunnus secundodorsalis Storer, Hist. Fish. Mass., 1875, 163, Pl. XXII, fig. 1, Provincetown, Mass.

2034. Thunnus subulatus (Poey).
West Indies; Cuba.
Orcynus subulatus Poey, Enumeratio, 1875, 71, Cuba; perhaps same as *T. coretta.*

2035. Thunnus coretta (Cuvier and Valenciennes). *Bonita of Martinique.*
West Indies.
Tynnus coretta Cuvier and Valenciennes, Hist. Nat. Poiss., VIII, 1831, 102, a young fish 11 inches long from Martinique.

Genus 684. GERMO Jordan. *Long-finned albacores.*
Orcynus Cuvier, Règne Anim., Ed. I, 1817, 314 (*Scomber germo* Lacépède=*Scomber alalunga* Gmelin; not *Orcynus* Rafinesque, 1810, which is *Scomberoides*).
Germo Jordan, Proc. Acad. Nat. Sci. Phila., XL, 1888, 180 (*Scombrus alalonga* Gmelin); substitute for *Orcynus*, preoccupied.

2036. Germo alalunga (Gmelin). *Albacore; Alilonghi.*
Mediterranean; Atlantic; all warm seas.
Scomber alalunga Gmelin, Syst. Nat., I, 1788, 1330, Sardinia; misprinted *Alatunga.*
Thynnus atlanticus Lesson, Voy. *Coquille* Zool., II, 1830, 165, Atlantic ocean.
Thynnus balteatus Cuvier and Valenciennes, Hist. Nat. Poiss., VIII, 1831, 98 (136), coast of Brazil ("vis-à-vis la Trinité du Brazil, par les 20° de latitude Australe").

2037. Germo germo (Lacépède).
Pacific Ocean; California; Hawaii, Japan, and southward.
Scomber germo Lacépède, Hist. Nat. Poiss., II, 1800, 598, lat. 17° S., long. 103° W.
Thynnus pacificus Cuvier and Valenciennes, op. cit., VIII, 1831, 96 (133), lat. 26° S.; long. 103° W.

Genus 685. NEOTHUNNUS Kishinouye. *Yellow-finned albacores.*
Neothunnus Kishinouye, Coll. Agric. Tokyo, VIII, 1923, 445 (*Thynnus macropterus* Temminck and Schlegel).

2038. Neothunnus catalinæ Jordan and Evermann. *Yellow-finned albacore.*
Open Pacific; southern California, about Santa Catalina Island.
Neothunnus catalinæ Jordan and Evermann, Occ. Paper No. 12, Calif. Acad. Sci., Sept. 30, 1926, 19, pl. 4, Santa Catalina Island, Calif.

2039. Neothunnus albacores (Bonnaterre). *West Indies long-finned albacore.*
West Indies.
Scomber albacores Bonnaterre, Encyc. Ichth., 1788, 140, Jamaica; based on Sloane; not *albacora* Lowe.
Scomber sloani Cuvier and Valenciennes, Hist. Nat. Poiss., VIII, 1831, 107 (148), Jamaica; after Sloane.

2040. Neothunnus allisoni (Mowbray). *Allison's tuna.*
Coast of Florida.
Thunnus allisoni Mowbray, Copeia, No. 78, 1920, 9, with text fig., Biscayne Bay, east coast of Florida.

Family 164. GEMPYLIDÆ. Snake mackerel; Escolares

Genus 686. ESCOLAR Jordan and Evermann.
Escolar Jordan and Evermann, in Goode and Bean, Oceanic Ichth., 1896, 519 (*Thyrsitops violaceus* Bean).
Bipinnula Jordan and Evermann, Fishes North and Mid. Amer., 1896, 878 (*Thyrsitops violaceus* Bean); duplication of names accidental through noncorrection of proofs.

2041. Escolar violaceus (Bean).
Atlantic coast of America in deep water; LaHave Bank.
Thyrsitops violaceus Bean, Proc. U. S. Nat. Mus., X, 1887, 513, LaHave Bank; perhaps the same as *Escolar niger.*

2042. Escolar niger (Poey).
Cuba.
Thyrsites niger Poey, Enumeratio, 1875, 74, deep water off Cuba.

Genus 687. RUVETTUS Cocco. *Escolares.*
Ruvettus Cocco, Giorn. Sci. Sicilia, XLII, 1829, 2 (*R. pretiosus* Cocco).
Aplurus Lowe, Trans. Zool. Soc. London, II, 1841, 180 (*A. simplex* Lowe).
Acanthoderma Cantraine, Jour. Acad. Sci. Belles-Lettres Bruxelles, X, 1837 (*A. temmincki*).

2043. Ruvettus pretiosus[46] Cocco. *Escolar; Rovetto; Ruvetto; Chicolar; Oilfish; Scourfish; Plaintail.*
Mediterranean and westward to Cuba in Atlantic.
Ruvettus pretiosus Cocco, in Giornale di Scienze per la Sicilia, XLII, 1829, 21, Messina.
Tetragonurus simplex Lowe, Proc. Zool. Soc. Lond., 1833, 143, Madeira.
Ruvettus temminckii Cantraine, Giorn. Sci. Ft. Litt. Pisa, 1833, Malta; *fide* Poey.
Thyrsites acanthoderma Lowe, Proc. Zool. Soc. Lond., 1839, 78, Madeira.
Thyrsites scholaris Poey, Memorias, I, 1854, 372, pl. 32, fig. 1, Cuba.

Genus 688. EPINNULA Poey.
Epinnula Poey, Memorias, I, 1854, 369 (*E. magistralis* Poey).

2044. Epinnula magistralis Poey. *Dómine.*
Habana.
Epinnula magistralis Poey, Memorias, I, 1854, 369, Habana.

Genus 689. NEALOTUS Johnson.
Nealotus Johnson, Proc. Zool. Soc. Lond., 1865, 434 (*N. tripes* Johnson).

2045. Nealotus tripes Johnson.
About Madeira in deep water; between the Bahamas and Bermudas.
Nealotus tripes Johnson, Proc. Zool. Soc. Lond., 1865, 434, Madeira.

Genus 690. PROMETHICHTHYS Gill. *Conejos.*
Prometheus Lowe, Trans. Zool. Soc. Lond., II, 1841, 181, Madeira (*Psempylus prometheus* Cuvier and Valenciennes); name preoccupied.
Promethichthys Gill, Mem. Nat. Acad. Sci., VI, 1893, 115 and 123 (*Prometheus atlanticus* Lowe=*Gempylus prometheus* Cuvier and Valenciennes).

2046. Promethichthys prometheus (Cuvier and Valenciennes). *Rabbitfish; Coelho; Conejo; Bermuda catfish.*
Tropical Atlantic; Cuba; Bermuda.
Gempylus prometheus Cuvier and Valenciennes, Hist. Nat. Poiss., VIII, 1831, 156 (213), pl. 222, St. Helena.

Genus 691. PTAX[47] **Jordan and Evermann.**
Ptax Jordan and Evermann, Proc. Calif. Acad. Sci., 4th ser., XVI, Apr. 27, 1927, 504 (*Dicrotus parvipinnis* Goode and Bean).

2047. Ptax parvipinnis (Goode and Bean).
Western Atlantic in deep water.
Dicrotus parvipinnis Goode and Bean, Oceanic Ichth., 1895, 201, fig. 212, Gulf Stream at *Albatross* stations 2537, 2542, and 2601, at about 40° N., 70° W.

Genus 692. GEMPYLUS Cuvier and Valenciennes. *Snake mackerels.*
Gempylus Cuvier and Valenciennes, Hist. Nat. Poiss., VIII, 1831, 152 (207) (*G. serpens* Cuvier and Valenciennes).
Lemnisoma Lesson, Voyage *Coquille*, Poiss., 1826 (1831), 160, the date later than that of *Gempylus*, as the work of subsequent Cuvier and Valenciennes is quoted by Lesson (*Lemnisoma thyrsitoides* Lesson).
Zypothyca Swainson, Nat. Hist. Fish., Amphib., etc., II, 1839, 239 (*Gempylus coluber* Cuvier and Valenciennes).

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[46] A species very similar, regarded by Doctor Gudger as the same, is *Ruvettus pretiosus* Weber=*R. pacificus* Jordan and Jordan, from the tropical Pacific north to Hawaii.

[47] From πτωξ, a rabbit, conejo, a Spanish name of *Promethichthys*. The genus is characterized by the number of fin rays—D. XXI, 11; A. II, 8—while in *Promethichthys* the rays are D. XVIII, 19–II; A. 16–II. *Dicrotus* has two lateral lines, the fin rays about as in *Promethichthys*.

2048. Gempylus serpens Cuvier and Valenciennes.
Deep seas of the Atlantic.
Gempylus serpens Cuvier and Valenciennes, Hist. Nat. Poiss., VIII, 1831, 152 (207), Martinique.
Gempylus ophidianus Poey, Memorias, II, 1861, 246, Cuba.

Family 165. TRICHIURIDÆ. Hairtails; Cutlassfishes

Genus 693. TRICHIURUS Linnæus. *Hairtails.*
Trichiurus Linnæus, Syst. Nat., Ed. X, 1758, 246 (*T. lepturus* Linnæus); after Artedi.
Gymnogaster Gronow, Mus. Ichth., I, 1754, 17, No. 47, and Zooph., I, 1763, 136 (*Trichiurus lepturus* Linnæus).
Enchelyopus Klein, in Bleeker, Versl. Akad. Amsterdam, XIV, 1862, 109 (*Trichiurus lepturus* Linnæus); after Klein; not of Schneider nor of Gronow.
Lepturus (Artedi) Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 126 (*Trichiurus lepturus* Linnæus, a revival of a pre-Linnæan name).

2049. Trichiurus lepturus Linnæus. *Cutlassfish; Scabbardfish; Silverfish; Sable; Savola; Hairtail; Ribbonfish; Silvery hairtail.*
Western Atlantic north to New Jersey; West Indies.
Trichiurus lepturus Linnæus, Syst. Nat., Ed. X, 1758, 246, America; after *Lepturus* of Artedi.
Trichiurus argenteus Shaw, Gen. Zool., IV, 1803, 90, pl. 12; after Linnæus.

2050. Trichiurus nitens Garman.
Off Galapagos Islands. This or a similar species in the Gulf of California.
Trichiurus nitens Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 69, off Galapagos Islands, *Albatross* stations 3354, 3389.

Genus 694. APHANOPUS Lowe.
Aphanopus Lowe, Proc. Zool. Soc. Lond., Pt. VI, 1839, 79 (*A. carbo* Lowe).

2051. Aphanopus minor Collett.
East coast of Greenland.
Aphanopus minor Collett, Vidensk. Selsk. Forhandl. Christiania, No. 19, 1886, 3, east coast of Greenland at 65° N., 31° W.

Genus 695. EVOXYMETOPON Poey. *Tirantes.*
Evoxymetopon Poey, in Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 227 (*E. tæniatus* Poey).

2052. Evoxymetopon tæniatus Poey. *Tirante; Tyrantfish.*
Cuba.
Evoxymetopon tæniatus Poey, in Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 228, Cuba.

Genus 696. LEPIDOPUS Gouan. *Frostfishes.*
Lepidopus Gouan, Hist. Nat. Poiss., 1770, 107 and 185 (*gouani*).
Vandellius Shaw, Gen. Zool., IV, 1803, 199 (needless substitute for *Lepidopus* Gouan).
Scarcina Rafinesque, Caratteri, 1810, 20 (*S. argyrea* Rafinesque).
Xiphotheca Montagu, Werner. Mus., I, 1812, 82 (*Lepidopus caudatus* Euphrasen).

2053. Lepidopus xantusi Goode and Bean. *Scabbardfish.*
Avalon, Santa Catalina; Lower California north to Santa Catalina, Calif.; San José del Cabo, Cape San Lucas.
Lepidopus xantusi Goode and Bean, Oceanic Ichth., 1895, 519, Cape San Lucas.

Genus 697. BENTHODESMUS Goode and Bean.
Benthodesmus Goode and Bean, Proc. U. S. Nat. Mus., IV, 1881, 380 (*B. elongatus* Goode and Bean, not *Lepidopus elongatus* Clarke= *Benthodesmus atlanticus* Goode and Bean).

2054. Benthodesmus atlanticus Goode and Bean.
Western edge of Grand Banks of Newfoundland in 80 fathoms.
Benthodesmus elongatus Goode and Bean, Proc. U. S. Nat. Mus., IV, 1881, 380–383; not of Clarke.
Benthodesmus atlanticus Goode and Bean, Oceanic Ichth., 1895, 205, Grand Banks.

Series XIPHIIFORMES

Family 166. ISTIOPHORIDÆ. Sailfishes; Spearfishes

Genus 698. ISTIOPHORUS Lacépède. *Sailfishes.*
Istiophorus Lacépède, Hist. Nat. Poiss., III, 1803, 374 (*I. gladifer* Lacépède=*Scomber gladius* Broussonet).
Notistium Herrmann, Obs. Zool., 1804, 305 (*N. gladius* Herrmann).
Zanclurus Swainson, Nat. Hist. Fish., Amphib., etc., II, 1839, 239 (*Histiophorus indicus* Cuvier and Valenciennes=*H. gladius*).
Histiophorus of authors, revised spelling.

2055. Istiophorus americanus (Cuvier and Valenciennes).
Brazil, and West Indies, north to Woods Hole.
Histiophorus americanus Cuvier and Valenciennes, Hist. Nat. Poiss., VIII, 1831, 303, Brazil; after *Guebucu* of Marcgrave.

2056. Istiophorus wrighti Jordan and Evermann.
West Indies northward to Florida.
Istiophorus wrighti Jordan and Evermann, Occ. Paper No. 12, Calif. Acad. Sci., Sept. 30, 1926, 43, pl. 12, fig. 2, coast of Florida.

2057. Istiophorus greyi Jordan and Hill. *Mexican sailfish; Pacific volador.*
Pacific coast of Mexico, north to Cape San Lucas.
Istiophorus greyi Jordan and Hill, in Jordan and Evermann, Occ. Paper No. 12, Proc. Calif. Acad. Sci., Sept. 30, 1926, 41, pl. 14, near Cape San Lucas, Lower California.

2058. Istiophorus volador Jordan and Evermann. *Volador; Florida sailfish.*
About Florida Keys.
Istiophorus volador Jordan and Evermann, Occ. Paper No. 12, Calif. Acad. Sci., Sept. 30, 1926, 46, pl. 12, fig. 1, Long Key, Fla.
Istiophorus maguirei Jordan and Evermann, loc. cit., 45, pl. 13, West Indies; apparently young of *volador*.

Genus 699. MAKAIRA Lacépède. *Marlinspike fishes; Spearfishes.*
Makaira Lacépède, Hist. Nat. Poiss., IV, 1803, 688 (*M. nigricans* Lac.).

2059. Makaira mazara (Jordan and Snyder). *Black marlin; Kurokajiki (Black spearfish); Mazaara (real swordfish); Kuroka (black marlin).*
Pacific Ocean, from Japan to Hawaiian Islands and the Channel Islands, Calif.
Tetrapturus mazara Jordan and Snyder, Jour. Coll. Sci. Imp. Univ. Tokyo, XV, May 20, 1901, 4, 305, Misaki, Japan.

2060. Makaira ampla (Poey). *Aguja de Casta.*
West Indies.
Tetrapturus amplus Poey, Memorias, II, 1861, 243, Habana.

2061. Makaira marlina Jordan and Evermann. *Giant black marlin.*
Southern California, south to Cape San Lucas.
Makaira marlina Jordan and Evermann, Occ. Paper No. 12, Calif. Acad. Sci., Sept. 30, 1926, 59, pl. 17, off Cape San Lucas, Lower California.

2062. Makaira mitsukurii (Jordan and Snyder). *Marlinspike fish; Barred marlin; Makajiki or true spearfish of Japan.*
Coasts of Japan; Hawaii; southern California; abundant off Santa Catalina.
?*Tetrapturus indicus* Cuvier and Valenciennes, Hist. Nat. Poiss., VIII, 1831, 286, Sumatra, on a figure by Banks.
?*Histiophorus audax* Philippi.
Tetrapturus mitsukurii Jordan and Snyder, Jour., Coll. Sci. Imp. Univ. Tokyo, XV, pt. 2, 1901, 304, Pl. XVI, fig. 5, fishwell at Misaki.

2063. Makaira holei Jordan and Evermann. *Striped marlin.*
Off Pacific coast of Mexico, north to Cape San Lucas.
Makaira holei Jordan and Evermann, Occ. Papers No. 12, Calif. Acad. Sci., Sept. 30, 1926, 63, pl. 19, fig. 1, off Cape San Lucas, Lower California.

Family 167. XIPHIIDÆ. Swordfishes

Genus 700. XIPHIAS Linnæus. *Swordfishes.*
Xiphias Linnæus, Syst. Nat., Ed. X, 1758, 248 (*X. gladius* Linnæus).
Phæthonichthys Nichols, Amer. Mus. Nov., XIX, I, 1923 (*Phæthonichthys tuberculatus* Nichols; a young swordfish).

2064. Xiphias gladius Linnæus. *Common swordfish; Broadbill; Espada; Espadón emperador.*
Open sea, Atlantic and Pacific Oceans, on both coasts; Cuba to Cape Breton and Newfoundland Banks; Pacific off Santa Barbara Islands, Hawaii, Japan, San Diego.
Xiphias gladius Linnæus, Syst. Nat., Ed. X, 1758, 248, Europe.
Xiphias rondeletii Leach, in Wern. Mem., II, 1818, 58, pl. 2, fig. 1, Firth of Forth.
Xiphias imperator Schneider, ed. Bloch, Syst. Ichth., 1801, 93, Pl. XXI, Mediterranean, after an erroneous figure of Duhamal.
Phæthonichthys tuberculatus Nichols, Amer. Mus. Nat. Hist. Novitates, XIX, pl. 1, Oct. 19, 1923; very young of *X. gladius* L.

Series LUVARIFORMES

Family 168. LUVARIDÆ

Genus 701. LUVARUS Rafinesque.
Luvarus Rafinesque, Caratteri, 1810, 22 (*L. imperialis* Rafinesque).
Diana Risso, Europe Méridionale, 1826, 267 (*D. semilunata* Risso).
Ausonia Risso, op. cit., 341 (*A. cuvieri* Risso).
Proctostegus Nardo, Diaro, Chem. et Hist. Nat. Ticino, I, 1827, 18, 42 (*P. proctostegus* Nardo).
Astrodermus (Bonelli) Cuvier, Règne Anim., ed. 2, II, 1829, about 215 (*A. guttatus* Bonelli MS).
Scafaria Gistel, Thierreich, VIII, 1848 (*Ausonia cuvieri* Risso).

2065. Luvarus imperialis Rafinesque.
Open sea; once taken at San Pedro, Calif. (W. F. Thompson).
Luvarus imperialis Rafinesque, Caratteri, 1810, 22.
Diana semilunata Risso, Europe Mérid., 1826, 267.
Ansonia cuvieri Risso, loc. cit., 341.
Proctostegus proctostegus Nardo, Diaro, Chem. et Hist. Nat. Ticino, I, 1827, 18, 42.
Astrodermus guttatus Bonelli, in Cuvier, Règne Anim., ed. 2, II, 1829, 215 ca.
Scafaria Gistel, Thierreich, VIII, 1848.

Series CORYPHÆNIFORMES

Family 169. CORYPHÆNIDÆ. Dolphins; Dorados

Genus 702. CORYPHÆNA Linnæus. *Dorados.*
Coryphæna Linnæus, Syst. Nat., Ed. X, 1758, 261 (*C. hippurus* L.).
Lampugus Cuvier and Valenciennes, Hist. Nat. Poiss., IX, 1833, 317 (*Scomber pelagicus* L.; female).

2066. Coryphæna hippurus Linnæus. *Common dolphin; Dorado; Dourade.*
Pelagic to Cape Cod and northward, South Carolina to Texas; also throughout the mid-Pacific.
Coryphæna hippurus Linnæus, Syst. Nat., ed. X, 1758, 261, open seas.
Scomber pelagicus Linnæus, loc. cit., 299, no locality.
Coryphæna fasciolata Pallas, Spicil. Zool., VIII, 1770, 23, Amboina.
Coryphæna imperialis Rafinesque, Caratteri, 1810, 33, Sicily.
Coryphæna immaculata Agassiz in Spix, Pisc. Brasil., 1829, 111, pl. 56, Atlantic, off Brazil.
Coryphæna marcgravii Cuvier and Valenciennes, Hist. Nat. Poiss., IX, 1833, 223 (301), America.
Coryphæna suerii Cuvier and Valenciennes, loc. cit., 224 (302), Philadelphia.
Coryphæna dorado Cuvier and Valenciennes, loc. cit., 225 (303), Brazil.
Coryphæna dolfyn Cuvier and Valenciennes, loc. cit., 226 (305), Antilles.

Coryphæna virgata Cuvier and Valenciennes, loc. cit., 228 (308), Martinique.
Coryphæna argyrurus Cuvier and Valenciennes, loc. cit., 232 (314), Sea of Coromandel.
Coryphæna vlamingii Cuvier and Valenciennes, loc. cit., 233 (315), seas of India.
Lampugus siculus Cuvier and Valenciennes, loc. cit., 240 (323), Sicily.
Coryphæna scomberoides Cuvier and Valenciennes, loc. cit., 234 (315), South Sea.
Ectenias brunneus Jordan and Thompson, Mem. Carnegie Mus., VI, 1914, 241, Japan; young.

2067. Coryphæna equisetis Linnæus. *Small dolphin.*
Open Atlantic and Pacific; rare in the West Indies. Recently taken in some numbers off coast of southern California.
Coryphæna equisetis Linnæus, Syst. Nat., Ed. X, 1758, 261 (misprinted *equiselis*), high seas; after Osbeck.
Coryphæna aurata Rafinesque, Caratteri, 1810, 33, Sicily.
Coryphæna lessonii Cuvier and Valenciennes, Hist. Nat. Poiss., IX, 1833, 228 (307), India.
Lampugus punctulatus Cuvier and Valenciennes, loc. cit., 242 (429), Atlantic at the Equator.
Lampugus neapolitanus Cuvier and Valenciennes, loc. cit., 241 (325), Naples; after Bloch.
Coryphæna azorica Cuvier and Valenciennes, loc. cit., 227 (306), Azores.

Series BRAMIFORMES

Family 170. BRAMIDÆ. Sea breams

Genus 703. BRAMA Bloch and Schneider. *Pomfret.*
Brama Bloch and Schneider, Ed. Bloch, Syst. Ichth., 1801, 98 (*Sparus raii* Bloch).
Lepodus Rafinesque, Caratteri, 1810, 54 (*L. saragus* Rafinesque= *Sparus raii* Bloch).

2068. Brama raii (Bloch). *Sea bream; Pomfret; Catagnole; Rondanin.*
Open seas; Europe; Faroe Islands; Bermuda; Grand Banks; Pacific coast from Santa Catalina to Puget Sound; Japan; reported recently from Cape Flattery.
Brama marina cauda forcipata Ray, Syn. Meth. Piscium, 1713, 115, Middelburg.
Sparus raii Bloch, Naturgesch. Ausl. Fische, V, 1791, 95; after Ray, etc.
Sparus castaneola Shaw, Gen. Zool., IV, 1803, 424; after Lacépède.
Sparus niger Turton, British Fauna, 1807, 98, Swansea.
Lepodus saragus Rafinesque, Caratteri, etc., 1810, 54, Palermo.
Brama dussumieri Cuvier and Valenciennes, Hist. Nat. Poiss., VII, 1831, 219 (294), Indian Sea, long. 85° E.
?*Brama orcini* Cuvier and Valenciennes, loc. cit., 220 (295), Indian Sea, long. 85° E.
?*Brama chilensis* Gay, Hist. Chile, Peces, 1843, 218, Chile.

2069. Brama agassizii Poey.
Cuba; rare.
Brama agassizii Poey, Memorias, II, 1861, 204, Cuba.

2070. Brama brevoorti Poey.
Cuba; rare.
Brama brevoorti Poey, Memorias, II, 1861, 206, Cuba.

Genus 704. TARACTES Lowe.
Taractes Lowe, Proc. Zool. Soc. Lond., 1843, 82 (*T. asper* Lowe; probably young of *Taractes longipinnis*).
Argo Döderlein, Fische Japans, II, Denkschr. Acad. Wiss. Wien, XLVIII, 1883, 34 (*Argo steindachneri* Döderlein); name preoccupied.

2071. Taractes saussurii (Lunel).
Habana.
Brama saussurii Lunel, Rèvue du Genre Brama, in Mém. Soc. Phys. Hist. Nat. Genève, XVIII, 1865, 185, tab. 2, Cuba.

Family 171. STEINEGERIIDÆ

Genus 705. STEINEGERIA Jordan and Evermann.
Steinegeria Jordan and Evermann, Proc. U. S. Nat. Mus., IX, 1886, 467 (*S. rubescens* Jordan and Evermann).

2072. Steinegeria rubescens Jordan and Evermann.
Gulf of Mexico in deep water; one specimen known.
Steinegeria rubescens Jordan and Evermann, Proc. U. S. Nat. Mus., IX, 1886, 467, snapper banks off Pensacola, Fla.

Family 172. PTERACLIDÆ

Genus 706. PTERACLIS Gronow.
Pteraclis Gronow, Acta Helvetica, VII, 1772, 43 (*Coryphæna velifera* Pallas).
Pteridium Scopoli, Introd. Hist. Nat., 1777, 454 (*Coryphæna velifera* Pallas).
Oligopodus Lacépède, Hist. Nat. Poiss., II, 1800, 511 (*Coryphæna velifera* Pallas).
Pteraclidus Rafinesque, Analyse de la Nat., 1815, 82, substitute for *Oligopodus* Lacépède.
Oligopodes Risso, in Cuvier, Règne Anim., ed. 1, 1817, 328 (*l'Oligopode noir* Risso).
Oligopus Risso, Europe Mérid., 1826, 105, substitute for *Oligopodus*.

2073. Pteraclis carolinus Cuvier and Valenciennes.
Coast of South Carolina.
Pteraclis carolinus Cuvier and Valenciennes, Hist. Nat. Poiss., IX, 1833, 272 (368), off coast South Carolina.
?*Pteraclis trichipterus* Cuvier and Valenciennes, loc. cit., 272 (367), locality unknown.

Genus 707. CENTROPHOLIS Hilgendorf.
Centropholis Hilgendorf, Sitzber. Naturf. Freunde, Berlin, 1878, 135 (*C. petersi* Hilgendorf).

2074. Centropholis goodei Jordan.
Gulf Stream.
Pteraclis carolinus Goode and Bean, Oceanic Ichth., 212, Pl. LIX, fig. 218, Gulf Stream; not of Linnæus.
Centropholis goodei Jordan, Ann. Carnegie Mus., IX, 1915, 333, Gulf Stream.

Series STROMATEIFORMES

Family 173. STROMATEIDÆ. Fiatolas

Genus 708. PEPRILUS Cuvier.
Rhombus Lacépède, Hist. Nat. Poiss., II, 1800, 321 (*Chætodon alepidotus* Linnæus); preoccupied in mollusks.
Peprilus Cuvier, Règne Anim., ed. 2, II, 1829, 213 (*Stromateus longipinnis* Mitchill=*Stromateus paru* Linnæus).

2075. Peprilus paru (Linnæus). *Harvestfish; Poppyfish; Rudderfish.*
South Atlantic coast of United States; West Indies; Cape Cod to Jamaica and Brazil.
Stromateus paru Linnæus, Syst. Nat., Ed. X, 1758, 248, Jamaica; based on Sloane.
Chætodon alepidotus Linnæus, op. cit., Ed. XII, 1766, 460, Charleston, S. C.
?*Sternoptyx gardenii* Bloch and Schneider, Syst. Ichth., 1801, 494, Carolinas; after Linnæus.
Stromateus longipinnis Mitchill, Trans. Lit. Phil. Soc. N. Y., I, 1815, 366, New York Bay.

Genus 709. PALOMETA Jordan and Evermann.
Palometa Jordan and Evermann, Fishes North and Mid. Amer., 1896, 966 (*Stromateus palometa* Jordan and Bollman).

2076. Palometa simillima (Ayres). *California pampano.*
Pacific coast of United States, Puget Sound to San Diego.
Poronotus simillimus Ayres, Proc. Calif. Acad. Nat. Sci., 1st ser., II, 1860, 84, San Francisco.

2077. Palometa media (Peters). *Palometa.*
Pacific coast of North America, Mazatlan to Panama.
Stromateus medius Peters, Berl. Monatsb., 1869, 707, Mazatlan, Mexico.

2078. Palometa palometa (Jordan and Bollman).
Pacific Ocean, off Colombia.
Stromateus palometa Jordan and Bollman, Proc. U. S. Nat. Mus., XII, 1889, 156, off coast of Colombia, lat. 8° 16′ 30″ N., long. 79° 37′ 45″ W., at *Albatross* station 2804.

2079. Palometa snyderi (Gilbert and Starks).
Panama.
Peprilus snyderi Gilbert and Starks, Mem. Calif. Acad. Sci., IV, 1904, 87, Panama.

Genus 710. PORONOTUS Gill.
Poronotus Gill, Cat. Fish. E. Coast N. Amer., Sup. to Proc. Acad. Nat. Sci. Phila., XIII, 1861, 35 (*Stromateus triacanthus* Peck).

2080. Poronotus triacanthus (Peck). *Dollarfish; Harvestfish; Butterfish; Lafayette.*
Nova Scotia to Florida; common.
Stromateus triacanthus Peck, Mem. Amer. Acad., II, 1800, pt. 2, 48, pl. 2, fig. 2, Piscataqua River, N. H.
Stromateus cryptosus Mitchill, Trans. Lit. Phil. Soc. N. Y., I, 1815, 365, New York Bay.

Genus 711. EUCROTUS Bean (B. A.).
Eucrotus Bean, Proc. Biol. Soc. Wash., XXV, 1912, 123 (*E. ventralis* Bean).

2081. Eucrotus ventralis Bean.
Bermudas.
Eucrotus ventralis Bean, Proc. Biol. Soc. Wash., XXV, 1912, 125, Bermudas.

Family 174. CENTROLOPHIDÆ. Rudderfishes

Genus 712. CENTROLOPHUS Lacépède. *Black ruffs.*
Centrolophus Lacépède, Hist. Nat. Poiss., IV, 1803, 441 (*Perca nigra* Gmelin = *Coryphæna pompilus* L.).
Acentrolophus Nardo, Prodromus. Adriat. Ichth. Giorn. Fisica di Pavia, sp. 62, 1827, (*A. maculatus* Nardo = *Centrolophus niger* Lacépède, the name *Centrolophus* deemed inappropriate).
Gymnocephalus Cocco, Nuov. Ann. Sci. Nat., II, 1838, 26 (*G. messinensis* Cocco); name preoccupied.
Pompilus Lowe, Suppl. Fish Madeira, Proc. Zool. Soc. London, VII, 1839, 81 (*Coryphæna pompilus* L.).

2082. Centrolophus niger (Gmelin). *Blackfish; Black ruffe; Borlase.*
Coasts of southern Europe; once taken at Dennis, Mass.
Perca nigra Gmelin, Syst. Nat., 1788, 1321, Cornwall.
Centrolophus liparis Risso, Eur. Mérid., III, 1826, 337, Nice, Italy.
Centrolophus morio Lacépède in Cuvier and Valenciennes, Hist. Nat. Poiss., IX, 1833, 254 (342), Mediterranean.
Centrolophus pompilius Cuvier and Valenciennes, loc. cit., 247 (334), pl. 269; not of Linnæus.
Acentrolophus maculosus Nardo, Prodr. Ichth. Adriat., No. 62, Isis, 1827, Adriatic.
Gymnocephalus messinensis Cocco, Nuovi Ann. Sci. Nat., II, 1838, 26, Messina.

Genus 713. PALINURICHTHYS Bleeker. *Black rudderfishes.*
Palinurus DeKay, N. Y. Fauna: Fishes, 1842 (*Coryphæna perciformis* Mitchill); name preoccupied in Crustacea.
Palinurichthys Bleeker, Enum. Spec. Pisc. Arch. Ind., in Acta Soc. S. Indo-Neerl., VII, November, 1859, 22 (*Coryphæna perciformis*, Mitchill).
Palinurichthys Gill, Proc. Acad. Nat. Sci. Phila., XII, January, 1860, 20 (*Coryphæna perciformis* Mitchill).
Pammelas Günther, Cat., II, June, 1860, 485 (*Coryphæna perciformis* Mitchill).

2083. Palinurichthys perciformis (Mitchill). *Rudderfish; Logfish; Snipnose mullet; Black rudderfish*

Atlantic coast of North America from Cape Hatteras to Maine; once taken in Cornwall.

Coryphæna perciformis Mitchill, Amer. Month. Mag., II, 1818, 244, New York Harbor.

Pimelepterus cornubiensis Cornish Zoologist, IX, 1874, 4255, Penzance, Cornwall (a stray specimen floated across in a fish box).

Genus 714. SCHEDOPHILUS Cocco.

Schedophilus Cocco, Giorn. Innom. Messina, Ann., III, 1834, No. 7, 57, (*S. medusophagus* Cocco).

Crius Valenciennes, Ichth. Iles Canaries, II, 1844, 43 (*Crius bertheloti* Valenciennes = *Schedophilus medusophagus* Cocco).

2084. Schedophilus heathi Gilbert.

Monterey Bay.

Schedophilus heathii Gilbert, Proc. Calif. Acad. Sci., ser. 3, Zool., III, 1904, 260, Pl. XXVI, Pacific Grove, Calif.

Genus 715. ICICHTHYS Jordan and Gilbert.

Icichthys Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880, 305 (*I. lockingtoni* Jordan and Gilbert).

2085. Icichthys lockingtoni Jordan and Gilbert.

Off California, in deep water; a surface swimmer, hovering under jelly-fishes; known from off Monterey and San Francisco.

Icichthys lockingtoni Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880, 305, off San Francisco.

Family 175. NOMEIDÆ. Man-of-war fishes

Genus 716. NOMEUS Cuvier.

Nomeus Cuvier, Règne Anim., ed. 1, II, 1817, 315 (*Gobius gronovii* Gmelin).

2086. Nomeus gronovii (Gmelin). *Portuguese man-of-war fish; Harder; Pastor.*

Tropical parts of the Atlantic and Indian Oceans; Sargasso Sea; Florida; Bermuda; Woods Hole, Mass.; rocky pools at Panama.

Gobius gronovii Gmelin, Syst. Nat., Ed. XIII, 1788, 1205, tropical America; after Gronow.

Eleotris mauritii Bloch and Schneider, Syst. Ichth., 1801, 66, Brazil.

Nomeus maculosus Bennett, Proc. Comm. Zool. Soc., I, 1831, 146, East Indies.

Nomeus oxyurus Poey, Memorias, II, 1861, 236, Habana.

Genus 717. PSENES Cuvier and Valenciennes.

Psenes Cuvier and Valenciennes, Hist. Nat. Poiss., IX, 1833, 193 (259), (*P. cyanophrys* Cuvier and Valenciennes).

2087. Psenes cyanophrys Cuvier and Valenciennes.

Open sea; Atlantic, Pacific, and Indian Oceans; Jamaica and Martinique.

Psenes cyanophrys Cuvier and Valenciennes, Hist. Nat. Poiss., IX, 1833, 193 260, pl. 265, New Ireland.

Psenes javanicus Cuvier and Valenciennes, loc. cit., 196 (264), Batavia.

Psenes auratus Cuvier and Valenciennes, loc. cit., 197 (264), Gulf of Bengal.

Psenes fuscus Guichenot, Mem. Soc. Sci. Nat. Cherbourg, XII, 1866, 138, Madagascar.

Cubiceps multiradiatus Günther, Proc. Zool. Soc. Lond., 1871, 661, pl. 61, Manado.

2088. Psenes maculatus Lütken.

Open Atlantic.

Psenes maculatus Lütken, Spolia Atlantica, 1880, 110, open Atlantic, lat. 39° N., long. 25° S. and between 34° and 27° W. in 600 to 700 fathoms.

2089. Psenes regulus Poey.

Coasts of Cuba.

Psenes regulus Poey, Synopsis, 1868, 375, Cuba.

2090. Psenes pellucidus Lütken.
Gulf Stream at 32° 24′ N., 76° 55′ W., in 528 fathoms.
Psenes pellucidus Lütken, Spolia Atlantica, 1880, 516 (108), with fig., Strait of Surabaja.

2091. Psenes edwardsii Eigenmann.
Off Rhode Island.
Psenes edwardsii Eigenmann, Bull. U. S. Fish Com., XXI, 1901 (1902), 35, fig.; taken from under a medusa, 30 miles south of Newport, R. I.

2092. Psenes chapmani Fowler.
Open Atlantic, Cape Verde Islands, northwest of the Lesser Antilles.
Psenes chapmani Fowler, Proc. Acad. Nat. Sci. Phila., LVIII, 1906, 120; open Atlantic, lat. 24° 21′ N., long. 34° 32′ W.

2093. Psenes pacificus Meek and Hildebrand.
Panama.
Psenes pacificus Meek and Hildebrand, Field Mus. Nat. Hist., Zool., XV, 1925, 409, Chame Point, Panama.

Family 176. TETRAGONURIDÆ. Squaretails

Genus 718. TETRAGONURUS Risso.
Tetragonurus Risso, Ichth. Nice, 1810, 247 (*T. cuvieri* Risso).
Ctenodax Macleay, Proc. Linn. Soc. New South Wales, 1885, 716 (*C. williamsoni* Macleay).

2094. Tetragonurus cuvieri Risso. *Squaretail; Escolar de natura; Courpata; Sea raven.*
Open seas; Nice; Toulon and Marseilles; Madeira; once taken off Santa Catalina Island, Calif. (W. F. Thompson), and once at Woods Hole, Mass.; these possibly different species.
Tetragonurus cuvieri Risso, Ichth. Nice, 1810, 347, Nice.
Tetragonurus atlanticus Löwe, Fishes Madeira, pt. 5, 1860 (1843), 129, Pl. XIX, Madeira.

Family 177. ICOSTEIDÆ. Ragfishes

Genus 719. ICOSTEUS Lockington.
Icosteus Lockington, Proc. U. S. Nat. Mus., III, 1880, 63 (*I. ænigmaticus* Lockington).
Schedophilopsis Steindachner, Ichth. Beitr., XI, 1881, 4 (*S. spinosus* Steindachner=*Icosteus ænigmaticus* Lockington).

2095. Icosteus ænigmaticus Lockington. *Ragfish.*
Open sea off the coasts of California, Oregon, and Washington; scarce.
Icosteus ænigmaticus Lockington, Proc. U. S. Nat. Mus., III, 1880, 63, off San Francisco.
Schedophilopsis spinosus Steindachner, Ichth. Beitr., XI, 1881, 4, with figure, off San Francisco.

Family 178. ACROTIDÆ

Genus 720. ACROTUS Bean.
Acrotus Bean, Proc. U. S. Nat. Mus., X, 1887, 631 (*A. willoughbyi* Bean).

2096. Acrotus willoughbyi Bean.
Off coast of Washington, Whitby Island, Puget Sound, south to San Pedro, Calif. (W. F. Thompson), in rather deep water.
Acrotus willoughbyi Bean, Proc. U. S. Nat. Mus., X, 1887, 631, Quinault Agency, Wash.

Family 179. CARANGIDÆ. Cavallas; Pampanos

The *Carangidæ*, as heretofore understood, may be naturally divided into two families, the *Seriolidæ* (*Seriola, Elagates, Naucrates,* etc.) differing strongly in lacking the bony arch behind the abdominal cavity, this being made up of enlarged and anchylosed hæmals, its character somewhat different in different genera but developed in all *Carangidæ* in the narrow sense.

Genus 721. DECAPTERUS Bleeker. *Mackerel scads.*
Decapterus Bleeker, Naturk. Tijdsch., VIII, 1855, 417 (*Caranx kurra* Bleeker).
Eustomatodus Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 261 (*Decapterus kurroides* Bleeker).
Gymneipignathus Gill, loc. cit., 261 (*Decapterus macrosoma* Bleeker).
Evepigymnus Gill, loc. cit., 261 (*Decapterus hypodus* Gill).

2097. Decapterus punctatus (Agassiz). *Scad; Round robin; Cigarfish; Quiaquia; Dotted scad.*
Cape Cod to Brazil, coasts of Florida and the West Indies.
Caranx punctatus Agassiz, in Spix, Pisc. Brasil., 1829, 108, pl. 56a, fig. 2, Brazil.
Caranx aureus Risso, in Cuvier and Valenciennes, Hist. Nat. Poiss., IX, 1833, 25 (33), Mediterranean.

2098. Decapterus sanctæ-helenæ (Cuvier and Valenciennes).
Tropical Atlantic; Cuba.
Caranx santæ-helenæ Cuvier and Valenciennes, Hist. Nat. Poiss., IX, 1833, 28 (37), St. Helena.

2099. Decapterus hypodus Gill.
Cape San Lucas, Lower California.
Decapterus hypodus Gill. Proc. Acad. Nat. Sci. Phila., XIV, 1862, 262, Cape San Lucas, Lower California.

2100. Decapterus macarellus (Cuvier and Valenciennes). *Mackerel scad; Antonino; Cigarfish.*
West Indies, northward to Cape Cod.
Caranx macarellus Cuvier and Valenciennes, Hist. Nat. Poiss., IX, 1833, 30 (40), Martinique.

Genus 722. TRACHURUS Rafinesque. *Saurels.*
Trachurus Rafinesque, Caratteri, 1810, 41 (*Scomber trachurus* Linnæus).

2101. Trachurus symmetricus (Ayres). *Horse mackerel.*
Coast of California.
Caranx symmetricus Ayres, Proc. Calif. Acad. Nat. Sci., I, 1855, 62, Bay of San Francisco.

2102. Trachurus trachurus (Linnæus). *Saurel; Gascon.*
North Atlantic, chiefly on the northern coast of Europe, south to Spain and Naples; Newport, R. I.; Pensacola.
Scomber trachurus Linnæus, Syst. Nat., Ed. X, 1758, 298, Mediterranean.
?*Caranxomorus plumieiranus* Lacépède, Hist. Nat. Poiss., III, 64, pl. 11, scarcely identifiable, from a figure by Plumier, supposed to have been made in Martinique.
Caranx semispinosus Nilsson, Prodr. Ichthyol. Scand., 1832, 84, Scandinavia; the northern form usually called *trachurus*, the valid name for the European form.
Trachurus europæus Gronow, Cat., Ed. Gray, 1854, 125, seas of Europe.
Trachurus linnæi Malm, Bohusläns Fauna, 421, Bohuslän, Sweden.

2103. Trachurus japonicus (Schlegel).
Coast of Japan, east of Lower California, the Mexican specimens few and not surely identified; may be *T. nova-zealandica* Richardson.
Caranx trachurus japonicus Schlegel, Faun. Japon., Poiss., 1850, 109, pl. 59, fig. 1, Japan.

2104. Trachurus lathami Nichols.
Coast of Long Island (a stray from the Gulf Stream).
Trachurus lathami Nichols, Bull. Amer. Mus. Nat. Hist., XLII, 1920, 479, Long Island.

Genus 723. TRACHUROPS [46] **Gill.**
Trachurops Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 238, 261, 431 (*Scomber crumenophthalmus* Bloch).

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[46] The genus *Selar* Bleeker was based on four species, the first named being *Caranx hasselti*, which is a species of the modern genus *Atule* Jordan and Jordan. It was first restricted to *Scomber boops* Bleeker, a species of *Trachurops;* but this restriction can not stand as *boops* was not mentioned by Bleeker in connection with *Selar: Caranx hasselti*=*affinis* of the south Pacific must therefore be the type of *Selar*.

2105. Trachurops crumenophthalma (Bloch). *Goggler; Big-eyed scad; Goggle-eye jack; Chicharro; Horse-eyed jack.*
Atlantic coast of the United States, Central America, South America, and Africa; West Indies; probably not in the Pacific.
Scomber crumenophthalmus Bloch, Naturgeschich. Ausl. Fische, VII, 1793, 77, Acara in Guinea.
Scomber plumieri Bloch, loc. cit., 79, Antilles.
Scomber balantiophthalmus Bloch and Schneider, Syst. Ichth., 1801, 29, Guinea.
Caranx macrophthalmus Agassiz, Spix, Pisc. Brasil., 1829, 107, Brazil.

2106. Trachurops brachychira Gill. *Akule; Atule.*
Pacific Ocean, north to Panama, and the Gulf of California and Hawaii.
Trachurops brachychirus Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 261, Cape San Lucas.

Genus 724. HEMICARANX Bleeker.
Alepes Swainson, Classn. Anim., II, 1839, 248 (*Alepes melanoptera* Swainson); identification uncertain.
Hemicaranx Bleeker, Vesl. Kon. Ak. Wet., XIV, 1862, 135 (*H. marginatus* Bleeker).
Carangops Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 238 (*Caranx heteropygus* Poey).

2107. Hemicaranx amblyrhynchus (Cuvier and Valenciennes).
Cape Hatteras to Brazil; West Indies; Carolina and Florida.
Caranx amblyrhynchus Cuvier and Valenciennes, Hist. Nat. Poiss., IX, 1833, 76 (100), pl. 248, Brazil.
Caranx heteropygus Poey, Memorias, II, 1861, 344, Cuba.

2108. Hemicaranx falcatus (Holbrook).
Charleston, S. C.
Caranx falcatus Holbrook, Ichth. South Carolina, 1855, 92, pl. 13, fig. 2, Charleston, S. C.

2109. Hemicaranx atrimanus (Jordan and Gilbert).
Pacific coast of tropical America; Panama.
Caranx atrimanus Jordan and Gilbert, Bull. U. S. Fish Com., I, 1881, 308, Panama.

2110. Hemicaranx furthii (Steindachner).
Panama.
Caranx fürthii Steindachner, Ichth. Beitr., IV, 1875, 12, Panama.

2111. Hemicaranx leucurus (Günther).
Pacific coast of tropical America; Panama.
Caranx leucurus Günther, Proc. Zool. Soc. Lond., 1864, 24, Panama.

2112. Hemicaranx zelotes Gilbert.
Panama.
Hemicaranx zelotes Gilbert, in Jordan and Evermann, Fishes North and Mid. Amer., 1898, 2845, Panama.

2113. Hemicaranx rhomboides Meek and Hildebrand.
Atlantic coast of Isthmus of Panama.
Hemicaranx rhomboides Meek and Hildebrand, Field Mus. Nat. Hist., Zool., XV, 1925, 345, Fox Bay, Colon, Panama.

Genus 725. ELAPHOTOXON [49] Fowler.
Elaphotoxon Fowler, Proc. Acad. Nat. Sci. Phila., LVII, 1905, 76 (*Scomber ruber* Bloch).

2114. Elaphotoxon ruber (Bloch). *Cibi mancho; Carbonero; Cibi; Green jack.*
West Indies and coast of the Carolinas.
Scomber ruber Bloch, Naturgeschich. Ausl. Fische, VII, 1793, 75, St. Croix.
Caranx blochii Cuvier and Valenciennes, Hist. Nat. Poiss., IX, 1833, 52 (69), St. Croix.
Caranx iridinus Poey, Memorias, II, 1861, 226, Cuba.

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[49] This genus is near *Caranx*, the body rather elongate, the teeth in few series, without canines; the arch of the lateral line moderate, more than half the straight part; the dorsal and anal fins anteriorly but little elevated, maxillary not narrowed.

2115. Elaphotoxon bartholomæi (Cuvier and Valenciennes). *Yellow jack; Cibi amarilla.*
West Indies, northward to Florida and North Carolina; Cuba.
Caranx bartholomæi Cuvier and Valenciennes, Hist. Nat. Poiss., IX, 1833, 75 (100), St. Bartholomew.
Caranx cibi Poey, Memorias, II, 1861, 224, Cuba.
Caranx beani Jordan, Proc. U. S. Nat. Mus., III, 1880, 486, Beaufort, N. C.

Genus 726. PARATRACTUS Gill.
Paratractus Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 432 (*Caranx pisquetus* Cuvier and Valenciennes=*Scomber crysos* Mitchill).

2116. Paratractus crysos (Mitchill). *Hardtail; Runner; Blue runner; Jurel; Yellow mackerel; Crevallé; Cojinera.*
Cape Cod to Brazil.
Scomber crysos Mitchill, Trans. Lit. Phil. Soc. N. Y., I, 1815, 424, New York.
Trachurus squamosus Gronow, Cat. Fishes, ed. Gray, 1854, 125, Carolina.
Caranx pisquetus Cuvier and Valenciennes, Hist. Nat. Poiss., IX, 1833, 73, Santo Domingo; Cuba; Brazil.

2117. Paratractus caballus (Günther). *Cocinero; Cocinero dorado; Jurel.*
Pacific coast of tropical America, San Diego to Panama, recently taken at San Pedro.
Caranx caballus Günther, Trans. Zool. Soc. Lond., VI, 1868, 431 (Nov. 27), Panama.
Trachurus boops Girard, Pac. R. R. Surv., X, pt. 4, Fishes, 1858, 108, San Diego; not *Caranx boops* of Cuvier and Valenciennes.
Caranx girardi Steindachner, Ichthyol. Notizen, IX, 1869, 25, Mazatlan.

Genus 727. XUREL Jordan and Evermann.
Xurel Jordan and Evermann, Proc. Calif. Acad. Sci., 4th ser., XVI, Apr. 27, 1927, 505 (*Caranx vinctus* Jordan and Gilbert).

2118. Xurel vincta (Jordan and Gilbert). *Cocinera.*
Pacific coast of Mexico, Mazatlan to Punta Arenas; Gulf of California to Panama.
Caranx vinctus Jordan and Gilbert, Proc. U. S. Nat. Mus., IV, 1881, 349, Mazatlan, Mexico.

2119. Xurel fasciatus (Cuvier and Valenciennes). *Segundo; Volantin.*
Cuba; Atlantic coast of Mexico.
? *Caranx fasciatus* Cuvier and Valenciennes, Hist. Nat. Poiss., IX, 1833, 53 (70), east coast of Mexico.
Caranx secundus Poey, Memorias, II, 1861, 223, Cuba.

2120. Xurel lata (Agassiz). *Jurel; Xurel; Horse-eye jack.*
Tropical Atlantic, north to Virginia; probably not in the Pacific, where it is represented by the near related *Caranx melampygus*.
Caranx latus Agassiz, in Spix, Pisc. Bras., 1829, 105, Brazil.
Caranx lepturus Agassiz, loc. cit., 106, Brazil.
Caranx fallax Cuvier and Valenciennes, Hist. Nat. Poiss., IX, 1833, 71 (95), Antilles; Brazil.
Caranx richardi Holbrook, Ichthyol. South Carolina, 1855, 94, pl. 13, fig. 1, South Carolina.
Carangus aureus Poey, Enumeratio, 1875, 76, Cuba.

2121. Xurel medusicola (Jordan and Starks).
Pacific coast of Mexico, south to Panama.
Caranx medusicola Jordan and Starks, in Jordan, Proc. Calif. Acad. Sci., V, 1895, 430, pl. 34, Mazatlan.

2122. Xurel marginatus (Gill).
Pacific Ocean; Mazatlan, Panama, and Hawaii.
Caranx marginatus Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 166, Panama.

2123. Xurel melampygus (Cuvier and Valenciennes). *Ulua.*
Tropical Pacific, east to off-shore islands of Mexico; Hawaii. A very important food fish.
Caranx melampygus Cuvier and Valenciennes, Hist. Nat. Poiss., IX, 1833, 103, East Indies.

2124. Xurel stellatus (Eydoux and Souleyet). *Omilu.*
Pacific Ocean generally; Hawaii; Revillagigedo Islands; with the "Ulua" one of the staple food fishes of the Pacific islands.
Caranx punctatus Cuvier and Valenciennes, Hist. Nat. Poiss., IX, 1833, 38; name preoccupied.
Caranx stellatus Eydoux and Souleyet, Voy. *Bonite*, Zool., I, Poiss., 1840, 167, Hawaiian Islands.

2125. Xurel lugubris (Poey). *Tiñosa.*
Tropical Atlantic; West Indies.
Caranx lugubris Poey, Memorias, II, 1861, 222, Cuba.
Caranx frontalis Poey, loc. cit., 222, Cuba.

2126. Xurel tenebrosus Jordan and Evermann.
South seas; Revillagigedos; Hawaii.
Caranx lugubris Jordan and Evermann, Fishes North and Mid. Amer., 1896, 924, in part; not of Poey, based on examples so listed by Jordan and McGregor, Report U. S. Fish Com., XXIV, 1899, 227, from Clarion Island of the Revillagigedos Group.
Caranx tenebrosus Jordan and Evermann, Proc. Calif. Acad. Sci., 4th Ser., XVI, Nov. 14, 1927, 656, Clarion Island.

Genus 728. CARANX Lacépède.
Caranx Lacépède, Hist. Nat. Poiss., III, 1802, 57 (*Scomber carangus* Bloch=*Scomber hippos* L., as now usually restricted). Species with the breast naked except for a central patch of scales.
Tricropterus Rafinesque, Caratteri, 1810, 41 (*Scomber carangus* Bloch= *Scomber hippos* Linnæus), as restricted.
Carangichthys Bleeker, Nat. Tijdschr. Neder. Indie, III, 1852, 760 (*C. typus* Bleeker); immature; fish with breast naked; strong teeth present.

2127. Caranx hippos (Linnæus). *Crevallé; Toro; Horse crevallé; Cavalla; Jack; Jiguagua; Yellow caranx; Yellow mackerel.*
East coast of tropical America, north to Cape Cod; apparently represented in the Pacific by the closely related *Caranx ignobilis.*
Scomber hippos Linnæus, Syst. Nat., Ed. XII, 1766, 494, Charleston, S. C.
Scomber carangus Bloch, Naturgeschich. Ausl. Fische, VII, 1793, 69, Antilles.
Caranx erithrurus Lacépède, Hist. Nat. Poiss., III, 1802, 68, South Carolina.
Caranx daubentonii Lacépède, loc. cit., 72, Martinique.
Caranx antillarum Bennett, Whaling Voyage, II, 1840, 282, West Indies.
Caranx defensor DeKay, N. Y. Fauna: Fishes, 1842, 120, New York.
Carangus esculentus Girard, U. S. Mex. Bound. Surv., 1859, 23, pl. XI, figs. 1–3, Brazos Santiago, Tex.

2128. Caranx ignobilis Forskål.
Tropical Pacific, east to offshore islands of Mexico; Hawaii.
Scomber ignobilis Forskål, Descr. Anim., 1775, Red Sea.
Carangus hippoides Jenkins, Bull. U. S. Fish Com., XXII, 1902, 443, fig. 15, Honolulu.

Genus 729. GNATHANODON Bleeker.
Gnathanodon Bleeker, Verh. Batav. Genootsch., XXIV, Makreele, art. 5, 1851 (1852), pp. 6, 18, 30, 72, etc. (*Scomber speciosus* Forskål).
Hypocaranx Klunzinger, Fische Rothen Meeres, 1884, 92 (*Scomber speciosus* Forskål).

2129. Gnathanodon speciosus (Forskål). *Mojarra dorada.*
Tropical parts of the Pacific Ocean; East Indies; Mazatlan to Panama; Hawaii.
Scomber speciosus Forskål, Descr. Anim., 1775, 54, Red Sea.
Scomber rim Forskål, loc. cit., 54, Djidda.
Caranx panamensis Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 166, Panama.

Genus 730. CITULA Cuvier.
Citula Cuvier, Règne Anim., ed. 1, 1817, 315 (*Sciæna armata* Forskål).

2130. Citula orthogramma (Jordan and Gilbert).
Revillagigedo Islands; Pacific Islands.
Caranx orthogrammus Jordan and Gilbert, Proc. U. S. Nat. Mus., IV, 1881, 226, Sulphur Bay, Clarion Island, Revillagigedo Archipelago.

2131. Citula dorsalis (Gill). *Pampano.*
Pacific coast of tropical America; Mazatlan; Panama.
Carangoides dorsalis Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 166, Panama.
Caranx otrynter Jordan and Gilbert, Proc. U. S. Nat. Mus., 1883, 202; new name substituted for *dorsalis* preoccupied in *Caranx*, but not in *Citula*.

Genus 731. ALECTIS [50] Rafinesque. *Cobblerfishes; Cockfishes.*
Gallus Lacépède, Hist. Nat. Poiss., IV, 1803 (*Zeus gallus* L.); preoccupied in birds.
Alectis Rafinesque, Anal. Nature, 1815, (*Zeus gallus* L.); substitute for *Gallus*, preoccupied.
Blepharis Cuvier, Règne Animal, 1817, 322 (*Zeus ciliaris* Bloch).
Gallichthys Cuvier and Valenciennes, Hist. Nat. Poiss., IX, 1833, 264 (*Zeus gallus* L.); substitute for *Gallus*, preoccupied.
Bleparichthys Gill, Cat. Fish. East Coast U. S., suppl. to Proc. Acad. Nat. Sci. Phila., XIII, 1861, 36; substitute for *Blepharis*.

2132. Alectis crinitus (Mitchill). *Threadfish; Cobblerfish; Sunfish; Shoemaker.*
West Indies north to Cape Cod, Florida Keys and Cuba.
Zeus crinitus Mitchill, Amer. Jour. Sci. Arts, XI, 1826, 144, Shoreham, Mass.
Blepharis sutor Cuvier and Valenciennes, Hist. Nat. Poiss., IX, 1833, 120 (161), pl. 253, Caribbean Sea.
Blepharis major Cuvier and Valenciennes, loc. cit., 121 (163), West Indies; Martinique; not *Gallichthys major*, an East Indian species.
Carangoides blepharis Bleeker, Verhand. Batav. Genootsch., XXIV, 1852, Makr. 667, East Indies.
Carangoides gallichthys Bleeker, loc. cit., 668, East Indies.

Genus 732. SCYRIS Cuvier.
Scyris Cuvier, Règne Anim., ed. 2, II, 1829, 209 (*S. indica* Cuvier and Valenciennes).

2133. Scyris analis Poey.
Cuba.
Scyris analis Poey, Synopsis, 1868, 369, Cuba.

Genus 733. HYNNIS Cuvier and Valenciennes.
Hynnis Cuvier and Valenciennes, Hist. Nat. Poiss., IX, 1833, 145 (195), pl. 257 (*H. goreensis* Cuvier and Valenciennes).

2134. Hynnis cubensis Poey.
Cuba.
Hynnis cubensis Poey, Memorias, II, 1861, 235, Habana.

2135. Hynnis hopkinsi Jordan and Starks. *Pámpano.*
Puerto Viejo, near Mazatlan, Mexico.
Hynnis hopkinsi Jordan and Starks, in Jordan, Proc. Calif. Acad. Sci., V, 1895, 435, pl. 35, Mazatlan.

Genus 734. VOMER Cuvier and Valenciennes.
Vomer Cuvier and Valenciennes, Hist. Nat. Poiss., IX, 1833, 141 (189), pl. 256 (*V. brownii* Cuvier and Valenciennes=*Zeus setapinnis* Mitchill).
Platysomus Swainson, Nat. Hist. Fish., Amphib., etc., II, 1839, 250 (*Vomer browni* Cuvier and Valenciennes).

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[50] The genera and species allied to *Alectis* have been much mixed from the first. While other possibilities exist, and may be defended, it seems best to adhere to current nomenclature, which, in fact, accords best with the Code.

2136. Vomer setapinnis (Mitchill). *Jorobado; Moonfish; Horsefish; Blunt-nosed shiner; Sunfish; Pug-nosed shiner.*
Atlantic coast of America; from Maine to Florida.
Zeus setapinnis Mitchill, Trans. Lit. Phil. Soc. N. Y., 1815, 384, New York.
Vomer brownii Cuvier and Valenciennes, Hist. Nat. Poiss., IX, 1833, 141 (189), pl. 256, New York.
Argyreiosus unimaculatus Batchelder, Proc. Bost. Soc. Nat. Hist., II, 1845, 78, Maine.
Vomer curtus Cope, Proc. Acad. Nat. Sci. Phila., XXII, 1870, 119, Rhode Island.

2137. Vomer setapinnis cubensis Nichols.
Coast of Cuba.
Vomer setapinnis cubensis Nichols, Bull. Amer. Mus. Nat. Hist., XXXVIII, 1918, 672, Cuba.

2138. Vomer dorsalis Gill.
West coast of Africa, recorded from the West Indies.
Vomer dorsalis Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 436; after Günther.
Argyreiosus setipinnis var. B. Günther, Cat., II, 1860, 459, St. Vincent; Cape Verde Islands; West Indies.
Vomer senegalensis Guichenot, Ann. Soc. Linn. Maine et Loire, 1865, 35, Senegal.
Vomer goreensis Guichenot, loc. cit., 37, Gorea.

2139. Vomer spixii (Swainson).
West Indies south to Brazil.
Platysomus spixii Swainson, Class. Fishes, etc., II, 1839, 250 and 406, Brazil; after Spix and Agassiz, pl. 37.
Platysomus micropteryx Swainson, loc. cit., 406, Pernambuco.
Vomer sanctæ-marthæ, columbianus, martinicensis, dominicensis, novæboracensis, sanctæ-petri, brasiliensis, cayennensis, and *cubæ* Guichenot, Ann. Soc. Linn. Maine et Loire, 38 to 44, 1865, localities indicated by names.

2140. Vomer declivifrons Meek and Hildebrand.
Cape San Lucas to Peru.
Vomer declivifrons Meek and Hildebrand, Field Mus. Nat. Hist., Zool., XV, 1925, 367, Pl. XXIX, fig. 2, Panama.

2141. Vomer gabonensis Guichenot.
West Indies and west coast of Africa.
Vomer gabonensis Guichenot, Ann. Soc. Linn. Maine et Loire, 1865, 42, Gaboon.

Genus 735. ARGYREIOSUS Lacépède. *Moonfishes.*
Selene Lacépède, Hist. Nat. Poiss., IV, 1803, 560 (*S. argentea* Lacépède = *Zeus vomer* L.).
Argyreiosus Lacépède, loc. cit., IV, 1803, 566 (*Zeus vomer* Linnæus).

2142. Argyreiosus vomer (Linnæus). *Moonfish; Jorobado; Lookdown; Horsehead; Hair-finned dory; Hair-finned silverfish; Dollarfish.*
Tropical America, on both coasts; Cape Cod to Brazil; Lower California to Peru.
Zeus vomer Linnæus, Syst. Nat., Ed. X, 1758, 266, America.
Zeus gallus Linnæus, loc. cit., America; after Artedi.
Zeus capillaris Mitchill, Trans. Lit. and Phil. Soc., I, 383, 1815, New York.
Zeus rostratus Mitchill, loc. cit., 384, New York.
Zeus geometricus Mitchill, Amer. Month. Mag., II, 245, 1818, New York.
Argyriosus triacanthus Swainson, Nat. Hist. Classn. Fish., 1839, 250, Brazil.
Argyriosus filamentosus Swainson, loc. cit., 250; after Cuvier and Valenciennes.
Argyriosus setifer Swainson, loc. cit., 407; after Cuvier and Valenciennes.
Argyriosus mauriceii Swainson, loc. cit., 408, Brazil.
Argyriosus mitchilli DeKay, N. Y. Fauna: Fishes, 1842, 126, New York.

2143. Argyreiosus œrstedii (Lütken).
Pacific coast, Mazatlan to Panama.
Selene œrstedii Lütken, Spolia Atlantica, 1880, 144, Punta Arenas.

2144. Argyreiosus brevoorti Gill.
Lower California to Peru.
Argyriosus brevoorti Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 83, Lower California.
Argyreiosus pacificus Lockington, Proc. Calif. Acad. Sci., first ser., VII, 1876, 84, Magdalena Bay, Lower California.

Genus 736. CHLOROSCOMBRUS Girard. *Casabes.*
Chloroscombrus Girard, Proc. Acad. Nat. Sci. Phila., X, 1858, 168 (*Micropteryx cosmopolita* Agassiz=*Scomber chrysurus* Linnæus).
Micropteryx Günther, not of Agassiz, which is *Seriola*.

2145. Chloroscombrus chrysurus (Linnæus). *Casabe; Bumper; Yellowtail.*
Cape Cod to Brazil; common on our South Atlantic coast and in Cuba.
Scomber chrysurus Linnæus, Syst. Nat., ed. XII, 1766, 494, Charleston, S. C.
Micropteryx cosmopolita Agassiz, in Spix, Pisc. Bras., 1829, 104, Tab. LIX, Atlantic Ocean.
Scomber latus Gronow, Cat. Fishes, ed. Gray, 1854, 127, Carolina.
Chloroscombrus caribbæus Girard, Mex. Bound. Surv., Zool., 1859, 21, Pl. XI, fig. 6, St. Joseph Island, Tex.

2146. Chloroscombrus orqueta Jordan and Gilbert. *Orqueta; Xurel de Castilla.*
Pacific coast of tropical America, Magdalena Bay to Panama.
Chloroscombrus orqueta Jordan and Gilbert, Proc., U. S. Nat. Mus., V, 1862, 646, Panama.
Chloroscombrus stirurus Jordan and Gilbert, loc. cit., VI, 1883, 206, Panama; slip for *C. orqueta* imperfectly corrected proof.

Genus 737. TRACHINOTUS Lacépède. *Pámpanos.*
Trachinotus Lacépède, Hist. Nat. Poiss., III, 1802, 79 (*Labrus falcatus* Linnæus).
Cæsiomorus Lacépède, loc. cit., 92 (*C. bailloni* Lacépède).
Acanthinion Lacépède, loc. cit., IV, 1803, 499 (*Chætodon rhomboides* Linnæus).
Baillonus Rafinesque, Analyse Nature, X, 1815 (*Trachinotus bailloni* Lacépède); substitute for *Cæsiomorus*.
Bothrolæmus Holbrook, Ichth. South Carolina, 1855, 80 (*Trachinotus pampanus* Cuvier and Valenciennes).
Doliodon Girard, Proc. Acad. Nat. Sci. Phila., X, 1858, 168 (*Gasterosteus carolinus* Linnæus).

2147. Trachinotus palometa Regan. *Gafftopsail; Pámpano; Oldwife; Palometa; Banner pompano.*
Tropical America, from Virginia to the Caribbean Sea.
Chætodon glaucus Bloch, Ichth., 1787, pl. 210, Martinique; on a figure by Plumier (name preoccupied by *Lichia glauca* L., also a *Trachinotus*).
Trachynotus palometa Regan, Ann. Mag. Nat. Hist., (7), XII, 1903, 349; substitute for *glaucus* Bloch).

2148. Trachinotus rhodopus (Gill). *Pampanito.*
Pacific coast of tropical America; south to Panama.
Trachynotus rhodopus Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 85, Cape San Lucas.
?*Trachynotus nasutus* Gill, loc. cit., 85, Cape San Lucas.
Trachynotus fasciatus Gill, loc. cit., 86, Panama.
Trachynotus glacoides Günther, Proc. Zool. Soc. Lond., 1864, 150, San Jose de Guatemala.

2149. Trachinotus falcatus (Linnæus). *Round pampano; Palometa; Permit* (Indian River) *Spinous dory; Ovate pampano.*
East coast of United States, Cape Cod to Florida.
Labrus falcatus Linnæus, Syst. Nat., ed. X, 1758, 284, America.
Trachinotus spinosus DeKay, N. Y. Fauna: Fishes, 1842, 117, pl. 19, fig. 53, New York Harbor.
Trachinotus fuscus Cuvier and Valenciennes, Hist. Nat. Poiss., VIII, 1831, 302 (410), Brazil.

2150. Trachinotus rhomboides (Bloch). *Round pampano.*
West Indies to Brazil.
Chætodon rhomboides Bloch, Nat. Ausl. Fische, III, 1787, 100, Martinique.

2151. Trachinotus culveri Jordan and Starks.
Pacific coast of Mexico.
Trachinotus culveri Jordan and Starks, in Jordan, Proc. Calif. Acad. Sci., V, 1895, 439, pl. 36, Astillero at Mazatlan, Mexico.

2152. Trachinotus kennedyi Steindachner. *Palometa.*
Magdalena Bay to Panama.
Trachinotus kennedyi Steindachner, Ichth. Beitr., III, 1875, 47, Pl. VII, Magdalena Bay.

2153. Trachinotus goodei Jordan and Evermann. *Permit; Palometa; Great pampano.*
West Indies, north to southern Florida.
Trachinotus goodei Jordan and Evermann, Fishes North and Mid. Amer., 1896, 943, Key West, Fla.

2154. Trachinotus carolinus (Linnæus). *Common pampano; Pámpano; Cobblerfish; Butterfish; Carolina pompano.*
South Atlantic and Gulf coasts of United States; Cape Cod; West Indies; Brazil. One of our best food fishes.
Gasterosteus carolinus Linnæus, Syst. Nat., ed. XII, 1766, 490, Carolina.
?*Trachinotus argenteus* Cuvier and Valenciennes, Hist. Nat. Poiss., VIII, 1831, 304 (410), New York; Rio Janeiro.
?*Trachinotus cupreus* Cuvier and Valenciennes, loc. cit., 305 (414), Martinique.
Trachinotus pampanus Cuvier and Valenciennes, loc. cit., 305 (415), Brazil; Charleston, S. C.

2155. Trachinotus paloma Jordan and Starks.
Cape San Lucas, Mazatlan, San Juan Lagoon.
Trachinotus paloma Jordan and Starks, in Jordan, Proc. Calif. Acad. Sci., V, 1895, 437, Mazatlan, Mexico.

Genus 738. ZALOCYS Jordan and McGregor.
Zalocys Jordan and McGregor (R. C.), Rept. U. S. Fish. Com., XXIV, 1898 (1899), 276 (*Zalocys stilbe* Jordan and McGregor).

2156 Zalocys stilbe Jordan and McGregor.
Off Pacific coast of Mexico, Revillagigedo Islands.
Zalocys stilbe Jordan and McGregor, Rept. U. S. Fish Com., XXIV, 1898 (1899), 277, pl. 5, Clarion Island.

Genus 739. OLIGOPLITES Gill. *Leatherjackets.*
Oligoplites Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 166 (*O. occidentalis* Gill).

2157. Oligoplites saurus (Bloch and Schneider). *Leatherjacket; Leathercoat; Runner; Zapatero; Quiebra; Sauteur.*
Both coasts of Central America, and West Indies, north to New York and Lower California.
Scomber saurus Bloch and Schneider, ed. Bloch, Syst. Ichth., 1801, 321, Jamaica; after *Saurus argenteus* of Browne.
Centronotus argenteus Lacépède, Hist. Nat. Poiss., III, 1802, 316, equatorial America.
Lichia quiebra Quoy and Gaimard, Voy. *Freycinet*, Zool., 1824, 365, equatorial America.
Chorinemus saltans Cuvier and Valenciennes, Hist. Nat. Poiss., VIII, 1831, 289 (393), Martinique, Brazil, and San Domingo.

2158. Oligoplites inornatus Gill. *Plain leatherjacket.*
Panama.
Oligoplites inornatus Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 166 Panama.

2159. Oligoplites saliens (Bloch). *Sauteur.*
West Indies.
Scomber saliens Bloch, Naturgeschich. Ausl. Fische, VII, 1793, 49, Martinique; on a figure by Plumier.
Scomberoides saltator Lacépède, Hist. Nat. Poiss., II, 1800, pl. 19, fig. 2.

2160. Oligoplites palometa (Cuvier and Valenciennes).
Lake Maracaibo, Venezuela.
Chorinemus palometa Cuvier and Valenciennes, Hist. Nat. Poiss., VIII, 1831, 288 (392), Lake Maracaibo, Venezuela.

2161. Oligoplites altus (Günther). *Jurel; Monda.*
Pacific coast of tropical America; Panama.
Chorinemus altus Günther, Trans. Zool. Soc. London, VI, 1869, 433, Panama.

2162. Oligoplites mundus Jordan and Starks.
West coast of Mexico; Mazatlan.
Oligoplites mundus Jordan and Starks, in Jordan and Evermann, Check List, 1896, 344, Mazatlan, Mexico (name only); Jordan and Evermann, Fishes North and Mid. Amer., 1898, 2844, San Juan Lagoon, Mexico.

2163. Oligoplites refulgens Gilbert and Starks.
Panama.
Oligoplites refulgens Gilbert and Starks, Mem. Calif. Acad. Sci., IV, 1904, 73, Panama.

Family 180. SERIOLIDÆ

Genus 740. NAUCRATES Rafinesque.

Naucrates Rafinesque, Caratteri 1810, 44 (*Centronotus conductor* Lacépède=*Gasterosteus ductor* Linnæus).
Centronotus Lacépède, Hist. Nat. Poiss., III, 1802, 311, 51 (*C. conductor* Lacépède).
Xystophorus Richardson, Voy. *Erebus* and *Terror*, 1844, 52, pl. 30, fig. 22 (larval form, no species named).
Nauclerus Cuvier and Valenciennes, Hist. Nat. Poiss., IX, 1833, 247 (*N. compressus*, Cuvier and Valenciennes; young of *Naucrates*).

2164. Naucrates ductor. (Linnæus). *Pilotfish; Romero.*
Atlantic coast from Cape Cod to West Indies.
Gasterosteus ductor Linnæus, Syst. Nat., ed. X, 1758, 295, "in Pelago."
Centronotus conductor Lacépède, Hist. Nat. Poiss., III, 1802, 311, no locality.
Naucrates fanfarus Rafinesque, Caratteri, 1810, 45, Sicily.
Naucrates noveboracensis Cuvier and Valenciennes, Hist. Nat. Poiss., VIII, 1831, 239 (325), New York.
Seriola dussumieri Cuvier and Valenciennes, loc. cit., IX, 1833, 162 (217), Gulf of Bengal.
Seriola succincta Cuvier and Valenciennes, loc. cit., 163 (218), south of St. Helena.
Nauclerus compressus Cuvier and Valenciennes, loc. cit., 185 (249), pl. 263, fig. 1, Molucca.
Nauclerus abbreviatus Cuvier and Valenciennes, loc. cit., 187 (251), Atlantic Ocean.
Nauclerus brachycentrus Cuvier and Valenciennes, loc. cit., 187 (253), Indian Ocean.
Nauclerus triacanthus Cuvier and Valenciennes, loc. cit., 188 (253), Atlantic Ocean.
Nauclerus annularis Cuvier and Valenciennes, loc. cit., 189 (254), south of St. Helena.
Nauclerus lecurus Cuvier and Valenciennes, loc. cit., 189 (255), south of St. Helena.
Naucrates cyanophrys Swainson, Classn. Fishes, II, 1839, 412, Palermo.
Naucrates serratus Swainson, loc. cit., 413, Palermo.
Thynnus pompilus Gronow, Cat. Fishes, 1854, 123, Mediterranean; seas of America and Spain.
Xystophorus Richardson, Voy. *Erebus* and *Terror*, 1844, 52, Palermo.

2165 Naucrates polysarcus Fowler.
Pacific coast of Mexico.
Naucrates polysarcus Fowler, Proc. Acad. Nat. Sci. Phila., LVII, 1905, 62, west coast of Mexico.

Genus 741. ELAGATIS Bennett.
Elagatis Bennett, Narrative of Whaling Voyage, II, 1840, 283 (*Seriola bipinnulata* Quoy and Gaimard).
Seriolichthys Bleeker, Nat. Tijdschr. Neder.-Indie, VI, 1854, 196 (*Seriola bipinnulata* Quoy and Gaimard).
Decaptus Poey, Memorias, II, 1861, 391 (*Seriola pinnulata* Poey).

2166. **Elagatis bipinnulatus** (Quoy and Gaimard). *Runner; Yellowtail; Skipjack; Shoemaker.*
Tropical seas; West Indies; Long Island; Hawaii.
Seriola bipinnulata Quoy and Gaimard, Voy. *Uranie*, Zool., I, 1824, 363, pl. 61, fig. 3, Keeling Islands.
Seriola pinnulata Poey, Memorias, II, 1861, 233, Habana, Cuba.

Genus 742. SERIOLA Cuvier.
Seriola Cuvier, Règne Animal, ed. 2, II, 1829, 205 (*Caranx dumerili* Risso).
Micropteryx Agassiz, Pisc. Brasil., 1829, 102, type (not named) *Seriola dumerili* Cuvier, substitute for *Seriola*, used in botany.
Zonichthys Swainson, Nat. Hist. Fishes, Amphib., etc., II, 1839, 248 (*Scomber fasciatus* Bloch).
Halatractus Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 442 (*Seriola dumerili*, substitute for *Seriola*, used in botany).
Lepidomegas Thominot, Bull. Soc. Philom. Paris, ser. 7, IV, 1880, 173 (*L. muelleri* Thominot).

2167. **Seriola dorsalis** (Gill). *Yellowtail; White salmon.*
Pacific coast of America from Monterey southward to Mazatlan; abundant about the Santa Barbara Islands.
Halatractus dorsalis Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 84, Cape San Lucas.

2168. **Seriola zonata** (Mitchill). *Rudderfish; Shark pilot; Pilotfish; Banded rudderfish; Jackfish; Banded mackerel.*
Atlantic coast of the United States from Cape Cod to Cape Hatteras.
Scomber zonatus Mitchill, Trans. Lit. Phil. Soc. N. Y., 1815, 427, New York Bay.

2169. **Seriola carolinensis** Holbrook.
Gulf of Mexico, and on Atlantic coast north to Cape Hatteras.
Seriola carolinensis Holbrook, Ichthyol. South Carolina, 1855, 70, Charleston, S. C.
Seriola stearnsi Goode and Bean, Proc. U. S. Nat. Mus., II, 1879, 48, Pensacola, Fla.

2170. **Seriola lalandi** Cuvier and Valenciennes. *Great amberfish; Amber jack; Coronado; Jenny Lind.*
New Jersey to Brazil; occasionally to New York.
Seriola lalandi Cuvier and Valenciennes, Hist. Nat. Poiss., IX, 1833, 155 (208), Brazil.
Seriola gigas Poey, Memorias, II, 1861, 227, Cuba.

2171. **Seriola dumerili** (Risso). *Amber jack; Coronado.*
Mediterranean to West Indies, north to Key West and Pensacola.
Caranx dumerili Risso, Ichthyol. Nice, 1810, 175, pl. 6, fig. 20, Nice.
Trachurus aliciolus Rafinesque, Caratteri, 1810, 42, Pl. XI, fig. 2, Sicily.
Trachurus fasciatus Rafinesque, Indice, No. 108, 21 and 53, Sicily; not *Scomber fasciatus* of Bloch.
Seriola proxima Poey, Memorias, II, 1861, 229, Cuba.

Genus 743. ZONICHTHYS Swainson.
Zonichthys Swainson, Nat. Hist. Fish., Amphib., etc., II, 1839, 248 (*Scomber fasciatus* Bloch).

2172. **Zonichthys mazatlanus** (Steindachner).
West coast of Mexico, Mazatlan.
Seriola mazatlana Steindachner, Ichth. Beitr., V, 1876, 8, Mazatlan, Mexico.

2173. **Zonichthys fasciatus** (Bloch). *Madregal; Bonito.*
West Indies, north to Charleston, S. C.
Scomber fasciatus Bloch, Nat. Ausl. Fische, VII, 1793, 73, pl. 341, no locality.
Seriola semicoronata Poey, Memorias, II, 1861, 232, Habana.

2174. Zonichthys rivolianus Cuvier and Valenciennes.
Mediterranean to Brazil, West Indies, and South Carolina; Florida coast.
Seriola rivoliana Cuvier and Valenciennes, Hist. Nat. Poiss., IX, 1833, 154 (207), the Greek Archipelago.
Seriola boscii Cuvier and Valenciennes, loc. cit., 156 (208), waters of Carolina.
Seriola bonariensis Cuvier and Valenciennes, loc. cit., 157 (211), Buenos Aires.
Seriola coronata Poey, Memorias, II, 1861, 232, Cuba.

2175. Zonichthys falcatus (Cuvier and Valenciennes). *Madregal; Rock salmon.*
West Indies, north to Florida and the Carolinas.
Seriola falcata Cuvier and Valenciennes, Hist. Nat. Poiss., IX, 1833, 156 (210), Gulf of Mexico.
Seriola dubia Lowe, Proc. Zool. Soc. London, VII, 1839, 80, Madeira.
Seriola declivis Poey, Memorias, II, 1861, 230, Habana.
Seriola ligulata Poey, loc. cit., 231, Cuba.

Family 181. NEMATISTIIDÆ. Peacockfishes; Papagallos

Genus 744. NEMATISTIUS Gill.
Nematistius Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 258 (*N. pectoralis* Gill).
Seriolophus Guichenot, Mém. Soc. Nat. Sci. Cherbourg, XIII, 1868, 90 (*Seriolophus carangoides* Guichenot).

2176. Nematistius pectoralis Gill. *Pez de gallo; Papagallo; Roosterfish.*
Gulf of California to Panama; generally common.
Nematistius pectoralis Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 259, Cape San Lucas.
Seriolophus carangoides Guichenot, Mém. Soc. Sci. Nat. Cherbourg, XIII, 1868, 90, locality unknown.

Family 182. POMATOMIDÆ. Bluefishes

Genus 745. POMATOMUS Lacépède. *Bluefishes.*
Pomatomus Lacépède, Hist. Nat. Poiss., IV, 1802, 436 (*P. skib* Lacépède).
Lopharis Rafinesque, Caratteri, 1810, 52 (*Perca lophar* Forskål).
Gonenion Rafinesque, loc. cit., 53 (*G. serra* Rafinesque).
Temnodon Cuvier, Règne Animal, ed. 1, II, 1817, 346 (*Cheilodipterus heptacanthus* Lacépède).
Sypterus Eichwald, Fauna Caspio-Caucas., 1841 (*Perca lophar* Forskål).
Chromis Gronow, Cat. Fishes, 1854, 149 (*C. epicurorum* Gronow = *Gasterosteus saltatrix* Linnæus); name preoccupied.
Sparactodon Rochebrune, Bull. Soc. Philom. Paris, ser. 7, IV, 1880, 162 (*S. nalnal* Rochebrune).

2177. Pomatomus saltatrix (Linnæus). *Bluefish; Snap mackerel; Skipjack; Fatback; Snapping mackerel; Tailor; Snapper; Horse mackerel; Greenfish; Skip mackerel.*
Atlantic coast of United States; eastern part of the Mediterranean and South to Australia and Madagascar; locally and irregularly abundant.
Perca saltatrix Linnæus, Syst. Nat., ed. X, I, 1758, 293, Carolinas.
Perca lophar Forskål, Descr. Anim., 1775, 38, Constantinople.
Cheilodipterus heptacanthus Lacépède, Hist. Nat. Poiss., III, 1802, 542, Fort Dauphin, Madagascar.
Pomatomus skib Lacépède, loc. cit., IV, 1802, 436, Carolinas.
Lopharis mediterraneus Rafinesque, Indice, 1810, 17, after Forskål.
Gonenion serra Rafinesque, Caratteri, 1810, 53, Sicily.
Chromis epicurorum Gronow, Cat., ed. Gray, 1854, 149, Carolinas.
Sparactodon nalnal De Rochebrune, Bull. Soc. Philom. Paris, 1880, 159, Senegambia.

Family 183. RACHYCENTRIDÆ. The Sergeantfishes

Genus 746. RACHYCENTRON Kaup. *Crab-eaters.*
Rachycentron Kaup, Isis, XIX, 1826, col. 89 (*R. typus* Kaup).
Elacate Cuvier and Valenciennes, Hist. Nat. Poiss., VIII, 1831, 328 (*E. malabarica* Cuvier and Valenciennes).
Mcladerma Swainson, Nat. Hist. Fish., Amphib., etc., II, 1839, 243 (*M. nigerrima* Swainson = *Elacate pondicerriana* Cuvier and Valenciennes).

2178. Rachycentron canadus (Linnæus). *Sergeantfish; Crab-eater; Bonito; Cobia.*
In all warm seas; Atlantic coast north to Cape Cod; also in Japan and the East Indies, if all members of the genus belong to one species.
Gasterosteus canadus Linnæus, Syst. Nat., ed. XII, 1766, 491, Carolinas.
Centronotus gardenii Lacépède, Hist. Nat. Poiss., III, 1802, 357, Carolinas.
Centronotus spinosus Mitchill, Trans. Lit. and Phil. Soc., I, 1815, 490, New York.
?*Elacate pondicerriana* Cuvier and Valenciennes, Hist. Nat. Poiss., VIII, 1831, 241 (329), Pondicherry.
?*Elacate motta* Cuvier and Valenciennes, loc. cit., 244 (332), Orixa.
?*Elacate malabarica* Cuvier and Valenciennes, loc. cit., 244 (332), Malabar.
Elacate atlantica Cuvier and Valenciennes, loc. cit., 245 (334), Brazil.
?*Elacate bivittata* Cuvier and Valenciennes, loc. cit., 248 (338), Molucca.
Elacata falcipinnis Gosse, Nat. Sojourn Jamaica, 1851, 208, Jamaica.

Family 184. BATHYCLUPEIDÆ

Genus 747. BATHYCLUPEA Alcock.
Bathyclupea Alcock, Ann. Mag. Nat. Hist., VIII, 1891, 130 (*B. hoskynii* Alcock).

2179. Bathyclupea argentea Goode and Bean.
West Indies, in deep water.
Bathyclupea argentea Goode and Bean, Oceanic Ichth., 1895, 190, off Nevis Island, West Indies, at *Blake* station 37 in 365 fathoms.

Family 185. PERCIDÆ. Perches

Genus 748. PERCA Linnæus. *River perches.*
Perca Linnæus, Syst. Nat., ed. X, 1758, 289 (*P. fluviatilis* Linnæus).
Epitrachys Schulze, Jahrsber. Naturw. Ver. Magdeburg, 1889, 209 (*Perca fluviatilis* Linnæus).

2180. Perca flavescens (Mitchill). *Yellow perch; American perch; Ringed perch; Raccoon perch; Yellow Ned; River perch; Lake perch.*
Fresh waters of the eastern United States, chiefly northward and eastward; abundant in the Great Lakes and in coastwise streams from Nova Scotia to North Carolina; common in the tributaries of the upper Mississippi, especially in lakes of Indiana, Michigan, Wisconsin, Iowa, and Minnesota; unknown from central Ohio southwestward; not known from the Ohio River or the lower Missouri.
Perca americana Schranck, Abh. Privatges. Oberdeutschland, I, 1792, 100, America; name preoccupied in *Morone*.
Morone flavescens Mitchill, Rept. Fish. N. Y., 1814, 18, near New York City.
Centropomus luteus Rafinesque, Précis des Découvertes Somiologiques, 1814, 19, Pennsylvania.
Perca notata Rafinesque, Amer. Month. Mag., II, 1818, 205, Lake Erie.
Perca serrato-granulata Cuvier and Valenciennes, Hist. Nat. Poiss., II, 1828, 34 (48), New York.
Perca granulata Cuvier and Valenciennes, loc. cit., 35 (48), pl. 9, New York.
Perca acuta Cuvier and Valenciennes, loc. cit., 36 (49), pl. 10, Lake Ontario.
Perca gracilis Cuvier and Valenciennes, loc. cit., 36 (50), Skaneateles Lake, N. Y.

Genus 749. STIZOSTEDION [51] **Rafinesque.** *American pike perches.*
Stizostedion Rafinesque, Ichth. Ohiensis, 1820, 23 (*Perca salmonea* Rafinesque=*Perca vitrea* Mitchill).
Stizostethium, attempted correction.

2181. Stizostedion vitreum (Mitchill). *Walleye; Wall-eyed pike; Pike perch; Dory; Glass-eye; Yellow pike; Blue pike; Jack salmon; White-eye; Spike* (small specimens about 8 inches long, at Maumee Bay, Sandusky Bay, Port Clinton, etc.); *Pickerel; River trout.*
Great Lakes region, upper Mississippi, north to Assiniboia; east to Vermont and Pennsylvania; south to Georgia and Alabama; especially common northward.
Perca vitrea Mitchill, Am. Month. Mag., II, 1818, 247, Cayuga Lake, N. Y.
Lucioperca americana Cuvier and Valenciennes, Hist. Nat. Poiss., II, 1828, 90 (122), pl. 16, New York.
Perca salmonea Rafinesque, Amer. Month. Mag. III, 1818, 354, Ohio River.

2182. Stizostedion glaucum Hubbs. *Blue pike.*
Great Lake region.
Stizostedion glaucum Hubbs, Univ. Mich. Mus. Zool., Misc. Publ. No. 15, July 7, 1926. 58, Pl. IV, fig. 1, Lake Erie.

Genus 750. CYNOPERCA Gill and Jordan.
Cynoperca Gill and Jordan, Bull. U. S. Nat. Mus., X, 1877, 44 (*Lucioperca canadensis* C. H. Smith, in Griffith's edition of Cuvier's Règne Animal).

2183. Cynoperca grisea (DeKay). *Sauger; Sand pike; Gray pike; Pickering.*
Great Lakes region and westward to Montana, Tennessee, and Arkansas; the common species which varies northward into the next.
Lucioperca grisea DeKay, New York Fauna: Fishes, 1842, 19, New York.
Lucioperca borea Girard, Proc. Acad. Nat. Sci. Phila., 1857, 201, Fort Sarpi, Nebr.
Lucioperca pepinus Estes, in Hallock's Sportsman's Gazetteer, 1827, 322, Lake Pepin.

2184. Cynoperca canadensis (Smith). *Sauger; Sand pike; Gray pike.*
Northeastern North America, from Vermont to the Great Lakes.
Lucioperca canadensis C. H. Smith, in Griffith's edition of Cuvier's Règne Anim., Fishes, 1836, 275, Canada.

Family 186. ETHEOSTOMIDÆ Darters

We begin this series with the species most nearly related to the *Percidæ*, from which the darters are apparently descended. *Percina* is the most primitive genus, and in most respects the highest, the other forms being progressively specialized to their life in swift brooks. From *Percina* two lines diverge in different directions; the allies of *Crystallaria* and *Vigil* to *Ammocrypta* toward a quiescent life, buried in sand; the other through *Pœcilichthys*, *Nothonotus* and *Oligocephalus* for life in weedy brooks, culminating in *Microperca* and *Alvarius*, the lowest forms.

Genus 751. PERCINA Haldeman. *Log perches.*
Percina Haldeman, Jour. Acad. Nat. Sci. Phila., VIII, 1842, 330 (*P. nebulosa* Haldeman=*Sciæna caprodes* Rafinesque).
Pileoma DeKay, New York Fauna: Fishes, 1842, 16 (*P. semifasciata* DeKay=*Etheostoma caprodes* Rafinesque).

[51] The European genus *Sander* Oken (*Lucioperca* Cuvier and Valenciennes) differs from *Stizostedion* in the close-set ventrals and the less close approximation of the anal spines.

2185 Percina caprodes (Rafinesque). *Log perch; Rockfish; Hogmolly; Hogfish.*
Great Lakes and streams of the South and West from Quebec to Lake Superior, and Iowa.
Sciæna caprodes Rafinesque, Amer. Month. Mag., Vol. II, 1818, 354, Ohio River.
Perca (Percina) nebulosa Haldeman, Jour. Acad. Nat. Sci. Phila., VIII, 1842, 330, Susquehanna River.
Pileoma semifasciatum DeKay, New York Fauna: Fishes, 1842, 16, pl. 50, fig. 162, Lake Champlain, Westport, N. Y.
Percina bimaculata Haldeman, Proc. Bost. Soc. Nat. Hist., 1844, 157, Susquehanna River.

2186. Percina carbonaria (Baird and Girard).
Streams of Mississippi to the Rio Grande.
Pileoma carbonaria Baird and Girard, Proc. Acad. Nat. Sci. Phila., VI, 1853, 387, Rio Salada; Rio Medina; San Pedro Creek, Tex.

2187. Percina zebra (Agassiz). *Manitou darter.*
Lakes of Michigan, northern Indiana, Wisconsin, and northward to Lake Superior; Cayuga Lake Basin. Probably varying into *P. caprodes.*
Pileoma zebra Agassiz, Lake Superior, 1850, 308, Lake Superior.
Percina manitou Jordan, Proc. Acad. Nat. Sci. Phila., XXIX, 1877, 53, Lake Manitou, Ind.

2188. Percina rex (Jordan and Evermann).
Roanoke River, Va. One of the largest and most imposing of the darters.
Etheostoma rex Jordan and Evermann, Proc. U. S. Nat. Mus., XI, 1888, 357, Pl. XLV, fig. 9, Roanoke River near Roanoke, Va.

Genus 752. HADROPTERUS Agassiz. *Black-sided darters.*
Hadropterus Agassiz, Amer. Jour. Sci. Arts, XVII, 1854, 305 (*H. nigrofasciatus* Agassiz).

2189. Hadropterus nigrofasciatus Agassiz. *Crawl-a-bottom.*
South Carolina to Louisiana.
Hadropterus nigrofasciatus Agassiz, Amer. Jour. Sci. Arts, XVII, 1854, 305, Mobile, Ala.
Alvordius spillmani Hay, Proc. U. S. Nat. Mus., III, 1880, 491, Chickasawha River, Miss.

Genus 753. ALVORDIUS Girard.
Alvordius Girard, Proc. Acad. Nat. Sci. Phila., XI, 1859, 68 (*A. maculatus* Girard).

2190. Alvordius maculatus Girard. *Black-sided darter.*
Great Lakes region to the middle Missouri and north to Minnesota, southward through Missouri, Indiana, and Kentucky to Arkansas; especially common in the Ohio Valley.
Alvordius maculatus Girard, Proc. Acad. Nat. Sci. Phila., XI, 1859, 68, Fort Gratiot, Mich.
Alvordius aspro Cope and Jordan, Proc. Acad. Nat. Sci. Phila., XXIX, 1877, 51, White River, Indianapolis, Ind.; substitute for *Etheostoma blennioides* of Kirtland, not of Rafinesque; perhaps distinct from *A. maculatus* which, if correctly described, has not been found later.

2191. Alvordius guntheri (Eigenmann and Eigenmann). *Günther's darter.*
Winnipeg south to Iowa.
Etheostoma güntheri Eigenmann and Eigenmann, Amer. Nat., November, 1892, 962, Souris River, Winnipeg.

2192. Alvordius peltatus (Stauffer). *Shielded darter.*
Southeastern Pennsylvania, southward to South Carolina in coastwise streams.
Hadropterus maculatus Girard, Proc. Acad. Nat. Sci. Phila., XI, 1859, 100, tributary of Potomac River, Md.; name preoccupied.
Etheostoma peltatum Stauffer, in Cope, Proc. Acad. Nat. Sci. Phila., XVI, 1864, 233, Conestoga Creek, near Lancaster, Pa.
Etheostoma nevisense Cope, Proc. Amer. Phil. Soc., XI, 1870, 261, falls of Neuse River, N. C.
Alvordius crassus Jordan and Brayton, Bull. U. S. Nat. Mus., XII, 1878, 12, near Greenville, S. C.

2193 Alvordius sellaris (Radcliffe and Welch). *Maryland darter.*
Streams of Maryland.
Hadropterus sellaris Radcliffe and Welch, Bull. U. S. Fish Com., XXXII, 1912, 31, Swan Creek, Havre de Grace, Md.

2194. Alvordius ouachitæ (Jordan and Gilbert). *Ouachita darter.*
Southern Indiana, western Kentucky, southwest to Arkansas, not rare; known from Patoka River, Ind.; lower Green and Obion Rivers, Kentucky and Tennessee; Saline River, Ark.
Etheostoma (*Hadropterus*) *ouachitæ* Jordan and Gilbert, Proc. U. S. Nat. Mus., X, 1887, 49, Saline River, Benton, Ark., a tributary of the Washita.

2195. Alvordius maxinkuckiensis (Evermann). *Maxinkuckee darter.*
Lake Maxinkuckee, Ind.
Hadropterus maxinkuckiensis Evermann, Rept. U. S. Fish Com., XXV, 1899 (1900), 366, pl. 17, fig. 2, Aubeenaubee Creek, an eastern tributary to Lake Maxinkuckee, Ind.

2196. Alvordius evermanni (Moenkhaus). *Evermann's darter.*
Lake Tippecanoe, Ind.
Hadropterus evermanni Moenkhaus, Bull. U. S. Fish Com., XXII, 1902 (1904), 397, with figure on p. 398, Tippecanoe Lake, Ind.

2197. Alvordius roanoka (Jordan and Jenkins).
Roanoke River, Va.
Hadropterus roanoka Jordan and Jenkins, Proc. U. S. Nat. Mus., XI, 1888, 358, Roanoke River at Roanoke, Salem, and Allegheny Springs, Va.

2198. Alvordius macrocephalus (Cope). *Big-headed darter.*
West slope of the Alleghenies from Pennsylvania southward in mountain streams; known from Youghiogheny River, Pa.; North Fork of Holston River, Saltville, Va.; Middle Fork of Holston River, Glade Spring, Va.; Big Sandy, upper Green, and Cumberland Rivers, Ky.; Clinch River, Tenn.
Etheostoma macrocephalum Cope, Trans. Amer. Phil. Soc., XIII, 1869, 400, Youghiogheny River, Pa.

2199. Alvordius phoxocephalus (Nelson).
Ohio to Iowa, south to Kentucky and Oklahoma, in sandy rivers; locally common.
Etheostoma phoxocephalum Nelson, Bull. Ill. Lab. Nat. Hist., I, 1876, 35, Illinois River and its tributaries.

Genus 754. SERRARIA Gilbert.
Serraria Gilbert, Proc. U. S. Nat. Mus., VII, 1884, 205 (*Hadropterus scierus* Swain).

2200. Serraria sciera (Swain). Northern Indiana to Tennessee and Texas.
Hadropterus scierus Swain, Proc. U. S. Nat. Mus., VI, 1883, 252, Bean Blossom Creek, Monroe County, Ind.

2201. Serraria serrula (Jordan and Gilbert).
From southern Arkansas southward through eastern Texas.
Hadropterus scierus serrula Jordan and Gilbert, Proc. U. S. Nat. Mus., IX, 1886, 16, Red River, Fulton, Ark.

Genus 755. ERICOSMA Jordan and Copeland.
Ericosma Jordan and Copeland, Bull. U. S. Nat. Mus., X, 1877, 8 (*Alvordius evides* Jordan and Copeland).

2202. Ericosma evides (Jordan and Copeland).
Indiana in the Wabash Basin, west to Cedar River, Iowa, and southward in Arkansas, Kentucky, and Tennessee; French Broad River and the Ozark region.
Alvordius evides Jordan and Copeland, Proc. Acad. Nat. Sci. Phila., XXIX, 1877, 51, White River near Indianapolis, Ind.

Genus 756. HYPOHOMUS Cope.
Hypohomus Cope, Proc. Amer. Phil. Soc. Phila., XI, 1870, 449 (*Cottogaster aurantiacus* Cope).

2203. Hypohomus aurantiacus (Cope).
Upper Tennessee Basin; North Fork of Holston, Clinch, Watauga, and French Broad Rivers.
Cottogaster aurantiacus Cope, Jour. Acad. Nat. Sci. Phila., VI, 1869, 211, North Fork of Holston River, Saltville, Va.

2204. Hypohomus cymatotænia (Gilbert and Meek).
Western Kentucky and southern Missouri.
Etheostoma (*Hadropterus*) *cymatotænia* Gilbert and Meek, Proc. U. S. Nat. Mus., X, 1887, 51, Niangua River and Osage Fork of the Gasconade near Marshfield, Mo.; Sac River near Greenfield, Mo.

2205. Hypohomus nianguæ (Gilbert and Meek). *Niangua darter.*
Niangua River, Ozark region of Missouri.
Etheostoma (*Hadropterus*) *nianguæ* Gilbert and Meek, Proc. U. S. Nat. Mus., X, 1887, 52, Niangua River near Marshfield, Mo.

2206. Hypohomus spilotus (Gilbert).
Kentucky River.
Etheostoma nianguæ spilotum Gilbert, Proc. U. S. Nat. Mus., X, 1887, 53, Sturgeon Creek, a tributary of Kentucky River near Travelers Rest, Owsley County, Ky.

Genus 757. SWAINIA Jordan and Evermann.
Swainia Jordan and Evermann, Fishes North and Mid. Amer., 1896, 1040 (*Etheostoma* (*Hadropterus*) *squamatus* Gilbert and Swain).

2207. Swainia squamata (Gilbert and Swain).
Upper Tennessee River Basin; known from Watauga and French Broad Rivers.
Etheostoma (*Hadropterus*) *squamatus* Gilbert and Swain, Proc. U. S. Nat. Mus., X, 1887, 50, French Broad River at mouth of Wolf Creek, Tenn.

Genus 758. COTTOGASTER Putnam.
Cottogaster Putnam, Bull. Mus. Comp. Zool., I, 1863, 4 (*Boleosoma tessellatum* Thompson; not of DeKay=*Cottogaster putnami* Jordan and Gilbert).
Rheocrypta Jordan, Bull. U. S. Nat. Mus., X, 1877, 9 (*R. copelandi* Jordan).

2208. Cottogaster copelandi (Jordan). *Copeland's darter.*
Great Lakes region, south to the Black Warrior, westward to Missouri and through the Ozark region, where it is abundant; also about Indianapolis in clear brooks.
Rheocrypta copelandi Jordan, Bull. U. S. Nat. Mus., X, 1877, 9, White River near Indianapolis, Ind.

2209. Cottogaster putnami (Jordan and Gilbert). *Putnam's darter.*
Lake Champlain.
Cottogaster putnami Jordan and Gilbert, Synopsis, 1883, 498, Westport Brook, Lake Champlain, N. Y. Probably intergrades with *C. copelandi*.

2210. Cottogaster uranidea (Jordan and Gilbert).
Lower Wabash Basin to southern Missouri, south through Arkansas and Alabama to the Escambia; mostly in sandy lowland streams.
Etheostoma (*Cottogaster*) *uranidea* Jordan and Gilbert, Proc. U. S. Nat. Mus., X, 1887, 48, Washita River, Arkadelphia, Ark.

Genus 759. IMOSTOMA Jordan.
Imostoma Jordan, Proc. Acad. Nat. Sci. Phila., XXIX, 1877, 49 (*Hadropterus shumardi* Girard).

2211. Imostoma shumardi (Girard). *Shumard's darter.*
Michigan, Ohio, Indiana, and Illinois southward to Kentucky and Arkansas.
Hadropterus shumardi Girard, Proc. Acad. Nat. Sci. Phila., XI, 1859, 100, Arkansas River near Fort Smith, Ark.
Etheostoma wrighti McCormick, Bull. Oberlin College Lab., No. 2, 1891, 30, near Oberlin, Ohio.

2212. Imostoma gilberti (Evermann and Thoburn). *Gilbert's darter.*
Clinch River, Tenn.
Ulocentra gilberti Evermann and Thoburn in Jordan and Evermann, Fishes North and Mid. Amer., 1896, 1049, Clinch River at Walker's ford near Tazewell, Tenn.

2213. Imostoma meadiæ (Jordan and Evermann). *Meadie's darter.*
Indian Creek, Powell River basin, eastern Tennessee.
Ulocentra meadiæ Jordan and Evermann, Fishes North and Mid. Amer., Nov. 26, 1898, 2852, Indian Creek, Cumberland Gap, Tenn.

2214. Imostoma longimane (Jordan).
Basin of James River, Va.
Etheostoma longimana Jordan, Proc. Acad. Nat. Sci. Phila., XL, 1888, 179, tributary of James River, Va.

2215. Imostoma cheneyi (Evermann and Kendall). *Cheney's darter.*
Racket River near Norfolk, St. Lawrence County, N. Y.
Cottogaster cheneyi Evermann and Kendall, Bull. U. S. Fish Com., XVII, 1897 (Feb. 9, 1898), 129, pl. 8, fig. 8, Racket River, near Norfolk, N. Y.

2216. Imostoma podostemone (Jordan and Jenkins).
Roanoke River Basin, Va.
Etheostoma podostemone Jordan and Jenkins, Proc. U. S. Nat. Mus., XI, 1888, 359, Roanoke River, at Roanoke, Salem, and Allegheny Springs, Va.

Genus 760. ETHEOSTOMA Rafinesque.
Etheostoma Rafinesque, Jour. Phys., etc., 1819, 419 (*E. blennioides* Rafinesque, as restricted by code).
Diplesion Rafinesque, Ichth. Ohiensis, 1820, 37 (*Etheostoma blennioides* Rafinesque).
Hyostoma Agassiz, Amer. Jour. Sci., XVII, 1854, 305 (*H. newmani* Agassiz = *Etheostoma blennioides* Rafinesque).

2217. Ethoestoma blennioides Rafinesque. *Green-sided darter.*
New York to South Dakota and Kansas, south to lower Alabama Basin; a beautiful fish.
Etheostoma blennioides Rafinesque, Jour. de Physique, LXXXVIII, 1819, 419, Ohio River.
Hyostoma newmani Agassiz, Amer. Jour. Sci. and Arts, X, VII, 1854, 305, vicinity of Huntsville, Ala.
Pileoma cymatogramma Abbott, Proc. Acad. Nat. Sci. Phila., XII, 1860, 327, no locality.
Hyostoma blennioperca Cope, Jour. Acad. Nat. Sci. Phila., VI, 1868, 215, tributaries of Kanawha and Holston Rivers.

Genus 761. ULOCENTRA Jordan.
Ulocentra Jordan, Man. Vertebrates, ed. 2, 1878, 223 (*Arlina atripinnis* Jordan = *Hyostoma simoterum* Cope).

2218. Ulocentra simotera (Cope).
West Virginia, eastern Kentucky, and Tennessee, in the basins of the Green, Cumberland, and Tennessee Rivers, southward through Alabama to the Escambia River.
Hyostoma simoterum Cope, Jour. Acad. Nat. Sci. Phila., VI, 1868, 215, Holston River and its tributaries, near Nashville, Tenn.
Arlina atripinnis Jordan, Bull. U. S. Nat. Mus., X, 1877, 10, tributary of Cumberland River near Nashville, Tenn.
?*Etheostoma duryi* Henshall, Jour. Cincinnati Soc. Hist., 1889, 32, tributary of Tennessee River.

2219. Ulocentra histrio (Jordan and Gilbert).
Southern Indiana, southwestward to Arkansas; known from the lower Wabash and tributaries; also from Green River, Ky., and Black, Poteau, and Washita Rivers, Ark.
Etheostoma (*Ulocentra*) *histrio* Jordan and Gilbert, Proc. U. S. Nat. Mus., X, 1887, 47, Poteau River near Hackett City, Ark.; Saline River at Benton, and Washita River at Arkadelphia, Ark.

2220. Ulocentra blennius (Gilbert and Swain).
Northern Alabama, in streams tributary to the Tennessee River.
Etheostoma (*Rhothœca*) *blennius* Gilbert and Swain, Proc. U. S. Nat. Mus., X, 1887, 55, Cox Creek and Shoal Creek, tributary to Tennessee River, Florence, Ala.

2221. Ulocentra verecunda (Jordan and Evermann).
Tributaries of Holston River, Va.; rare.
Etheostoma verecundum Jordan and Evermann, Proc. U. S. Nat. Mus., XI, 1888, 360, Pl. XLV, fig. 12, Middle Fork of the Holston River, about 5 miles south of Glade Spring, Va.

2222. Ulocentra phlox (Cope).
Trinity River, Tex.
Boleosoma phlox Cope, Bull. U. S. Nat. Mus., XVII, 1880, 30, Trinity River at Fort Worth, Tex.

2223. Ulocentra stigmæa (Jordan). *Speck.*
Tennessee and Arkansas to Georgia and Louisiana.
Boleosoma stigmæum Jordan, Ann. Lyc. Nat. Hist. N. Y., XI, 1876 (1877), 311, small tributaries of Etowah and Oostanaula Rivers near Rome, Ga.
Pœcilichthys saxatilis Hay, Proc. U. S. Nat. Mus., III, 1880, 495, stream at Enterprise, Miss.

Genus 762. BOLEOSOMA DeKay. *Tessellated darters.*
Boleosoma DeKay, New York Fauna: Fishes, 1842, 20 (*B. tessellatum* DeKay = *Etheostoma olmstedi* Storer).
Arlina Girard, Proc. Acad. Nat. Sci. Phila., 1859, 64 (*A. effulgens* Girard).
Estrella Girard, loc. cit., 65 (*E. atromaculata* Girard).

2224. Boleosoma olmstedi (Storer). *Tessellated darter; Grand Oranchee darter; Sand darter.*
Lake Ontario to Massachusetts and south to North Carolina, east of the Alleghenies.
Etheostoma olmstedi Storer, Jour., Bost. Soc. Nat. Hist., IV, 1842, 61, pl. 5, fig. 2, Hartford, Conn.
Perca minima Haldeman, Jour. Acad. Nat. Sci. Phila., VIII, 1842, 330, Susquehanna River.
Boleosoma tassellatum DeKay, New York Fauna: Fishes, 1842, 20, pl. 20, fig. 57; New York fresh-water streams.
Estrella atromaculata Girard, Proc. Acad. Nat. Sci. Phila., XI, 1859, 66, Potomac River, vicinity of Washington, D. C.
?*Boleosoma æsopus* Cope, Proc. Amer. Phil. Soc., XI, 1870, 270, Loyalsoc Creek, Pa.

2225. Boleosoma nigrum (Rafinesque). *Johnny darter; Blind simon.*
Eastern United States, Ohio Valley, Great Lakes region, and upper Mississippi, west to Colorado and north to Manitoba.
Etheostoma nigra Rafinesque, Ichth. Ohiensis, 1820, 37, Green River, Ky.
Boleosoma maculatum Agassiz, Lake Superior, 1850, 305, Lake Superior.
Boleosoma olmstedi brevipinnis Cope, Jour. Acad. Nat. Sci. Phila., VI, 1868, 214, Kiskiminitas River, Pa.
Pœcilichthys beani Jordan, Proc. U. S. Nat. Mus., VII, 1884, 479, Tabo Creek, Mo.

2226. Boleosoma effulgens (Girard). *Tassellated darter.*
Maryland to North Carolina.
Arlina effulgens Girard, Proc. Acad. Nat. Sci. Phila., XI, 1859, 65, brooks and streams flowing into Potomac River.

2227. Boleosoma mesæum (Cope).
Platte River near Fort Kearney, Nebr.
Pœcilichthys mesæus Cope, Proc. Acad. Nat. Sci. Phila., XVI, 1864, 232, Platte River near Fort Kearney, Nebr.

2228. Boleosoma maculaticeps Cope.
Upper waters of Catawba River, N. C.
Boleosoma maculaticeps Cope, Proc. Amer. Phil. Soc., XI, 1870, 269, upper waters of Catawba River, N. C.

2229. Boleosoma vexillare Jordan.
Tributaries of the James, Roanoke, and Rappahannock Rivers.
Boleosoma vexillare Jordan, Proc. U. S. Nat. Mus., II, 1879, 235, Rappahannock River at Warrenton, Va.

2230. Boleosoma susanæ Jordan and Swain. *Susan's darter.*
Basin of upper Cumberland River, Ky.
Boleosoma susanæ Jordan and Swain, Proc. U. S. Nat. Mus., VI., 1883, 249, Wolf Creek and other tributaries of the Clear Fork of Cumberland River near Pleasant View, Whitley County, Ky.

Genus 763. VAILLANTIA Jordan.
Vaillantia Jordan, Bull. U. S. Nat. Mus., XII, 1878, 89 (*Boleosoma camurum* Forbes).

2231. Vaillantia camura (Forbes).
Indiana to Iowa and Mississippi, southwest to Houston, Tex.
Boleosoma camurum Forbes, Bull. Ill. Lab. Nat. Hist., I, 1878, 40, Cache River and Clear Creek, Union County, Johnston County, and Pekin, Ill.; name preoccupied in *Nothonotus* but not in *Boleosoma* or *Vaillantia*,
Vaillantia chlorosoma Hay, Proc. U. S. Nat. Mus., III, 1880, 495, Mississippi.

Genus 764. CRYSTALLARIA Jordan and Gilbert.
Crystallaria Jordan and Gilbert, in Jordan, Cat. Fishes N. Amer., 1885, 78 (*Pleurolepis asprellus* Jordan).

2232. Crystallaria asprella (Jordan).
Southern Indiana and Illinois to Arkansas and Alabama, chiefly in the larger, clearer streams. Recorded from Ohio River at Rising Sun, Ind.; Wabash River at New Harmony, Vincennes, and Terre Haute; Green River, Ky.; Choccolo Creek, Ala.; and Washita River, Ark.; besides the original locality in Illinois.
Pleurolepis asprellus Jordan, Bull. Ill. Lab. Nat. Hist., I, 1878, No. 2, 38, 1878, rocky tributary of Mississippi River in Hancock County, Ill.

Genus 765. VIGIL Jordan.
Pleurolepis (Agassiz) Putnam, Bull. Mus. Comp. Zool., I, 1863, 5 (*Etheostoma pellucidum* (Baird) Agassiz; name preoccupied by Egerton for a genus of fossil fishes.
Vigil Jordan, Proc. Acad. Nat. Sci. Phila., LXX, 1918 (1919), 344 (*Pleurolepis pellucidus* Agassiz).

2233. Vigil pellucidus (Baird). *Sand darter.*
Lake Erie to Minnesota, Kentucky, and Texas.
Pleurolepis pellucidus Baird, in Agassiz, Bull. Mus. Comp. Zool., I, 1863, 5, no locality; the specimens from Black River, Ohio, the types of *Etheostoma pellucidum* Baird (MS., 1853).

2234. Vigil clarus (Jordan and Meek).
Mississippi Valley; Wabash River, west to central Iowa and Minnesota, and south to Arkansas and northern Texas.
Ammocrypta clara Jordan and Meek, Proc. U. S. Nat. Mus., VIII, 1885, 8, Des Moines River, Ottumwa, Iowa.

2235. Vigil vivax (Hay).
Mississippi and northwest through Arkansas and south to Texas.
Ammocrypta vivax Hay, Bull. U. S. Fish Com., II, 1882, (1883), 58, Pearl River, Jackson, Miss.

Genus 766. IOA Jordan and Brayton.
Ioa Jordan and Brayton, Bull. U. S. Nat. Mus., XII, 1878, 88 (*Pœcilichthys vitreus* Cope).

2236. Ioa vitrea (Cope).
Southeastern Virginia and western North Carolina.
Pœcilichthys vitreus Cope, Proc. Amer. Phil. Soc. Phila., XI, 1870, 263, Walnut Creek, a tributary of Neuse River, Wake County, N. C.

2237. Ioa vigil Hay.
Pearl River, Jackson, Miss.
Ioa vigil Hay, Bull. U. S. Fish Com., II, 1882 (1883), 59, Pearl River, Jackson, Miss.

Genus 767. AMMOCRYPTA Jordan. *Sand darters.*
Ammocrypta Jordan, Bull. U. S. Nat. Mus., X, 1877, 5 (*A. beanii* Jordan).

2238. Ammocrypta beanii Jordan.
Gulf States, Alabama to Louisiana.
Ammocrypta beanii Jordan, Bull. U. S. Nat. Mus., X, 1877, 5, Notalbany River, Tickfaw, La.
Ammocrypta gelida Hay, Proc. U. S. Nat. Mus., III, 1880, 490, Enterprise, Miss.

Genus 768. PŒCILICHTHYS Agassiz.
Pœcilosoma Agassiz, Lake Superior, 1850, 299 (*Etheostoma variata* Kirtland); name preoccupied.
Pœcilichthys Agassiz, Amer. Jour. Sci. Arts, XVII, 1854, 305 (*Etheostoma variata* Kirtland).

2239. Pœcilichthys variatus (Kirtland).
Ohio River Basin, from western Pennsylvania to Kentucky; scarce. Long confused with *Oligocephalus cæruleus*.
Etheostoma variata Kirtland, Zoology of Ohio, 1838, 168, 192, Mahoning River, Ohio.
Hadropterus tessellatus Jordan, Bull. U. S. Nat. Mus., X, 1877, 7, Allegheny River, Foxburg, Pa.

Genus 769. NANOSTOMA Putnam.
Nanostoma Putnam, in Jordan, Bull. U. S. Nat. Mus., X, 1877, 6 (*Pœcilichthys zonalis* Cope); not *Nannostomus* Günther).
Rhothœca Jordan, Rept. U. S. Fish Com., XIII, 1885 (1887), 868, p. 80 of reprint issued 1885; substitute for *Nanostoma* Putnam, regarded as preoccupied by *Nannostomus* Günther.

2240. Nanostoma zonale (Cope). *Banded darter.*
Mississippi Valley from Ohio and northern Indiana (Kankakee River) west through Iowa and south through Kentucky and Tennessee into Alabama, Louisiana, and Arkansas.
Pœcilichthys zonalis Cope, Jour. Acad. Nat. Sci. Phila., VI, 1868, 212, Holston River, Va.
Nanostoma vinctipes Jordan, Proc. U. S. Nat. Mus., II, 1879, 236, tributary of Illinois River at Naperville, Ill.

2241. Nanostoma arcansanum (Jordan and Gilbert).
Ozark region of Missouri and Arkansas.
Etheostoma zonale arcansanum Jordan and Gilbert, Proc. U. S. Nat. Mus., IX, 1886, 5, Spring River, Carthage, Mo.; James River, Marshfield, Mo.; Poteau River, Hackett City, Ark.; Washita River, Arkadelphia, Ark., and Saline River, Benton, Ark.

2242. Nanostoma swannanoa (Jordan and Evermann).
Upper waters of the Tennessee River.
Etheostoma swannanoa Jordan and Evermann, Proc. U. S. Nat. Mus., XI, 1888, 360, Pl. XLV, fig. 13, South Fork of Holston River, Holstein Mills, Va.; Middle Fork of Holston River, Marion, Va. and South Fork of Swannanoa River, Black Mountain, N. C.

2243. Nanostoma elegans (Hay).
Chickasawha River, Miss.
Nanostoma elegans Hay, Proc. U. S. Nat. Mus., III, 1880, 493, shallow rocky branch of Chickasawha River, Enterprise, Miss.

2244. Nanostoma thalassinum (Jordan and Brayton).
Santee River Basin in North and South Carolina.
Nothonotus thalassinus Jordan and Brayton, Bull. U. S. Nat. Mus., XII, 1878, 13, Reedy River, Greenville, S. C.; Catawba River and tributaries in North Carolina; Ennoree River, Chick Springs, S. C.; and Saluda River, Farr's Mill, S. C.

2245. Nanostoma inscriptum (Jordan and Brayton).
Oconee River, Ga.
Nothonotus inscriptus Jordan and Brayton, Bull. U. S. Nat. Mus., XII, 1878, 34, Oconee River, Sulphur Springs, Hall County, Ga.

2246. Nanostoma rupestre (Gilbert and Swain).
North River, a tributary of Black Warrior River, Ala.
Etheostoma (*Rhothœca*) *rupestre* Gilbert and Swain, Proc. U. S. Nat. Mus., X, 1887, 57, North River near Tuscaloosa, Ala.

Genus 770. NOTHONOTUS Agassiz.
Nothonotus Agassiz, Bull. Mus. Comp. Zool., I, 1863, 3 (*Etheostoma maculata* Kirtland).

2247. Nothonotus maculatus Kirtland.
Ohio and Indiana, southward through Kentucky and Tennessee to northern Alabama, in tributaries of the Wabash, Ohio, Cumberland, and Tennessee Rivers.
Etheostoma maculata Kirtland, Jour. Bost. Soc. Nat. Hist., 1840, 276, Mahoning River, Ohio.
Pœcilichthys sanguifluus Cope, Proc. Amer. Phil. Soc. Phila., XI, 1870, 264, headwaters of the South Fork of the Cumberland River in Tennessee.

2248. Nothonotus camurus (Cope). *Blue-breasted darter.*
Lake Erie to Tennessee, in clear, swift waters; not common; the most brilliantly colored of fresh-water fishes.
Pœcilichthys camurus Cope, Proc. Amer Phil. Soc. Phila., XI, 1870, 265, headwaters of Cumberland River in Tennessee.

2249. Nothonotus vulneratus (Cope).
French Broad River.
Pœcilichthys vulneratus Cope, Proc. Amer. Phil. Soc. Phila., XI, 1870, 266, tributary of French Broad River, Warm Springs, N. C.

2250. Nothonotus cinereus (Storer).
Tennessee and Cumberland Rivers; Tennessee River at Florence, Ala.; Obeys River at Olympus, Tenn.; Rock Creek near Whitley Station, Ky.
Etheostoma cinerea Storer, Proc. Bost. Soc. Nat. Hist., II, 1845, 49, Florence, Ala.

2251. Nothonotus tessellatus (Storer). *Tessellated darter.*
Florence, Ala.
Etheostoma tessellata Storer, Proc., Bost. Soc. Nat. Hist., II, 1845, 48, Tennessee River at Florence, Ala. (Not *Boleosoma tessellatum* DeKay).

2252. Nothonotus rufilineatus (Cope).
Upper tributaries of the Tennessee, Cumberland, and Green Rivers.
Pœcilichthys rufilineatus Cope, Proc. Amer. Phil. Soc., XI, 1870, 267, Warm Springs Creek, French Broad River, Madison County, N. C.

2253. Nothonotus jordani (Gilbert). *Jordan's darter.*
Tributaries of Coosa River in the Alabama River Basin.
Etheostoma (*Nothonotus*) *jordani* Gilbert, Bull. U. S. Fish Com., I, 1889 (1891), 156, pl. 43, fig. 3, Choccolo Creek, Oxford, Ala., and Chestnut Creek, Verbena, Ala.

Genus 771. RAFINESQUIELLUS Jordan and Evermann.
Aplesion Girard, Proc. Acad. Nat. Sci. Phila., XI, 1859, 102 (*A. pottsii* Girard); not of Rafinesque.
Rafinesquiellus Jordan and Evermann, Fishes North and Mid. Amer., 1896, 1082 (*Aplesion pottsii* Girard).

2254. Rafinesquiellus pottsii (Girard).
Streams of Chihuahua, Mexico, in Rio Grande Basin.
Aplesion pottsii (misprinted *potsii*) Girard, Proc. Acad. Nat. Sci. Phila., XI, 1859, 102, tributaries of Chihuahua River, Mexico.
Etheostoma micropterus Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 289, Chihuahua, Mexico.

Genus 772. OLIGOCEPHALUS Girard.
Oligocephalus Girard, Proc. Acad. Nat. Sci. Phila., XI, 1859, 67 (*Boleosoma lepida* Baird and Girard).

2255. Oligocephalus cæruleus (Storer). *Blue darter; Rainbow darter; Soldierfish; Blue johnny.*
Upper Mississippi Valley, from Kentucky to Michigan and east to New York.
Etheostoma cærulea Storer, Proc. Bost. Soc. Nat. Hist., II, 1845, 47, Fox River, Ill.
Pœcilosoma erythrogastrum Kirtland, Cleveland Annals Sci., 1854, 4, near Cleveland, Ohio.
Pœcilichthys versicolor Agassiz, Amer. Jour. Sci. Arts, 1854, 304, Quincy, Ill.
Pœcilichthys spectabilis Agassiz, Amer. Jour. Sci. Arts, 1854, 304, Osage River, Mo.
Pœcilosoma transversum Abbott, Proc. Acad. Nat. Sci. Phila., XII, 1860, 326, Lake Superior.

2256. Oligocephalus lepidus (Baird and Girard).
Streams of Arkansas, Texas, and Chihuahua; perhaps more than one species included.
Boleosoma lepida Baird and Girard, Proc. Acad. Nat. Sci. Phila., VI, 1853, 388, upper tributaries of the Rio Nueces, Tex.
Oligocephalus grahami Girard, loc. cit., XI, 1859, 102, Devil River, Tex.
Oligocephalus leonensis Girard, loc. cit., 102, Leon River, Tex.
Oligocephalus pulchellus Girard, loc. cit., 102, Gypsum Creek, a tributary to the Canadian River.

2257. Oligocephalus fricksia (Hildebrand).
Tributaries of Savannah River.
Etheostoma fricksia Hildebrand, Bull. U. S. Bur. Fish., XXIX, 1924, 7, Brook near Augusta, Ga.

2258. Oligocephalus iowæ (Jordan and Meek).
Upper Mississippi Valley, from Iowa, Nebraska, and Colorado north to Assiniboia; abundant and widely distributed.
Etheostoma iowæ Jordan and Meek, Proc. U. S. Nat. Mus., VIII, 1885, 10, Chariton River, Chariton, Iowa.
Etheostoma quappella Eigenmann and Eigenmann, Amer. Nat., 1892, 963, Qu'Apelle River, Manitoba.

2259. Oligocephalus aubeenaubei (Evermann). *Aubeenaubee darter.*
Aubeenaubee Creek, an eastern inlet to Lake Maxinkuckee, Ind.
Etheostoma aubeenaubei Evermann, Rept., U. S. Fish Com., XXV, 1899 (1900), 367, Aubeenaubee Creek, Lake Maxinkuckee, Ind.

2260. Oligocephalus hildebrandti (Evermann and Clark).
Fletcher Lake, Fulton Co., Ind.
Etheostoma hildebrandti Evermann and Clark, Proc. Biol. Soc. Wash., XXIII, May 4, 1910, 81–88, fig. 1, Fletcher Lake, Fulton Co., Ind.

2261. Oligocephalus jessiæ (Jordan and Brayton). *Jessie's darter.*
Southern Illinois to Georgia and Mississippi.
Pœcilichthys jessiæ Jordan and Brayton, in Jordan, Man. Vert., ed. 2, 1878, 227; creek near Ringgold, Ga.
Pœcilichthys asprigenis Forbes, Bull. Ill. Lab. Nat. Hist., I, No. 2, 1877, 41, small creek at Pekin, Ill.
Pœcilichthys swaini Jordan, Proc. U. S. Nat. Mus., VII, 1884, 479, tributary of Pearl River, Monticello, Miss.

2262. Oligocephalus luteovinctus (Gilbert and Swain).
Stone River, Tenn.
Etheostoma luteovinctum Gilbert and Swain, Proc. U. S. Nat. Mus., X, 1887, 58, Stone River near Nashville, Tenn.

Genus 773. NIVICOLA Jordan and Evermann.
Nivicola Jordan and Evermann, Fishes North and Mid. Amer., 1896, 1082 (*Pœcilichthys borealis* Jordan).

2263. Nivicola borealis (Jordan). *Northern darter.*
St. Lawrence River at Montreal, Canada, and Muskoka Lakes near Lake Huron.
Pœcilichthys borealis Jordan, Proc. U. S. Nat. Mus., VII, 1884, 477, Montreal, Canada.

2264. Nivicola cragini (Gilbert). *Cragin's darter.*
Western portion of the Arkansas River Basin, from Garden City, Kans., to Canyon City, Colo.
Etheostoma cragini Gilbert, Bull. Washburn Coll. Lab., March and April, 1885, 99, small stream connecting the "Lake" at Garden City, Kans., with Arkansas River.

2265. Nivicola punctulata (Agassiz).
Ozark region of southwestern Missouri.
Pœcilichthys punctulatus Agassiz, Amer. Jour. Sci. Arts, XVII, 1854, 304, Osage River, Mo.

2266. Nivicola pagei (Meek).
Tributary of Neosho River, Arkansas Basin.
Etheostoma pagei Meek, Amer. Nat., 1894, 957, Neosho, Mo.; only two specimens known.

2267. Nivicola artesiæ (Hay).
Georgia to central Texas.
Pœcilichthys artesiæ Hay, Proc. U. S. Nat. Mus., III, 1880, 494, from a small branch of Catawba River, Artesia, Lowndes County, Miss.

2268. Nivicola lepidogenys (Evermann and Kendall).
Rio Comal, Tex.
Etheostoma lepidogenys Evermann and Kendall, Bull. U. S. Fish. Com., XII, 1892 (Feb. 6, 1894), 114, pl. 35, fig. 3, Rio Comal, New Braunfels, Tex.

2269. Nivicola virgata (Jordan).
Tributaries of Cumberland River in western Kentucky.
Pœcilichthys virgatus Jordan, Proc. U. S. Nat. Mus., II, 1879, 236, Rock Castle River, Livingston, Ky.

2270. Nivicola obeyense (Kirsch).
Tributaries of the Cumberland River in Clinton County, Ky.
Etheostoma obeyense Kirsch, Bull. U. S. Fish Com., X, 1890 (1892), 292, with figure; all streams tributary to the Cumberland River in Clinton County, Ky.

2271. Nivicola tippecanoe (Jordan and Evermann).
Tippecanoe River, Ind.
Etheostoma tippecanoe Jordan and Evermann, Proc. U. S. Nat. Mus., XIII, 1890, 3 (with a figure of *Etheostoma camurum* by error of printer), Tippecanoe River, Marshland, Ind.

Genus 774. CLARICOLA Jordan and Evermann.
Claricola Jordan and Evermann, Fishes North and Mid. Amer., 1896, 1093 (*Etheostoma juliæ* Meek).

2272. Claricola juliæ (Meek). *Julia's darter.*
Basin of White River, Mo.
Etheostoma juliæ Meek, Bull. U. S. Fish Com., IX, 1889 (1891), 130, pl. 42, fig. 2, James River, near Springfield, Mo.

2273. Claricola whipplii (Girard). *Whipple's darter.*
Lower Arkansas Basin; locally abundant in clear tributaries of the Saline, Washita, etc.
Boleichthys whipplii Girard, Proc. Acad. Nat. Sci. Phila., XI, 1859, 103, Coal Creek, Ark.

2274. Claricola alabamæ (Gilbert and Swain). *Alabama darter.*
Black Warrior and Big Catawba Rivers, Ala.
Etheostoma whipplei alabamæ Gilbert and Swain, Proc. U. S. Nat. Mus., X, 1887, 62, Black Warrior River near Morris and Tuscaloosa, Ala.

2275. Claricola squamiceps (Jordan).
Lower Wabash Valley, Ind., through western Kentucky and Tennessee to Georgia and western Florida. A peculiar species resembling *Catonotus;* perhaps not a *Claricola.*
Etheostoma squamiceps Jordan, Bull. U. S. Nat. Mus., X, 1877, 11, Russellville, Ky.
Etheostoma parvipinne Gilbert and Swain, Proc. U. S. Nat. Mus., X, 1887, 59, small spring branch, tributary to Black Warrior River, Tuscaloosa, Ala.

Genus 775. CATONOTUS Agassiz. *Fantail darters.*
Catonotus Agassiz, Amer. Jour. Sci. Arts, XVII, 1854, 305 (*C. lineolatus* Agassiz).
Etheostoma Rafinesque, as restricted by Cope and Jordan.
Richia Coker, Bull. U. S. Bur. Fish., XLII, 1926, 105, 106; *R. brevispina* Coker, preoccupied by *Richia*, a genus of moths.
Richiella Coker, Copeia, No. 162, March, 1927, 17, substitute for *Richia*, preoccupied.

2276. Catonotus flabellaris (Rafinesque). *Fan-tailed darter.*
New York to Virginia, west to Iowa and south to South Carolina and northern Alabama.
Etheostoma flabellaris Rafinesque, Jour. de Physique, LXXXVIII, 1819, 419, tributaries of Ohio River.
Etheostoma flabellata Rafinesque, Ichth. Ohiensis, 1820, 36, Ohio River.
Etheostoma fontinalis Rafinesque, loc. cit., 85, Ohio River.
Etheostoma linsleyi Storer, Proc. Bost. Soc. Nat. Hist., IV, 1851, 37, Wolcott, Wayne County, N. Y.
Oligocephalus humeralis Girard, Proc. Acad. Nat. Sci. Phila., XI, 1859, 67, James River, Va.
Catonotus fasciatus Girard, loc. cit., 68, Madrid, N. Y., and Grass River.
Catonotus kennicotti Putnam, Bull. Mus. Comp. Zool., I, 1863, 3, southern Illinois.
Richia brevispina Coker, Bull. U. S. Bur. Fish., XLII, March, 1927, 106, fig. 1, Paddys Creek, N. C.

2277. Catonotus flabellare lineolatum (Agassiz).
Minnesota to northern Indiana and northern Missouri.
Catonotus lineolatus Agassiz, Amer. Jour. Sci. Arts, XVII, 1854, 305, small creek near Quincy, Ill.

2278. Catonotus flabellare cumberlandicum (Jordan and Swain). *Cumberland darter.*
Brooks in Cumberland Mountains tributary to Cumberland River.
Etheostoma cumberlandicum Jordan and Swain, Proc., U. S. Nat. Mus., VI, 1883, 251, small streams of the Cumberland Mountains; Wolf Creek and Briar Creek near Pleasant View, Whitley County, Ky.

Genus 776. TORRENTARIA Jordan and Evermann.
Torrentaria Jordan and Evermann, Fishes North and Mid. Amer., 1896, 1080 (*Etheostoma sagitta* Jordan and Swain).

2279. Torrentaria sagitta (Jordan and Swain).
Cumberland River.
Pœcilichthys sagitta Jordan and Swain, Proc. U. S. Nat. Mus., VI, 1883, 250, Wolf Creek, near Pleasant View, Whitley County, Ky.

2280. Torrentaria fasciata (Girard).
Chihuahua River, Mexico, in Rio Grande Basin.
Diplesion fasciatus Girard, Proc. Acad. Nat. Sci. Phila., XI, 1859, 101, Chihuahua River, Mexico; the name preoccupied in *Etheostoma*, not in *Torrentaria*.
Etheostoma australe Jordan, Proc. U. S. Nat. Mus., XI, 1888, 362, Chihuahua River, Mexico; based on the types of *Diplesion fasciatus* Girard.
Etheostoma scovellii Woolman, Amer. Nat., March, 1892, 260, Rio de las Conchas, Chihuahua, Mexico.

Genus 777. PSYCHROMASTER Jordan and Evermann.
Psychromaster Jordan and Evermann, Fishes North and Mid. Amer., 1896, 1099 (*Etheostoma tuscumbia* Gilbert and Swain).

2281. Psychromaster tuscumbia (Gilbert and Swain). *Tuscumbia darter.*
Tennessee River Basin in northern Alabama.
Etheostoma tuscumbia Gilbert and Swain, Proc. U. S. Nat. Mus., X, 1887, 63, stream flowing from the large spring at Tuscumbia, Ala.

Genus 778. BOLEICHTHYS Girard.
Boleichthys Girard, Proc. Acad. Nat. Sci. Phila., XI, 1859, 103 (*Boleichthys exilis* Girard).

2282. Boleichthys fusiformis (Girard). *Fusiform darter.*
Massachusetts and south in coastwise streams.
Boleosoma fusiforme Girard, Proc. Bost. Soc. Nat. Hist., IV, 1854, 41, Charles River, Mass.
Hololepis erochrous Cope, Proc. Acad. Nat. Sci. Phila., XVI, 1864, 233, Brown's Mill, N. J., opposite Philadelphia.

2283. Boleichthys gracilis (Girard). *Crimson darter.*
Southern Indiana to Georgia and Texas; perhaps more than one species included; perhaps varying into the preceding.
Boleosoma gracile Girard, Proc. Acad. Nat. Sci. Phila., XI, 1859, 103, Rio Seco and Leona River, Tex.
Pœcilichthys butlerianus Hay, Bull. U. S. Fish Com., II, 1882, 61, Big Black River near Vaughns station, Yazoo County, Miss.
Pœcilichthys palustris Gilbert, Proc. U. S. Nat. Mus., VII, 1884, 209, Switz City Swamp, Greene County, Ind.

2284. Boleichthys eos (Jordan and Copeland).
New York to Minnesota.
Boleichthys eos Jordan and Copeland, Proc. Acad. Nat. Sci. Phila., XXIX, 1877, 46, Wisconsin and Rock Rivers, Wis.; Fox River, Ill.; northern Indiana.

2285. Boleichthys exilis Girard.
Upper Missouri River Basin and Red River of the North.
Boleichthys exilis Girard, Proc. Acad. Nat. Sci. Phila., XI, 1859, 103, Little Muddy River, a tributary of the upper Missouri.
Boleichthys warreni Girard, loc. cit., 104, Cannonball River.

Genus 779. HOLOLEPIS Agassiz.
Hololepis Agassiz, in Putnam, Bull. Mus. Comp. Zool., I, 1863, 4 (*Etheostoma barrati* Holbrook).
Copelandellus Jordan and Evermann, Fishes North and Mid. Amer., 1896, 1100 (*Pœcilichthys quiescens* Jordan).

2286. Hololepis barratti Holbrook.
Swamps and streams of the lowlands from Virginia to Florida; known from Blackwater River, Zuni, Va.; Allapaha River, Nashville, Ga.; and various streams in Florida and South Carolina.
Hololepis barratti Holbrook, Jour. Acad. Nat. Sci. Phila., III, 1855, 56, South Carolina.
Pœcilichthys quiescens Jordan, Proc. U. S. Nat. Mus., VII, 1884, 478, tributary of Allaphaha River, Nashville, Ga.

Genus 780. MICROPERCA Putnam.
Microperca Putnam, Bull. Mus. Comp. Zool., I, 1863, 4 (*M. punctulata* Putnam).

2287. Microperca punctulata Putnam. *Least darter.*
Northwestern States; Indiana, Michigan, and Minnesota, south to Arkansas; rare outside of tributaries of the Great Lakes.
Microperca punctulata Putnam, Bull. Mus. Comp. Zool., I, 1863, 4, various points in Michigan, Wisconsin, Illinois, and Alabama; those from Alabama probably *M. prœliaris* (Hay); name preoccupied in *Etheostoma*.
Etheostoma microperca Jordan and Gilbert, in Jordan's Man. Vert., ed. V, 1888, 134, lakes of Laporte County, Ind.; substitute name.

2288. Microperca prœliaris Hay.
Alabama and Mississippi, in lowland streams and ponds.
Microperca prœliaris Hay, Proc. U. S. Nat. Mus., III, 1880, 496, small branch of the Tuscumbia River at Corinth, Miss.

Genus 781. ALVARIUS Girard.
Alvarius Girard, Proc. Acad. Nat. Sci. Phila., XI, 1859, 101 (*A. lateralis* Girard).
This genus differs from *Microperca* in having but one anal spine. The fins are short and low and the scales in the type are said to be small.

2289. Alvarius lateralis Girard.
Rio Grande about Brazos Santiago, Tex.
Alvarius lateralis Girard, Proc. Acad. Nat. Sci. Phila., XI, 1859, 101, mouth of Rio Grande.

2290. Alvarius fonticola Jordan and Gilbert.
Arkansas and Texas, in clear rocky streams; known only from Washita River at Arkadelphia; San Marcos River at San Marcos, Tex.; Comal Creek at New Braunfels, Tex.
Alvarius fonticola Jordan and Gilbert, Proc. U. S. Nat. Mus., IX, 1886, 23, San Marcos Spring at San Marcos, Tex.

Family 187. APOGONIDÆ. Cardinal fishes

Genus 782. APOGON Lacépède.
Amia Gronow, Zoophyl., 1763, 80 (*Apogon moluccensis* Cuvier and Valenciennes); not *Amia* L., nonbinomial.
Apogon Lacépède, Hist. Nat. Poiss., III, 1802, 411 (*A. ruber* Lacépède= *Mullus imberbis* L.).
Ostorhinchus Lacépède, loc. cit., IV, 1803, 23 (*O. fleurieu* Lacépède).
Dipterodon Lacépède, loc. cit., 165 (*D. hexacanthus* Lacépède).
Macrolepis Rafinesque, Analyse de la Nat., 1815, 86; a bare name, no type.
Monoprion Poey, Memorias, II, 1861, 123 (*M. maculatus* Poey).

2291. Apogon imberbis (Linnæus). *King of the mullets; Alfoncino; Fucinita.*
Mediterranean and neighboring waters; one from Newport, R. I., and one from the island of Fernando de Noronha.
Mullus imberbis Linnæus, Syst. Nat., ed. X, 1758, 300, Malta; after Artedi.
Apogon ruber Lacépède, Hist. Nat. Poiss., III, 1802, 411, Malta.
Perca pusilla De la Roche, Ann. Mus. Nat. Hist., XIII, 1809, 318, Nice.
Apogon rex-mullorum Cuvier and Valenciennes, Hist. Nat. Poiss., II, 1828, 105 (143), Marseilles, Nice, Genoa, Naples, Palermo.

2292. Apogon maculatus (Poey).
Pensacola to Bahia; recorded from as far north as Woods Hole; common on the "snapper banks"; often found in the stomachs of snappers and groupers.
Monoprion maculatus Poey, Memorias, II, 1861, 123, Cuba.

2293. Apogon pigmentarius (Poey).
Cuba; common at Habana.
Monoprion pigmentarius Poey, Memorias, II, 1861, 123, Cuba.

2294. Apogon sellicauda Evermann and Marsh.
West Indies; Tortugas Archipelago; Porto Rico.
Apogon sellicauda Evermann and Marsh, Fish. Porto Rico, Bull. U. S. Fish Com., XX, 1900, 143, fig. 40, Culebra Island, Porto Rico.

2295. Apogon americanus Castelnau.
Brazil, north to the Tortugas.
Apogon americanum Castelnau, Anim. Amer. Sud, Poiss., 1855, 3, pl. III, fig. 2, Bahia.

2296. Apogon binotatus (Poey).
Cuba.
Amia binotata Poey, Repertorio, 1867, 234, Cuba.

2297. Apogon retrosella (Gill). *Cardenal.*
Pacific coast of Mexico.
Amia retrosella Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 251, Cape San Lucas.

2298. Apogon dovii Günther.
Mazatlan to Panama.
Apogon dovii Günther, Proc. Zool. Soc. Lond., 1861, 371, Panama.

2299. Apogon atricaudus (Jordan and McGregor).
Offshore islands, Pacific coast of Mexico.
Apogon atricaudus Jordan and McGregor, Rept. U. S. Fish Com., XXIV, 1898, 277, and in Jordan and Evermann, Fish. North and Mid. Amer., 1898, 2853, Socorro, Clarion, and San Benedicto islands.

2300. Apogon atrodorsatus Heller and Snodgrass.
Galapagos Islands.
Apogon atrodorsatus Heller and Snodgrass, Proc. Wash. Acad. Sci., V, 1903, 192, Pl. III, Charles Island.

2301. Apogon guadalupensis (Osburn and Nichols).
Guadalupe Island, off Lower California.
Amia guadalupensis Osburn and Nichols, Bull. Amer. Mus. Nat. Hist., XXXV, 1916, 160, fig. 9, Guadalupe Island.

Genus 783. APOGONICHTHYS Bleeker.
Apogonichthys Bleeker, Naturkundig Tijd. Nederl.-Indie, Floris, VI, 1854, 321 (*A. perdix* Bleeker).

2302. Apogonichthys alutus (Jordan and Gilbert).
Snapper banks off Pensacola and Tampa, Fla.; and at Porto Rico.
Apogon alutus Jordan and Gilbert, Proc. U. S. Nat. Mus., V, 1882, 279, and in Synopsis, 1883, 931, snapper banks off Pensacola, Fla.

2303. Apogonichthys puncticulatus Poey.
Cuba; Tortugas.
Apogonichthys puncticulatus Poey, Repertorio, II, 1867, 233, Cuba.

2304. Apogonichthys melampodus Blosser.
St. Croix Island, West Indies.
Apogonichthys melampodus Blosser, Ann. Carnegie Mus., VI, 1909, No. 1, 296, St. Croix.

Genus 784. ASTRAPOGON Fowler.
Astrapogon Fowler, Proc. Acad. Nat. Sci. Phila., LXIII, 1906, 527 (*Apogonichthys stellatus* Cope).

2305. Astrapogon stellatus (Cope).
Bahamas.
Apogonichthys stellatus Cope, Trans. Amer. Phil. Soc., XIII, 1869, 400, Nassau, Bahama Islands.
Apogonichthys strombi Plate, Zool. Anzeiger, XXXIII, 1908, 393, with plate, Bahamas; living symbiodic in shells of *Strombus gigas*.

Genus 785. XYSTRAMIA Jordan.
Xystramia Jordan, Copeia, May 24, 1917, 46 (*Glossamia pandionis* Goode and Bean).

2306. Xystramia pandionis (Goode and Bean).
Deep water off Chesapeake Bay.
Apogon pandionis Goode and Bean, Proc. U. S. Nat. Mus., IV, 1881, 160, deep water off Chesapeake Bay.

Genus 786. EPIGONUS Rafinesque.
Epigonus Rafinesque, Indice, 1810, 64 (*E. macrophthalmus* Rafinesque).
Pomatomus Risso, in Cuvier and Valenciennes, Hist. Nat. Poiss., II, 1828, 171 (*P. telescopium* Risso); not of Lacépède.
Telescops Bleeker, Arch. Néerl. Sci. Nat., XI, 1876, 261 (*Pomatomus telescopium* Risso); substitute for *Pomatomus* Cuvier; not of Lacépède.
Pomatomichthys Giglioli, Espos. Int. d. Pesca, Berlin, 1880, 20 (*P. constanciæ* Giglioli = *Pomatomus telescopium* Risso).

2307. Epigonus occidentalis Goode and Bean.
Deep water off Barbados.
Epigonus occidentalis Goode and Bean, Oceanic Ichth., 1895, 233, off Barbados.

Genus 787. CHEILODIPTERUS Lacépède.
Cheilodipterus Lacépède, Hist. Nat. Poiss., II, 1802, 539; restricted by Cuvier and Valenciennes, 1828, to *C. macrodon* Lacépède.
Clodipterus Rafinesque, Analyse Nat., 1815, 86, substitute for *Cheilodipterus* Lacépède; regarded as too long.
Paramia Bleeker, Neder. Tijdschr. Dierk., I, 1863, 233 (*Cheilodipterus lineatus* Lacépède); substitute for *Cheilodipterus* (Lacépède) Cuvier.

2308. Cheilodipterus affinis Poey.
Cuba; three specimens known.
Cheilodipterus affinis Poey, Ann. Acad. Nat. Sci. N. Y., XI, 1876, 58, Habana.

Family 188. SCOMBROPIDÆ

Genus 788. SPHYRÆNOPS Poey.
Sphyrænops Poey, Memorias, II, 1861, 249 (*S. bairdianus* Poey).

2309. Sphyrænops bairdiana Poey.
Deep water of Cuba; one specimen known.
Sphyrænops bairdianus Poey, Memorias, II, 1861, 350, Cuba.

Genus 789. PARASPHYRÆNOPS Bean.
Parasphyrænops B. A. Bean, Proc. Biol. Soc. Wash., XXV, 1912, 194 (*P. atrimanus* B. A. Bean).

2310. Parasphyrænops atrimanus B. A. Bean.
Bermudas.
Parasphyrænops atrimanus B. A. Bean, Proc. Biol. Soc. Wash., XXV, 1912, 194, Bermudas.

Genus 790. LATEBRUS Poey.
Latebrus Poey, Memorias, II, 1860, 168 (*L. oculatus* Poey).

2311. Latebrus oculatus Poey. *Escolar chino.*
Coast of Cuba; in deep water.
Latebrus oculatus Poey, Memorias, II, 1861, 168, with plate, Cuba.

Genus 791. HYPOCLYDONIA Goode and Bean.
Hypoclydonia Goode and Bean, Oceanic Ichth., 1895, 265 (*H. bella* Goode and Bean).

2312. Hypoclydonia bella Goode and Bean.
Gulf Stream.
Hypoclydonia bella Goode and Bean, Oceanic Ichth., 1895, 236, *Albatross* stations 2314, 2397, 2401, 2417, etc., at depths from 90 to 159 fathoms.

Genus 792. AMIICHTHYS Poey.
Amiichthys Poey, in Jordan, Proc. U. S. Nat. Mus., IX, 1886, 586 (*diapterus* Poey, 1861; only the specific name of this fish being published by Poey).

2313. Amiichthys diapterus Poey.
Coast of Cuba; two specimens known.
——— *diapterus* Poey, Synopsis, 1861, 305, Cuba.

Family 189. CENTRARCHIDÆ. Black basses; Sunfishes and pumpkinseeds

Genus 793. HURO Cuvier and Valenciennes. *Largemouth black bass.*
?*Nemocampsis*[52] Rafinesque, Ichth. Ohiensis, 1820, 30 (*Lepomis flexuolaris* Raf.).
Huro Cuvier and Valenciennes, Hist. Nat., Poiss., II, 1828, 125 (*H. nigricans* Cuvier and Valenciennes = *Cichla floridana* LeSueur).

2314. Huro floridana (LeSueur). *Large-mouthed black bass; Oswego bass; Green bass; Bayou bass; Chub; Trout; Jumper; Welshman; Achigan grand bouche; Achigan noir; Big-mouthed black bass; Black bass of the Huron; Black huron; Bride perch; Cow bass; Dotted paintedtail; Fresh-water trout; Gray bass; Green perch; Green trout; Growler; Huron; Lake bass; Marsh bass; Millpond chub; Moss bass; Mud bass; Paintedtail; Pale river bass; Perch; River bass; Rock bass; Salmon-formed growler; Slough bass; Southern chub; Speckled hen; Spotted bass; Straw bass; Striped bass; White bass; White salmon; White trout; Yellow bass; Yellow pondperch.*
Rivers of the United States from the Great Lakes and Red River of the North to Florida, Texas, and Mexico; west to the Dakotas, Nebraska and Kansas; introduced into lakes and streams of California.
Cichla floridana LeSueur, Jour. Acad. Nat. Sci. Phila., II, 1822, 219, east Florida.
Huro nigricans Cuvier and Valenciennes, Hist. Nat. Poiss., II, 1828, 93 (124), pl. 17, Lake Huron.
Micropterus salmoides of authors; not *Labrus salmoides* Lacépède.

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[52] Except for the phrase "Mouth large," Rafinesque gives no distinctive characters for the young black bass he calls "*Nemocampsis*"; but in *Micropterus* the mouth is decidedly large, though smaller than in *Huro*.

Genus 794. MICROPTERUS Lacépède. *Black bass.*

Micropterus Lacépède, Hist. Nat. Poiss., IV, 325, 1802 (*M. dolomieu* Lacépède).

Calliurus Rafinesque, Jour. de Physique, 1819, 420 (*C. punctulatus* Raf.)

Aplites Rafinesque, Ichth. Ohiensis, 1820, 30 (*Lepomis pallida* Raf.).

?*Nemocampsis* Rafinesque, loc. cit., 30 (*Lepomis flexuolaris* Raf.).

Dioplites Rafinesque, loc. cit., 32 (*Lepomis notata* Raf.).

Aplesion Rafinesque, loc. cit., 36 (*Etheostoma calliura* Raf.).

2315. **Micropterus dolomieu** Lacépède. *Small-mouthed black bass; Achigan noir; Achigan petite bouche; Bass; Bass hogfish; Black bass; Black fresh-water bass; Black perch; Bronze-backer; Brown bass; Brown trout; Dwarf bass; Gold bass; Green bass; Green perch; Green trout; Hog bass; Jumper; Little bass; Minny bass; Mountain trout; Redeye; River bass; Rock bass; Speckled hen; Spotted river bass; Streaked-cheeked river bass; Streaked lead; Swago bass; Swego; Trout bass; Trout perch; White trout; Yellow bass; Yellow perch.*

Lake Champlain to Manitoba and southward on both sides of the mountains to South Carolina and Arkansas.

Micropterus dolomieu Lacépède, Hist. Nat. Poiss., IV, 1802, 325, type locality uncertain, probably South Carolina.

Labrus salmoides Lacépède, loc. cit., IV, 1802, 716, South Carolina.

Bodianus achigan Rafinesque, Amer. Month Mag., II, 1817, 120, New York.

Calliurus punctulatus Rafinesque, Jour. de Physique, 1819, 420, falls of the Ohio River.

Lepomis pallida Rafinesque, Ichth. Ohiensis, 1820, 30, Ohio, Miami, and Hocking Rivers.

Lepomis trifasciata Rafinesque, loc. cit., 31, Ohio River.

?*Lepomis flexuolaris* Rafinesque, loc. cit., 31, Ohio River.

Lepomis salmonea Rafinesque, loc. cit., 32, Kentucky, Green, Licking, and Ohio Rivers.

Lepomis notata Rafinesque, loc. cit., 32, Ohio River.

Etheostoma calliura Rafinesque, loc. cit., 36, Ohio River; Salt River, Ky.

Cichla fasciata LeSueur, Jour., Acad. Nat. Sci. Phila., II, 1822, 216, Lake Erie.

Cichla ohiensis LeSueur, loc. cit., 218, Ohio River.

Cichla minima LeSueur, loc. cit., 220, Lake Erie.

Centrarchus obscurus DeKay, New York Fauna: Fishes, 1842, 30, pl. 17, fig. 48, Onondaga Creek, N. Y.

Dioplites variabilis Vaillant and Bocourt, Miss. Sci. Mex., Poissons, 1875–1883, 142, Wabash River, New Harmony, Ind.

2316. **Micropterus pseudoplites** Hubbs. *Kentucky black bass.*

Southeastern United States from western West Virginia northward to southern Ohio, westward to Kansas and central Texas.

Micropterus pseudaplites Hubbs, Proc. Okla. Acad. Sci., Part I, V, Jan. 1, 1927, 137, nomen nudum.

Micropterus pseudoplites Hubbs, Occ. Papers, Mus. Zool. Univ. Mich. No. 184, June 29, 1927, 8, Pl. I, figs. 2, 3, and 5, Forbush Creek near Mill Springs, Ky.

Genus 795. APOMOTIS Rafinesque.

Apomotis Rafinesque, Jour. de Physique, LXXXVIII, 1819, 420 (*Lepomis cyanellus* Rafinesque).

Telipomis Rafinesque, Ichth. Ohiensis, 1820, 27 (*Lepomis cyanellus* Rafinesque).

Bryttus Cuvier and Valenciennes, Hist. Nat. Poiss., VII, 454, 461 (*B. punctatus* Cuvier and Valenciennes).

2317. **Apomotis cyanellus** (Rafinesque). *Blue-spotted sunfish; Green sunfish; Little red-eye; Blackeyes; Blackeye sunfish; Blue-and-green sunfish; Blue bass; Bluefish; Blue sunfish; Bream; Buffalo sunfish; Perch; Redeye; Sunfish; Blanco perch; Wood bass.*

Great Lakes region to Mexico; very abundant from Ohio southwestward to the Rio Grande.

Lepomis cyanellus Rafinesque, Jour. de Physique, LXXXVIII, 1819, 420, Ohio River.

Icthelis melanops Rafinesque, Ichth. Ohiensis, 1820, 28, Ohio River.

Pomotis longulus Baird and Girard, Proc. Acad. Nat. Sci. Phila., VI, 1853, 391, Otter Creek, Ark.
Calliurus diaphanus Girard, Proc. Acad. Nat. Sci. Phila., IX, 1857, 200, Rio Blanco, Tex.
Calliurus formosus Girard, loc. cit., 1857, 200, Arkansas.
Calliurus microps Girard, loc. cit., 200, Rio Brazos, Tex.
Calliurus murinus Girard, loc. cit., 200, Texas.
Bryttus signifer Girard, loc. cit., 201, Rio Medina, Tex.
Bryttus mineopas Cope, loc. cit., XVII, 1865, 84, Whittlesey Lake, Minneapolis, Minn.

2318. **Apomotis euryorus** (McKay).
Upper Great Lakes region. A form regarded as this occasional in the upper Mississippi.
Lepomis euryorus McKay, Proc. U. S. Nat. Mus., IV, 1881, 89, Lake Huron at Fort Gratiot, Mich. Regarded by Hubbs as a hybrid between *Apomotis cyanellus* and *Eupomotis gibbosus*.

2319. **Apomotis ischyrus** (Jordan and Nelson). *Big-nosed sunfish.*
Upper Mississippi Valley.
Lepiopomus ischyrus Jordan and Nelson, Bull. U. S. Nat. Mus., X, 1877, 25, Illinois River, Ill. Rare; thought by Hubbs to be a hybrid.

2320. **Apomotis phenax** Cope and Jordan. *Deceptive sunfish.*
Streams of New Jersey.
Apomotis phenax Cope and Jordan, Bull. U. S. Nat. Mus., X, 1877, 26, Beaseley's Point, N. J.; locality possibly erroneous; rare; thought to be a hybrid.

2321. **Apomotis punctatus** (Cuvier and Valenciennes). *Bream; Chinquapin perch; Spotted bream.*
South Carolina to Florida.
Bryttus punctatus Cuvier and Valenciennes, Hist Nat. Poiss., VII, 1831, 347 (462), no locality, probably Charleston, S. C.
Bryttus reticulatus Cuvier and Valenciennes, loc. cit., 348 (463), Charleston, S. C.
Lepomis apiatus Cope, Proc. Amer. Phil. Soc., XVII, 1877, 65, Volusia, Fla.

2322. **Apomotis symmetricus** (Forbes)
Mississippi Valley; Illinois to Louisiana and Texas.
Lepomis symmetricus Forbes, in Jordan and Gilbert, Synopsis, 1883, 473, Illinois River, Ill.

Genus 796. LEPOMIS Rafinesque. *Sunfishes.*
Lepomis Rafinesque, Jour. de Physique, LXXXVIII, 1819, 420 (*Labrus auritus* Linnæus).
Pomotis Rafinesque, loc. cit., 420 (*Labrus auritus* Linnæus).
Icthelis Rafinesque, Ichth. Ohiensis, 1820, 27 (*Labrus auritus* Linnæus).

2323. **Lepomis pallidus** (Mitchill).
New York.
Labrus palladus Mitchill, Trans. Lit. and Phil. Soc. N. Y., 1815, 407, New York. Misprint for *pallidus*.
Lepomis appendix Mitchill, Amer. Month. Mag., 1818, 247, New York. An uncertain species, perhaps based on *L. auritus*.

2324. **Lepomis auritus** (Linnæus). *Yellowbelly; Redbreast bream; Sunfish; Tobaccobox; Long-eared sunfish; Sun perch; Bream; Redbreast; Black-eared pondfish; Flatfish; Flounder; Fresh-water sunfish; Kiver; Leather-ear; Leatherwing; Perch; Quiver; Redbelly; Red-bellied bream; Red-bellied robin perch; Red-headed bream; Red perch; Red sunfish; Red-tailed bream; Red-tailed pomotis; Roach; Robin; Robin perch; Yellow perch; River sunfish; Horned-eared sunfish.*
Maine to Virginia; abundant in all streams east of the Alleghenies and south of New York.
Labrus auritus Linnæus, Syst. Nat., Ed. X, 1758, 283, Philadelphia.
Bryttus unicolor Cuvier and Valenciennes, Hist. Nat. Poiss., VII, 1831, 348 (464), Philadelphia and Charleston.
Pomotis rubri-cauda Storer, Jour. Boston Soc. Nat. Hist., IV, 1842, 177, Concord, N. H.
Lepomis ophthalmicus Cope, Jour. Acad. Nat. Sci. Phila., VI, 1868, 223, 224, Roanoke River, Va.

2325. Lepomis mystacalis Cope.
East Florida.
Lepomis mystacalis Cope, Proc. Amer. Phil. Soc., XVII, 1877, 66, east Florida.

2326. Lepomis solis (Cuvier and Valenciennes).
Virginia to Louisiana, in coastwise streams.
Pomotis solis Cuvier and Valenciennes, Hist. Nat. Poiss., 1831, 352 (468), Lake Pontchartrain, La.
Pomotis elongatus Holbrook, Jour. Acad. Nat. Sci. Phila., III, 1855, 47, pl. 5, fig. 1, St. Johns River, Fla.

Genus 797. SCLEROTIS Hubbs.
Sclerotis Hubbs, Proc. Okla. Acad. Sci., Pt. I, VI, Jan. 1, 1927, 138 (*Lepomis miniatus* Jordan).

2327. Sclerotis miniatus (Jordan). *Red perch.*
Mississippi Valley; southern Illinois to Louisiana and Texas.
Lepiopomus miniatus Jordan, Bull. U. S. Nat. Mus., X, 1877, 26, Tangipahoa River.
Lepomis garmani Forbes, Bull. Ill. Lab. Nat. Hist., 1885, 135, Little Fox River at Phillipstown and Wabash River and Drew Pond at Carmi, Ill.

Genus 798. ALLOTIS Hubbs.
Allotis Hubbs, Proc. Okla. Acad. Sci., Pt. I, VI, Jan. 1, 1927, 139 (*Bryttus humilus* Girard).

2328. Allotis humilis (Girard). *Red-spotted sunfish; Bream; Orange-spotted sunfish; Perch; Sunfish.*
Ohio and Kentucky to the Dakotas, Kansas, and Texas; locally abundant, especially in the lower Missouri Basin.
Bryttus humilis Girard, Proc. Acad. Nat. Sci. Phila., IX, 1857, 201, Sugar Loaf Creek, Ark.
Bryttus oculatus Cope, loc. cit., XVII, 1865, 83, Lake Whittlesey, Minn.
Lepomis anagallinus Cope, Jour. Acad. Nat. Sci. Phila., 2d ser., VI, January, 1869, 221, Leavenworth, Kans.

Genus 799. XENOTIS Jordan.
Xenotis Jordan, Proc. Acad. Nat. Sci. Phila., XXIX, 1877, 76 (*Pomotis fallax* Baird and Girard).

2329. Xenotis megalotis (Rafinesque.) *Long-eared sunfish; Big-eared sunfish; Blackears; Black-tailed sunfish; Bloody sunfish; Bream; Brilliant sunfish; Common sunfish; Eared sunfish; Long-scaled sunfish; Perch; Redbellied bream; Redbelly; Red-eyed sunfish; Small green sunfish; Sun perch.*
Michigan to Minnesota, South Carolina, and southward to the Rio Grande.
Icthelis megalotis Rafinesque, Ichth. Ohiensis, 1820, 29, Kentucky, Licking, and Sandy Rivers, Ky.
Pomotis nitida Kirtland, Bost. Jour. Nat. Hist., III, 1840, 472, pl. 28, fig. 1, Mahoning River, Ohio.
Pomotis breviceps Baird and Girard, Proc. Acad. Nat. Sci. Phila., VI, 1853, 390, Otter Creek, Ark.
Pomotis fallax Baird and Girard, loc. cit., VII, 1854, 24, Elm Creek, Tex.
Pomotis convexifrons Baird and Girard, loc. cit., 1854, 24, Rio Cibolo, Tex.
Pomotis nefastus Baird and Girard, loc. cit., 24, Rio Cibolo and Salado Creek, Tex.
Pomotis sanguinolentus Agassiz, Amer. Jour. Sci. and Arts, XVII, 1854, 301, Huntsville, Ala.
Pomotis inscriptus Agassiz, loc. cit., 1854, 302, Huntsville, Ala.
Pomotis popeii Girard, Pacific R. R. Surv., X, 1858, 26, headwaters of Colorado River, Tex.
Lepomis peltastes Cope, Proc. Amer. Phil. Soc., 1870, 454, Huron River, Mich.
Xenotis lythrochloris Jordan, Ann. N. Y. Lyc. Nat. Hist., XI, 1876 (1877), 376, White River.
Xenotis aureolus Jordan, loc. cit., 376, White River.

2330. Xenotis occidentalis (Meek).
Rio Grande Basin in Mexico.
Lepomis occidentalis Meek, Field Col. Mus., Zool., III, 1902, 118, Rio Conchos, Mexico.

Genus 800. HELIOPERCA Jordan.
Helioperca Jordan, Ann. Lyc. Nat. Hist. N. Y., XI, 1876 (1877), 355 (*Labrus pallidus* Cuvier and Valenciennes; not of Mitchill = *Pomotis incisor* Cuvier and Valenciennes).
Erichæta Jordan, Klippart's Rept. Fish Com. Ohio, 1876 (1877), 48 (*Pomatis incisor* Cuvier and Valenciennes); uncorrected in proof, reading for *Helioperca*.

2331. Helioperca incisor (Cuvier and Valenciennes). *Bluegill; Blue bream; Blue sunfish; Copper-nosed bream; Dollardee; Black-eared pondfish; Blue Joe; Blue-mouthed sunfish; Blue perch; Bream; Copper-headed bream; Perch; Sunfish.*
Great Lakes to Florida and the Rio Grande.
Pomotis incisor Cuvier and Valenciennes, Hist. Nat. Poiss., VII, 1831, 350 (466), New Orleans.
Pomotis gibbosus Cuvier and Valenciennes, loc. cit., 1831, 351 (467), Charleston, S. C.; not of Linnæus.
Pomotis speciosus Baird and Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 24, Brownsville, Tex.
Pomotis obscurus Agassiz, Amer. Jour. Sci. Arts, XVII, 1854, 302, Huntsville, Ala.; specimens almost black.
Pomotis luna Girard, Proc. Acad. Nat. Sci. Phila., IX, 1857, 201, Fort Snelling, Minn.
Lepomis longispinis Cope, loc. cit., 1865, 83, Leavenworth, Kans.
Lepomis ardesiacus Cope, Jour. Acad. Nat. Sci. Phila., VI, 1868, 222, Kiskiminitas River, Pa.
Lepomis purpurascens Cope, Proc. Amer. Phil. Soc., XI, 1870, 454, Yadkin River, N. C.

2332. Helioperca macrochira (Rafinesque). *Bream; Chain-sided perch; Chain-side; Gilded sunfish; Gold perch; Perch; Sunfish.*
Ohio Valley and southwestward to Missouri and Kentucky.
Lepomis macrochirus Rafinesque, Jour. de Physique, LXXXVIII, 1819, 420, Ohio, Wabash, Green, and Licking Rivers.

2333. Helioperca nephela (Cope).
Western Pennsylvania.
Lepomis nephelus Cope, Jour. Acad. Nat. Sci. Phila., VI, 1868, 222, Kiskiminitas River, western Pennsylvania. Perhaps the same as *H. macrochira*.

2334. Helioperca marginata (Holbrook).
Florida.
Pomotis marginatus Holbrook, Jour. Acad. Nat. Sci. Phila., III, 1855, 49, Pl. VI, fig. 2, St. Johns River, Fla. This and the remaining species here referred to *Helioperca* are of uncertain value and of doubtful relationship.

2335. Helioperca haplognatha (Cope).
Monterey, Nuevo Leon, Mexico.
Lepomis haplognathus Cope, Proc. Amer. Phil. Soc., XXII, 1884 (1885), 168, Monterey, Nuevo Leon, Mexico.

2336. Helioperca bombifrons (Agassiz).
Tennessee River.
Pomotis bombifrons Agassiz, Amer. Jour. Sci. and Arts, XVII, 1854, 303, Huntsville, Ala.

Genus 801. XYSTROPLITES Jordan.
Xystroplites Jordan, Bull. X, U. S. Nat. Mus., 1877, 24 (*X. gillii* Jordan = *Pomotis pallidus* Agassiz).

2337. Xystroplites pallidus (Agassiz).
Georgia to Texas.
Pomotis pallidus Agassiz, Amer. Jour. Sci. Arts, 1854, 303 (name preoccupied in *Lepomis* by *Labrus palladus* Mitchill, but not in *Eupomotis*).
Bryttus albulus Girard, Proc. Acad. Nat. Sci. Phila., IX, 1857, 200, Rio Blanco, Tex.
Xystroplites gillii Jordan, Bull. U. S. Nat. Mus., X, 1877, 24, "Garden Key, Florida"; evidently an error, as there is no fresh-water stream on Garden Key.
Lepomis lirus McKay, Proc. U. S. Nat. Mus., IV, 1881, 89; name a substitute for *pallidus*.

Genus 802. EUPOMOTIS Gill and Jordan.
Eupomotis Gill and Jordan, Field and Forest, II, 1877, 190 (*Sparus aureus* Walbaum = *Perca gibbosa* Linnæus).

2338. Eupomotis heros (Baird and Girard).
Southern Illinois, Indiana, and Ohio to Florida and the Rio Grande Basin.
Pomotis heros Baird and Girard, Proc. Acad. Nat. Sci. Phila., VII, March, 1854, 25, Rio Cibolo, Tex.
Pomotis notatus Agassiz, Amer. Jour. Sci. and Arts, XVII, 1854, 302, Huntsville, Ala.

2339. Eupomotis holbrookii (Cuvier and Valenciennes). *Yellow bream; Shellcracker; Strawberry bass; Branch perch.*
Virginia to Florida.
Pomotis holbroockii Cuvier and Valenciennes, Hist. Nat. Poiss., VII, 1831, 350 (466), Charleston, S. C. Misprint for *holbrookii*.
Pomotis speciosus Holbrook, Jour. Acad. Nat. Sci. Phila., III, 1855, 48, pl. 5, fig. 2, St. Johns River, Fla.; not of Baird and Girard.
Pomotis microlophus Günther, Cat., I, 1859, 264, St. Johns River, Fla.

2340. Eupomotis longimanus (Cope).
Florida to Alabama.
Xystroplites longimanus Cope, Proc. Amer. Phil. Soc., XVII, 1877, 66, Volusia and Port Bay, Fla. Perhaps identical with *E. holbrookii*.

2341. Eupomotis gibbosus (Linnæus). *Common sunfish; Bream; Pumpkinseed; Sunfish; Sunny; Crapet jaune; Female perch; Flatfish; Flounder; Harlequin roach; Kiver; Northern pomotis; Perch; Pond perch; Quiver; Redbelly; Roach; Robin; Robin perch; Ruff; Sand perch; Sun bass; Tobaccobox; Yellowbelly; Yellow perch.*
Great Lakes region to Maine and southward to Florida, east of the Alleghenies.
Perca gibbosa Linnæus, Syst. Nat., Ed. X, 1758, 293, Carolinas; after *Perca fluviatilis gibbosa, ventre luteo*, of Catesby.
Sparus aureus Walbaum, Artedi Pisc., 1792, 290, lakes of New York.
Morone maculata Mitchill, Fishes of New York, 1814, 18, near New York City.
Pomotis vulgaris Cuvier and Valenciennes, Hist. Nat. Poiss., III, 1829, 67 (91), Lake Huron, New York, Virginia, and the Carolinas.
Pomotis ravenelii Cuvier and Valenciennes, loc. cit., VII, 1831, 349 (465), Philadelphia.
Pomotis catesbei Cuvier and Valenciennes, loc. cit., 352 (469), Philadelphia.

Genus 803. CHÆNOBRYTTUS Gill.
Chænobryttus Gill, Amer. Jour. Sci. Arts, XXXVII, 1864, 92 (*Calliurus melanops* Girard = *Pomotis gulosus* Cuvier and Valenciennes).
Glossoplites Jordan, Man. Vert., ed. 1, 1876, 223 (*Calliurus melanops* Girard).

2342. Chænobryttus gulosus (Cuvier and Valenciennes). *Warmouth; Goggle-eye; Bigmouth; Big-mouthed sunfish; Black sunfish; Black warmouth; Bream; Buffalo bass; Chub; Jugmouth; Moremouth bream; Mud chub; Perch; Perchmouth bream; Redeye; Sac-a-lait; Sunfish; Sun trout; Warmouth perch; Warmouth bream; Wide-mouthed sunfish; Yawmouth perch; Indianfish.*

Eastern United States, from the Great Lakes to Florida and Texas, west to Kansas and the Dakotas; chiefly west or south of the Alleghenies; common in South Carolina.

Pomotis gulosus Cuvier and Valenciennes, Hist. Nat. Poiss., III, 1829, 367 (498), Lake Pontchartrain and lagoons about New Orleans.

Calliurus floridensis Holbrook, Jour. Acad. Nat. Sci. Phila., III, 1855, 53, Pl. VI, fig. 1, St. Johns River, Fla.

Calliurus melanops Girard, Proc. Acad. Nat. Sci. Phila., IX, 1857, 200, Texas.

Lepomis gillii Cope, Jour. Acad. Nat. Sci. Phila., VI, 1868, 222, 225, Texas.

Lepomis charybdis Cope, loc. cit., 223, Texas.

Chænobryttus antistius McKay, Proc. U. S. Nat. Mus., IV, 1881, 88, Lake Michigan.

Genus 804. AMBLOPLITES Rafinesque. *Rock basses.*

Ambloplites Rafinesque, Ichth. Ohiensis, 1820, 33 (*Lepomis ictheloides* Rafinesque = *Bodianus rupestris* Rafinesque).

2343. Ambloplites rupestris (Rafinesque). *Common rock bass; Redeye; Goggle-eye; Redeye perch; Bream; Bronzed centrarchus; Crapet mondoux; Crapet noir; Crapet vert; Fresh-water bass; Lake bass; Red-eyed bream; Red-eyed sunfish; Sunfish; Sunfish bass; Sun perch; White bass.*

Vermont to Great Lakes region and Manitoba, south to Louisiana; very abundant west of the Alleghenies.

Bodianus rupestris Rafinesque, Amer. Month. Mag., II, 1817, 120, Lakes of New York, Vermont, and Canada.

Icthelis erythrops Rafinesque, Ichth. Ohiensis, 1820, 29, Ohio River.

Lepomis ictheloides Rafinesque, loc. cit., 32, Ohio River.

Cichla ænea LeSueur, Jour. Acad. Nat. Sci. Phila., II, 1822, 214, Lake Ontario.

Centrarchus pentacanthus Cuvier and Valenciennes, Hist. Nat. Poiss., III, 1829, 65 (88), Wabash River.

2344. Ambloplites cavifrons Cope. *Southern rock bass.*

Roanoke River, Va.

Ambloplites cavifrons Cope, Jour. Acad. Nat. Sci. Phila., VI, 1868, 217, Roanoke River, Va.

Genus 805. ARCHOPLITES Gill.

Archoplites Gill, Proc. Acad. Nat. Sci. Phila., XIII, 1861, 165 (*Centrarchus interruptus* Girard).

2345. Archoplites interruptus (Girard). *Sacramento perch.*

Sacramento and San Joaquin Rivers, Calif.

Centrarchus interruptus Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 129, San Joaquin and Sacramento Rivers, Calif.

Centrarchus maculosus Ayres, Proc. Calif. Acad. Nat. Sci., I, 1854, 7, Sacramento River.

Genus 806. ACANTHARCHUS Gill.

Acantharchus Gill, Amer. Jour. Sci. Arts, XXXVI, 1864, 92 (*Centrarchus pomotis* Baird).

2346. Acantharchus pomotis (Baird). *Mud sunfish; Bass sunfish; Mud bass; Mud perch.*

Southern New York to South Carolina.

Centrarchus pomotis Baird, Ninth Smiths. Rept., 1855, 325, New Jersey, New York.

Genus 807. MESOGONISTIUS Gill.

Mesogonistius Gill, Amer. Jour. Sci. Arts, XXXVII, 1864, 92 (*Pomotis chætodon* Baird).

2347. Mesogonistius chætodon (Baird). *Black-banded sunfish.*

New Jersey to Maryland.

Pomotis chætodon Baird, Ninth Smiths. Rept., 1855, 324, Cedar Swamp Creek, N. J.

Genus 808. ENNEACANTHUS Gill.

Enneacanthus Gill, Amer. Jour. Sci. Arts, XXXVII, 1864, 92 (*Pomotis obesus* Baird).

Hemioplites Cope, Jour. Acad. Nat. Sci. Phila., 2d ser., VI, 1868, 217 (*H. simulans* Cope=*Enneacanthus gloriosus;* abnormal example with A. IV, the dorsal erroneously stated to be X.

Copelandia Jordan, Proc. Acad. Nat. Sci. Phila., XXIX, 1877, 56 (*C. eriarcha* Jordan, an abnormal example with D. X; A. IV, of *Enneacanthus gloriosus*).

2348. Enneacanthus obesus (Girard). *Banded sunfish; Little bream; Little sunfish; Spotted sunfish; Rock sunfish.*

Charles River, Mass., to Florida.

Pomotis obesus Girard, Proc. Bost. Soc. Nat. Hist., V, 1854, 40, waters about Hingham and in branch of Charles River at Holliston, Mass.

Bryttus fasciatus Holbrook, Jour. Acad. Nat. Sci. Phila., III, 1855, 51, Pl. V, fig. 3, St. Johns River, Fla.

Pomotis guttatus Morris, Proc. Acad. Nat. Sci. Phila., XI, 1859, 3, Delaware River, Philadelphia.

2349. Enneacanthus gloriosus (Holbrook). *Blue-spotted sunfish; Little sunfish; Spotted-finned sunfish; Spotted sunfish.*

Atlantic States; New York to Florida.

Bryttus gloriosus Holbrook, Jour. Acad. Nat. Sci. Phila., III, 1855, 52, Pl. V, fig. 4, Cooper River, S. C.

Hemioplites simulans Cope, Jour. Acad. Nat. Sci. Phila., VI, 1868, 217, Tuckahoe Creek near Richmond, Va.; abnormal examples.

Enneacanthus pinniger Gill and Jordan, Bull. U. S. Nat. Mus., X, 1877, 27, Tar River, Kinston, N. C.

Enneacanthus margarotis Gill and Jordan, loc. cit., 28, Beaseleys Point, N. J.

Copelandia eriarcha Jordan, Proc. Acad. Nat. Sci. Phila., XXIX, 1877, 56, Menominee River, Wis.; evidently an error, an abnormal example; the locality for New Jersey.

Genus 809. CENTRARCHUS Cuvier and Valenciennes. *Round basses.*

Centrarchus Cuvier and Valenciennes, Hist. Nat. Poiss., III, 1829, 62 (84) (*Labrus irideus* Lacépède=*Labrus macropterus* Lacépède).

2350. Centrarchus macropterus (Lacépède). *Round sunfish; Flier; Flying perch; Large-finned bass; Long-finned sunfish; Many-spined sunfish; Millpond perch; Perch; Round bass; Sac-a-lait; Shining bass; Sunfish.*

Lowland streams from Virginia southward to Florida and Louisiana; northward in the Mississippi Valley to southern Illinois.

Labrus macropterus Lacépède, Hist. Nat. Poiss., III, 1802, 432, Charleston, S. C.

Labrus irideus Lacépède, loc. cit., IV, 716, Charleston, S. C.

Genus 810. POMOXIS Rafinesque. *Crappies.*

Pomoxis Rafinesque, Amer. Month. Mag., IV, 1818, 41 (*Pomoxis annularis* Rafinesque).

Hyperistius Gill, Amer. Jour. Sci. Arts, 1864, 92 (*Centrarchus hexacanthus* Cuvier and Valenciennes=*Labrus sparoides* Lacépède).

Subgenus POMOXIS Rafinesque.

2351. Pomoxis annularis Rafinesque. *Crappie; Bachelor; Sac-a-lait; New-light; Campbellite; Crapet; Bachelor perch; Bridge perch; Chinquapin perch; Goggle-eye; Goldring; John demon; Pale crappie; Papermouth; Shad; Silver perch; Speckled perch; Strawberry perch; Suckley perch; Timber crappie; Tinmouth; Tin perch; White crappie; White perch.*

Eastern United States, from the Great Lakes south to Texas and west to Kansas and Nebraska. Introduced into Columbia River and other waters on the Pacific coast.

Pomoxis annularis Rafinesque, Amer. Month. Mag., IV, 1818, 41, falls of the Ohio River.

Cichla storeria Kirtland, Rept., Zool. Ohio, 1838, 191, Ohio River.

Pomoxis nitidus Girard, Proc. Acad. Nat. Sci. Phila., IX, 1857, 200, Houston River, Ky.

Pomoxys brevicauda Gill, loc. cit., XVII, 1865, 64, North Grand River, Mo.

Pomoxys intermedius Gill, loc. cit., 65, no locality.

Pomoxys protacanthus Gill, loc. cit., 66, Tarboro, N. C.

Subgenus HYPERISTIUS Gill.

2352. Pomoxis sparoides (Lacépède). *Calico bass; Grass bass; Barfish; Strawberry bass; Bachelor; Banklick bass; Bitterhead; Calico bream; Chinquapin perch; Crapet; Crappie; Dolly Varden; Goggle-eye; Lake bass; Lake Erie bass; Millpond flier; Razorback; Roach; Rockfish; Sand perch; Silver bass; Silver perch; Speckled bass; Spotted perch; Spotted trout; Straw bass; Sun perch; Tinmouth; White perch; Black crappie.*

Great Lakes and upper Mississippi Valley to New Jersey and southward to Florida, Louisiana, and Texas. Introduced into Pacific coast streams.

Labrus sparoides Lacépède, Hist. Nat. Poiss., III, 1802, 517 and 518, South Carolina.

Cantharus nigro-maculatus LeSueur, in Cuvier and Valenciennes, Hist. Nat. Poiss., III, 1829, 65 (88), Wabash River.

Centrarchus hexacanthus Cuvier and Valenciennes, Hist. Nat. Poiss., VII, 1831, 344 (459), Charleston, S. C.

Hyperistius carolinensis Gill, Amer. Jour. Sci. Arts, XXXVI, 1864, 93, South Carolina.

Family 190. ELASSOMIDÆ

Genus 811. ELASSOMA Jordan.

Elassoma Jordan, Bull. U. S. Nat. Mus., X, 1877, 50 (*E. zonata* Jordan).

Elassosoma Boulenger; attempted correction but the name is from ἐλάσσωμα, a diminution.

2353. Elassoma zonatum Jordan. *Pigmy sunfish.*

Southern Illinois to Texas and Alabama.

Elassoma zonata Jordan, Bull. U. S. Nat. Mus., X, 1877, 50, Little Red River, White County, Ark.

2354. Elassoma evergladei Jordan. *Everglades pigmy sunfish.*

Swamps of southern Georgia and Florida; locally common in dark waters tributary to the Everglades.

Elassoma evergladei Jordan, Proc. U. S. Nat. Mus., VII, 1884, 323, St. Johns and Suwanee Rivers, Fla.

Family 191. KUHLIIDÆ. Mountain bass; Sesele

Genus 812. SAFOLE Jordan.

Safole Jordan, Proc. U. S. Nat. Mus., XLII, 1912, 655 (*Dules tæniurus* Cuvier and Valenciennes).

2355. Safole tæniura (Cuvier and Valenciennes).

Galapagos and Revillagigedo archipelagoes; locally common; South Seas and Hawaii to Japan; throughout the warm parts of the Pacific, in the open sea, away from coral reefs; not in California.

Dules tæniurus Cuvier and Valenciennes, Hist. Nat. Poiss., III, 1829, 85 (114), Java.

Kuhlia arge Jordan and Bollman, Proc. U. S. Nat. Mus., XII, 1889, 159, Chatham Island, Galapagos.

Family 192. CENTROPOMIDÆ. Robalos

Genus 813. CENTROPOMUS Lacépède. *Robalos.*

Centropomus Lacépède, Hist. Nat. Poiss., IV, 1802, 248 (*lucioperca undecimalis*, etc.; restricted to *Sciæna undecimalis* Bloch by Cuvier and Valenciennes).

Oxylabrax Bleeker, Archiv Neerl., XI, 1876, 264 (same type *Centropomus* being restricted to the first species named by Lacépède).

2356. Centropomus undecimalis (Bloch). *Robalo; Sergeantfish; Snook; Brochet de mer.*

Coasts of Florida and Texas, southward among the West Indies to Surinam or beyond; Bay of Panama.

Sciæna undecimalis Bloch, Naturgeschich. Ausl. Fische, VI, 1792, 60, Jamaica.

Centropomous undecim-radiatus Lacépède, Hist. Nat. Poiss., IV, 1802, 268; after Bloch.

Perca loubina Lacépède, loc. cit., 397, Cayenne.

Sphyræna aureoviridis Lacépède, loc. cit., V, 1803, 324, Martinique.

Centropomus appendiculatus Poey, Memorias, II, 1860, 119, Cuba.

2357. Centropomus viridis Lockington. *Robalo.*
Pacific coast of Mexico; common from Gulf of California to Panama.
Centropomus viridis Lockington, Proc. Calif. Acad. Sci., VII, 1876 (1877), 110, off Ascension Island, Lower California. Probably not separable from *C. undecimalis.*

2358. Centropomus nigrescens Günther. *Robalo prieto.*
Pacific coast of tropical America; generally common from Mazatlan to Panama.
Centropomus nigrescens Günther, Proc. Zool. Soc. Lond., 1864 (Mar. 22), 144, Chiapam.

2359. Centropomus pedimacula Poey. *Constantino de las aletas prietas; Robalito de las aletas prietas.*
Both coasts of tropical America; common in Cuba; Jamaica; south to Brazil.
Centropomus pedimacula Poey, Memorias, II, 1860, 122, Habana and Cienfuegos, Cuba.
Centropomus medius Günther, Proc. Zool. Soc. Lond., 1864, 144, Chiapam.
Centropomus cuvieri Bocourt, Ann. Sci. Nat. Paris, IX, 1868, 91, Haiti.
Centropomus grandoculatus Jenkins and Evermann, Proc. U. S. Nat. Mus., XI, 1888, 139, Guaymas, Sonora. Probably distinct.

2360 Centropomus parallelus Poey.
Coasts of Cuba; San Domingo, Jamaica, Barbados, and Rio Chagres; Guiana, Pernambuco, and Bahia; Porto Rico.
Centropomus parallelus Poey, Memorias, II, 1861, 120, Habana and Cienfuegos, Cuba.
Centropomus mexicanus Bocourt, Ann. Sci. Nat. Paris, IX, 1868, 90, Gulf of Mexico.

2361. Centropomus pectinatus Poey.
Coasts of Cuba.
Centropomus undecimalis Cuvier and Valenciennes (part; not of Bloch), Hist. Nat. Poiss., II, 1828, 102 (*Centropomus pectinatus* Poey, Memorias, II, 1861, 121; Habana and Cienfuegos, Cuba.

2362. Centropomus unionensis Bocourt.
Pacific coast of Central America; rather common at Panama.
Centropomus unionensis Bocourt, Ann. Sci. Nat. Paris, IX, 1868, 90, La Union, San Salvador.

2363. Centropomus armatus Gill.
Pacific coast of Central America; common from Chiapas to Panama.
Centropomus armatus Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 163, Panama.

2364. Centropomus robalito Jordan and Gilbert. *Constantino; Robalito las aletas amarillas.*
Pacific coast of Mexico, from Mazatlan to Panama.
Centropomus robalito Jordan and Gilbert, Proc. U. S. Nat. Mus., IV, 1881, 462, Mazatlan; Acapulco.

2365. Centropomus ensiferus Poey.
West Indies; generally common from Cuba to Surinam.
Centropomus ensiferus Poey, Memorias, II, 1861, 122, Habana.
?*Centropomus brevis* Günther, Proc. Zool. Soc. Lond., 1864, 145, locality unknown, tropical America.
Centropomus affinis Steindachner, Ichth. Notizen, I, 1864, 1, pl. 1, fig. 1, Rio Janeiro and Cajutuba; Demerara, Guiana.
Centropomus scaber Bocourt, Ann. Sci. Nat., 5 ser., IX, 1868, 90, marshes of Belize.

Family 193. MORONIDÆ. White bass

Genus 814. ROCCUS Mitchill. *Striped bass.*
Roccus Mitchill, Fishes of New York, 1814, 24 (*R. striatus* Mitchill= *Sciæna lineata* Bloch).

2366. Roccus saxatilis[53] (Walbaum). *Striped bass; Rockfish; Rock; Missuckeke-kequock.*
Atlantic coasts of North America from New Brunswick to Escambia River, Fla.; introduced by the U. S. Fish Commission into Sacramento River, Calif.
Perca saxatilis Walbaum, Artedi Gen. Pisc., 1792, 330, New York.
Perca septentrionalis Bloch and Schneider, Systema Ichthyol., 1801, 90, New York.
Roccus striatus Mitchill, Rep. Fishes N. Y., 1814, 24, New York.
Perca mitchilli Mitchill, Trans. Lit. Phil. Soc. N. Y., I, 1815, 413, pl. 3, fig. 4, New York.
Perca mitchilli alternata Mitchill, loc. cit., 415, New York.
Perca mitchilli interrupta Mitchill, loc. cit., 415, New York.

Genus 815. LEPIBEMA Rafinesque.
Lepibema Rafinesque, Ichth. Ohiensis, 1820, 23 (*Perca chrysops* Rafinesque).

2367. Lepibema chrysops (Rafinesque). *White bass; White lake bass; sometimes silver bass at Sandusky, Ohio.*
Great Lakes region, upper Mississippi and Ohio Valleys, south to Washita River.
Perca chrysops Rafinesque, Ichth. Ohiensis, 1820, 22, falls of the Ohio.
Labrax multilineatus Cuvier and Valenciennes, Hist. Nat. Poiss., III, 1830, 360 (488), Wabash River.
Labrax notatus Richardson, Fauna Bor.-Amer., III, 1836, 8, lower St. Lawrence River.
Labrax albidus DeKay, N. Y. Fauna: Fishes, 1842, 13, pl. 51, fig. 165, Buffalo, N. Y.
Labrax osculatii Filippi, Rev. et. Mag. de Zoologie, 2d series, V, 1853, 164, Canada.

Genus 816. CHRYSOPERCA Fowler.
Chrysoperca Fowler, Proc. Acad. Nat. Sci. Phila., LIX, 1907, 250 (*Morone interrupta* Gill).

2368. Chrysoperca interrupta (Gill). *Yellow bass.*
Lower Mississippi Valley north to Cincinnati, Terre Haute, and St. Louis.
Morone interrupta Gill, Proc. Acad. Nat. Sci. Phila., XII, 1860, 118, St. Louis; New Orleans.
Morone mississippiensis Jordan and Eigenmann, Proc. Acad. Nat. Sci. Phila., XXXIX, 1887, 295; substitute for *Morone interrupta*, preoccupied in *Roccus*, not in *Morone* nor in *Chrysoperca*.

Genus 817. MORONE Mitchill. *White perch.*
Morone Mitchill, Fishes of New York, 1814, 17 (*M. pallida* Mitchill= *Perca americana* Gmelin).

2369. Morone americana (Gmelin). *White perch; Silver perch; Sea perch.*
Atlantic coast of North America from Nova Scotia to South Carolina in brackish water, ascending streams, and frequently landlocked in ponds.
Perca americana Gmelin, Syst. Nat., I, III, 1789, 1308, New York; after Schöpf.
Perca immaculata Walbaum, Artedi Genera Piscium, 1792, 330, New York; after Schöpf.
Morone rufa Mitchill, Rep. Fishes N. Y., 1814, 18, New York.
Morone pallida Mitchill, loc. cit., 17, New York.
?*Centropomus albus* Rafinesque, Précis des Découvertes Somiolog., 1814, 19, Philadelphia.

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[53] This species is usually called *Roccus lineatus* after *Sciæna lineata* Bloch (Ausländische Fische, VI, 1792, 62); but it can not be the same. The form, serræ of the preopercle, and the stout spines of the fin, as well as the asserted locality ("Mediterranean") indicate that the species concerned is *Dicentrarchus lupus* of Europe. The only resemblance to *Roccus* is found in the striped color; but Bloch says that the stripes on the sides are yellow.

Perca mucronata Rafinesque, Amer. Month. Mag. and Crit. Rev., II, 1818, 204, Delaware, Schuylkill, and Susquehanna Rivers.
Labrax nigricans DeKay, Nat. Hist. N. Y., Fishes, 1842, 12, pl. 50, fig. 160, Long Island.

Family 194. EPINEPHELIDÆ. Sea basses, groupers, garrupas, etc.

Genus 818. STEREOLEPIS Ayres. *Jewfishes.*
Stereolepis Ayres, Proc. Calif. Acad. Nat. Sci., II, 1859, 28 (*S. gigas* Ayres).
Megaperca Hilgendorf, Sitzb. Gesell. Naturf. Freunde, Berlin, 1878, 155 (*M. ishinagi* Hilgendorf).

2370. Stereolepis gigas Ayres. *California jewfish.*
Coast of California, north to the Farallons.
Stereolepis gigas Ayres, Proc. Calif. Acad. Nat. Sci., II, 1859, 28, southern California.
Stereolepis californicus Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 330, California; substitute for *S. gigas*, supposed to be preoccupied in this genus.

Genus 819. POLYPRION Cuvier. *Wreckfishes.*
Polyprion Cuvier, Règne Animal, ed. 1, II, 1817, 282 (?*Amphiprion americanus* Bloch and Schneider).

2371. Polyprion americanus (Bloch and Schneider). *Wreckfish; Stone bass; Cernier.*
Gulf stream; Grand Banks and New Jersey; also in Europe if *P. massiliensis* is the same, which is not certain.
Amphiprion americanus Bloch and Schneider, Syst. Ichth., 1801, 205, pl. 47; based on a drawing sent by Latham to Schneider representing some fish called in America "Girom"; called *Amphiprion australis* on pl. 47.
?*Scorpæna massiliensis* Risso, Ichth. Nice, 1810, 184, Marseilles.
?*Polyprion cernium* Cuvier, Mém. du Museum, XI, 1824, 265, Pl. XVII, France.
?*Holocentrus gulo* Risso, Europe Mérid., III, 1826, 367, Nice.
?*Serranus couchii* Yarrell, British Fishes, ed. 1, I, 1836, 12, Great Britain.

Genus 820. GONIOPLECTRUS Gill. *Spanish flags.*
Gonioplectrus Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 236, 237 (*Plectropoma hispanum* Cuvier and Valenciennes).

2372. Gonioplectrus hispanus (Cuvier and Valenciennes). *Spanish flag; Ouatilibi espagnol; Biajaiba de lo alto.*
West Indies; Cuba.
Plectropoma hispanum Cuvier and Valenciennes, Hist. Nat. Poiss., II, 1828, 298 (396), Martinique.

Genus 821. PETROMETOPON Gill. *Enjambre.*
Petrometopon Gill, Proc. Acad. Nat. Sci. Phila., XVII, 1865, 105 (*Perca guttatus* Poey = *Sparus cruentatus* Lacépède).

2373. Petrometopon cruentatus (Lacépède). *Enjambre; Coney; Rock hind.*
West Indian fauna, Brazil to Florida Keys; very common on Cuba coast.
Sparus cruentatus Lacépède, Hist. Nat. Poiss., IV, 1802, 156, Martinique; on a copy of Plumier's drawing.
?*Perca guttata* Bloch, Ichthyol., 1792, 312, Martinique, not of Linnæus.
Saranus apiarius Poey, Memorias, II, 1861, 143, Habana.

2374. Petrometopon cruentatus coronatus (Cuvier and Valenciennes). *Brown hind; Petite nègre.*
West Indies, north to Key West.
Serranus coronatus Cuvier and Valenciennes, Hist. Nat. Poiss., II, 1828, 278 (371), Martinique.

2375. Petrometopon panamensis (Steindachner).
Panama.
Serranus panamensis Steindachner, Ichth. Beitr., IV, 1875, 1, with plate, Panama.

Genus 822. CEPHALOPHOLIS Bloch and Schneider.

Cephalopholis Bloch and Schneider, Syst. Ichth., 1801, 311 (*C. argus* Bloch and Schneider).

Uriphaëton Swainson, Nat. Hist. Fish., Amphib., etc., II, 1839, 202 (*Serranus*[54] *phaëton* Cuvier and Valenciennes = *U. microleptes* Swainson).

Enneacentrus Gill, Proc. Acad. Nat. Sci. Phila., XVII, 1865, 105 (*Serranus ouatalibi* Cuvier and Valenciennes = *Labrus fulvus* Linnæus).

Bodianus Bloch, in part, restricted by Cuvier and Valenciennes to *Bodianus guttatus*, etc., later restricted to *Bodianus bodianus* = *Harpe rufa* through tautonymy.

2376. Cephalopholis fulvus[55] (Linnæus). *Guativere; Niggerfish; Yellowfish; Butterfish; Lemon-yellow butterfish; Guativere amarilla.*

West Indies; Bermuda and Florida Keys to Bahia.

Labrus fulvus Linnæus, Syst. Nat., Ed. X, 1758, 287, Bahamas; after Catesby.

Guativere amarillas Parra, Descr. Dif. Piezas, Hist. Nat. Cuba, 8 lam., V, 1787, fig. 2, Cuba.

Holocentrus auratus Bloch, Naturgesch. Ausl. Fische, IV, 1790, 75, East Indies.

Bodianus guativere Bloch and Schneider, Syst. Ichth., 1801, 336 (after Parra's figure).

2377. Cephalopholis fulvus ruber (Bloch and Schneider). *Red guativere; Ouatilibi; Rock hind.*

West Indies, etc.; very common.

Gymnocephalus ruber Bloch and Schneider, Syst. Ichth., 1801, 346, pl. 67, on *Carauna* of Marcgrave; not *Epinephelus ruber* Bloch.

Serranus ouatalibi Cuvier and Valenciennes, Hist. Nat. Poiss., II, 1828, 286 (381), Habana.

Serranus carauna Cuvier and Valenciennes, loc. cit., 288 (384), no locality given.

2378. Cephalopholis fulvus punctatus (Linnæus). *Niggerfish; Negrofish; Black guativere.*

West Indies, etc.; everywhere common.

Perca punctata Linnæus, Syst. Nat., ed. X, 1758, 291, Bahamas; based on Catesby.

2379. Cephalopholis stellatus (Blosser).

St. Croix.

Bodianus stellatus Blosser, Ann. Carnegie Mus., VI, 1909, 297, St. Croix.

2380. Cephalopholis tæniops (Cuvier and Valenciennes).

West coast of Africa, straying to Florida.

Serranus tæniops Cuvier and Valenciennes, Hist. Nat. Poiss., II, 1828, 277 (370), Cape Verde Islands.

Genus 823. MENEPHORUS Poey.

Menephorus Poey, Ann. Lyc. Nat. Hist. N. Y., X, 1871, 50 (*Serranus dubius* Poey).

2381. Menephorus dubius (Poey).

Cuba.

Serranus dubius Poey, Memorias, II, 1861, 142, Cuba.

2382. Menephorus punctiferus (Poey).

Cuba.

Menephorus punctiferus Poey, Enumeratio, 1875, 21, Habana.

Genus 824. ENNEISTUS Jordan and Evermann.

Enneistus Jordan and Evermann, Fishes North and Mid. Amer., 1896, 1147 (*Bodianus acanthistius* Gilbert).

2383. Enneistus acanthistius (Gilbert).

Cape Lobos, eastern shore of Gulf of California.

Bodianus acanthistius Gilbert, Proc. U. S. Nat. Mus., XIV, 1891, 552, Cape Lobos, eastern shore of Gulf of California at *Albatross* station 3017, in 58 fathoms.

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[54] A spurious species, *Cephalopolis nigripinnis* to which the tail of a *Fistularia* had been attached.

[55] The various forms here treated as subspecies seem to inhabit varying depths of water and should be regarded rather as forms of *C. fulvus*.

Genus 825. EPINEPHELUS Bloch. *Groupers.*

Epinephelus Bloch, Nat. Ausl. Fische, VII, 1793, 11 (*E. marginalis*).

Cerna Bonaparte, Introd. Fauna Italica, III, 1833, pt. 1 (*Perca gigas* Brünnich).

Cromileptes Swainson, Nat. Hist. Fish., Amphib., etc., II, 1839, 201 (*Serranus altivelis* Cuvier and Valenciennes).

Cynichthys Swainson, loc. cit., 201 (*Perca flavopurpurea* Bennett= *Holocentrus flavocæruleus* Lacépède).

Hyporthodus Gill, Proc. Acad. Nat. Sci. Phila., XIII, 1861, 98 (*Serranus niveatus* Cuvier and Valenciennes).

Labroperca Gill, loc. cit., XIV, 1862, 236 (*Serranus labriformis* Jenyns).

Schistorus Gill, loc. cit., 237 (*Serranus mystacinus* Poey).

Merus Poey, Ann. Lyc. Nat. Hist. N. Y., X, 1871, 39 (*Serranus gigas* Cuvier and Valenciennes).

Priacanthichthys Day, Proc. Zool. Soc. Lond., 1868, 193 (*P. maderaspatensis* Day=*Epinephelus latefasciatus* Temminck and Schlegel).

Homalogrystes Alleyne and Macleay, Proc. Linn. Soc. New South Wales, 1877, 268 (*H. guentheri* Alleyne and Macleay).

Hyposerranus Klunzinger, Fische des Rothen Meeres, 1884, 3 (*Serranus morrhua* Cuvier and Valenciennes).

Subgenus SCHISTORUS Gill.

2384. Epinephelus mystacinus (Poey). *Cherna de lo alto.*

West Indies south to Brazil.

Serranus mystacinus Poey, Memorias, I, 1852, 52, Tab. 10, fig. 1, Cuba

Subgenus EPINEPHELUS Bloch.

2385. Epinephelus analogus Gill. *Cabrilla pinta.*

Pacific coast of tropical America; common on coast of Mexico.

Epinephelus analogus Gill. Proc. Acad. Nat. Sci. Phila., XV, 1863, 163, Panama.

?*Serranus courtadei* Bocourt, Ann. Sci. Nat. Paris, X, 1868, 222, La Union, San Salvador.

2386. Epinephelus adscensionis (Osbeck). *Rock hind; Cabra mora.*

West Indies; Florida Keys to Brazil; Ascension and St. Helena Islands; Woods Hole, Mass.

Perca tota Siba, Thesaurus, LII, 1758, Tab. 27.

Trachinus adscensionis Osbeck, Iter Chin., etc., 1757, and English ed., 1771, 96, Ascension Island.

Trachinus punctatus Bonnaterre, Tableau Encycl., 1788, 46; after Osbeck.

Perca stellio Walbaum, Artedi Pisc., 1792, 349; after Siba.

?*Perca maculata* Bloch, Nat. Ausl. Fische, 1792, 92, Martinique; on a figure by Plumier. Name preoccupied in *Epinephelus*.

Trachinus osbeck Lacépède, Hist. Nat. Poiss., II, 1800, 364; after Osbeck.

Sparus atlanticus Lacépède, loc. cit., IV, 1803, 158, pl. 5, fig. 1, Martinique; on a drawing by Plumier.

Serranus nigriculus Cuvier and Valenciennes, Hist. Nat. Poiss., II, 1828, 381 (375); Martinique.

Serranus pixanga Cuvier and Valenciennes, loc. cit., 288 (383), after Pira-Pixanga or Gat-Vichof, Marcgrave, Hist. Brazil, 1648, 152.

Serranus aspersus Jenyns, Voy. *Beagle*, Fishes, 1842, 6, Porto Praya, St. Jago of the Cape Verde Islands.

Serranus impetiginosus Müller and Troschel, Schomburgk's Hist. Barb., 1848, 665, Barbados.

?*Serranus varius* Bocourt, Ann. Sci. Nat., X, 1868, 222, Gulf coast of Mexico.

2387. Epinephelus guaza (Linnæus). *Merou; Mérou; Guasa.*

Coasts of southern Europe and western Africa, ranging north to England, southward to Cape of Good Hope, and westward to Rio Janeiro and to Guiana. The American form, *E. mentzeli* (Cuvier and Valenciennes), may prove different.

Labrus guaza Linnæus, Syst. Nat., ed. X, 1758, 285, "Habitat in Pelago."

Perca gigas Brunnich, Ichth. Massiliensis, No. 81, 1768, 65, Marseilles.

Holocentrus merou Lacépède, Hist. Nat. Poiss., IV, 1803, 377, Marseilles; after Brunnich.

?*Serranus mentzelii* Cuvier and Valenciennes, loc. cit., II, 1828, 216 (291), coast of Brazil.
Perca robusta Couch, Mag. Nat. Hist., V, 1832, 21, fig. 7, Polperro, Cornwall.
Serranus marginatus Lowe, Proc. Zool. Soc. Lond., pt. 1, 1833, 142, Madeira.
Serranus fimbriatus Lowe, Trans. Cambr. Phil. Soc., 1836, 195, pl. 1, Madeira.
?*Epinephelus brachysoma* Cope, Trans. Amer. Phil. Soc., XIV, 1871, 466, Rio Janeiro.

2388. Epinephelus labriformis (Jenyns).
Pacific coast of tropical America; Cape San Lucas to Galapagos Islands.
Serranus labriformis Jenyns, Voyage *Beagle*, Fishes, 1842, 8, pl. 3, Galapagos Islands.
Epinephelus sellicauda Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 250, Cape San Lucas.
Epinephelus ordinatus Cope, Trans. Amer. Phil. Soc., XIV, 1871, 466, Panama.

2389. Epinephelus flavolimbatus Poey. *Yellow-finned grouper.*
West Indies, north to Pensacola.
Epinephelus flavolimbatus Poey, Repertorio, I, 1866, 183, Cuba.

2390. Epinephelus niveatus (Cuvier and Valenciennes). *Spotted grouper; Snowy grouper.*
West Indies to Brazil, occasionally northward in the Gulf Stream as far as Newport, R. I., and Woods Hole, Mass.
Serranus niveatus Cuvier and Valenciennes, Hist. Nat. Poiss., II, 1828. 285 (380), Brazil.
Serranus margaritifer Günther, Cat., I, 1859, 131, South America.
Serranus conspersus Poey, Memorias, II, 1860, 139, Cuba.
Hyporthodus flavicauda Gill, Proc. Acad. Nat. Sci. Phila., XIII, 1861, 98, Newport, R. I.

2391. Epinephelus striatus (Bloch). *Nassau grouper; Hamlet; Cherna criolla; Grouper; Rockfish.*
West Indian fauna; Key West to Brazil.
Cherna Parra, Dif. Piezas, 1787, 50, Habana.
Anthias striatus Bloch, Naturgesch. Ausl. Fische, VI, 1792, 125, Martinique; on figure by Plumier.
Anthias cherna Bloch and Schneider, Syst. Ichth., 1801, 310, Cuba; after Parra.
Sparus chrysomelanurus Lacépède, Hist. Nat. Poiss., IV, 1803, 160, Martinique; on a copy of Plumier.

2392. Epinephelus guttatus (Linnæus). *Cabrilla; Red hind.*
West Indies; Carolina to Brazil, occasionally north to Charleston, the Florida Keys, and the Bermudas.
Perca guttata Linnæus, Syst. Nat., ed. X, 1758, 292, Brazil; after Marcgrave, in part, but with a type specimen, examined by Lönnberg.
Cabrilla Parra, Dif. Piezas, Hist. Nat. Cuba, 1787, 93, pl. 36, Habana.
Lutjanus lunulatus Bloch and Schneider, Syst. Ichth., 1801, 329; after Parra, not *L. lunulatus* of Park.
Serranus catus Cuvier and Valenciennes, Hist. Nat. Poiss., II, 1828, 280 (373), Martinique.
Serranus maculosus Cuvier and Valenciennes, loc. cit., 332; verified by Boulenger.
Serranus arara Cuvier and Valenciennes, loc. cit., 283 (377), Habana.
Epinephelus cubanus Poey, Repertorio, I, 1866, 202, Cuba.
Serranus stadthouderi Vaillant, Miss. Sci. Mex., Poiss., 1877, 69, substitute for *maculosus* regarded as preoccupied by *maculatus*.

2393. Epinephelus angustifrons (Steindachner).
Coast of Cuba.
Serranus angustifrons Steindachner, Verh. Ges. Wien, XIV, 230, Pl. VII, figs. 2 and 3, 1864, Cuba.

2394. Epinephelus drummond-hayi Goode and Bean. *Speckled hind; John paw.*
Bermudas, south Atlantic and Gulf coast of United States; Charleston, S. C.
Epinephelus drummond-hayi Goode and Bean, Proc. U. S. Nat. Mus., I, 1878, 173, 174, Pensacola; Bermuda.

2395. Epinephelus niphobles Gilbert and Starks.
Magdalena Bay, Lower California.
Epinephelus niphobles Gilbert and Starks, Proc. U. S. Nat. Mus., XIX, 1896, 442, Magdalena Bay, Lower California.

Subgenus VIVERO[56] Jordan and Evermann.

2396. Epinephelus morio (Cuvier and Valenciennes). *Red grouper; Cherna americana; Cherna de vivero; Nègre.*
Atlantic coast of America; Woods Hole to Rio Janeiro.
Serranus morio Cuvier and Valenciennes, Hist. Nat. Poiss., II, 1828, 211 (285), New York and San Domingo.
Serranus erythrogaster DeKay, New York Fauna: Fishes, 1842, 21, pl. 19, fig. 52, Florida.
Serranus remotus Poey, Memorias, II, 1860, 140, Cuba.

Genus 826. GARRUPA Jordan. *Black groupers.*
Garrupa Jordan, Bull. U. S. Fish Com., VIII, 1888 (1890), 353 (*Serranus nigritus* Holbrook).

2397. Garrupa nigrita (Holbrook). *Black jewfish; Black grouper; Mero de lo alto.*
South Atlantic and Gulf coast of the United States, Charleston and Pensacola to Cuba and Brazil; perhaps straying to Sicily.
Serranus nigritus Holbrook, Ichth. South Carolina, Ed. I, 1855, 173, pl. 25, fig. 11, Charleston, S. C.
Centropristis merus Poey, Synopsis Piscium Cubensium, 1868, 288, Cuba.
?*Cerna sicana* Doderlein, Rivista delle Specie del Genere Epinephelus o Cerna, 1882, 81, Palermo.

Genus 827. PROMICROPS Gill. *Guasas.*
Promicrops Gill, in Poey, Synopsis, 1868, 287 (*Serranus guasa* Poey = *Itaiara* Lichtenstein).
Itaiara Vaillant and Bocourt, Miss. Sci. Mexique, 1875, 90 (*Serranus itaiara* Lichtenstein).

2398. Promicrops itaiara (Lichtenstein). *Guasa; Spotted jewfish; Méro.*
Atlantic coast of tropical America, from Florida to Brazil; not uncommon about rocks.
Cugupuguacu Catesby, Nat. Hist. Carolina, 1771, 14; nonbinomial.
Serranus itaiara Lichtenstein, Abhandl. Berlin Acad. Wiss., 1821 (1822), 278, Brazil; not *Itaiara* of Marcgrave.
Serranus galeus Müller and Troschel, in Schomburgk's Reise in Brit. Guiana, 1848, 621, Guiana.
Serranus guasa Poey, Memorias, II, 1861, 141; 1861, 354, Cuba.

2399. Promicrops quinquefasciata (Bocourt).
Pacific coast of Central America.
Serranus quinquefasciatus Bocourt, Ann. Sci. Nat., X, 1868, 223, Nagualate, Pacific coast of Guatemala; very close to *P. itaiara*.

Genus 828. ALPHESTES Bloch and Schneider.
Alphestes Bloch and Schneider, Syst. Ichth., 1801, 236 (*Epinephelus afer* Bloch).
Prospinus Poey, in Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 287 (*Plectropoma chloropterum* Cuvier and Valenciennes = *Alphestes afer* Bloch).

2400. Alphestes afer (Bloch).
West Indies; Cuba to Brazil; recorded perhaps doubtfully from Guinea, if so, the American species, *A. chloropterus*, may prove different.
Epinephelus afer Bloch, Ichthyol., 1793, pl. 327, Acará in Guinea.
Plectropoma chloropterum Cuvier and Valenciennes, Hist. Nat. Poiss., II, 1828, 300 (398), San Domingo, Martinique.

[56] The subgenus *Vivero* is based on *Epinephelus morio* (Cuv. & Val.) which differs from all other species of *Epinephelus* in the elevation of the second dorsal spine.

Plectropoma monacanthus Müller and Troschel, in Schomburgk's Hist. Barbados, 1847, 665, Barbados.
?*Serranus armatus* Osorio, Jour. Sci. Lisbon, III, 1894, 74.

2401. Alphestes multiguttatus (Günther).
Pacific coast of tropical America; Mazatlan to Panama.
Plectropoma multiguttatum Günther, Proc. Zool. Soc. Lond., 1866, 600, Panama.

2402. Alpestes lightfooti (Fowler).
San Domingo, West Indies.
Epinephelus lightfooti Fowler, Proc. Acad. Nat. Sci. Phila., LIX, 1907, 258, fig. 3, San Domingo.

Genus 829. DERMATOLEPIS Gill.
Dermatolepis Gill, Proc. Acad. Nat. Sci. Phila., XIII, 1861, 54 (*Dermatolepis punctatus* Gill).
Lioperca Gill, loc. cit., XIV, 1862, 237 (*Serranus inermis* Cuvier and Valenciennes).

2403. Dermatolepis punctatus Gill.
West coast of Mexico; Cape San Lucas; the Venados; the Revillagigedos.
Dermatolepis punctatus Gill, Proc. Acad. Nat. Sci. Phila., XIII, 1861, 54, Cape San Lucas.

2404. Dermatolepis zanclus Evermann and Kendall.
Key West.
Dermatolepis zanclus Evermann and Kendall, Bull. U. S. Fish Com., XVII, 1897, 129, pl. 8, fig. 9, Key West, Fla.

Subgenus LIOPERCA Gill.

2405. Dermatolepis inermis (Cuvier and Valenciennes).
West Indies.
Serranus inermis Cuvier and Valenciennes, Hist. Nat. Poiss., IX, 1833, 322 (436), Antilles.

Genus 830. TRISOTROPIS Gill.
Trisotropis Gill, Proc. Acad. Nat. Sci. Phila., XVII, 1865, 104 (*Johnius guttatus* Bloch and Schneider = *Perca venenosa* Linnæus).
Archoperca Jordan and Evermann, Fishes North and Mid. Amer., 1896, 1171 (*Mycteroperca boulengeri* Jordan and Starks).

Subgenus ARCHOPERCA Jordan and Evermann.

2406. Trisotropis boulengeri (Jordan and Starks). *Cabrilla de raizero; Mangrove grouper.*
Mazatlan, Mexico.
Mycteroperca boulengeri Jordan and Starks, in Jordan, Fishes Sinaloa, Proc. Calif. Acad. Sci., V, 1895, 445, pl. 38, taken in the Astillero at Mazatlan, Mexico.

Subgenus TRISOTROPIS Gill.

2407. Trisotropis venenosus (Linnæus). *Rockfish; Yellow-finned grouper; Bonaci de Piedra.*
Bahamas, Florida Keys, and southward.
Perca venenosa Linnæus, Syst. Nat., Ed. X, 1758, 292, Bahamas; after Catesby.
Serranus petrosus Poey, Memorias, II, 1861, 136, Cuba.

2408. Trisotropis venenosus apua (Bloch). *Bonaci cardenal.*
West Indies, Florida Keys, and southward to Brazil. A red form of *T. venenosus.*
Bodianus apua Bloch, Nat. Ausl. Fische, IV, 1790, 50, Brazil; after a drawing by Prince Maurice—the same used by Marcgrave.
Pirati apia Marcgrave, Hist. Brasil., 1648, 158, Brazil.
Bonaci cardenal Parra, Piezas de Hist. Nat. Cuba, 1787, 29, Pl. XVI, Habana.
Johnius guttatus Bloch and Schneider, Syst. Ichth., 1801, 77; after Parra.
Bodianus marginatus Bloch and Schneider, loc. cit., 331; after Marcgrave.
Serranus rupestris Cuvier and Valenciennes, Hist. Nat. Poiss., IX, 1833, 323 (437), San Domingo.

2409. Trisotropis bonaci (Poey). *Marbled rockfish; Bonaci arara; Black grouper; Aguaji; Bonaci.*
West Indies; Pensacola to Brazil; Woods Hole, Mass.
Serranus bonaci Poey, Memorias, II, 1861, 129, Cuba.
Serranus brunneus Poey, loc. cit., 131, Cuba.
Serranus decimalis Poey, loc. cit., 138, Cuba; specimen with ten dorsal spines.
Trisotropis aguaji Poey, Repertorio, II, 1868, 229, Habana.
Serranus cyclopomatus Poey, Memorias, 1861, 353, Cuba.
Serranus latepictus Poey, loc. cit., 353, Cuba.

2410. Trisotropis xanthostictus (Jordan and Swain).
Snapper Banks off Pensacola, Fla.
Mycteroperca bonaci xanthosticta Jordan and Swain, Proc. U. S. Nat. Mus., VII, 1884, 371, Snapper Banks off Pensacola, Fla.

2411. Trisotropis jordani (Jenkins and Evermann). *Cabrilla de astillero; Baya.*
Pacific coast of Mexico from Gulf of California to Mazatlan.
Epinephelus jordani Jenkins and Evermann, Proc. U. S. Nat. Mus., XI, 1888, 140, Guaymas, Sonora.

2412. Trisotropis microlepis Goode and Bean. *Gog; Aquaji.*
South Atlantic and Gulf coast of United States, north to Virginia, south to Pensacola and Key West.
Trisotropis microlepis Goode and Bean, Proc. U. S. Nat. Mus., II, 1879, 141, west Florida.
Trisotropis stomias Goode and Bean, loc. cit., V, 1882, 427, Pensacola; Key West.

2413. Trisotropis interstitialis (Poey).
Coast of Cuba; Woods Hole, Mass.
Serranus interstitialis Poey, Memorias, II, 1861, 127, Cuba.
Trisotropis chlorostomus Poey, Repertorio, II, 1868, 231, Cuba.

2414. Trisotropis dimidiatus (Poey).
Coast of Cuba.
Serranus dimidiatus Poey, Memorias, II, 1861, 129, Cuba.

2415. Trisotropis xenarchus (Jordan).
Pacific coast of Mexico to the Venados Islands near Mazatlan and to the Galapagos Archipelago.
Mycteroperca xenarcha Jordan, Proc. Acad. Nat. Sci. Phila., XXXIX, 1887, 387, Galapagos Islands; Payta, Peru.

Genus 831. MYCTEROPERCA Gill.
Mycteroperca Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 80 (*Serranus olfax* Jenyns).

2416. Mycteroperca venadorum Jordan and Starks. *Garlopa.*
West coast of Mexico at Mazatlan.
Mycteroperca venadorum Jordan and Starks, in Jordan, Proc. Calif. Acad. Sci., V, 1895, 446, Mazatlan, Mexico.

2417. Mycteroperca bowersi Evermann and Marsh.
Culebra and Vieques Islands, Porto Rico.
Mycteroperca bowersi Evermann and Marsh, Bull. Bur. Fish., XX, 1900 (1902), 158, Culebra Island.

2418. Mycteroperca hopkinsi Jordan and Rutter.
Jamaica.
Mycteroperca hopkinsi Jordan and Rutter, Proc. Acad. Nat. Sci. Phila., XLIX, 1897, 105, Jamaica.

2419. Mycteroperca olfax (Jenyns). *Yellow grouper; Gourami.*
James Island, Galapagos Archipelago; Panama.
Serranus olfax Jenyns, Voyage *Beagle*, Fishes, 1840, 9, pl. 4, Galapagos Islands.

2420. Mycteroperca rosacea (Streets). *Cabrilla calamaria.*
Gulf of California.
Epinephelus rosaceus Streets, Bull. U. S. Nat. Mus., VII, 1877, 51, Angel Island, Gulf of California.

2421. Mycteroperca falcata (Poey). *Scamp; Bacalao; Abadejo.*
West Indies, north to Bermuda.
Serranus falcatus Poey, Memorias, II, 1861, 138, Habana.

2422. Mycteroperca phenax Jordan and Swain. *Scamp; Bacalao.*
Coasts of southern Florida; abundant about the keys.
Mycteroperca falcata phenax Jordan and Swain, Proc. U. S. Nat. Mus., VII, 1884, 363, Key West, Fla.

2423. Mycteroperca calliura Poey.
Coast of Cuba.
Mycteroperca calliura Poey, Repertorio, I, 1867, 181, Cuba.

2424. Mycteroperca tigris (Cuvier and Valenciennes). *Bonaci gato; Rockfish.*
West Indies, north to Bermuda.
Serranus tigris Cuvier and Valenciennes, Hist. Nat. Poiss., IX, 1833, 325 (440), San Domingo.
Serranus felinus Poey, Memorias, II, 1861, 134, Habana.
Serranus repandus Poey, loc. cit., 135, Habana.
Trisotropis reticulatus Gill, Proc. Acad. Nat. Sci. Phila., XVII, 1865, 105, Barbados.

2425. Mycteroperca camelopardalis (Poey).
West Indies.
Serranus camelopardalis Poey, Memorias, II, 1861, 132, Cuba, a bright red form, otherwise similar to *M. tigris*.

Genus 832. XYSTROPERCA Jordan and Evermann.
Xystroperca Jordan and Evermann, Fishes North and Mid. Amer., 1896, 1181 (*Mycteroperca pardalis* Gilbert).

2426. Xystroperca pardalis (Gilbert). *Cabrilla piritita.*
Gulf of California.
Mycteroperca pardalis Gilbert, Proc. U. S. Nat. Mus., XIV, 1891, 551, La Paz Bay, Lower California.

Genus 833. PAREPINEPHELUS Bleeker.
Parepinephelus Bleeker, Systema Percarum Revisum, in Archiv Neer. des Sci. Exet. Nat., XI, 1875, 1876, 257 (*Serranus acutirostris* Cuvier and Valenciennes=*Epinephelus ruber* Bloch).

2427. Parepinephelus acutirostris (Cuvier and Valenciennes). *Scirenga.*
West Indies, Brazil, Mediterranean Sea, and islands of the eastern Atlantic.
?*Epinephelus ruber*[57] Bloch, Nat. Ausl. Fische, VII, 1793, 22, pl. 330, "Japan"; probably from the Mediterranean.
Serranus acutirostris Cuvier and Valenciennes, Hist. Nat. Poiss., II, 1828, 212 (286), Brazil.
Serranus undulosus Cuvier and Valenciennes, loc. cit., 219 (295), Brazil.
Serranus tinca Cantraine, "Nouv. Mem. Ac. Brux., XI, 1831," Naples.
Serranus fuscus Lowe, Trans. Cambr. Philos. Soc., VI, 1838, 196, Madeira.
Cerna nebulosa Cocco, "Indice Pesci. Messina, Gen. 45, sp. 2," 1844, Messina.
Cerna macrogenis Sassi, "Descr. Genovæil Genovasato, I, 139," 1846, Genoa.
Serranus emarginatus Valenciennes, Ichth. Îles Canaries, 1839, 10, Canary Islands.
Epinephelus chalinius Cope, Trans. Amer. Phil. Soc., XIV, 1871, 465, St. Martins.
Cerna acutirostris lata Doderlein, loc. cit., 74, Palermo.

Genus 834. CHORISTISTIUM Gill.
Chorististium Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 15 (*Liopropoma rubra* Poey).

2428. Chorististium rubrum (Poey).
Coast of Cuba.
Liopropoma rubre Poey, Memorias, II, 1861, 418, Habana.

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[57] The original type of *E. ruber* has 24 gill rakers; all others examined (Athem, Brazil) have 30 to 35; for these we retain the name *acutirostris* pending investigation.

Genus 835. LIOPROPOMA Gill.
Liopropoma Gill, Proc. Acad. Nat. Sci. Phila., XIII, 1861, 52 (*Perca aberrans* Poey).

2429. Liopropoma aberrans (Poey).
Coast of Cuba.
Perca aberrans Poey, Memorias, II, 1861, 125, Cuba.

2430. Liopropoma longilepis Garman.
Eastern Pacific in deep water.
Liopropoma longilepis Garman, Mem. Mus. Comp. Zool., XXIV, 1889, 47, lat. 7° 30′ N., long. 78° 34′ W.

Genus 836. RYPTICUS Cuvier. *Soapfishes.*
Ryptieus Cuvier, Règne Animal, ed. 2, II, 1829, 144 (*Anthias saponaceus* Bloch and Schneider).
Smecticus Valenciennes, Ichth. Voy. *Vénus*, 1855, 305 (*S. bicolor* Valenciennes).
Eleutheractis Cope, Trans. Amer. Phil. Soc., XIV, 1871, 467 (*E. coriaceus* Cope).
Rhypticus authors, corrected spelling.

2431. Rypticus saponaceus (Bloch and Schneider). *Soapfish; Jabon; Jaboncillo.*
West Indies; Pensacola to west Africa and Brazil.
Jaboncillo Parra, Difer. Piezas de Hist. Nat., 1787, 51, lam. 24, fig. 2, Habana.
Anthias saponaceus Bloch and Schneider, Syst. Ichth., 1801, 310, Habana.

2432. Rypticus arenatus Cuvier and Valenciennes.
West Indies and coast of Brazil; recorded from Jamaica, Trinity, Barbados, and St. Thomas.
Rypticus arenatus Cuvier and Valenciennes, Hist. Nat. Poiss., III, 1829, 48 (65), pl. 46, Brazil.
?*Rhypticus subbifrenatus* Gill, Proc. Acad. Nat. Sci. Phila., XIII, 1861, 53, St. Thomas.
?*Rhypticus nigromaculatus* Steindachner, Ichth. Notiz., VI, 1867, 42, Barbados; dorsal with four spines instead of three.

2433. Rypticus coriaceus (Cope). *Black soapfish.*
West Indies; recorded from St. Martins and Jamaica.
Eleutheractis coriaceus Cope, Trans. Amer. Phil. Soc., XIV, 1870 (1871), 467, St. Martins.

2434. Rypticus xanti (Gill).
Pacific coast of Mexico, from Cape San Lucas to Colima and Mazatlan.
Rhypticus xanti Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 250, Cape San Lucas.

2435. Rypticus bicolor (Valenciennes).
Galapagos Archipelago.
Smecticus bicolor Valenciennes, Voy. *Vénus*, Poissons, 1855, 307, pl. 2, fig. 2, Galapagos Archipelago.

Genus 837. PROMICROPTERUS Gill.
Promicropterus Gill, Proc. Acad. Nat. Sci. Phila., XIII, 1861, 53 (*Rhypticus maculatus* Holbrook = *Bodianus bistrispinus* Mitchill).

2436. Promicropterus bistrispinus (Mitchill). *Soapfish.*
South Atlantic coast of United States; frequent off Charleston, Pensacola, and Key West; Porto Rico; occasional as far north as Newport, R. I.
Bodianus bis-trispinus Mitchill, Amer. Month. Mag. and Crit. Review, II, February, 1818, 247, Straits of Bahama.
Rypticus maculatus Holbrook, Ichth. South Carolina, Ed. I, 1855, 39, Cape Romain, S. C.
Rhypticus pituitosus Goode and Bean, Proc. U. S. Nat. Mus., II, 1879, 341, Key West, Fla.

2437. Promicropterus nigripinnis (Gill).
Pacific coast of tropical America, Cape San Lucas to Panama.
Rhypticus nigripinnis Gill, Proc. Acad. Nat. Sci. Phila., XIII, 1861, 53, Panama.
Rhypticus maculatus Gill, loc. cit., XIV, 1862, 251, Cape San Lucas.
Promicropterus decoratus Gill, loc. cit., XV, 1863, 164, Panama.

Family 195. SERRANIDÆ. Sea bass

Genus 838. PARALABRAX Girard. *Cabrillas verdes.*
Paralabrax Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 131 (*Labrax nebulifer* Girard).

2438. Paralabrax nebulifer (Girard). *Johnny verde; Kelp bass.*
Southern California, from Monterey to Magdalena Bay.
Labrax nebulifer Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 142, Monterey, Calif.

2439. Paralabrax maculatofasciatus (Steindachner). *Spotted cabrilla.*
Pacific coast of America from Lower California to San Pedro and Mazatlan.
Serranus maculatofasciatus Steindachner, Ichth. Notizen, VII, 1868, 5, Mazatlan, Mexico.
?*Serranus acanthophorus* Bocourt, Ann. Sci. Nat., X, 1870, 223, Pacific coast of Mexico.

2440. Paralabrax humeralis (Cuvier and Valenciennes).
Pacific coast of South America; Panama to Juan Fernandez.
Serranus humeralis Cuvier and Valenciennes, Hist. Nat. Poiss., II, 1828, 183 (246), Chile.
Serranus albomaculatus Jenyns, Zool. *Beagle*, Fishes, 1840, 3, pl. 2, Galapagos Archipelago.
?*Serranus semifasciatus* Guichenot, in Gay, Hist. Chile, II, 1847, 151, pl. 1, fig. 2, Juan Fernandez.

2441. Paralabrax clathratus (Girard). *Cabrilla; Rock bass.*
Coast of southern California, from San Francisco to Cedros Island.
Labrax clathratus Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 143, San Diego.

Genus 839. CRATINUS Steindachner.
Cratinus Steindachner, Ichth. Beitr., VII, 1878, 19 (*C. agassizii* Steindachner).

2442. Cratinus agassizii Steindachner.
Galapagos Archipelago.
Cratinus agassizii Steindachner, Ichth. Beitr., VII, 1878, 19, Galapagos Islands.

Genus 840. CENTROPRISTES Cuvier and Valenciennes. *Black sea bass.*
Centropristes Cuvier and Valenciennes, Hist. Nat. Poiss., III, 1829, 27 (36) (*C. nigricans* Cuvier and Valenciennes=*Labrus striatus* Linnæus).
Centropristis of authors; variation in spelling.

2443. Centropristes striatus (Linnæus). *Black sea bass; Blackfish; Tallywag; Hannahill; Black Will; Black Harry; Black perch; Black bass; Bluefish.*
Atlantic coast of United States, Cape Ann to northern Florida.
Labrus striatus Linnæus, Syst. Nat., ed. X, 1758, 285, "America"; description very brief, but not to be referred to any other fish.
Perca atraria Linnæus, loc. cit., ed. XII, 1766, 485, Carolina.
Perca furva Walbaum, Artedi Pisc., 1792, 336, New York; after Schöpf.
Coryphæna nigrescens Bloch and Schneider, Syst. Ichth., 1801, 297, New York.
Lutjanus trilobatus Lacépède, Hist. Nat. Poiss., IV, 1802, 246, locality unknown.
Perca varia Mitchill, Trans. Lit. & Phil. Soc. N. Y., I, 1815, 415, pl. 3, fig. 6, New York.

2444. Centropristes ocyurus (Jordan and Evermann). *Gulf sea bass.*
Gulf of Mexico at Snapper Banks off Pensacola, Fla.
Serranus ocyurus Jordan and Evermann, Proc. U. S. Nat. Mus., IX, 1886, 468, Snapper Banks off Pensacola, Fla.

2445. Centropristes rufus Cuvier and Valenciennes. *Hogfish.*
Martinique.
Centropristes rufus Cuvier and Valenciennes, Hist. Nat. Poiss., III, 1829, 35 (47), Martinique.

Genus 841. TRILOBURUS Gill.
Triloburus Gill, Cat. Fish. East Coast U. S., Supplement to Proc. Acad. Nat. Sci. Phila., XIII, 1861, 30 (*Perca trifurca* Storer=*Perca philadelphica* Linnæus).

2446. Triloburus philadelphicus (Linnæus). *Rock sea bass; Redfish.*
Coast of South Carolina.
Perca philadelphica Linnæus, Syst. Nat., ed. X, 1758, 291, America.
Perca trifurca Linnæus, loc. cit., ed. XII, 1766, 489, Carolinas.
Lutjanus tridens Lacépède, Hist. Nat. Poiss., IV, 1802, 246, Carolinas.

Genus 842. DIPLECTRUM Holbrook. *Squirrelfishes.*
Diplectrum Holbrook, Ichth. South Carolina, ed. I, 1855, 32 (*Serranus fascicularis* Cuvier and Valenciennes=*Perca formosa* Linnæus).
Haliperca Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 236, (*Serranus bivittatus* Cuvier and Valenciennes=*Serranus radialis* Quoy and Gaimard, and other species).
Paraserranus Bleeker, Verh. Akad. Amst., XIV, 1873, 6 (*P. hasselti* Bleeker).

Subgenus HALIPERCA Gill.

2447. Diplectrum radiale (Quoy and Gaimard). *Aguavina.*
Cuba to Brazil.
Serranus radialis Quoy and Gaimard, Voyage *Uranie*, 1824, 316, Rio Janeiro.
Serranus bivittatus Cuvier and Valenciennes, Hist. Nat. Poiss., II, 1828, 179 (241), Martinique.
Centropristes ayresi Steindachner, Ichth. Notizen, VII, 1868, 1, pl. 1, fig. 1, Santos, Brazil.

2448. Diplectrum pacificum Meek and Hildebrand.
Panama.
Diplectrum radiale Gilbert and Starks, Memoir Calif. Acad. Sci., IV, 1904, 97 (not of Quoy and Gaimard).
Diplectrum pacificum Meek and Hildebrand, Field Mus. Nat. Hist., Zool., XV, Apr. 15, 1925, 477, Pl. XLVI, fig. 2, Naos Island, Panama.

2449. Diplectrum macropoma (Günther).
Pacific coast of tropical America.
Centropristis macropoma Günther, Proc. Zool. Soc. Lond., 1864, 145, Panama.

2450. Diplectrum sciurus Gilbert.
Gulf of California.
Diplectrum sciurus Gilbert, Proc. U. S. Nat. Mus., XIV, 1891, 550, Gulf of California at *Albatross* stations Nos. 3014, 3021, 3026, and 3033, all in shallow water.

2451. Diplectrum euryplectrum Jordan and Bollman.
Coast of Colombia, southwest of Panama.
Diplectrum euryplectrum Jordan and Bollman, Proc. U. S. Nat. Mus., XII, 1889, 157, Pacific Ocean, off coast of Colombia.

Subgenus DIPLECTRUM Holbrook.

2452. Diplectrum formosus (Linnæus). *Squirrelfish; Sandfish; Serrano.*
West Indies; common on the south Atlantic and Gulf coasts of the United States, from Charleston south to Montevideo.
Perca formosa Linnæus, Syst. Nat., ed. XII, 1766, 488, Carolinas.
Epinephelus striatus Bloch, Naturgesch. Ausl. Fische, VII, 1793, 20, Jamaica (not *Anthias striatus* Bloch).
Serranus radians Quoy and Gaimard, Voy. *Uranie*, Poiss., 1824, 313. pl. 58, fig. 2, Rio de Janeiro.

Serranus irradians Cuvier and Valenciennes, Hist. Nat. Poiss., II, 1828, 181 (244), Montevideo.
Serranus fascicularis Cuvier and Valenciennes, loc. cit., 182 (245), pl. 30, Brazil.

Genus 843. **PRIONODES** Jenyns.
Prionodes Jenyns, Voy. *Beagle*, Fishes, 1842, 46 (*P. fasciatus* Jenyns).

2453. **Prionodes æquidens** (Gilbert).
Gulf of California.
Serranus æquidens Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 61, Gulf of California at *Albatross* station No. 2996, in 112 fathoms.

2454. **Prionodes fusculus** (Poey).
Cuba.
Centropristes fusculus Poey, Memorias, II, 1861, 342, Cuba.

2455. **Prionodes phœbe** (Poey). *Phœbe.*
West Indies, north to Pensacola, Fla.
Serranus phœbe Poey, Memorias, I, 1852, 55, pl. 2, fig. 3, Cuba.

2456. **Prionodes baldwini** Evermann and Marsh.
Porto Rico.
Prionodes baldwini Evermann and Marsh, Rept. U. S. Fish Com., XXV, 1899 (1900), 353, Culebra and Vieques Islands.

2457. **Prionodes fasciatus** Jenyns.
Pacific coast of Mexico, Cape San Lucas to Galapagos Islands.
Prionodes fasciatus Jenyns, Voy. *Beagle*, Fishes, 1840, 46, Chatham Island, Galapagos Archipelago.
Serranus psittacinus Valenciennes, Voy. *Vénus*, Poiss., 1855, 299, pl. 1, fig. 1, Galapagos Islands.
Serranus calopteryx Jordan and Gilbert, Proc. U. S. Nat. Mus., IV, 1881, 350, Mazatlan.

2458. **Prionodes bulleri** (Boulenger).
Coast of Jalisco, western Mexico.
Serranus bulleri Boulenger, Cat., I, 1895, 288, Las Peñas, Jalisco, Mexico.

2459. **Prionodes deweegeri** (Metzelaar).
Caribbean Sea.
Serranus (*Paralabrax*) *deweegeri* Metzelaar, Trop. Atl. Visschen, 1919, 52, fig. 20, Guanta, coast of Venezuela.

2460. **Prionodes tabacaria** (Cuvier and Valenciennes). *Jacome; Bout de tabac.*
West Indies.
Centropristes tabacarius Cuvier and Valenciennes, Hist. Nat. Poiss., III, 1829, 33 (44), Martinique.
Serranus jacome Poey, Memorias, I, 1852, 57, pl. 2, fig. 1, Cuba.

2461. **Prionodes tigrinus** (Bloch).
West Indies.
Holocentrus tigrinus Bloch, Naturgesch. Ausl. Fische, IV, 1790, 77, East Indies; after Seba, Thesaurus, III, Pl. XXVII, fig. 5.
Serranus præstigiator Poey, Memorias, I, 1852, 58, pl. 2, fig. 2, Habana.
?*Centropristis annularis* Günther, Shore Fishes, *Challenger* Rept., Zool., I, pt. 6, 1880, 6, pl. 1, fig. C, Pernambuco.

2462. **Prionodes flavescens** (Cuvier and Valenciennes).
Martinique.
Serranus flavescens Cuvier and Valenciennes, Hist. Nat. Poiss., VI, 1830, 380 (506), Martinique.

Genus 844. **MENTIPERCA** Gill.
Mentiperca Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 236 (*Serranus luciopercanus* Poey).

2463. **Mentiperca luciopercana** (Poey).
Coast of Cuba.
Serranus luciopercanus Poey, Memorias, I, 1852, 56, pl. 9, fig. 1, Cuba.

Genus 845. **CENTRISTHMUS** Garman.
Centristhmus Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 47 (*Centristhmus signifer* Garman).

2464. Centristhmus signifer Garman.
Off Bay of Panama in deep water.
Centristhmus signifer Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 48, Pl. LXIX, off Bay of Panama.

Genus 846. DULES Cuvier.
Dules Cuvier, Règne Animal, ed. 2, II, 1829, 147 (*Dules auriga* Cuvier and Valenciennes).
Eudulus Fowler, Proc. Acad. Nat. Sci. Phila., LIX, 1907, 264 (*Dules auriga* Cuvier and Valenciennes; *Dulus* being a genus of birds.

2465. Dules auriga Cuvier and Valenciennes. *Coachman; Charioteer.*
Coasts of Brazil and Uruguay, and occasionally northward.
Dules auriga Cuvier and Valenciennes, Hist. Nat. Poiss., III, 1829, 83 (112), pl. 51, Brazil.
Centropristis brasiliensis Brissot de Barneville, Révue Zoologique, 1847, 131, Bahia.

Genus 847. CALLIDULUS Fowler.
Callidulus Fowler, Proc. Acad. Nat. Sci. Phila., LIX, 1907, 265 (*Centropristes subligarius* Cope).

2466. Callidulus flaviventris Cuvier and Valenciennes. *Grassy ground rockfish.*
Tropical America, Charleston to Brazil.
Dules flaviventris Cuvier and Valenciennes, Hist. Nat. Poiss., III, 1829, 85, Brazil.
Centropristis dispilurus Günther, Proc. Zool. Soc. Lond., 1867, 99, Trinidad.
Centropristis subligarius Cope, Proc. Acad. Nat. Sci. Phila., XXII, 1870, 120, Pensacola, Fla.

Genus 848. PARANTHIAS Guichenot.
Brachyrhinus Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 286 (*Serranus creolus* Cuvier and Valenciennes).
Paranthias Guichenot, Ann. Soc. Linn. Maine-et-Loire, X, 1868 (*Serranus furcifer* Cuvier and Valenciennes=*Serranus creolus* Cuvier and Valenciennes).
Creolus Jordan and Gilbert, Synopsis, Bull. U. S. Nat. Mus., XVI, 1882, XXXVI (withdrawn in the text) (*Serranus furcifer* Cuvier and Valenciennes).

2467. Paranthias furcifer (Cuvier and Valenciennes). *Rabirubia de lo alto; Creolefish.*
Both coasts of tropical America, Cuba to Brazil, Cape San Lucas to the Galapagos Archipelago.
Serranus furcifer Cuvier and Valenciennes, Hist. Nat. Poiss., II, 1828, 196 (264), Brazil.
Serranus creolus Cuvier and Valenciennes, loc. cit., 197 (265), Martinique; San Domingo.
Corvina oxyptera DeKay, New York Fauna: Fishes, 1842, 77, Pl. XXX, fig. 96, locality unknown.
Serranus colonus Valenciennes, Voy. *Vénus*, Zool., 1855, 300, pl. 2, fig. 1, Galapagos Islands.

Genus 849. OCYANTHIAS Jordan and Evermann.
Ocyanthias Jordan and Evermann, Fishes North and Mid. Amer., 1896, 1227 (*Aylopon martinicensis* Guichenot).

2468. Ocyanthias martinicensis (Guichenot).
West Indies.
?*Aylopon martinicensis* Guichenot, Anthiani, Ann. Linn. Soc., X, 1868, Martinique.

Genus 850. HYPOPLECTRUS[56] **Gill.** *Vacas.*
Hypoplectrus Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 236 (*Plectropoma puella* Cuvier and Valenciennes=variety of *Perca unicolor* Walbaum).

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[56] The West Indian forms correctly referred to this species fall into several groups here provisionally designated as subspecies of the form first named (*H. unicolor*), apparently differing only in color. These range from mottled olive and orange to intense indigo blue.

2469. **Hypoplectrus unicolor** (Walbaum). *Vaca; Petitnègre.*
West Indies, north to Florida Keys.
Perca unicolor Walbaum, Artedi Piscium, III, 1792, 352, locality unknown.
Plectropoma ephippium Cuvier and Valenciennes, Hist. Nat. Poiss., II, 1828, 307, (408), locality unknown.
Hypoplectrus maculiferus Poey, Ann. Lyc. Nat. Hist. N. Y., X, 1871, 78, Habana.

2470. **Hypoplectrus unicolor puella** (Cuvier and Valenciennes). *Vaca.*
Martinique.
Plectropoma puella Cuvier and Valenciennes, Hist. Nat. Poiss., II, 1828, 305 (405), pl. 37, Martinique.

2471. **Hypoplectrus unicolor vitulinus** (Poey).
Cuba.
Plectropoma vitulinum Poey, Memorias, I, 1852, 68, Cuba.

2472. **Hypoplectrus unicolor pinnivarius** (Poey).
Habana.
Hypoplectrus pinnivaria Poey, Synopsis, 1868, 291, Habana.

2473. **Hypoplectrus unicolor guttavarius** (Poey).
Cuba.
Plectropoma guttavarium Poey, Memorias, I, 1852, 70, Cuba.
Plectropoma melanorhina Guichenot, Poissons, in Ramon de la Sagra, Hist. Cuba, 1853, 18, pl. 1, fig. 1, Cuba.

2474. **Hypoplectrus unicolor gummigutta** (Poey).
Cuba.
Plectropoma gummigutta Poey, Memorias, I, 1852, 70, Cuba.

2475. **Hypoplectrus unicolor crocotus** (Cope).
West Indies.
Plectropoma crocota Cope, Trans. Amer. Phil. Soc., XIV, 1870 (1871), 466, St. Martins, West Indies.

2476. **Hypoplectrus unicolor aberrans** (Poey).
Cuba.
Hypoplectrus aberrans Poey, Synopsis, 1868, 291, Cuba.

2477. **Hypoplectrus unicolor accensus** (Poey).
Cuba.
Plectropoma accensum Poey, Memorias, I, 1852, 72, Cuba.

2478. **Hypoplectrus unicolor affinis** (Poey).
Cuba.
Plectropoma affine Poey, Memorias, II, 1861, 427, Cuba.

2479. **Hypoplectrus unicolor chlorurus** (Cuvier and Valenciennes).
Martinique.
Plectropoma chlorurum Cuvier and Valenciennes, Hist. Nat. Poiss., II, 1828, 306 (406), Martinique.

2480. **Hypoplectrus unicolor nigricans** (Poey).
Cuba.
Plectropoma nigricans Poey, Memorias, I, 1852, 71, Cuba.

2481. **Hypoplectrus unicolor indigo** (Poey). *Añil.*
Cuba.
Plectropoma indigo Poey, Memorias, I, 1852, 69, pl. 3, fig. 1, Cuba.

2482. **Hypoplectrus unicolor bovinus** (Poey).
Cuba.
Plectropoma bovinum Poey, Memorias, I, 1852, 69, Cuba.

2483. **Hypoplectrus unicolor gemma** Goode and Bean.
Florida Keys; known from one specimen from Garden Key, Fla.
Hypoplectrus gemma Goode and Bean, Proc. U. S. Nat. Mus., V, 1882, 428, Garden Key, Fla.

2484. **Hypoplectrus lamprurus** (Jordan and Gilbert).
Panama.
Serranus lamprurus Jordan and Gilbert, Bull. U. S. Fish Com., I, 1881, 322, Panama.

Genus 851. ANTHIAS Bloch. *Barbiers.*
Anthias Bloch, Nat. Ausl. Fische, VI, 1792, 97 (*Labrus anthias* L.).
Aylopon Rafinesque, Caratteri, 1810, 52, (*Labrus anthias* L.; the name *Anthias* said to be preoccupied).

2485. Anthias tenuis Nichols.
Bermuda.
Anthias tenuis Nichols, Proc. Biol. Soc. Wash., XXXIII, 1920, 60, Bermudas.

Genus 852. HEMIANTHIAS Steindachner.
Hemianthias Steindachner, Ichth. Beitr., I, 1874, 4 (*Anthias* (*Hemianthias*) *peruanus* Steindachner).

2486. Hemianthias peruanus (Steindachner).
Coasts of Peru and Chile, occasionally northward; off the coast of Lower California.
Anthias (*Hemianthias*) *peruanus* Steindachner, Ichth. Beitr., I, 1874, 4, Payta; Trujillo.

2487. Hemianthias vivanus (Jordan and Swain).
Gulf of Mexico; Snapper Banks between Pensacola and Tampa, Fla.
Anthias vivanus Jordan and Swain, Proc. U. S. Nat. Mus., VII, 1884, 544, from stomach of a red snapper taken at the Snapper Banks off Pensacola, Fla.

Genus 853. PRONOTOGRAMMUS Gill.
Pronotogrammus Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 80 (*P. multifasciatus* Gill).

2488. Pronotogrammus multifasciatus Gill.
Off Bay of Panama; Cape San Lucas, Lower California.
Pronotogrammus multifasciatus Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 81, Cape San Lucas, Lower California.

2489. Pronotogrammus eos Gilbert.
Pacific coast of tropical America.
Pronotogrammus eos Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 62, west coast of Mexico, at *Albatross* station 2996, in 112 fathoms.

Family 196. PSEUDOCHROMIDÆ

Genus 854. GRAMMA Poey.
Gramma Poey, Synopsis, 1868, 296 (*G. loreto* Poey).

2490. Gramma loreto Poey.
Matanzas, Cuba; only the type known.
Gramma loreto Poey, Synopsis, 1868, 296, Matanzas, Cuba.

Family 197. RHEGMATIDÆ

Genus 855. RHEGMA Gilbert.
Rhegma Gilbert, in Jordan and Evermann, Fishes North and Mid. Amer., 1898, 3169 (*Rhegma thaumasium* Gilbert).

2491. Rhegma thaumasium Gilbert.
Panama.
Rhegma thaumasium Gilbert, in Jordan and Evermann, Fishes North and Mid. Amer., 1898, 3170, Panama.

Family 198. PRIACANTHIDÆ. Big-eyes or catalufas

Genus 856. PRIACANTHUS Cuvier.
Priacanthus Cuvier, Règne Animal, ed. 1, 1817, 281 (*P. macrophthalmus* Cuvier).

2492. Priacanthus cruentatus (Lacépède). *Big-eye; Catalufa.*
Tortugas; West Indies to St. Helena and the Canaries (*Priacanthus carolinus* Lesson), a species very similar or identical in Hawaii and the western Pacific.
Labrus cruentatus Lacépède, Hist. Nat. Poiss., III, 1802, 522, Martinique; from a copy by Aubriet of a plate made by Plumier at Martinique.

Priacanthus cepedianus Desmarest, Prém. Dec. Ichthy., 1823, 9, pl. 1, Habana.
?*Priacanthus carolinus* Lesson, Voy. *Coquille*, 1826, 204, Caroline Islands.

2493. Priacanthus arenatus Cuvier and Valenciennes. *Catalufa; Big-eye.*
West Indies, south to Brazil; occasionally northward in the Gulf Stream to Newport and Woods Hole, Mass.
Catalufa Parra, Dif. Piezas Hist. Nat., 1787, 20, Habana.
Priacanthus arenatus Cuvier and Valenciennes, Hist. Nat. Poiss., III, 1829, 75 (101), Brazil.
Priacanthus fulgens Lowe, Trans. Zool. Soc. Lond., II, 1839, 174, Madeira.
Priacanthus catalufa Poey, Proc. Acad. Nat. Sci. Phila., XV, 1863, 182, Habana.

Genus 857. PSEUDOPRIACANTHUS Bleeker.
Pseudopriacanthus Bleeker, Versl. Ak. Wet. Amsterdam, 1869 (2), 241 (*Priacanthus niphonius* Cuvier and Valenciennes).

2494. Pseudopriacanthus altus (Gill).
West Indies and the Gulf Stream.
Priacanthus altus Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 732, Narragansett Bay.

2495. Pseudopriacanthus serrula (Gilbert).
Pacific coast of Colombia.
Priacanthus serrula Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 450, *Albatross* station, 2797, west coast of Colombia.

Family 199. PEMPHERIDÆ. Deep-water catalufas

Genus 858. PEMPHERIS Cuvier.
Pempheris Cuvier, Règne Anim., ed. 2, II, 1829, 195 (*Kurtus argenteus* Bloch and Schneider = *Pempheris touea* Cuvier).

2496. Pempheris schomburgkii Müller and Troschel.
Barbados and Cuba.
Pempheris schomburgkii Müller and Troschel, in Schomburgk's History of Barbados, 1848, 669, Barbados.

2497. Pempheris mülleri Poey. *Catalufa de lo alto.*
West Indies to Brazil.
Pempheris mülleri Poey, Memorias, II, 1861, 203, Cuba.

2498. Pempheris poeyi Bean.
Cuba.
Pempheris poeyi Bean, Proc. U. S. Nat. Mus., VIII, 1885, 229, Habana.

2499. Pempheris mexicanus Cuvier and Valenciennes.
Pacific coast of Mexico, Acapulco.
Pempheris mexicana Cuvier and Valenciennes, Hist. Nat. Poiss., VII, 1831, 230 (308), Acapulco, Mexico.

Family 200. LOBOTIDÆ. Flashers or tripletails

Genus 859. LOBOTES Cuvier.
Lobotes Cuvier, Règne Anim., ed. 2, II, 1829, 177 (*L. erate* Cuvier and Valenciennes).

2500. Lobotes surinamensis (Bloch). *Flasher; Tripletail; Dormeur; Black perch; Black grunt.*
Atlantic coast from Cape Cod to Surinam; Mediterranean; Japan.
Holocentrus surinamensis Bloch, Naturgesch. Ausl. Fische, IV, 1790, 98, Surinam.
Bodianus triourus Mitchill, Trans. Lit. and Phil. Soc. N. Y., I, 1815, 418, Powells Hook, N. J.
Lobotes somnolentus Cuvier and Valenciennes, Hist. Nat. Poiss., V, 1830, 244 (324), pl. 126, San Domingo.
Lobotes erate Cuvier and Valenciennes, loc. cit., 322, Pondicherry.
Lobotes auctorum Günther, Cat., I, 1859, 338, Cuba; Calcutta; China.

Genus 860. VERRUGATO Jordan.
Verrugato Jordan, Classn. Fishes, 1923, 195 (*Lobotes pacificus* Gilbert).

2501. Verrugato pacificus (Gilbert). *Berrugate.*
Panama.
Lobotes pacificus Gilbert, in Jordan and Evermann, Fishes North and Mid. Amer., 1898, 2857, Panama.

Family 201. XENICHTHYIDÆ

Genus 861. XENICHTHYS Gill.
Xenichthys Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 82 (*X. xanti* Gill).

2502. Xenichthys xanti Gill.
Pacific coast of tropical America, from Cape San Lucas to Panama.
Xenichthys xanti Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 82, Cape San Lucas.
Xenichthys xenops Jordan and Gilbert, Bull. U. S. Fish Com., I, 1881, 325, Panama.

Genus 862. XENISTIUS Jordan and Gilbert.
Xenistius Jordan and Gilbert, Synopsis, 1883, 920 (*Xenichthys californiensis* Steindachner).

2503. Xenistius californiensis (Steindachner).
Pacific coast of America, from San Diego southward to Guaymas, Mexico.
Xenichthys californiensis Steindachner, Ichth. Beitr., III, 1875, 3, San Diego.

Family 202. HOPLOPAGRIDÆ

Genus 863. HOPLOPAGRUS Gill.
Hoplopagrus Gill, Proc. Acad. Nat. Sci. Phila., XIII, 1861, 78; and 1862, 253 (*Hoplopagrus guntheri* Gill.)

2504. Hoplopagrus guntheri Gill. *Pargo.*
Pacific coast of tropical America, from Guaymas to Panama.
Hoplopagrus guntheri Gill, Proc. Acad. Nat. Sci. Phila., XIII, 1861, 78, and 1862, 253, Cape San Lucas, Lower California.

Family 203. LUTIANIDÆ. Snappers

Genus 864. LUTIANUS Bloch.
Lutianus Bloch, Nat. Ausl. Fische, IV, 1790, 105 (*L. lutianus* Bloch).
Diacope Cuvier, Mém. Mus. Hist. Nat. Paris, I, 1816, 360 (*Holocentrus bengalensis* Bloch, preoccupied).
Mesoprion Cuvier (Règne Animal, 143), Cuvier and Valenciennes, Hist. Nat. Poiss., II, 1828, 441 (*L. lutianus* Bloch).
Genyoroge Cantor, Jour. Roy. Asiat. Soc. Bengal, XVIII, 1849, 12 (*Diacope sebæ* Cuvier and Valenciennes).
Neomænis Girard, Proc. Acad. Nat. Sci. Phila., X, 1858 (1859), 167 (*Lobotes emarginatus* Baird and Girard = *Labrus griseus* Linnæus).
Hypoplites Gill, loc. cit., XIV, 1862, 236 (*Mesoprion retrospinis* Cuvier and Valenciennes).
Evoplites Gill, loc. cit., 236 (*Mesoprion pomacanthus* Bleeker, young of *L. kasmira*).
Lutjanus Bloch and later writers, change of spelling; the word from the Indian "Lutjang."

Subgenus EVOPLITES Gill.

2505. Lutianus viridis (Valenciennes).
Rocky islands of the eastern Pacific; known from Galapagos, Tres Marias, and Revillagigedo Islands.
Diacope viridis Valenciennes, Voy. *Vénus*, 1855, 303, pl. 1, fig. 2 (very bad), Galapagos Islands.

Subgenus NEOMÆNIS Girard.

2506. Lutianus jordani (Gilbert)
Panama; Cocos Island.
Neomænis jordani Gilbert, in Jordan and Evermann, Fishes North and Mid. Amer., 1896, 1252, Panama.

2507. Lutianus novemfasciatus (Gill). *Pargo prieto; Pargo moreno; Pargo negro.*

Pacific coast of tropical America; Cape San Lucas; Guaymas; Mazatlan; Punta Arenas; San Blas; Panama.

Lutjanus novemfasciatus Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 251, Cape San Lucas, Lower California.

Mesoprion pacificus Bocourt, Ann. Sci. Nat. Paris, X, 1868, 223, Tauesco, Pacific coast of Guatemala.

Lutjanus prieto Jordan and Gilbert, Proc. U. S. Nat. Mus., IV, 1881, 353, Mazatlan.

2508. Lutianus cyanopterus (Cuvier and Valenciennes). *Cubera.*

West Indies to Brazil.

Mesoprion cyanopterus Cuvier and Valenciennes, Hist. Nat. Poiss., II, 1828, 357 (472), Brazil.

?*Mesoprion pargus* Cuvier and Valenciennes, loc. cit., 358 (473), Porto Rico.

Lutjanus cubera Poey, Ann. Lyc. Nat. Hist. N. Y., X, 1871, 75, Cuba.

Lutjanus dentatus A. Duméril in Vaillant and Bocourt, Misc. Sci. Mex. Poiss., 1881, 125, Brazil.

2509. Lutianus griseus (Linnæus). *Gray snapper; Mangrove snapper; Cabelellerote; Lawyer.*

West Indies; ranging from New York to Brazil.

Turdus pinnis branchialibus carens Catesby, Hist. Carolinas, II, 1743, 5, pl. 9, Bahamas.

Labrus griseus Linnæus, Syst. Nat., ed. X, 1758, 283, after Catesby.

Caballerote Parra, Descr. Dif. Piezas, Hist. Nat., 1787, 52, pl. 25, fig. 1, Habana.

Sparus tetracanthus Bloch, Nat. Ausl. Fische, 1791, 116, Martinique.

Anthias caballerote Bloch and Schneider, Syst. Ichth., 1801, 310, Cuba; after Parra.

Bodianus vivanet Lacépède, Hist. Nat. Poiss., IV, 1802, pl. 4, fig. 3, Martinique.

Mesoprion griseus Cuvier and Valenciennes, Hist. Nat. Poiss., II, 1828, 355 (469), San Domingo, not after Linnæus.

Lobotes emarginatus Baird and Girard, 9th Smith. Rept., 1854 (1855), 332, Beaseley Point, N. J.

Lutjanus stearnsi Goode and Bean, Proc. U. S. Nat. Mus., I, 1878, 179, Pensacola, Fla.

2510. Lutianus jocú (Bloch and Schneider). *Dog snapper; Jocú.*

West Indies, north to Florida Keys, south to Bahia; one young recorded from Woods Hole, Mass. (Nichols and Breder).

Anthias jocú Bloch and Schneider, Syst. Ichth., 1801, 310, Cuba; after Parra.

Jocú Parra, Descr. Dif. Piezas, Hist. Nat., I, 1787, 53, pl. 25, fig. 2, Cuba.

Mesoprion litura Cuvier and Valenciennes, Hist. Nat. Poiss., II, 1828, 353 (467), Cayenne; St. Thomas.

2511. Lutianus apodus (Walbaum). *Schoolmaster; Cají.*

West Indies, north to Key West, south to Bahia; young casual at Woods Hole, Mass. (Nichols and Breder).

Perca apoda Walbaum, Artedi Piscium, 1792, 351; based on the "Schoolmaster" of Catesby, which, in the very bad plate, lacks the pectoral fin.

Caxis Parra, Descr. Dif. Piezas, Hist. Nat., 1787, 14, pl. 8, fig. 2, Habana.

Sparus caxis Bloch and Schneider, Syst. Ichth., 1801, 284, Habana; after Parra.

Bodianus striatus Bloch and Schneider, loc. cit., 1801, 335, pl. 65, West Indies, misprinted *albostriatus* and *fasciatus*.

Lutjanus acutirostris Desmarest, Prem. Dec. Ichth., 1823, 12, pl. 3, Cuba.

Mesoprion cynodon Cuvier and Valenciennes, Hist. Nat. Poiss., II, 1828, 351 (465), Martinique, San Domingo.

Mesoprion linea Cuvier and Valenciennes, loc. cit., 354 (468,) Cuba; San Domingo.

Mesoprion flavescens Cuvier and Valenciennes, loc. cit., 357 (472), Martinique.

2512. Lutianus lutjanoides (Poey).
Cuba.
Ocyurus lutjanoides Poey, Ann. Lyc. Nat. Hist., IX, 1870, 319, Cuba; known from one specimen, suspected to be a hybrid between *Ocyurus chrysurus* and *Lutianus apodus*).

2513. Lutianus brachypterus (Cope).
Bahama Islands.
One specimen known.
Lutjanus brachypterus Cope, Trans. Amer. Phil. Soc., XIV, 1871, 470, New Providence, Bahama Islands; perhaps a hybrid of *Lutianus griseus* and *L. synagris*.

2514. Lutianus argentiventris (Peters). *Pargo amarillo.*
Pacific coast of tropical America; Galapagos and Cocos Islands.
Mesoprion argentiventris Peters, Berlin Monatsber., 1869, 704, Mazatlan.

2515. Lutianus hastingsi (Bean). *Bermuda silk snapper.*
Bermuda.
Neomænis hastingsi Bean, Bull. Amer. Mus. Nat. Hist., X, Art. III, 1898, 45, Bermuda.

2516. Lutianus buccanella (Cuvier and Valenciennes). *Sesi de lo alto; Orielle noire; Boucanello; Blackfin snapper.*
West Indies; Habana.
Mesoprion bucanella Cuvier and Valenciennes, Hist. Nat. Poiss., II, 1828, 344 (455), Martinique.
Mesoprion caudanotatus Poey, Memorias, I, 1854, pl. 3, fig. 3, 440, Cuba.

2517. Lutianus vivanus (Cuvier and Valenciennes). *Pargo de lo alto; Silk snapper; West Indian snapper.*
West Indies; Habana.
Mesoprion vivanus Cuvier and Valenciennes, Hist. Nat. Poiss., II, 1828, 343 (454), Martinique.
Mesoprion profundus Poey, Memorias, II, 1861, 150, Cuba.
Lutjanus torridus Cope, Trans. Amer. Phil. Soc., XIV, 1871, 469, St. Kitts.
Lutjanus purpureus Poey, Enumeratio, 1875, 29.

2518. Lutianus campechanus[59] (Poey). *Red snapper; Mexican snapper; Pargo guachenarigo.*
Long Island to Yucatan and Texas; a valued food fish.
Mesoprion campechanus Poey, Memorias, II, 1861, 149, Campeche.

2519. Lutianus blackfordii Goode and Bean. *Pensacola snapper.*
Lutjanus blackfordii Goode and Bean, Proc. U. S. Nat. Mus., I, 1878, 176, Pensacola, Fla.

2520. Lutianus analis (Cuvier and Valenciennes). *Muttonfish; Pargo; Pargo criollo.*
West Indies; Pensacola to Brazil, rarely north to Woods Hole, common and valued.
Anthias quartus rondeleti (the muttonfish) Catesby, Nat. Hist. Carolina, II, 1743, 25, pl. 25, Bahamas.
Mesoprion analis Cuvier and Valenciennes, Hist. Nat. Poiss., II, 1828, 341 (452), San Domingo.
Mesoprion sobra Cuvier and Valenciennes, Hist. Nat. Poiss., II, 1828, 342 (453), Martinique.
Mesoprion isodon Cuvier and Valenciennes, loc. cit., IX, 1833, 328 (443), San Domingo.
Mesoprion rosaceus Poey, Ann. Lyc. Nat. Hist. N. Y., IX, 1870, 317, Cuba.

2521. Lutianus colorado (Jordan and Gilbert). *Pargo colorado.*
Pacific coast of Mexico, Guaymas to Panama.
Lutjanus colorado Jordan and Gilbert, Proc. U. S. Nat. Mus., IV, 1881, 338, name only, 351, 355, Mazatlan, Mexico.

2522. Lutianus guttatus (Steindachner). *Flamenco.*
Pacific coast of Mexico, from Guaymas to Panama.
Mesoprion guttatus Steindachner, Ichthyol. Notizen, IX, 1869, 18, pl. 8, Mazatlan, Mexico.

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[59] The common red snapper is here admitted provisionally as distinct from the Brazilian *Lutianus aya* from which it is said by Hildebrand to differ tangibly.

2523. Lutianus synagris (Linnæus). *Lane snapper; Biajaiba; Redtail snapper.*
West Indies; Florida Keys to Colon and Brazil.
Sparus synagris Linnæus, Syst. Nat., Ed. X, 1758, 280, Carolinas; after Catesby.
Salpa purpurascens variegata (Lane snapper) Catesby, Nat. Hist. Carolina, II, 1743, 17, pl. 17, Bahamas.
Sparus vermicularis Bloch and Schneider, Syst. Ichth., 1801, 275, Martinique, on a drawing by Plumier.
?*Lutjanus aubrieti* Desmarest, Prem. Dec. Ichth., 1823, 17, pl. 2, Cuba.
Mesoprion uninotatus Cuvier and Valenciennes, Hist. Nat. Poiss., II, 1828, 339 (449), pl. 39, San Domingo; Martinique.

2524. Lutianus ambiguus (Poey).
Cuba.
Mesoprion ambiguus Poey, Memorias, II, 1861, 152, pl. 12, fig. 4; pl. 13, fig. 8; Habana; two specimens known; suspected to be a hybrid of *Lutianus synagris* and *Ocyurus chrysurus*).

2525. Lutianus mahogoni (Cuvier and Valenciennes). *Ojanco; Mahogany snapper.*
West Indies; Habana.
Mesoprion mahogoni Cuvier and Valenciennes, Hist. Nat. Poiss., II, 1828, 338 (447), Martinique.
Mesoprion ricardi Cuvier and Valenciennes, loc. cit., 339 (447), Martinique? No locality given.
Mesoprion ojanco Poey, Memorias, II, 1861, 150, pl. 13, fig. 10, Cuba.

2526. Lutianus megalophthalmus (Evermann and Marsh).
Porto Rico.
Neomænis megalophthalmus Evermann and Marsh, Bull. U. S. Fish Com., XX, 1900 (1902), 177, Puerto Real, Porto Rico.

Genus 865. RAIZERO Jordan and Fesler.
Raisero Jordan and Fesler, Rept. U. S. Fish. Com., XVII, 1889 (1893), 438 (*Mesoprion aratus* Günther).

2527. Raizero aratus (Günther). *Pargo de raizero.*
Pacific coast of tropical America.
Mesoprion aratus Günther, Proc. Zool. Soc. Lond., 1864, 145, Panama; Chiapam.

Genus 866. RABIRUBIA Jordan and Fesler.
Rabirubia Jordan and Fesler, Rept. U. S. Fish Com., XVII, 1889 (1893), 438 (*Mesoprion inermis* Peters).

2528. Rabirubia inermis (Peters).
Pacific coast of America from Mazatlan to Panama.
Mesoprion inermis Peters, Berliner Monatsber., 1869, 705, Mazatlan, Mexico.

Genus 867. OCYURUS Gill. *Rabirubias.*
Ocyurus Gill, Proc. Acad. Nat. Sci. Phila.. XIV, 1862, 236 (*Sparus chrysurus* Bloch).

2529. Ocyurus chrysurus (Bloch). *Yellowtail; Rabirubia.*
West Indies, southern Florida to Brazil; single specimen recorded at Woods Hole, Mass.
Sparus chrysurus Bloch, Nat. Ausl. Fische, V, 1791, 28, Brazil; after Marcgrave.
Acara pitamba Marcgrave, Hist. Brasil., 1648, 155, Brazil.
Rabirubia Parra, Descr. Dif. Piezas, Hist. Nat., 1787, 42, pl. 20, fig. 1, Cuba.
Anthias rabirubia Bloch and Schneider, Syst. Ichth., 1801, 309, Cuba; after Parra.
Sparus semiluna Lacépède, Hist. Nat. Poiss., IV, 1802, 141, Martinique.
Mesoprion aurovittatus Agassiz, Spix, Pisc. Brasil., 1829, 121, pl. 66, Brazil.
Ocyurus rijgersmœi Cope, Trans. Amer. Phil. Soc., XIV, 1871, 468, fig. 4, St. Kitts.

Genus 868. RHOMBOPLITES Gill.
Rhomboplites Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 237 (*Centropristis aurorubens* Cuvier and Valenciennes).

2530. Rhomboplites aurorubens (Cuvier and Valenciennes). *Cagon de lo alto.*
West Indies, north to Charleston, south to Rio Janeiro.
Centropristis aurorubens Cuvier and Valenciennes, Hist. Nat. Poiss., III, 1829, 34 (45), Brazil, Martinique, and San Domingo.
Mesoprion elegans Poey, Memorias, II, 1861, 153, Cuba.
Aprion ariommus Jordan and Gilbert, Proc. U. S. Nat. Mus., VI, 1883, 142, Pensacola, Fla.

Genus 869. TROPIDINIUS Gill.
Tropidinius Gill, in Poey, Synopsis, 1868, 296 (*Mesoprion arnillo* Poey=*Apsilus dentatus* Guichenot).

2531. Tropidinius dentatus (Guichenot). *Arnillo.*
West Indies; Habana.
Apsilus dentatus Guichenot, in Ramon de la Sagra, Hist. Cuba, Poiss., 1853, 29, pl. 1, fig. 2, Habana.
Mesoprion arnillo Poey, Memorias, II, 1861, 154, Cuba.

Genus 870. PRISTIPOMOIDES Bleeker.
Pristipomoides Bleeker, Tijdschr. Ned. Ind., III, 1852, 574 (*Pristipomoides typus* Bleeker).
Platyinius Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 237 (*Mesoprion vorax* Poey=*Centropristis macrophthalmus* Müller and Troschel).
Bowersia Jordan and Evermann, Bull. U. S. Fish Com., XXII, 1902 (1903), 182 (*B. violescens* Jordan and Evermann).

Subgenus PLATYINIUS Gill.

2532. Pristipomoides macrophthalmus (Müller and Troschel). *Voraz.*
West Indies, Habana.
Centropristis macrophthalmus Müller and Troschel, in Schomburgk, Hist. Barbados, 1848, 666, Barbados.
Mesoprion vorax Poey, Memorias, II, 1861, 151, Cuba.

Genus 871. ETELIS Cuvier and Valenciennes.
Etelis Cuvier and Valenciennes, Hist. Nat. Poiss., II, 1828, 93 (127) (*Etelis carbunculus* Cuvier and Valenciennes, an East Indian species).
Elastoma Swainson, Nat. Hist. Fish., Amphib., etc., II, 1839, 202 (*Etelis oculatus* Cuvier and Valenciennes).
Hesperanthias Lowe, Fishes of Madeira, 1843, 14 (*Serranus oculatus* Cuvier and Valenciennes).
Macrops Duméril, Mém. Acad. Sci. Paris, XXVII, 1856, 279 (*Serranus aculeatus* (*oculatus*) Cuvier and Valenciennes).

2533. Etelis oculatus [60] (Cuvier and Valenciennes). *Cachucho.*
Warm seas; West Indies to Madeira; Hawaii.
Etelis carbunculus Cuvier and Valenciennes, Hist. Nat. Poiss., II, 1828, 94 (127), pl. 18, Seychelles Archipelago.
Serranus oculatus Cuvier and Valenciennes, loc. cit., II, 198 (266), pl. 32, Martinique.
?*Etelis eviurus* Jordan and Evermann, Bull. U. S. Fish Com., XXII, 1902, 142, Hawaii.

Genus 872. ETELIDES Jordan and Thompson.
Etelides Jordan and Thompson, Bull. U. S. Bur. Fish., XXIV, 1904, 241 (*Anthias aquilonaris* Goode and Bean).

2534. Etelides aquilonaris (Goode and Bean).
Gulf of Mexico; Gulf Stream near Carolina coast.
Anthias aquilonaris Goode and Bean, Oceanic Ichth., 1895, 238, Gulf of Mexico.

Family 204. VERILIDÆ

Genus 873. VERILUS Poey.
Verilus Poey, Memorias, II, 1861, 124 (*V. sordidus* Poey).

2535. Verilus sordidus Poey. *Escolar chino.*
West Indies.
Verilus sordidus Poey, Memorias, II, 1861, 125, pl. 12, fig. 6, Cuba.

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[60] This widely distributed and brilliantly colored fish seems to be of a single species throughout the warm seas. We let the American species stand, pending investigation, though we can not detect any difference from the common *eviurus*, Hawaii, and *carbunculus* of Japan.

Family 205. HÆMULIDÆ

Genus 874. HÆMULON Cuvier. *Roncos or grunts.*

Diabasis Desmarest, Prem. Decade Ichth., 1823, 34 (*D. parra* Desmarest; name preoccupied in beetles).

Hæmulon Cuvier, Règne Anim., ed. 2, II, 1829, 175 (*elegans*, etc., restricted later to *Hæmulon elegans* Cuvier=*Sparus sciurus* Shaw).

Anarmostus Scudder, in Putnam, Bull. Mus. Comp. Zool., I, 1863, 12; name preoccupied in insects.

2536. Hæmulon sexfaciatum Gill. *Mojarra almejero.*

Pacific coast of tropical America, Guaymas to Panama.

Hæmulon sexfasciatus Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 254, Cape San Lucas.

Hæmulon maculosum Peters, Berliner Monatsber., 1869, 705, Mazatlan.

2537. Hæmulon album Cuvier and Valenciennes. *Margatefish; Jallao; Margaret grunt.*

West Indies; Florida Keys to Brazil.

Perca marina gibbosa cinerea (margatefish) Catesby, Nat. Hist. Carolina, II, 1743, 2, pl. 2, Bahamas.

Perca gibbosa Walbaum, Artedi Pisc., 1792, 342, not of Linnæus, after Catesby.

Hæmulon album Cuvier and Valenciennes, Hist. Nat. Poiss., V, 1830, 179 (241), St. Thomas.

Hæmulon microphthalum Günther, Cat., I, 1859, 306, America.

2538. Hæmulon mowbrayi Jordan and Evermann.

Key West, Fla.

Hæmulon chrysopterum Mowbray, N. Y. Zool. Soc. Bull., XVIII, No. 6, 1915, 1298, with fig., Key West; not of Cuvier, which is *Bathystoma rimator* Jordan and Swain.

Hæmulon mowbrayi Jordan and Evermann, Proc. Calif. Acad. Sci., 4th ser., XVI, Apr. 27, 1927, 505.

2539. Hæmulon macrostomum Günther. *Gray grunt; Striped grunt.*

West Indies, north to Florida Keys.

Hæmulon macrostoma Günther, Cat., I, 1859, 308, Jamaica.

Hæmulon fremebundum Goode and Bean, Proc. U. S. Nat. Mus., II, 1879, 340, Clearwater Harbor, Fla.

2540. Hæmulon bonariense Cuvier and Valenciennes. *Black grunt; Ponce prieto.*

West Indies, south to Buenos Aires.

Hæmulon bonariense Cuvier and Valenciennes, Hist. Nat. Poiss., V, 1830, 174 (254), Buenos Aires.

Hæmulon canna Cuvier and Valenciennes, loc. cit., V, 173 (233), Martinique.

Hæmulon notatum Poey, Memorias, II, 1861, 179, Cuba.

Hæmulon retrocurrens Poey, Repertorio, II, 1868, 236, 461, Cuba.

Hæmulon continuum Poey, Enumeratio, 1875, 46, Cuba.

2541. Hæmulon parra (Desmarest). *Sailors' choice; Ronco blanco; Ronco prieto; Bastard margaret.*

West Indies; southern Florida to Brazil; very common at Key West and Habana.

Diabasis parra Desmarest, Prem. Décade Ichth., 1823, 30, pl. 2, fig. 2, Habana.

Hæmulon caudimacula Cuvier, Règne Anim., ed. 2, II, 1829, 176, Brazil; Habana.

Hæmulon chromis Broussonet, in Cuvier and Valenciennes, Hist. Nat. Poiss., V, 1830, 180 (242), Jamaica.

Hæmulon acutum Poey, Memorias, II, 1861, 180, Cuba.

Hæmulon serratum Poey, loc. cit., 181, Cuba.

Hæmulon albidum Poey, loc. cit., 181, Cuba.

Hæmulon canna Agassiz in Spix, Pisc. Brasil., 1829, 130, pl. 69, Brazil; not of Cuvier and Valenciennes.

2542. Hæmulon scudderi Gill. *Mojarra prieta.*
Pacific coast of tropical America, Guaymas to Panama.
Hæmulon scudderi Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 253, Cape San Lucas.
Hæmulon brevirostrum Günther, Trans. Zool. Soc. Lond., VI, 1868, 418 (Nov. 27), Panama.
Hæmulon undecimale Steindachner, Ichth. Beitr., III, 1875, 11, Panama.

2543. Hæmulon carbonarium Poey. *Ronco carbonero; Cæsar grunt.*
West Indies and Bermudas, south to Brazil; Habana.
Hæmulon carbonarium Poey, Memorias, II, 1861, 176, Cuba.

2544. Hæmulon steindachneri (Jordan and Gilbert). *Roncador raiado.*
Both coasts of tropical America; Guaymas to Panama; a similar species (unnamed) recorded from St. Lucia and Rio Janeiro.
Diabasis steindachneri Jordan and Gilbert, Bull. U. S. Fish Com., I, 1881 (1882), 322, Panama and Mazatlan.

2545. Hæmulon melanurum (Linnæus). *Jeniguana; Cæsar grunt.*
West Indies; Habana and southward; Bush Key; Tortugas.
Perca marina cauda nigra (blacktail) Catesby, Hist. Carolina, II, 1743, 7, pl. 7, fig. 2, Bahamas.
Perca melanura Linnæus, Syst. Nat., ed. X, 1758, 292, and ed. XII, 1766, 486, Bahamas; based on Catesby.
Hæmulon schrankii Agassiz in Spix, Pisc. Brasil., 1829, 131, pl. 69a, Brazil.
Hæmulon dorsale Poey, Memorias, II, 1861, 179, Cuba.

2546. Hæmulon sciurus (Shaw). *Yellow grunt; Ronco amarillo; Boar grunt; Humpback grunt.*
West Indies; Florida Keys to Brazil.
Anthias formosus Bloch, Nat. Ausl. Fische, VI, 1792, 122, Antilles; not *Perca formosa* of Linnæus as identified.
Sparus sciurus Shaw, General Zoology, IV, 1803, 439, pl. 64, Antilles; based on the description and figure of Bloch.
?*Diabasis obliquatus* Bennett, Zool. Jour. London, V, 1837, 90, Jamaica.
?*Hæmulon similis* Castelnau, Anim. Nouv. Rares, II, 1855, Bahia.
Hæmulon luteum Poey, Memorias, II, 1861, 174, Cuba.
Hæmulon multilineatum Poey, loc. cit., 178, Cuba.
?*Hæmulon hians* Haly, Ann. Nat. Hist., XV, 1875, 268, Aspinwall.

2547. Hæmulon plumieri (Lacépède). *Common grunt; Ronco ronco; Ronco arará; Boar grunt; Squirrelfish; Ronco grande.*
West Indies; abundant from Cape Hatteras to Rio Janeiro.
Perca marina capite striato Catesby, Nat. Hist. Carolina, II, 1743, 6, pl. 6, Bahamas.
Labrus plumieri Lacépède, Hist. Nat. Poiss., III, 1802, 480, pl. 2, fig. 2, Martinique; on a copy of a drawing by Plumier, identified with this species by Cuvier.
Guabicoara brasiliensibus Marcgrave, Hist. Brasil., 1648, 163, Brazil.
Hæmulon formosum Cuvier, Règne Anim., ed. 2, II, 1829, 175, Martinique.
Hæmulon arcuatum Cuvier and Valenciennes, Hist. Nat. Poiss., IX, 1833, 356 (481), Charleston, S. C.
Hæmulon arara Poey, Memorias, II, 1861, 177, Cuba.
Hæmulon subarcuatum Poey, loc. cit., 419, Cuba.

2548. Hæmulon flavolineatum (Desmarest). *French grunt; Open-mouthed grunt; Ronco condenado.*
West Indies; Florida Keys and Bermudas to Brazil.
Diabasis flavolineatus Desmarest, Prem. Décade Ichth., 1823, 35, pl. 2, fig. 1, Cuba.
Hæmulon heterodon Cuvier, Règne Anim., ed. 2, II, 1829, 176, Cuba, based on Desmarest.
Hæmulon xanthopteron Cuvier and Valenciennes, Hist. Nat. Poiss., V, 1830, 174 (254), Martinique.

Genus 875. BRACHYGENYS Scudder.
Brachygenys Scudder, in Poey, Enumeratio, 1875, 47 (*Hæmulon tæniatum* Poey = *Hæmulon chrysargyreum* Günther).

2549. Brachygenys chrysargyreus (Günther).
Key West, Habana, and Trinidad.
Hæmulon chrysargyreum Günther, Cat., 1859, 314, Trinidad.
Hæmulon tæniatum Poey, Memorias, II, 1861, 182, Cuba.

Genus 876. BATHYSTOMA Scudder. *Tomtates.*
Bathystoma Scudder, in Putnam, Bull. Mus. Comp. Zool., I, 1863, 12; no definition. (*Hæmulon jeniguano* Poey = *Hæmulon aurolineatum* Cuvier and Valenciennes); not *Bathystomus* Förster, 1862.

2550. Bathystoma rimator (Jordan and Swain). *Tomtate; Redmouth grunt; Cæsar; Young grunt.*
West Indies; Cape Hatteras to Trinidad.
Hæmulon rimator Jordan and Swain, Proc. U. S. Nat. Mus., VII, 1884, 308, Charleston; Key West; Pensacola.

2551. Bathystoma aurolineatum (Cuvier and Valenciennes). *Jeniguano; Tomtate.*
West Indies; Florida Keys to Brazil.
Hæmulon aurolineatum Cuvier and Valenciennes, Hist. Nat. Poiss., V, 1830, 176 (237), Brazil; San Domingo.
Hæmulon jeniguano Poey, Memorias, II, 1861, 183, Cuba.

2552. Bathystoma striatum (Linnæus). *White grunt.*
West Indies; Bermudas to Brazil.
Capeuna brasiliensibus Marcgrave, Hist. Brasil., 1648, 155, Brazil (nonbinomial).
Perca striata Linnæus, Syst. Nat., Ed. X, 1758, 293, North America.
Grammistes trivittatus Bloch and Schneider, Syst. Ichth., 1801, 188, Brazil, after Marcgrave.
Serranus capuena Lichtenstein, Abhandl. Berlin. Akad., 1820, 288, Brazil; after Marcgrave.
Hæmulon quadrilineatum Cuvier and Valenciennes, Hist. Nat. Poiss., V, 1830, 177 (238), pl. 120, San Domingo.
Hæmulon quinquelineatum Poey, Memorias, II, 1861, 419, Cuba.

Genus 877. LYTHRULON Jordan and Swain.
Lythrulon Jordan and Swain, Proc. U. S. Nat. Mus., VII, 1884, 287 (*Hæmulon flaviguttatus* Gill).

2553. Lythrulon flaviguttatum (Gill). *Peixe fonda.*
Pacific coast of tropical America, Guaymas to Panama.
Hæmulon flaviguttatus Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 254, Cape San Lucas, Lower California.
Hæmulon margaritiferum Günther, Proc. Zool. Soc. Lond., 1864, 147, Panama.

2554. Lythrulon opalescens Jordan and Starks.
Mazatlan, Mexico.
Lythrulon opalescens Jordan and Starks, in Jordan, Proc. Calif. Acad. Sci., V, 1895, 459, pl. 40, Mazatlan, Mexico.

Genus 878. ORTHOSTŒCHUS Gill. *Striped grunts.*
Orthostœchus Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 255 (*O. maculicauda* Gill).

2555. Orthostœchus maculicauda Gill. *Roncador raiado.*
Pacific coast of tropical America; Guaymas to Panama.
Orthostœchus maculicauda Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 225, Cape San Lucas, Lower California.
Hæmulon mazatlanum Steindachner, Ichth. Notizen, VIII, 1869, 12, Pl. VI, Mazatlan.

Genus 879. PARACONODON Bleeker.
Paraconodon Bleeker, Archiv Neerl., XI, 1876, 272 (*Conodon pacifici* Günther).

2556. Paraconodon pacifici (Günther).
Pacific coast of tropical America.
Conodon pacifici Günther, Proc. Zool. Soc. Lond., 1864, 147, Chiapam.

2557. Paraconodon cæsius (Jordan and Gilbert).
Pacific coast of Mexico; Mazatlan and Acapulco; Bay of Panama.
Pomadasys cæsius Jordan and Gilbert, Proc. U. S. Nat. Mus., IV, 1881, 383, Mazatlan.

2558. Paraconodon dovii (Günther).
Pacific coast of tropical America at Mazatlan and Panama.
Pristipoma dovii Günther, Proc. Zool. Soc. Lond., 1864, 23, Panama

Genus 880. ANISOTREMUS Gill.
Anisotremus Gill, Proc. Acad. Nat. Sci. Phila., XIII, 1861, 105 (*Sparus virginicus* Linnæus).
Genytremus Gill, loc. cit., XIV, 1862, 256 (*Pristipoma bilineatum* Cuvier and Valenciennes = *Anisotremus surinamensis* Bloch).

Subgenus GENYTREMUS Gill.

2559. Anisotremus surinamensis (Bloch). *Pompon.*
Tropical America, from Louisiana (New Orleans market) to Brazil.
?*Lutjanus surinamensis* Bloch, Naturgesch. Ausl. Fische, IV, 1790, 98, Surinam.
Pristipoma bilineatum Cuvier and Valenciennes, Hist. Nat. Poiss., V, 1830, 202 (271), pl. 122, Martinique.
Pristipoma melanopterum Cuvier and Valenciennes, loc. cit., 203 (273), Brazil.
Hæmulon obtusum Poey, Memorias, II, 1861, 182, Habana.
Hæmulon labridum Poey, loc. cit., 1861, 419, Cuba.

2560. Anisotremus interruptus (Gill). *Mojarron.*
Pacific coast, Magdalena Bay to Panama and the Galapagos.
Genytremus interruptus Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1861, 256, Cape San Lucas, Lower California.
Pristipoma furthii Steindachner, Ichth. Beitr., V, 1876, 4, Panama.

2561. Anisotremus bicolor (Castelnau). *Maria prieta.*
Coast of Brazil; perhaps Cuba.
Pristipoma bicolor Castelnau, Anim. Amér. du Sud, Poiss., 1855, 8, pl. 2, fig. 2, Bahia, Brazil.
?*Pristipoma trilineatum* Poey, Memorias, II, 1861, 343, Habana, young.
Pristipoma brasiliense Steindachner, Sitzungsb. k. Akad. Wiss. Wien, 1863, 1013, Bahia.

Subgenus ANISOTREMUS Gill.

2562. Anisotremus scapularis (Tschudi).
Coast of Peru; said to have been once taken at Mazatlan, a doubtful record.
Pristipoma scapulare Tschudi, Fauna Peruana, 12, 1845, Huacho, Peru.
?*Diagramma melanospilum* Kner, Sitzungsb. k. Akad. Wiss., 1807, 4, west coast of South America.
Pristipoma notatum Peters, Monatsb. Akad. Wiss. Berlin, 1869, 706. "angeblich aus Mazatlan."

2563. Anisotremus davidsonii (Steindachner). *Sargo raiado.*
Coast of southern California.
Pristipoma davidsonii Steindachner, Ichth. Beitr., III, 1875, 6, San Diego.

2564. Anisotremus spleniatus (Poey).
Habana.
Pristipoma spleniatum Poey, Memorias, II, 1861, 187, Habana.

2565. Anisotremus tæniatus Gill. *Catalina; Striped grunt.*
Pacific coast of tropical America; Magdalena Bay to Panama.
Anisotremus tæniatus Gill, Proc. Acad. Nat. Sci. Phila., XIII, 1861, 107, Panama.

2566. Anisotremus virginicus (Linnæus). *Porkfish; Catalineta.*
West Indies; Florida Keys to Brazil.
Guatucupa juba Marcgrave, Hist. Brasil., 1648, 147, Brazil.
Acara pinima Marcgrave, loc. cit., 1648, 152, Brazil.
Sparus virginicus Linnæus, Syst. Nat., ed. X, 1758, 281, South America.
?*Sparus vittatus* Bloch, Naturgesch. Ausl. Fische, V, 1791, 33, fig. 2, Brazil; after *Acara pinima* Marcgrave.
Perca juba Bloch, loc. cit., VI, 1792, 77, Brazil, after Marcgrave.
Grammistes mauritii Bloch and Schneider, Syst. Ichthyol., 1801, 185, after Bloch.

?*Pristipoma catharinæ* Cuvier and Valenciennes, Hist. Nat. Poiss., V, 1830, 201, 269, St. Catharine Island, Brazil.
Pristipoma acara-pinima Castelnau, Anim. Nouv. Rares, 1856, 8, Brazil.
Pristipoma rodo Cuvier and Valenciennes, loc. cit., 205 (274), Martinique, Brazil, Porto Rico, and San Domingo.

2567. Anisotremus serrula (Cuvier and Valenciennes). *Tête de roche; Petite scie.*
Martinique.
Pristipoma serrula Cuvier and Valenciennes, Hist. Nat. Poiss., V, 1830, 203 (272), Martinique.
Pristipoma auratum Cuvier and Valenciennes, loc. cit., 203 (272), Martinique.

Genus 881. CONODON Cuvier and Valenciennes.
Conodon Cuvier and Valenciennes, Hist. Nat. Poiss., V, 1830, 156 (*C. antillanus* Cuvier and Valenciennes=*Perca nobilis* Linnæus).
Cheloniger Plumier, in Lacépède, Hist. Nat. Poiss., V, 1803 (*Perca nobilis* Linnæus); name not accepted by Lacépède.

2568. Conodon nobilis (Linnæus).
West Indies; coast of Texas to Brazil.
Perca nobilis Linnæus, Syst. Nat., Ed. X, 1758, 291, North America.
Sciæna plumieri Bloch, Nat. Ausl. Fische, VI, 1792, 66, taf. 306, Martinique.
Sciæna coro Bloch, loc. cit., 1792, 70, pl. 307, fig. 2, Brazil; after *Coro coro* Marcgrave.
Conodon antillanus Cuvier and Valenciennes, Hist. Nat. Poiss., V, 1830, 116 (156), Jamaica.

2569. Conodon serrifer Jordan and Gilbert.
Lower California.
Conodon serrifer Jordan and Gilbert, Proc. U. S. Nat. Mus., V, 1882, 351, Boca Soledad, Lower California.

Genus 882. BRACHYDEUTERUS Gill. *Burritos.*
Brachydeuterus Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 17 (*B. auritus*, an African species).
Hæmulopsis Steindachner, Ichth. Notizen, VIII, 1869, 9, Mazatlan (*Hæmulon corvinæformis* Steindachner).

2570. Brachydeuterus nitidus (Steindachner).
Pacific coast of tropical America; Panama, Mazatlan, and the Gulf of California.
Pristipoma (*Hæmulopsis*) *nitidum* Steindachner, Ichth. Notizen, VIII, 1869, 5, Mazatlan.

2571. Brachydeuterus leuciscus (Günther). *Burrito.*
Pacific coast of tropical America; not rare at Mazatlan and Panama; south to northern Peru.
Pristopoma leuciscus Günther, Proc. Zool. Soc. Lond., 1864, 147, San Jose de Nicaragua; Chiapam.
Pomadasis elongatus Jordan and Gilbert, Proc. U. S. Nat. Mus., V, 1882, 352, Mazatlan, Mexico.

2572. Brachydeuterus axillaris (Steindachner). *Burro blanco.*
Pacific coast of Mexico; Mazatlan and Guaymas.
Pristipoma (*Hæmulopsis*) *axillare* Steindachner, Ichth. Notizen, VIII, 1869, 7, Mazatlan.

2573. Brachydeuterus corvinæformis (Steindachner).
West Indies to Brazil; Jamaica.
Hæmulon corvinæforme Steindachner, Ichth. Notizen, VII, 1868, 16, Santos, Brazil.

Genus 883. RHENCUS Jordan and Evermann.
Rhencus Jordan and Evermann, Check List, 1895, 387 (*Pristipoma panamense* Steindachner).

2574. Rhencus panamensis (Steindachner).
Pacific coast of tropical America; Panama and Mazatlan.
Pristipoma panamense Steindachner, Ichth. Beitr., III, 1875, 8, Panama.

Genus 884. POMADASYS Lacépède. *Burros.*
Pomadasys Lacépède, Hist. Nat. Poiss., IV, 1803, 516 (*Sciæna argentea* Forskål).
Pristipomus Oken, Isis, 1817, 279 (*Lutjanus hasta* Bloch; after *les Pristipomes* Cuvier).
Pristipoma Cuvier and Valenciennes, changed spelling.

Subgenus PRISTOPOMUS Cuvier.

2575. Pomadasys bayanus Jordan and Evermann.
Pacific coast of Panama, in fresh water.
Pristipoma humile Kner and Steindachner, Sitsgber. Akad. Wiss. Münch., 1863, 222, Rio Bayano, near Panama; name preoccupied by *Pristopoma humilis* Bowdich, Fishes of Madeira, 1825, 236.
Pomadasis bayanus Jordan and Evermann, Fishes North and Mid. Amer., 1898, 1331, Rio Bayano, near Panama.

2576. Pomadasys productus (Poey).
Cuba.
Pristipoma productum Poey, Memorias, II, 1861, 186, Habana.

2577. Pomadasys macracanthus (Günther). *Burro.*
Pacific coast of tropical America; Panama; Mazatlan; Chiapas, and Punta Arenas.
Pristipoma macracanthum Günther, Proc. Zool. Soc. Lond., 1864, 146, Chiapam.

2578. Pomadasys grandis Meek.
Lake Nicaragua.
Pomadasis grandis Meek, Field Mus. Nat. Hist., Zool., VII, 1907, 116, Lake Nicaragua.

2579. Pomadasys templei Meek.
Valles, San Luis Potosí, Mexico.
Pomadasys templei Meek, Field Col. Mus., Zool., V, 1904, 201, Valles, San Luis Potosí, Mexico.

2580. Pomadasys boschmæ (Metzelaar).
West Indies.
Pristipoma boschmæ Metzelaar, Tropisch Atl. Vissch., 1919, 83, fig. 27; probably from Curaçao.

2581. Pomadasys starri Meek. *Burro.*
Perez, Vera Cruz, Mexico.
Pomadasys starri Meek, Field Col. Mus., Zool., V, 1904, 200, Perez, Vera Cruz, Mexico.

Genus 885. RHONCISCUS Jordan and Evermann.
Rhonciscus Jordan and Evermann, Check List, 1895, 387 (*Pristipoma crocro* Cuvier and Valenciennes).

2582. Rhonciscus crocro (Cuvier and Valenciennes).
West Indies; Cuba to Brazil.
Pristipoma crocro Cuvier and Valenciennes, Hist. Nat. Poiss., V, 1830, 197 (264), Martinique.
Pristipoma cultiferum Poey, Memorias, II, 1861, 185, Habana.
Pomadasys approximans Bean and Dresel, Proc. U. S. Nat. Mus., VII, 1884, 160, Jamaica.

2583. Rhonciscus branicki (Steindachner). *Burrito.*
Pacific coast of tropical America; Mazatlan to Peru.
Pristipoma branicki Steindachner, Denkschr. K. Akad. Wiss. Wien, XLI, 1879, 28, Tumbez, Peru.

2584. Rhonciscus ramosus (Poey).
West Indies; south to Brazil.
Pristipoma ramosum Poey, Memorias, II, 1861, 186, Habana.
Pristipoma boucardi Steindachner, Ichth. Notizen, VIII, 1869, 1, Cojimar River near Habana.

2585. Rhonciscus sinuosus (Eigenmann).
North coast of Colombia.
Pomadasys sinuosus Eigenmann, Proc. Amer. Phil. Soc., LVI, 1917, 683, Patia, between Magna and Telembi.

Genus 886. ORTHOPRISTIS Girard. *Pigfishes.*
Orthopristis Girard, U. S. Mex. Bound. Surv., Zool., 1859, 15 (*O. duplex* Girard = *Perca chrysopterus* Linnæus).
Pristocantharus Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 256 (*Pristipoma cantharinum* Jenyns).

2586. Orthopristis chalceus (Günther).
Pacific coast of tropical America, from Cape San Lucas to the Galapagos.
Pristipoma chalceum Günther, Proc. Zool. Soc. Lond., 1864, 146, Panama.
Pristipoma kneri Steindachner, Ichth. Notizen, VIII, 1869, 3, Mazatlan, Mexico.

2587. Orthopristis reddingi Jordan and Richardson.
La Paz, Lower California.
Orthopristis reddingi Jordan and Richardson, in Jordan, Proc. Calif. Acad. Sci., V, 1895, 509, pl. 41, La Paz, Lower California.

2588. Orthopristis chrysopterus (Linnæus). *Pigfish; Sailors' choice, Hogfish; Red-mouthed grunt.*
South Atlantic and Gulf coasts of the United States; young common as far north as New York.
Perca chrysoptera Linnæus, Syst. Nat., Ed. XII, 1766, 485, Charleston, S. C.
Labrus fulvo-maculatus Mitchill, Trans. Lit. and Phil. Soc. N. Y., 1814, 406, New York.
Pristipoma fasciatum Cuvier and Valenciennes, Hist. Nat. Poiss., V, 1830, 213 (285), New York.
Orthopristis duplex Girard, U. S. Mex. Bound, Surv., Zool., Fishes, 1859, 15, pl. 9, figs. 1 to 4, Indianola and Brazos Santiago, Tex.

2589. Orthopristis poeyi Scudder.
West Indies; Habana.
Orthopristis poeyi Scudder, in Poey, Synopsis, 1868, 312, Habana.

Genus 887. MICROLEPIDOTUS Gill.
Microlepidotus Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 255 (*M. inornatus* Gill).
Isaciella Jordan and Fesler, Rept. U. S. Fish Com., XVII, 1889-1891 (1893), 497 (*Pristipoma brevipinne* Steindachner).

2590. Microlepidotus brevipinnis (Steindachner).
Pacific coast of Mexico.
Pristipoma (*Hæmulopsis*) *brevipinne* Steindachner, Ichth. Notizen, VIII, 1869, 10, Mazatlan.

2591. Microlepidotus inornatus Gill. *Jopaton.*
Gulf of California; La Paz and Mazatlan.
Microlepidotus inornatus Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 256, Cape San Lucas, Lower California.

Genus 888. GENYATREMUS Gill.
Genyatremus Gill, Proc., Acad. Nat. Sci. Phila., XIV, 1862, 256 (*Diagramma cavifrons* Cuvier and Valenciennes = *Lutianus luteus* Bloch).

2592. Genyatremus luteus (Bloch).
Lesser Antilles to Brazil.
Lutianus luteus Bloch, Nat. Ausl. Fische, IV, 1795, 111, Martinique; on a drawing by Plumier.
Grammistes hepatus Bloch and Schneider, Syst. Ichth., 1801, 187, after Bloch.
Diagramma cavifrons Cuvier and Valenciennes, Hist. Nat. Poiss., V, 1830, 217 (290), pl. 123, Rio Janeiro.

Family 206. SPARIDÆ. Porgies; Pargos

Genus 889. OTRYNTER Jordan and Evermann.
Otrynter Jordan and Evermann, Check List, 1895, 388 (*Stenotomus caprinus* Bean).

2593. Otrynter caprinus (Bean).
Banks off the west coast of Florida.
Stenotomus caprinus Bean, Proc. U. S. Nat. Mus., V, 1882, 426, Snapper Banks off Pensacola, Fla.

Genus 890. STENOTOMUS Gill.
Stenotomus Gill, Canadian Nat., 1865, 266 (*Sparus argyrops* Linnæus= *Sparus chrysops* Linnæus).
Stenesthes Jordan, Copeia, Oct. 4, 1917 (same type); substitute name, there being an earlier genus *Stenotoma*).

2594. Stenotomus versicolor (Mitchill). *Common scup; Porgy; Scuppaug; Mishcuppauog; Bream; Fair maid.*
Atlantic coast of United States, from Cape Cod to North Carolina; common northward.
Labrus versicolor Mitchill, Trans. Lit. and Phil. Soc., I, 1815, 404, New York.
Sargus ambassis Günther, Cat., I, 1859, 449, New York.

2595. Stenotomus chrysops (Linnæus). *Southern porgy.*
Southern Atlantic and Gulf coast of United States, Cape Hatteras to Texas.
Sparus argyrops Linnæus, Syst. Nat., Ed. XII, 1766, 471, Charleston; young.
Sparus chrysops Linnæus, loc. cit., 1766, 471, Charleston, S. C.
Sparus xanthurus Lacépède, Hist. Nat. Poiss., IV, 1803, 120, Charleston; after *argyrops* L.
Chrysophrys aculeata Cuvier and Valenciennes, Hist. Nat. Poiss., XI, 1830, 137, Charleston, S. C.

Genus 891. CALAMUS Swainson.
Calamus Swainson, Nat. Hist. Fishes, etc., II, 1839, 171 and 221 (*Pagellus calamus* Cuvier and Valenciennes).
Grammateus Poey, Ann. Lyc. Nat. Hist. N. Y., X, 1874 (*Pagellus microps* Guichenot=*Pagellus penna* Cuvier and Valenciennes).

2596. Calamus calamus (Cuvier and Valenciennes). *Saucereye porgy; Pez de pluma.*
West Indies, north to Florida Keys.
Pagellus calamus Cuvier and Valenciennes, Hist. Nat. Poiss., VI, 1830, 152 (206), pl. 152, Martinique; San Domingo.
Calamus megacephalus Swainson, Nat. Hist. Fishes, II, 1839, 222, after Cuvier and Valenciennes.
Pagellus orbitarius Poey, Memorias, II, 1861, 201, Cuba.

2597. Calamus bajonado (Bloch and Schneider). *Jolt-head porgy; Bajonado.*
West Indies, north to Florida Keys.
Sparus bajonado Bloch and Schneider, ed. Bloch, Syst. Ichth., 1801, 284, West Indies; after Parra.
Bajonado Parra, Dif. Piezas Hist. Nat. Cuba, 1787, 13, lam. 8, Habana.
Pajellus caninus Poey, Memorias, II, 1861, 199, Habana.
Calamus plumatula Guichenot, Rev. Pagels in Mém. Soc. Sci. Nat. Cherbourg, XIV, 1868, 119, Martinique.

2598. Calamus proridens Jordan and Gilbert. *Littlehead porgy; Pez de pluma.*
West Indies, north to the Florida Keys.
Calamus proridens Jordan and Gilbert, Proc. U. S. Nat. Mus., VII, 1884, 150, Key West, Fla.

2599. Calamus pennatula Guichenot. *Littlehead porgy.*
West Indies.
Calamus pennatula Guichenot, Révision des Pagels in Mém. Soc. Sci. Nat. Cherbourg, XIV, 1868, 116, Martinique.

2600. Calamus brachysomus (Lockington). *Mojarra garabata.*
Gulf of California and neighboring waters, locally abundant from Magdalena Bay to Panama.
Sparus brachysomus Lockington, Proc. U. S. Nat. Mus., III, 1880, 284, Magdalena Bay, Lower California.

2601. Calamus leucosteus Jordan and Gilbert. *Whitebone porgy.*
South Atlantic coast of United States; known only from the markets of Charleston, S. C.
Calamus leucosteus Jordan and Gilbert, in Jordan, Cat. Fish. N. Amer., in Rept. U. S. Fish Com., XIII, 1885, 879, Charleston, S. C.

2602. Calamus macrops Poey.
Cuba.
Calamus macrops Poey, Ann. Lyc. Nat. Hist. N. Y., X, 1872, 181, Pl. VII, fig. 3, Habana.

2603. Calamus penna (Cuvier and Valenciennes). *Littlemouth porgy; Sheepshead porgy; Speckled porgy.*
Southern Florida to Brazil; known from southern Florida, Key West, Rio Janeiro, St. Thomas, Habana, Camaru, and Rio Grande do Sul.
Pagellus penna Cuvier and Valenciennes, Hist. Nat. Poiss., VI, 1830, 154 (209), Brazil.
Pagellus microps Guichenot, in Ramon de la Sagra, Hist. Ile Cuba, 1853, 83, pl. 3, fig. 1, Habana.
Pagellus humilis Poey, Synopsis, 1868, 308, Habana.
Pagellus milneri Goode and Bean, Proc. U. S. Nat. Mus., II, 1879, 134, Charlotte Harbor, Fla.

2604. Calamus arctifrons Goode and Bean. *Grass porgy; Shad porgy.*
Gulf of Mexico, from Pensacola to Key West; West Indies; Porto Rico.
Calamus arctifrons Goode and Bean, Proc. U. S. Nat. Mus., V, 1882, 425, Pensacola, Fla.

2605. Calamus medius (Poey).
West Indies; Habana.
Grammateus medius Poey, Ann. Lyc. Nat. Hist. N. Y., X, 1872, 183, pl. 7, fig. 4, Habana.

2606. Calamus kendalli Evermann and Marsh. *Pluma.*
Porto Rico.
Calamus kendalli Evermann and Marsh, Rept. U. S. Fish Com., XXV, 1899, 354, Mayaguez, Porto Rico.

Genus 892. PAGRUS Cuvier.
Pagrus Cuvier, Règne Animal, ed. 1, 1817, 272 (*Sparus argenteus* Bloch and Schneider=*Sparus pagrus* Linnæus).

2607. Pagrus pagrus (Linnæus). *Red porgy; Besugo; Pargo colorado.*
Southern Europe and south Atlantic and Gulf coasts of the United States; south to Uruguay; less common in America.
Sparus pagrus Linnæus, Syst. Nat., Ed. X, 1758, 279, southern Europe.
Sparus argenteus Bloch and Schneider, Syst. Ichth., 1801, 271, Europe.
Pagrus vulgaris Cuvier and Valenciennes, Hist. Nat. Poiss., VI, 1830, 104 (142), pl. 148, southern Europe.

Genus 893. LAGODON Holbrook. *Chopa spina; Sailors' choice.*
Lagodon Holbrook, Ichth. South Carolina, 1855, 56 (*Sparus rhomboides* Linnæus).

2608. Lagodon rhomboides (Linnæus). *Pinfish; Bream; Sailors' choice; Chopa spina; Sargo.*
Atlantic and Gulf coasts of United States; Cape Cod to Cuba.
Sparus rhomboides Linnæus, Syst. Nat., Ed. XII, 1766, 470, Charleston, S. C.

Genus 894. SALEMA Jordan and Evermann.
Salema [61] Jordan and Evermann, Check List, 1895, 390 (*Perca unimaculata* Bloch).

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[61] Not *Seleima* Bowdich 1825=*Kyphosus*.

2609. Salema rhomboidalis (Linnæus). *Salema.*
West Indies, north to Key West, south to Rio Janeiro.
Perca rhomboidalis Linnæus, Syst. Nat., Ed. X, 1758, Jamaica; after Bream, Browne, Jamaica, 1756, 446.
Perca unimaculata Bloch, Nat. Ausl. Fische, VI, 1792, 75, Brazil.
Sparus salin Lacépède, Hist. Nat. Poiss., IV, 1802, 136; based on Bloch.
Sargus humerimaculatus Quoy and Gaimard, Voy. *Freycinet*, Zool., 1824, 297, Rio Janeiro.
Sargus flavolineatus Cuvier and Valenciennes, Hist. Nat. Poiss., VI, 1830, 44 (60), Cuba.
Cynædus brama Gronow, Cat. Fishes, ed. Gray, 1854, 56, South Carolina.
Sargus caribæus Poey, Memorias, II, 1861, 197, Cuba.

2610. Salema tridens (Poey).
Cuba.
Sargus tridens Poey, Enumeratio, 1875, 57, Cuba.

Genus 895. ARCHOSARGUS Gill. *Sheepsheads.*
Archosargus Gill, Canadian Nat., 1865, 266 (*Sparus probatocephalus* Walbaum).

2611. Archosargus probatocephalus (Walbaum). *Sheepshead; Sargo raiado.*
Atlantic and Gulf coasts of the United States; Cape Cod to Florida Keys and Texas.
Sparus probatocephalus Walbaum, Artedi Pisc., 1792, 295, New York; based on *Sparus* of Schöpf.
Sparus ovicephalus Bloch and Schneider, Syst. Ichth., 1801, 280, New York.
Sargus ovis Mitchill, Trans. Lit. and Phil. Soc. N. Y., I, 1814, 392, pl. 2, fig. 5, New York.

2612. Archosargus aries (Cuvier and Valenciennes).
Honduras to Brazil; Rio Janeiro; Maracaibo; Belize.
Sargus aries Cuvier and Valenciennes, Hist. Nat. Poiss., VI, 1830, 42 (58), Rio Janeiro; Maracaibo.

Genus 896. DIPLODUS Rafinesque.
Diplodus Rafinesque, Indice, 1810, 54 (*Sparus annularis* L.).
Sargus Cuvier, Règne Anim., I, 1817, 272 (*Sparus sargus* Linnæus); preoccupied in insects.

2613. Diplodus holbrookii (Bean).
South Atlantic and Gulf coasts of the United States; Cape Hatteras to Cedar Keys.
Sargus holbrookii Bean, Forest and Stream, June 13, 1878, 359, Charleston, S. C.

2614. Diplodus argenteus (Cuvier and Valenciennes). *Sargo.*
West Indies; Florida and Bermudas, south to Argentina.
Sargus argenteus Cuvier and Valenciennes, Hist. Nat. Poiss., VI, 1830, 44 (60), Brazil.
Sargus caudimacula Poey, Memorias, II, 1861, 198, Cuba.

2615. Diplodus sargus (Linnæus). *Sargo.*
Coasts of southern Europe; Bermudas.
Sargus sargus Linnæus, Syst. Nat., Ed. X, 1758, 278, Mediterranean.
Sargus variegatus Lacépède, Hist. Nat. Poiss., IV, 1803, 207, Mediterranean.
Sargus raucus Geoffrey St. Hilaire, Descr. de l'Egypte, Poiss., 1813, Pl. XVIII, fig. 1, coast of Egypt.
Sargus rondeletii Cuvier and Valenciennes, Hist. Nat. Poiss., VI, 1830, 10 (14), pl. 141, Mediterranean.
Sargus vitula Cuvier and Valenciennes, loc. cit., 35 (48), Naples.

Family 207. GIRELLIDÆ

Genus 897. GIRELLA [62] Gray.
Girella Gray, Illus. Indian Zool., II, 1833, 98 (*G. punctata* Gray).
Camarina Ayres, Proc. Calif. Acad. Nat. Sci., II, 1860 (1863), 81 (*C. nigricans* Ayres).

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[62] *Melanichthys* Schlegel, 1844 = *Incisidens* Gill, 1862; differs from *Girella* in having two to four rows of incisors and is probably a valid genus.

2616. Girella nigricans (Ayres). *Greenfish; California bluefish; White spot.*
Coast of southern California from Monterey to Cape San Lucas.
Camarina nigricans Ayres, Proc. Calif. Acad. Nat. Sci., II, 1860, 81, fig. 22, California.
Girella dorsomacula Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 244, Cape San Lucas.

Genus 898. INCISIDENS Gill.
Incisidens Gill, Proc. Acad. Sci. Phila., XIV, 1862, 244 (*Crenidens simplex* [63] Richardson).
Aplodon Duméril, in Thominot, Bull. Soc. Philom. Paris, 1883, 141 (*Aplodon margaritiferum* Duméril); name preoccupied.

2617. Incisidens simplicidens (Osburn and Nichols.)
Gulf of California.
Girella simplicidens Osburn and Nichols, Bull. Amer. Mus. Nat. Hist., XXXV, 1916, 165, fig. 10, San Francisquito.

Family 208. KYPHOSIDÆ. Pilotfishes

Genus 899. KYPHOSUS Lacépède.
Kyphosus Lacépède, Hist. Nat. Poiss., III, 1802, 114 (*K. bigibbus* Lacépède=*fuscus* Lacépède).
Pimelepterus Lacépède, Hist. Nat. Poiss., IV, 1803, 429 (*P. bosci* Lacépède).
Dorsuarius Lacépède, loc. cit., V, 1803, 482 (*D. nigrescens* Lacépède.).
Xyster Lacépède, loc. cit., X, 484 (*X. fuscus* Lacépède).
Xysterus Rafinesque, Anal. Nature, 1815, 95; substitute for *Xyster*.
Seleima Bowdich, Fishes Madeira, 1825, 238 (*S. aurata* Bowdich).
Opisthistius Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 245 (*Sciæna tahmel* Forskål.
Cyphosus of authors, corrected spelling.

2618. Kyphosus analogus (Gill). *Salema.*
Pacific coast of tropical America, Gulf of California to Panama.
Pimelepterus analogus Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 245, Cape San Lucas.

2619. Kyphosus incisor (Cuvier and Valenciennes). *Chopa amarilla.*
West Indies to Brazil and the Canaries; Tortugas.
Pimelepterus incisor Cuvier and Valenciennes, Hist. Nat. Poiss., VII, 1831, 198 (266), Brazil.
?*Saleima aurata* Bowdich, Excursion Madeira, 1825, 238, Bona Vista Island.
Pimelepterus flavo-lineatus Poey, Repertorio, I, 1866, 319, Habana.

2620. Kyphosus elegans (Peters). *Chopa.*
Pacific coast of tropical America, from Guaymas to Mazatlan; a species apparently the same in Hawaii.
Pimelepterus elegans Peters, Berlin. Monatsb., 1869, 707, Mazatlan, Mexico.
Pimelepterus sandvicensis Sauvage, Bull. Soc. Philom., July, 1880 (7), IV, 221, Sandwich Islands.

2621. Kyphosus metzelaari Jordan and Evermann.
Caribbean Sea.
Cyphosus elegans Metzelaar, Trop. Atl. Vissch., 1919, 44, Curaçao; Venezuela; not *Pimalepterus elegans* Peters.
This species, according to Metzelaar's account, is extremely close to *Kyphosus elegans* of the Pacific, but the scales are larger; 52 in the lateral line (67 in *elegans*), the teeth are also fewer, "15 in upper jaw"; in *elegans* they are "86 in each jaw."
Kyphosus metzelaari Jordan and Evermann, Proc., Calif. Acad. Sci., 4th Ser., XVI, Apr. 27, 1927, 506, Curaçao, Venezuela.

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[63] This species with entire teeth is said to be the female of *Girella tricuspidata*. If this is true the genus *Incisidens* may not be tenable.

2622. Kyphosus sectatrix (Linnæus). *Rudderfish; Bermuda chub; Chub; Chopa blanca.*
West Indies, ranging from Cape Cod to Brazil, crossing the ocean to the Canary Islands; accidental in the Mediterranean; one taken at Palermo.
Perca marina sectatrix Catesby, Nat. Hist. Carolina, II, 1743, 8, Carolinas.
Perca sectatrix Linnæus, Syst. Nat., Ed. XII, 1766, 486 (correction), misprinted for *saltatrix*, after Catesby.
Chætodon cyprinaceus Gmelin, Syst. Nat., I, 1789, 1269, tropical America.
Pimelepterus bosquii Lacépède, Hist. Nat. Poiss., IV, 1803, 429, South Carolina.
Pimelepterus oblongior Cuvier and Valenciennes, Hist. Nat. Poiss., VII, 1831, 197 (264), locality unknown.
Pimelepterus bosci sicula Doderlein, Nat. Siciliano, Giornale Scienze Nat., III, 1883, 83, Gulf of Palermo.

2623. Kyphosus lutescens (Jordan and Gilbert).
Revillagigedo Archipelago.
Pimelepterus lutescens Jordan and Gilbert, Proc. U. S. Nat. Mus., IV, 1881, 229, Braithwaite Bay, Socorro Island.

Genus 900. SECTATOR Jordan and Fesler.
Sectator Jordan and Fesler, Rept. U. S. Fish Com., XVII, 1889–91, 534 (*Pimelepterus ocyurus* Jordan and Gilbert).

2624. Sectator ocyurus (Jordan and Gilbert).
Panama.
Pimelepterus ocyurus Jordan and Gilbert, Bull. U. S. Fish Com., I, 1881, 327, 328, Bay of Panama.

Genus 901. HERMOSILLA Jenkins and Evermann.
Hermosilla Jenkins and Evermann, Proc. U. S. Nat. Mus., XI, 1888, 144 (*H. azurea* Jenkins and Evermann).

2625. Hermosilla azurea Jenkins and Evermann.
Gulf of California.
Hermosilla azurea Jenkins and Evermann, Proc. U. S. Nat. Mus., XI, 1888, 144, Guaymas, Mexico.

2626. Hermosilla robusta Osburn and Nichols.
Gulf of California.
Hermosilla robusta Osburn and Nichols, Bull. Amer. Mus. Nat. Hist., XXXV, 1916, 166, fig. 11, Tiburon Island.

Family 209. INERMIIDÆ

Genus 902. INERMIA Poey.
Inermia Poey, Memorias, II, 1861, 193 (*I. vittata* Poey).

2627. Inermia vittata (Poey). *Boga.*
Caribbean Sea, north to Cuba; often in large schools, off Venezuela.
Inermia vittata Poey, Memorias, II, 1861, 193, Habana.

Family 210. MÆNIDÆ

Genus 903. SPICARA Rafinesque.
Spicara Rafinesque, Caratteri, 1810, 51 (*S. flexuosa* Rafinesque=*Sparus smaris* Linnæus).
Smaris Cuvier, Règne Animal, ed. 1, 1817, 269 (*Sparus smaris* Linnæus).

2628. Spicara martinica (Cuvier and Valenciennes).
West Indies; probably an error.
Smaris martinicus Cuvier and Valenciennes, Hist. Nat. Poiss., VI, 1830, 319 (424), Martinique; most likely an error, type probably from the Mediterranean.

Family 211. GERRIDÆ. Mojarras; Silver perch

Genus 904. EUCINOSTOMUS Baird and Girard. *Mojarritas.*
Eucinostomus Baird and Girard, Ninth Smithson. Rept., 1854, 344 (*E. argenteus* Baird and Girard=*Gerres gula* Cuvier and Valenciennes).

2629. Eucinostomus gula (Cuvier and Valenciennes). *Silver jenny; Mojarra de ley; Petite queule; Shad.*
Gerres gula Cuvier and Valenciennes, Hist. Nat. Poiss., VI, 1830, 349 (464), Martinique.
Eucinostomus argenteus Baird and Girard, Ninth Smith. Rept., 1854, 335, Bessley Point, N. J.
Eucinostomus gulula Poey, Enumeratio, 1875, 54, pl. 2, Habana.
Diapterus homonymus Goode and Bean, Proc. U. S. Nat. Mus., II, 1879, 340, Clearwater Harbor, Fla.

2630. Eucinostomus pseudogula Poey.
Tortugas; West Indies to Brazil; Bermudas; St. Lucia; Bahia.
Eucinostomus pseudo-gula Poey, Enumeratio, 1875, 53, pl. 1, Cuba.
Gerres jonesii Günther, Ann. Mag. Nat. Hist., 1879, 150, Bermudas.
Eucinostomus harengulus Goode and Bean, Proc. U. S. Nat. Mus., II, 1879, 132, west Florida.

2631. Eucinostomus californiensis (Gill). *Mojarra cantilena.*
Pacific coast of Mexico; Guaymas and Cape San Lucas to Panama.
Diapterus californiensis Gill, Proc. Acad. Nat. Sci., Phila., XIV, 1862, 245, Cape San Lucas, Lower California.
Diapterus gracilis Gill, loc. cit., 245, Cape San Lucas.
Diapterus dowii Gill, loc. cit., XV, 1863, 162, Panama.

2632. Eucinostomus elongatus Meek and Hildebrand.
Panama.
Eucinostomus californiensis elongatus Meek and Hildebrand, Field Mus. Nat. Hist., Zool., XV, 1925, 586, Sobago Island, Panama.

Genus 905. ULÆMA Jordan and Evermann.
Ulæma Jordan and Evermann, Proc. Calif. Acad. Sci., V, 1895, 471 (*Diapterus lefroyi* Goode).

2633. Ulæma lefroyi (Goode).
West Indies, on sandy shores north to Cedar Keys; Bermudas; Cuba; Key West; recorded north at Beaufort, N. C.
Diapterus lefroyi Goode, Amer. Jour. Sci. Arts, 3d ser., VIII, 1874, 123, Bermudas.

2634. Ulæma producta (Poey).
Cuba.
Eucinostomus productus Poey, Enumeratio, 1875, 55, Habana.

2635. Ulæma meeki (Eigenmann).
Rio San Juan, in western Cuba.
Eucinostomus meeki Eigenmann, Bull. U. S. Fish Com., XXII, 1902, 229, fig. 10, San Juan River, just below its first ford, west Cuba; apparently a *Ulæma* having but two anal spines, the second hæmal spine not described.

Genus 906. GERRES (Cuvier) Quoy and Gaimard. *Mojarras blancas.*
Gerres Cuvier in Quoy and Gaimard, Voyage *Uranie*, 1824, 293, restricted by Jordan 1919 to *Gerres vaigiensis* Quoy and Gaimard = *Sciæna argyrea* Forskål, an ally of *Mugil cinereus* Walbaum. The only other species named in this earlier paper is *Gerres gula*, belonging to *Eucinostomus*. This use of the name *Gerres* from Cuvier's MS. antedates that in the Règne Animal, 1829, and unfortunately must stand.
Podager Gistel, Thierreich, IX, 1848, a substitute for *Gerres* regarded as preoccupied by *Gerris; Podager* is actually so, however.
Catochænum Cantor, Malayan Fishes, 1849, 55, same type, being a substitute for *Gerres*, deemed preoccupied by *Gerris*, a genus of insects.
Xystæma Jordan and Evermann, Proc. Calif. Acad. Sci., V, 1895, 471 (*Mugil cinereus* Walbaum).

2636. Gerres cinereus (Walbaum). *Mojarra de Casta; Mojarra blanca; Broad shad.*
Coasts of tropical America; West Indies, north to Florida; Habana; Jamaica; Martinique; Bahamas; Barbados; Florida Keys.
Turdus cinereus peltatus Catesby, Nat. Hist. Carolinas, II, 1743, 11, Bahamas.
Mugil cinereus Walbaum, Artedi Pisc., 1792, 228, Bahamas; after Catesby.

Gerres aprion Cuvier, Règne Animal, ed. 2, II, 1829, 188; based on Catesby.
Gerres zebra Müller and Troschel, in Schomburgk's Hist. Barbados, 1848, 668, Barbados.
Gerres squamipinnis Günther, Cat., I, 1859, 349, Jamaica; Guatemala.

2637. Gerres simillimus Regan.
Pacific coast of tropical America, Mazatlan to Panama.
Gerres simillimus Regan, Biol. Centrali-Amer., Pisces, 1906, 38, Panama.

2638. Gerres havana (Nichols).
Miami, Florida; Cuba.
Xystæma havana Nichols, Bull. Amer. Mus. Nat. Hist., XXXI, 1912, 189, fig. 2, Marianas Beach, Habana.

Genus 907. MOHARRA Poey.
Moharra Poey, Enumeratio, 1875, 50 (*Gerres rhombeus* Cuvier and Valenciennes).

2639. Moharra rhombea (Cuvier and Valenciennes).
West Indies and Atlantic coast of tropical America; Jamaica; San Domingo; Martinique; Puerto Cabello; Habana; Aspinwall; Rio Magdalena; Santa Lucia; Bahia.
Gerres rhombeus Cuvier and Valenciennes, Hist. Nat. Poiss., VI, 1830, 345 (459), Martinique; San Domingo.

2640. Moharra evermanni (Meek and Hildebrand).
Atlantic waters of Panama.
Diapterus evermanni Meek and Hildebrand, Field Mus. Nat. Hist., Zool., XV, 1925, 594, Pl. LXII, Mindi River near Mindi, Panama Canal Zone.

Genus 908. DIAPTERUS Ranzani.
Diapterus Ranzani, Nov. Comment. Bonon., V, 1842, 340 (*Diapterus auratus* Ranzani, a species near *D. alisthostomus*).

2641. Diapterus aureolus (Jordan and Gilbert).
Panama; only the type known.
Gerres aureolus Jordan and Gilbert, Bull. U. S. Fish Com., I, 1881, 328, Panama.

2642. Diapterus axillaris (Günther).
Pacific coast of Mexico.
Gerres axillaris Günther, Proc. Zool. Soc. Lond., 1864, 152, Chiapas.

2643. Diapterus peruvianus (Cuvier and Valenciennes). *Mojarra de las aletas amarillas.*
West coast of tropical America; Mazatlan; Salina Cruz; Chiapas; Panama; Peru.
Gerres peruvianus Cuvier and Valenciennes, Hist. Nat. Poiss., VI, 1830, 351 (467), Payta, northern Peru.
Gerres brevirostris Sauvage, Bull. Soc. Philom. Paris, III, 1879, 208, Rio Guayas, Ecuador.

2644. Diapterus olisthostomus (Goode and Bean). *Irish pompano; Mutton-fish.*
West Indies, north to southern Florida.
Gerres olisthostoma Goode and Bean, Proc. U. S. Nat. Mus., V, 1882, 423, Indian River, Fla.

Genus 909. EUGERRES Jordan and Evermann.
Eugerres Jordan and Evermann, Proc. Calif. Acad. Sci., 4th ser., XVI, Apr. 27, 1927, 506 (*Gerres plumieri* Cuvier and Valenciennes).

2645. Eugerres lineatus (Humboldt). *Mojarra china.*
Pacific coast of Mexico; Acapulco; Mazatlan; San Blas; Chiapas.
Smaris lineatus Humboldt, Observ. Zool., II, 1811, 185, pl. 46, Acapulco.

2646. Eugerres brasilianus (Cuvier and Valenciennes). *Pataó.*
West Indies to Brazil.
Gerres brasilianus Cuvier and Valenciennes, Hist. Nat. Poiss., VI, 1830, 344, 458, Brazil.
Gerres patao Poey, Synopsis, VI, 1868, 320, Habana; scarcely distinguishable from *G. lineatus* of the Pacific coast.
Gerres embryx Jordan and Starks, in Jordan and Evermann, Fishes North and Mid. Amer., 1898, 1379, Charleston, S. C.; large example.

2647. Eugerres brevimanus (Günther).
Pacific coast of tropical America and Panama Bay.
Gerres brevimanus Günther, Proc. Zool. Soc. Lond., 1864, 152, Chiapam.

2648. Eugerres plumieri (Cuvier and Valenciennes). *Mojarra.*
Atlantic coast of tropical America and West Indies; Habana; Porto Rico; San Domingo; Jamaica; Pernambuco; Bahia; Aspinwall; Guatemala.
Gerres plumieri Cuvier and Valenciennes, Hist. Nat. Poiss., VI, 1830, 340 (452), pl. 467, Antilles; Porto Rico.

2649. Eugerres mexicanus (Steindachner). *Mexican mojarra.*
Rio Teapa, Mexico.
Gerres mexicanus Steindachner, Ueber eine Neue Gerres-Art aus Mexico, Verh. K. K. Ges. Wien, XIII, 1863, 383, Rio Teapa, Mexico.

Family 212. MULLIDÆ. Surmullets

Genus 910. MULLUS Linnæus. *Surmullets.*
Mullus Linnæus, Syst. Nat., Ed. X, 1758, 299 (*M. barbatus* Linnæus).

2650. Mullus auratus Jordan and Gilbert. *Goatfish; Red mullet.*
Eastern coast of North America, Cape Cod to Pensacola; rare.
Mullus barbatus auratus Jordan and Gilbert, Proc. U. S. Nat. Mus., V, 1882, 280, Pensacola, Fla.

Genus 911. UPENEUS Cuvier. *Goatfishes.*
Upeneus Cuvier, Règne Animal, Ed. II, 1829, 157 (*vittatus; russelii; bifasciatus; trifasciatus;* first restricted by Bleeker to *bifasciatus*, an ally to *U. maculatus*).
Pseudupeneus Bleeker, Versl. Akad. Amsterdam, XIV, 1862, 134 (*P. prayenis* Bleeker).
Parupeneus Bleeker, Neder. Tijdschr. Dierk., I, 1863, 342 (*Mullus bifasciatus* Lacépède).
Mullhypeneus Poey, Repertorio, II, 1867, 160 (*Upeneus flavovittatus* Poey).
Brachymullus Bleeker, Arch. Neerl. Sci. Nat., XI, 1876, 333 (*Upeneus tetraspilus* Günther).
Hypeneus Agassiz, corrected spelling.

2651. Upeneus maculatus (Bloch). *Red goatfish; Salmonete.*
West Indies and Brazil, Key West to Rio Janeiro; generally common.
Mullus maculatus Bloch, Naturgesch. Ausl. Fische, VII, 1893, 95, Brazil.
Upeneus punctatus Cuvier and Valenciennes, Hist. Nat. Poiss., III, 1829, 355, 482, Martinique.

2652. Upeneus dentatus Gill.
Pacific coast of Mexico, Cape San Lucas, La Paz, and the Tres Marias Islands.
Upeneus dentatus Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 256, Cape San Lucas.

2653. Upeneus parvus Poey.
Cuba.
Upeneus parvus Poey, Memorias, I, 1853, 226, Cuba.

2654. Upeneus martinicus Cuvier and Valenciennes. *Yellow goatfish; Salmonete amarilla; King mullet.*
West Indies, north to Key West.
Upeneus martinicus Cuvier and Valenciennes, Hist. Nat. Poiss., III, 1829, 356 (483), Martinique.
Upeneus balteatus Cuvier and Valenciennes, loc. cit., 356 (483), Cuba.
Upeneus flavovittatus Poey, Memorias, I, 1853, 224, Cuba.

2655. Upeneus xanthogrammus Gilbert.
Coast of Lower California.
Upeneus xanthogrammus Gilbert, Proc. U. S. Nat. Mus., XIV, 1891, 553, La Paz, Lower California.

2656. Upeneus grandisquamis Gill. *Chivo.*
Pacific coast of Mexico and Central America, Guaymas to Panama.
Upeneus grandisquamis Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 168, western coast of Central America.
Upeneus tetraspilus Günther, Proc. Zool. Soc. Lond., 1864, 148, Panama.

Genus 912. MULLOIDES Bleeker.
Mulloides Bleeker, Verh. Bat. Gen., XXII, 1849, 12 (*Mullus flavolineatus* Lacépède).

2657. Mulloides rathbuni (Evermann and Jenkins).
Gulf of California.
Upeneus rathbuni Evermann and Jenkins, Proc. U. S. Nat. Mus., XIV, 1891, 158, pl. 2, fig. 4, Bay of Guaymas, Sonora.

Family 213. SCIÆNIDÆ. Croakers; Roncadores

Genus 913. LARIMUS Cuvier and Valenciennes.
Larimus Cuvier and Valenciennes, Hist. Nat. Poiss., V, 1830, 108 (145), (*L. breviceps* Cuvier and Valenciennes).
Amblyscion Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 165 (*A. argenteus* Gill).
Monosira Poey, Anales de l'Hist. Nat. Esp., 1881, 326 (*M. stahli* Poey).

Subgenus LARIMUS.

2658. Larimus effulgens Gilbert.
Pacific coast of Mexico, Sonora to Panama.
Larimus effulgens Gilbert, in Jordan and Evermann, Fishes North and Mid. Amer., 1898, 1421, San Juan Lagoon, Sonora.

Subgenus AMBLYSCION Gill.

2659. Larimus argenteus (Gill).
Panama.
Amblyscion argenteus Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 165, western coast of Central America, the extreme form of the series.

2660. Larimus acclivis Jordan and Bristol.
Pacific coast of Mexico and Central America, from Sonora to Panama.
Larimus acclivis Jordan and Bristol (S. B.), in Jordan and Evermann, Fishes North and Mid. Amer., 1898, 1422, San Juan Lagoon, Sonora.

2661. Larimus breviceps Cuvier and Valenciennes. *Cabezon.*
West Indies, south to Brazil.
Larimus breviceps Cuvier and Valenciennes, Hist. Nat. Poiss., V, 1830, 108 (145), pl. 140, Brazil; San Domingo.
Monosira stahli Poey, Anal. Soc. Española Hist. Nat., X, 1881, 326, Pl. VI, Porto Rico.

2662. Larimus pacificus Jordan and Bollman.
Pacific Ocean, off coast of Colombia.
Larimus pacificus Jordan and Bollman, Proc. U. S. Nat. Mus., XII, 1889, 161, *Albatross* station 2802, 8° 38′ N., 79° 31′ 30″ W., between Galapagos Islands and Panama.

2663. Larimus fasciatus Holbrook. *Banded larimus.*
South Atlantic coast of the United States, from Chesapeake Bay to Galveston, Tex.; not common.
Larimus fasciatus Holbrook, Ichth. South Carolina, 1855, 153, pl. 22, fig. 1, Charleston, S. C.

Genus 914. ODONTOSCION Gill.
Odontoscion Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 18 (*Corvina dentex* Cuvier and Valenciennes).

2664. Odontoscion dentex (Cuvier and Valenciennes). *Corvina.*
West Indies, north to the Tortugas.
Corvina dentex Cuvier and Valenciennes, Hist. Nat. Poiss., V, 1830, 103 (139), pl. 109, San Domingo.

2665. Odontoscion xanthops Gilbert.
Panama.
Odontoscion xanthops Gilbert in Jordan and Evermann, Check List, 1895, 396, Panama.

Genus 915. CORVULA Jordan and Eigenmann.
Corvula Jordan and Eigenmann, Review Sciænidæ Europe and America, in Rept. U. S. Fish Com., XIV, 1886, 377 (35), (*Johnius batabanus* Poey).

2666. Corvula batabana (Poey).
Cuba and Porto Rico.
Johnius batabanus Poey, Memorias, II, 1861, 184, Batabano, south coast of Cuba.

Genus 916. VACUOQUA Jordan and Evermann.
Vacuoqua Jordan and Evermann, Proc. Calif. Acad. Sci., 4th ser., XVI, Apr. 27, 1927, 506 (*Corvina macrops* Steindachner).
This genus differs from the aberrant *Corvula batabana* in having the deeper, symmetrical body and the silvery coloration of *Bairdiella* and related species.

2667. Vacuoqua macrops (Steindachner). *Vacuocua.*
Pacific coast of tropical America; Mazatlan to Panama.
Corvina macrops Steindachner, Ichth. Beitr., III, 1875, 24, fig. 2, Panama.

2668. Vacuoqua sialis (Jordan and Eigenmann).
Florida Keys.
Corvula sialis Jordan and Eigenmann, Rept. U. S. Fish Com., XIV, 1886, 379, Key West, Fla.

2669. Vacuoqua subæqualis (Poey).
West Indies.
Corvina subæqualis Poey, Ann. Lyc. Nat. Hist. N. Y., XI, 1875, 58, Cuba.

2670. Vacuoqua sanctæ-luciæ (Jordan).
West Indies.
Corvula sanctæ-luciæ Jordan, Proc. U. S. Nat. Mus., XII, 1889, 649, Port Castries, St. Lucia.

Genus 917. ELATTARCHUS Jordan and Evermann.
Elattarchus Jordan and Evermann, Check List, 1895, 397 (*Odontoscion archidium* Jordan and Gilbert).

2671. Elattarchus archidium (Jordan and Gilbert).
Panama.
Odontoscion archidium Jordan and Gilbert, Bull. U. S. Fish Com., I, 1881, 317, Panama.

Genus 918. BAIRDIELLA Gill. *Mademoiselles.*
Bairdiella Gill, Cat. Fish. E. Coast N. Amer., Suppl. to Proc. Acad. Nat. Sci. Phila., XIII, 1861, 33 (*Bodianus argyroleucos* Mitchill = *Dipterodon chrysurus* Lacépède).

2672. Bairdiella chrysura (Lacépède). *Mademoiselle; Yellowtail; Silver perch.*
South Atlantic and Gulf coasts of United States, north to New York; very abundant on our sandy shores from Long Island to Texas.
Caranx chrysurus Lacépède, Hist. Nat. Poiss., III, 1802, 64, South Carolina; after Linnæus.
Perca punctata Linnæus, Syst. Nat., Ed. XII, 1766, 482, in part, South Carolina.
Bodianus argyro-leucos et *exiguus* Mitchill, Trans. Lit. Phil. Soc. N. Y., I, 1815, 417, pl. 6, fig. 9, New York.
Bodianus pallidus Mitchill, loc. cit., 420, New York.
Homoprion subtruncatus Gill, Cat. Fish. E. Coast N. Amer., Suppl. to Proc. Acad. Nat. Sci. Phila., XIII, 1861, 33, South Carolina; after Holbrook.

2673. Bairdiella ensifera (Jordan and Gilbert).
Panama; common.
Sciæna ensifera Jordan and Gilbert, Bull. U. S. Fish Com., I, 1881, 313, Bay of Panama; Punta Arenas.
Corvina fulgens Vaillant, Miss. Sci. au Mexique, 1883, 164, Pacific coast of Mexico.

2674. Bairdiella icistia (Jordan and Gilbert). *Corbineta.*
Pacific coast of Mexico; rather common about Mazatlan.
Sciæna icistia Jordan and Gilbert, Proc. U. S. Nat. Mus., IV, 1881, 356, Mazatlan.

2675. Bairdiella ronchus (Cuvier and Valenciennes). *Ronco; Ground drummer.*
Atlantic coasts of tropical America; generally common in the West Indies and along the coast of Brazil.
Corvina ronchus Cuvier and Valenciennes, Hist. Nat. Poiss., V, 1830, 79 (107), Maracaibo; Surinam.

2676. Bairdiella bedoti (Regan).
Cuba.
Sciæna (Bairdiella) bedotis Regan, Rev. Suisse Zool., XIII, 1905, 391, Pl. VI, Cuba.

Genus 919. NECTOR Jordan and Evermann.
Nector Jordan and Evermann, Fishes North and Mid. Amer., 1898, 1432 (*Corvina chrysoleuca* Günther).

2677. Nector armatus (Gill).
Both coasts of tropical America; not uncommon on the Pacific coast about Panama, and equally abundant on the Atlantic coast.
Bairdiella armata Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 164, west coast of Central America.
Corvina acutirostris Steindachner, Ichth. Beitr., III, 1875, 28, pl. 4, Panama.

2678. Nector veræ-crucis (Jordan and Dickerson).
Gulf of Mexico, Vera Cruz.
Bairdiella veræ-crucis Jordan and Dickerson, Proc. U. S. Nat. Mus., XXXIV, 1908, 16, fig. 1, Vera Cruz, Mexico.

2679. Nector alutus (Jordan and Gilbert).
Pacific coast of Central America.
Sciæna aluta Jordan and Gilbert, Proc. U. S. Nat. Mus., IV, 1881, 232, La Union, Salvador.

2680. Nector chrysoleucus (Günther).
Panama.
Corvina chrysoleuca Günther, Trans. Zool. Soc. Lond., VI, 1868 (Nov. 27), 387, 427, pl. 67, fig. 1, Panama.

Genus 920. STELLIFER (Cuvier) Oken.
Les Stelifères Cuvier, Règne Anim., Ed. I, 1817, 283 (*Bodianus stellifer* Bloch).
Stellifer (Cuvier) Oken, Isis, I, 1817, 1182 (*Bodianus stellifer* Bloch).
Stelliferus Stark, Elem. Nat. Hist., 1, 1828, 459 (*Bodianus stellifer* Bloch).
Homoprion Holbrook, Ichth. South Car., 1st ed. (mostly destroyed by fire), 1855, 168 (*Homoprion lanceolatus* Holbrook).

2681. Stellifer stellifer (Bloch).
Coasts of Guiana and Brazil.
Bodianus stellifer Bloch, Naturgesch. Ausl. Fische, IV, 1790, 55, Cape of Good Hope.
Corvina trispinosa Cuvier and Valenciennes, Hist. Nat. Poiss., V, 1830, 80 (109), Brazil; Cayenne.

2682. Stellifer lanceolatus (Holbrook).
South Atlantic and Gulf coasts of United States, Charleston to Texas.
Homoprion lanceolatus Holbrook, Ichth. South Carolina, Ed. I, 1855, 168, pl. 23, Port Royal Sound, S. C.

2683. Stellifer ericymba (Jordan and Gilbert).
Panama.
Sciæna ericymba Jordan and Gilbert, Bull. U. S. Fish Com., I, 1881, 311, Bay of Panama.

2684. Stellifer microps (Steindachner).
Coast of Brazil and Guiana.
Corvina microps Steindachner, Ichth. Notizen, I, 1864, 6, pl. 2, fig. 1, Guiana.
Corvina stellifera Günther, Cat., II, 1860, 299, West Indies (not *Bodianus stellifer* Bloch).

2685. Stellifer mindii Meek and Hildebrand.
Atlantic coast of Panama.
Stellifer mindii Meek and Hildebrand, Field Mus. Nat. Hist., Zool., XV, 1925, 626, Pl. LXVI, fig. 2, Mindi Reef, near Colon.

Genus 921. ZESTIS Gilbert.
Zestis Gilbert, in Jordan and Evermann, Fishes North and Mid. Amer., 1898, 1439 (*Stellifer oscitans* Jordan and Gilbert).

2686. Zestis oscitans (Jordan and Gilbert).
Panama.
Sciæna oscitans Jordan and Gilbert, Bull. U. S. Fish Com., I, 1881, 312, Bay of Panama.

2687. Zestis furthii (Steindacher).
Panama.
Corvina (*Homoprion*) *fürthii* Steindachner, Ichth. Beitr., III, 1875, 26, fig. 3, Panama.

2688. Zestis melanochir (Eigenmann).
North coast of Colombia.
Stellifer melanochir Eigenmann, Proc. Am. Phil. Soc., LVI, 1917, 682, Tumneo.

Genus 922. ZESTIDIUM Gilbert.
Zestidium Gilbert, in Jordan and Evermann, Fishes North and Mid. Amer., 1898, 1439 (*Stellifer illecebrosus* Gilbert).

2689. Zestidium illecebrosum (Gilbert).
Panama.
Stelliferus illecebrosus Gilbert, in Jordan and Evermann, Check List, 1895, 398, and Fishes North and Mid. Amer., 1896, 1443, Panama.

2690. Zestidium colonense (Meek and Hildebrand).
Coral reefs near Colon, Atlantic side of Isthmus of Panama.
Stellifer colonensis Meek and Hildebrand, Field Mus. Nat. Hist., Zool., XV, 1925, 623, Mindi Reef, Colon.

Genus 923. STELLICARENS Gilbert.
Stellicarens Gilbert, in Jordan and Evermann, Fishes North and Mid. Amer., 1898, 1445 (*Stellifer zestocarus* Gilbert).

2691. Stellicarens zestocarus (Gilbert).
Panama.
Stelliferus zestocarus Gilbert, in Jordan and Evermann, Check List, 1895, 398, and Fishes North and Mid. Amer., 1896, 1445, Panama.

Genus 924. OPHIOSCION Gill.
Ophioscion Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 164 (*Ophioson typicus* Gill).

2692. Ophioscion adustus (Agassiz).
West Indies to coast of Brazil.
Corvina adusta Agassiz, in Spix, Pisc. Brasil., 1829, 126, pl. 70, Brazil.

2693. Ophioscion punctatissimus Meek and Hildebrand.
Panama.
Ophioscion punctatissimus Meek and Hildebrand, Field Mus. Nat. Hist., Zool., XV, 1925, pt. 2, 644, Pl. LXVIII, Panama Canal at Cristobal.

2694. Ophioscion typicus Gill.
Panama.
Ophioscion typicus Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 165, west coast Central America.
Corvina ophioscion Günther, Trans. Zool. Soc. Lond., VI, 1868 (Nov. 27), 387, 428, Panama.

2695. Ophioscion strabo Gilbert.
Panama.
Ophioscion strabo Gilbert, Proc. U. S. Nat. Mus., XIX, 1896, 444, San Juan Lagoon, south of Guaymas, Mexico.

2696. Ophioscion simulus Gilbert.
Panama.
Ophioscion simulus Gilbert, in Jordan and Evermann, Check List, 1895, 398, and Fishes North and Mid. Amer., 1896, 1449, Panama.

2697. Ophioscion imiceps (Jordan and Gilbert).
Panama.
Sciæna imiceps Jordan and Gilbert, Bull. U. S. Fish Com., I, 1881, 309, Bay of Panama.

2698. Ophioscion scierus (Jordan and Gilbert).
Pacific coast of tropical America; from Mazatlan to Panama.
Sciæna sciera Jordan and Gilbert, Proc. U. S. Nat. Mus., VII, 1884, 480, Panama.

Genus 925. SIGMURUS Gilbert.
Sigmurus Gilbert, in Jordan and Evermann, Fishes North and Mid. Amer., 1898, 1446 (*Corvina vermicularis* Günther).

2699. Sigmurus vermicularis (Günther).
Panama.
Corvina vermicularis Günther, Trans. Zool. Soc. Lond., VI, 1868 (Nov. 27), 387, 427, pl. 67, fig. 2, Panama.

Genus 926. SCIÆNOPS Gill. *Red drums.*
Sciænops Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 30 (*Perca ocellata* Linnæus).

2700. Sciænops ocellata (Linnæus). *Red drum; Channel bass; Redfish; Pescado colorado; Bull redfish; Bass; Red bass; Sea bass; Spotted bass; Spottail.*
South Atlantic and Gulf coasts of the United States, New York to Texas; very abundant south.
Perca ocellata Linnæus, Syst. Nat., Ed. XII, 1766, 483, South Carolina.
Lutjanus triangulum Lacépède, Hist. Nat. Poiss., IV, 1802, 181, pl. 24, fig. 3, Sumatra.
Sciæna imberbis Mitchill, Trans. Lit. and Phil. Soc. New York, 1815, 411, New York.

Genus 927. CALLAUS Jordan.
Callaus Jordan, Rept. U. S. Fish Com., XIV, 1886, 401, 406 (59) (*Corvina deliciosa* Tschudi).

2701. Callaus deliciosa (Tschudi).
Pacific coast of South America, from Panama to Peru.
Corvina deliciosa Tschudi, Fauna Peruana, Ichthyol., 1845, 8, Peru.

Genus 928. RHINOSCION [44] Gill. *Red roncadors.*
Rhinoscion Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 17 (*Amblodon saturnus* Girard).

2702. Rhinoscion saturnus (Girard). *Red roncador; Black croaker.*
Coast of southern California, from Santa Barbara to Cedros Island.
Amblodon saturnus Girard, U. S. Pac. R. R. Surv., 1858, 98, San Diego, Calif.
Corvina (*Johnius*) *jacobi* Steindachner, Ichth. Beitr., VIII, 1879, 3, San Diego; young.

Genus 929. RONCADOR Jordan and Gilbert.
Roncador Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880, 28 (*Corvina stearnsi* Steindachner).

2703. Roncador stearnsi (Steindachner). *Roncador.*
Coast of southern California, north to Santa Barbara.
Corvina stearnsi Steindachner, Ichth. Beitr., III, 1875, 22, San Diego, Calif.

Genus 930. LEIOSTOMUS Lacépède. *Goodies.*
Leiostomus Lacépède, Hist. Nat. Poiss., IV, 1803, 439 (*L. xanthurus* Lacépède).
Liostomus authors, revised spelling.

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[44] This genus is very close to the European genus *Corvina* on the one hand and to the Peruvian *Cheilotrema* on the other, but probably deserves to stand There is no genuine species in America of *Sciæna* as now restricted.

2704. **Leiostomus xanthurus** Lacépède. *Spot; Goody; Postcroaker; Oldwife; Lafayette; Cape May goody; Porgy; Yellowtail.*
South Atlantic and Gulf coasts of United States; Cape Cod to Texas; once doubtfully recorded from Martinique.
Leiostomus xanthurus Lacépède, Hist. Nat. Poiss., IV, 1802, 439, pl. 10, fig. 1, Carolina.
Mugil obliquus Mitchill, Trans. Lit. Phil. Soc. New York, 1815, 405, New York.
Sciæna multofasciata LeSueur, Jour. Acad. Nat. Sci. Phila., II, 1821, 255, east Florida.
Leiostomus humeralis Cuvier and Valenciennes, Hist. Nat. Poiss., V, 1830, 105 (141), pl. 110, New York.

Genus 931. PACHYPOPS Gill.
Pachypops Gill, Proc. Acad. Nat. Sci. Phila., XIII, 1861, 87 (*Micropogon trifilis* Müller and Troschel).

2705. **Pachypops furcræa** (Lacépède).
Rivers and estuaries of Guiana.
Perca furcræa Lacépède, Hist. Nat. Poiss., IV, 1802, 398, 424, Surinam.
Corvina biloba Cuvier and Valenciennes, Hist. Nat. Poiss., V, 1830, 83 (112), habitat unknown.

Genus 932. GENYONEMUS Gill.
Genyonemus Gill, Proc. Acad. Nat. Sci. Phila., XIII, 1861, 87 (*Leiostomus lineatus* Ayres).

2706. **Genyonemus lineatus** (Ayres). *Little roncador; Kingfish; Croaker.*
Coast of southern California, San Francisco to Cedros Island.
Leiostomus lineatus Ayres, Proc. Calif. Acad. Nat. Sci., I, 1855, 24, San Francisco.

Genus 933. MICROPOGON Cuvier and Valenciennes. *Croaker.*
Micropogon Cuvier and Valenciennes, Hist. Nat. Poiss., V, 1830, 158 (213) (*M. lineatus* Cuvier and Valenciennes = *Perca undulata* Linnæus).
Micropogonias Bonaparte, Ittiologia Generale, 1831, 104 (*Perca undulata* Linnæus; substitute for *Micropogon* said to be preoccupied; but the genus of birds so named dates from 1838).

2707. **Micropogon undulatus** (Linnæus). *Croaker; Roncodina; Corvina; Hardhead.*
South Atlantic and Gulf coasts of United States; Cape Cod to Texas.
Perca undulata Linnæus, Syst. Nat., Ed. XII, 1766, 483, South Carolina.
Sciæna croker Lacépède, Hist. Nat. Poiss., IV, 1802, 309, Carolinas.
Bodianus costatus Mitchill, Trans. Lit. Phil. Soc. New York, 1815, 417, New York.
Micropogon lineatus Cuvier and Valenciennes, Hist. Nat. Poiss., V, 1830, 160 (215), pl. 119, New York.

2708. **Micropogon furnieri** (Desmarest). *Verrugato; Whitemouth drummer.*
West Indies and coasts of South America.
Umbrina furnieri Desmarest, Première Décade Ichth., 22, pl. 2, fig. 3, 1823, 182, Habana.
?*Micropogon argenteus* Cuvier and Valenciennes, Hist. Nat. Poiss., V, 1830, 162 (218), Surinam.

2709. **Micropogon megalops** Gilbert.
Gulf of California.
Micropogon megalops Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 64, Gulf of California in 14 fathoms at *Albatross* station 3021.

2710. **Micropogon ectenes** Jordan and Gilbert. *Verrugate.*
Pacific coast of Mexico, Mazatlan.
Micropogon ectenes Jordan and Gilbert, Proc. U. S. Nat. Mus., IV, 1881, 355, Mazatlan.

2711. **Micropogon altipinnis** Günther.
Panama.
Micropogon altipinnis Günther, Proc. Zool. Soc. Lond., 1864, 149, San Jose; Panama; Chiapam.

Genus 934. UMBRINA Cuvier.
Umbrina Cuvier, Règne Anim., Ed. I, II, 1817, 297 (*Sciæna cirrhosa* Linnæus).
Attilus Gistel, Naturgesch. d. Thierreichs, 1848, 109 (*Sciæna cirrhosa* Linnæus).

2712. **Umbrina broussonnetii** Cuvier and Valenciennes.
West Indies; Florida to Brazil.
Umbrina broussonnetii Cuvier and Valenciennes, Hist. Nat. Poiss., V, 1830, 139 (187), Jamaica.

2713. **Umbrina coroides** Cuvier and Valenciennes.
Southern Florida to the West Indies and Brazil.
Umbrina coroides Cuvier and Valenciennes, Hist. Nat. Poiss., V, 1830, 139 (187), Brazil.

2714. **Umbrina gracilicirrhus** Metzelaar.
Coast of Venezuela.
Umbrina gracilicirrhus Metzelaar, Tropisch Atlantisch Vissch., 1919, 72, coast of Venezuela.

2715. **Umbrina roncador** Jordan and Gilbert. *Yellow-finned roncador; Yellow-tailed croaker.*
Coast of southern California, from Point Conception to Guaymas.
Umbrina roncador Jordan and Gilbert, Proc. U. S. Nat. Mus., IV, 1881, 277, Pequena Bay, west coast of Lower California.

2716. **Umbrina xanti** Gill. *Codorniz.*
Pacific coast of tropical America, Cape San Lucas to Panama.
Umbrina xanti Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 257, Cape San Lucas.
Umbrina analis Günther, Trans. Zool. Soc. Lond., VI, 1868 (Nov. 27), 387, 426. Panama.

2717. **Umbrina sinaloæ** Scofield.
Pacific coast of Mexico; Mazatlan.
Umbrina sinaloæ Scofield, Proc. Calif. Acad. Sci., VI, 1896, 220, Pl. XXV, Mazatlan, Mexico.

2718. **Umbrina dorsalis** Gill.
Pacific coast of Mexico.
Umbrina dorsalis Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 257, Cape San Lucas.

Genus 935. MENTICIRRHUS Gill. *Kingfishes.*
Menticirrhus Gill, Proc. Acad. Nat. Sci. Phila., XIII, 1861, 86 (*Perca alburnus* Linnæus = *Cyprinus americanus* Linnæus).

2719. **Menticirrhus americanus** (Linnæus). *Carolina whiting; Sand whiting; Kingfish; Sea smelt; Sea mullet.*
South Atlantic and Gulf coasts of United States; Chesapeake Bay to Texas.
Cyprinus americanus Linnæus, Syst. Nat., Ed. X, 1758, 321, Carolinas; (based on *Alburnus americanus* the whiting of Catesby, nonbinomial; not *Cyprinus americanus* of 12th edition of Systema Naturæ, which is a cyprinoid, *Abramis bosci* Cuvier and Valenciennes).
Perca alburnus Linnæus, Syst. Nat., Ed. XII, 1766, 482. Charleston, S. C.
Umbrina phalæna Girard, Proc. Acad. Nat. Sci. Phila., X, 1858, 167, Indianola and Brazos Santiago, Tex.

2720. **Menticirrhus saxatilis** (Bloch and Schneider). *Kingfish; Sea mink; Northern whiting; Hake; Barb.*
Atlantic and Gulf coasts of the United States; Cape Ann to Key West and Pensacola; most common northward.
Johnius saxatilis Schneider, Ed. Bloch, Syst. Ichth., 1801, 75, New York.

2721. **Menticirrhus undulatus** (Girard). *California whiting; Sand sucker.*
Southern California, north to Santa Barbara.
Umbrina undulata Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 148, San Diego, Calif.

2722. Menticirrhus martinicensis (Cuvier and Valenciennes). *Jewsharp drummer.*
West Indies; Martinique; Jamaica to Patagonia; common in Brazil.
Umbrina martinicensis Cuvier and Valenciennes, Hist, Nat. Poiss., V, 1830, 186, Martinique.
Umbrina gracilis Cuvier and Valenciennes, loc. cit., 1830, 186, Brazil.
Umbrina arenata Cuvier and Valenciennes, loc. cit., 141 (190), Brazil.
Umbrina januaria Steindachner, Ichth. Beitr., V, 1876, 122, Rio Janeiro.

2723. Menticirrhus nasus (Günther).
Panama.
Umbrina nasus Günther, Trans. Zool. Soc. Lond., VI, 1868 (Nov. 27), 387, 426, Panama.
Menticirrhus simus Jordan and Eigenmann, Review Sciænidæ, Rept. U. S. Fish Com.. XIV, 1886, 427, Mazatlan and Panama.

2724. Menticirrhus panamensis (Steindachner).
Pacific coast of tropical America; Mazatlan to Panama.
Umbrina panamensis Steindachner, Ichth. Beitr., IV, 1875, 9, Panama.

Genus 936. UMBRULA Jordan and Eigenmann.
Umbrula Jordan and Eigenmann, Review Sciænidæ, Rept. U. S. Fish Com., XIV, 1886, 424 (*Umbrina littoralis* Holbrook).

2725. Umbrula littoralis (Holbrook). *Surf whiting; Silver whiting; Shore whiting.*
South Atlantic and Gulf coasts of United States, North Carolina to Texas.
Umbrina littoralis Holbrook, Ichth. South Carolina, Ed. I, 1855, 142, pl. 20, fig. 1, South Carolina.

2726. Umbrula elongata (Günther). *Verrugata.*
Pacific coast of tropical America, Mazatlan to Panama.
Umbrina elongata Günther, Proc. Zool. Soc. Lond., 1864, 148, Chiapam.

Genus 937. PARALONCHURUS Bocourt.
Paralonchurus Bocourt, Nouv. Arch. Mus. d'Hist. Nat., IV, 1869, 21 (*P. petersi* Bocourt).

2727. Paralonchurus petersi Bocourt.
Coast of Central America; rare at Panama.
Paralonchurus petersi Bocourt, Nouv. Archiv du Muséum, IV, 1869, 22, La Union, San Salvador.

Genus 938. POLYCLEMUS Berg. *Corvalos.*
Polycirrhus Bocourt, Nouv. Arch. Mus. Paris, IV, 1869, 22 (*P. dumerili* Bocourt); name preoccupied in worms.
Polyclemus Berg, Ann. Mus. Nac. Buenos Aires, IV, 1895, 52 (*Polycirrhus dumerili* Bocourt).

2728. Polyclemus dumerili (Bocourt).
Panama.
Polycirrhus dumerili Bocourt, Nouv. Arch. Mus. d'Hist. Nat., IV, 1869, 23, La Union, San Salvador.
Genyonemus fasciatus Steindachner, Ichth. Beitr., II, 1875, 31, Panama.

Genus 939. ZONOSCION Jordan and Evermann.
Zonoscion Jordan and Evermann, Check List, 1895, 401 (*Polycirrhus rathbuni* Jordan and Bollman).

2729. Zonoscion rathbuni (Jordan and Bollman).
Panama.
Polycirrhus rathbuni Jordan and Bollman, Proc. U. S. Nat. Mus., XII, 1889, 162, Panama.

Genus 940. ZACLEMUS Gilbert.
Zaclemus Gilbert, in Jordan and Evermann, Check List, 1895, 401 (*Paralonchurus goodei* Gilbert).

2730. Zaclemus goodei (Gilbert).
Panama.
Paralonchurus goodei Gilbert, in Jordan and Evermann, Check List, 1895, 401, and Fishes North and Mid. Amer., 1896, 1480, Panama.

Genus 941. LONCHIURUS Bloch.
Lonchiurus Bloch, Naturgesch. Ausl. Fische, VII, 1793, 144 (*Lonchiurus barbata* Bloch=*Perca lanceolata* Bloch).
Lonchurus authors, preferred spelling.

2731. Lonchiurus lanceolatus (Bloch).
West Indies to Guiana.
Perca lanceolata Bloch, Nov. Act. Sc., Copenh., III, 1788, 383, India.
Lonchiurus depressus Bloch, Naturgesch. Ausl. Fische, VII, 1793, 144, Surinam.

Genus 942. POGONIAS Lacépède. *Sea drums.*
Pogonias Lacépède, Hist. Nat. Poiss., III, 1802, 138 (*P. fasciatus* Lacépède=*Labrus cromis* Linnæus).
Pogonathus Lacépède, loc. cit., V, 1803, 121 (*P. courbina* Lacépède).
Pogonathus Bonaparte, Ittiologia Generale, 1831 (*Pogonias fasciatus* Lacépède).

2732. Pogonias cromis (Linnæus). *Gray drum; Drum; Black drum; Drumfish; Banded drum; Big drum.*
Atlantic coast of America; Long Island to mouth of Rio Grande.
Labrus cromis Linnæus, Syst. Nat., Ed. XII, 1766, 479, Carolinas.
Pogonias fasciatus Lacépède, Hist. Nat. Poiss., III, 1802, 137.
Mugil grunniens Mitchill, Rept. in part, Fishes New York, 1814, 15, New York.
Sciæna fusca Mitchill, Trans. Lit. Phil. Soc. N. Y., 1815, 409, New York.
Sciæna gigas Mitchill, loc. cit., 412, New York.

2733. Pogonias courbina (Lacépède).
Guiana to Uruguay; rather common on coast of Brazil.
Pogonathus courbina Lacépède, Hist. Nat. Poiss., V, 1803, 121, Rio de la Plata.

Genus 943. APLODINOTUS Rafinesque. *River drums; Thunderpumpers.*
Aplodinotus Rafinesque, Jour. de Phys., LXXXVIII, 1819, 418 (*A. grunniens* Rafinesque).
Amblodon Rafinesque, Jour. de Phys., 1819, 421, based on teeth supposed to belong to *Ictiobus*, later restricted by Rafinesque to *Amblodon grunniens*.
Eutychelithus Jordan, Man. Vert., Ed. I, 1876, 242 (*Corvina richardsoni* Cuvier and Valenciennes, an injured or deformed example of *A. grunniens*).
Haploidonotus Gill, revised spelling.

2734. Aplodinotus grunniens Rafinesque. *Fresh-water drum; Gaspergou; Thunderpumper; Lake sheepshead; Croaker; Bubbler; White perch.*
Great Lakes to Texas; abundant in lakes and large streams between the Alleghenies and the Great Plains.
Aplidonotus grunniens Rafinesque, Jour. de Phys., 1819, 88, Ohio River.
Sciæna oscula LeSueur, Jour. Acad. Nat. Sci. Phila., 1822, 252, pl. 13, Lake Ontario.
Sciæna grisea LeSueur, loc. cit., 254, Ohio River at Pittsburgh, Pa.
Corvina richardsoni Cuvier and Valenciennes, Hist. Nat. Poiss., V, 1830, 100, Lake Huron, based on an abnormal specimen.
Amblodon concinnus Agassiz, Amer. Jour. Sci. Arts, XVII, 1854, 307, Tennessee River.
Amblodon lineatus Agassiz, loc. cit., 307, Osage River, Mo.

2735. Aplodinotus neglectus (Girard).
Streams of eastern Mexico from Rio Grande to Rio Usumacinta.
Amblodon neglectus Girard, Proc. Acad. Nat. Sci. Phila., X, 1858, 167, mouth of the Rio Grande; Rio Usumacinta. This Mexican form apparently distinguished by larger scales (43 instead of 55 to 60).

Genus 944. EQUETUS Rafinesque.
Eques Bloch, Nat. Ausl. Fische, VII, 1793, 91 (*E. americanus* Bloch=*Chætodon lanceolatus* Linnæus); preoccupied.
Equetus Rafinesque, Anal. Nat., 1815, 89; substitute for *Eques* Bloch.

2736. Equetus lanceolatus (Linnæus). *Ribbonfish; Guapena; Serrana.*
West Indies, ranging northward to Pensacola.
Ribband fish, Edwards, Gleanings, pl. 210, 1758, Guadeloupe; Carolina.
Chætodon lanceolatus Linnæus, Syst. Nat., Ed. X, 1758, 277, "Caraibes Islands"; based on Edwards, pl. 210.
?*Serrana* Parra, Piezas, d'Hist. de Cuba, 1787, pl. 2, Cuba.
Eques americanus Bloch, Nat. Ausl. Fische, VII, 1793, West Indies.
Eques balteatus Cuvier, Règne Anim., ed. 2, II, 1829, 175, pl. 29, fig. 2, Martinique, after Edwards.
Sciæna edwardi Gronow, Cat. Fish., ed. Gray, 1854, 53, after Edwards.

Genus 945. PAREQUES Gill.
Pareques Gill in Goode, Bull. U. S. Nat. Mus., V, 1875, 50 (*Grammistes acuminatus* Bloch and Schneider).

2737. Pareques viola (Gilbert).
Panama.
Eques viola Gilbert in Jordan and Evermann, Check List, 1895, 402, Panama.

2738. Pareques acuminatus (Bloch and Schneider).
West Indies; South Carolina to Brazil.
Grammistes acuminatus Bloch and Schneider, ed. Bloch, Syst. Ichth., 1801, 184, no locality; after Seba.
Eques lineatus Cuvier and Valenciennes, Hist. Nat. Poiss., V, 1830, 126 (169), Brazil.

2739. Pareques umbrosus (Jordan and Eigenmann).
Southeast coast of the United States, Charleston to Pensacola.
Eques acuminatus umbrosus Jordan and Eigenmann, Review Sciænidæ, Rept. U. S. Fish Com., XIV, 1886, 440, Charleston and Pensacola.

2740. Pareques punctatus (Bloch and Schneider). *Serrana hispana.*
West Indies.
Serrana hispanis Parra, Piezas, Hist. Nat. Cuba, 1787, 2, pl. 2, lower figure, Cuba.
Eques punctatus Bloch and Schneider, Syst. Ichth., 1801, 106, Cuba; based on Parra, 2, pl. 2, fig. 2.

2741. Pareques pulcher (Steindachner).
Tortugas Archipelago; Barbados.
Eques pulcher Steindachner, Ichth. Notizen, VI, 1867, 43, Barbados.

Family 214. OTOLITHIDÆ. Weakfishes; Queenfishes

Genus 946. SERIPHUS Ayres.
Seriphus Ayres, Proc. Calif. Acad. Nat. Sci., II, 1858–1862 (1863; read Nov. 5, 1860), 80 (*S. politus* Ayres).

2742. Seriphus politus Ayres. *Queenfish; White croaker.*
Coast of southern California from Point Conception to Cedros Island; common on sandy shores.
Seriphus politus Ayres, Proc. Calif. Acad. Nat. Sci., II, 1858–1862 (1863; read Nov. 5, 1860), 80, fig. 21, about San Diego.

Genus 947. ISOPISTHUS Gill.
Isopisthus Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 18 (*Ancylodon parvipinnis* Cuvier and Valenciennes).

2743. Isopisthus parvipinnis (Cuvier and Valenciennes).
Coast of Brazil, north to Cayenne and Guiana.
Ancylodon parvipinnis Cuvier and Valenciennes, Hist. Nat. Poiss., V, 1830, 62 (84), pl. 105, Cayenne.
Isopisthus affinis Steindachner, Denksch. Mat. Nat. Kais. Acad. Wiss., XLI, Bd. I., Abth., 1879, 43, pl. 2, fig. 2, Porto Alegre, Brazil.

2744. Isopisthus remifer Jordan and Gilbert.
Panama, on sandy shores, rather common.
Isopisthus remifer Jordan and Gilbert, Bull. U. S. Fish Com., I, 1881, 320, Panama.

2745. Isopisthus harroweri Fowler.
Atlantic shore of Central America.
Isopisthus harroweri Fowler, Proc. Acad. Nat. Sci. Phila., LXVIII, 1916, 402, Colon.

Genus 948. NEBRIS Cuvier and Valenciennes.
Nebris Cuvier and Valenciennes, Hist. Nat. Poiss., V, 1830, 111 (149) (*N. microps* Cuvier and Valenciennes).

2746. Nebris microps Cuvier and Valenciennes.
Atlantic coast of northern South America; sandy shores.
Nebris microps Cuvier and Valenciennes, Hist. Nat. Poiss., V, 1830, 111 (149), pl. 112, Surinam.

2747. Nebris occidentalis Vaillant. *Guavina.*
Pacific coast of tropical America.
Nebris occidentalis Vaillant, Bull. Mus. Paris, 1897, 124, Pacific coast of Central America.
Nebris zestus Jordan and Starks, in Jordan and Evermann, Fishes North and Mid. Amer., 1898, 1417, Panama.

Genus 949. MACRODON Schintz.
Ancylodon Cuvier, in Oken, Isis, 1817, 1182 (*Lonchurus ancylodon* Schneider); name preoccupied in mammals.
Macrodon Schintz, Das Thierreich, II, 1822, 482 (*Lonchurus ancylodon* Schneider).
Nomalus Gistel, Thierreich, X, 1848, substitute for *Ancylodon.*
Sagenichthys Carlos Berg, Ann. Mus. Nat. Buenos Aires, 1895, 42 (*Lonchurus ancylodon* Schneider); substitute for *Ancylodon.*

2748. Macrodon ancylodon (Bloch and Schneider). *Pescadillo del rey.*
West Indies; Guiana; Brazil; and Uruguay; rather scarce.
Lonchurus ancylodon Bloch and Schneider, ed. Bloch, Syst. Ichth., 1801, 102, pl. 25, Surinam.
Ancylodon jaculidens Cuvier and Valenciennes, Hist. Nat. Poiss., V, 1830, 60 (81), Cayenne.

2749. Macrodon mordax (Gilbert and Starks).
Panama.
Sagenichthys mordax Gilbert and Starks, Mem. Calif. Acad. Sci., IV, 1904, 121, Pl. XVI, Panama.

Genus 950. BUCCONE Jordan and Evermann.
Buccone Jordan and Evermann, Check List, 1895, 394 (*Cestreus prædatorius* Jordan and Gilbert).

2750. Buccone prædatoria (Jordan and Gilbert). *Bocone.*
Coast of Panama; scarce.
Cestreus prædatorius Jordan and Gilbert, Rept. U. S. Fish Com., XIV, 1886, 363, Panama.

Genus 951. CYNOSCION Gill.
Cestreus Gronow, Cat. Fish., ed. Gray, 1854, 49 (*Cestreus carolinensis* Gronow=*Otolithus nebulosus* Cuvier and Valenciennes); preoccupied in gobies.
Cynoscion Gill, Proc. Acad. Nat. Sci. Phila., XIII, 1861, 81 (*Johnius regalis* Bloch and Schneider).
Apseudobranchus Gill, loc. cit., XIV, 1862, 18 (*Otolithus tœ-rœ* Cuvier and Valenciennes=*Cheilodipterus acoupa* Lacépède).

Subgenus CYNOSCION Gill.

2751. Cynoscion acoupa (Lacépède). *Acoupa; Toeroe.*
Atlantic coast of South America, Brazil north to Venezuela; generally common.
Cheilodipterus acoupa Lacépède, Hist. Nat. Poiss., III, 1802, 546, Cayenne.
Lutjanus cayanensis Lacépède, loc. cit., IV, 1802, 196, Cayenne.
Otolithus rhomboidalis Cuvier, Règne Anim., ed. 2, II, 1829, 173, Cayenne.
Otolithus toe-roe Cuvier and Valenciennes, Hist. Nat. Poiss., V, 1830, 54 (72), pl. 103, Cayenne.

2752. Cynoscion squamipinnis (Günther).
Pacific coast of tropical America; known from a few specimens taken at La Union and Panama.
Otolithus squamipinnis Günther, Trans. Zool. Soc. Lond., VI, 1868 (Nov. 27), 387, 429, Panama.

2753. Cynoscion othonopterus Jordan and Gilbert.
Gulf of California.
Cynoscion othonopterum Jordan and Gilbert, Proc. U. S. Nat. Mus., IV, 1881, 274, Punta San Felipe, Mexico.

2754. Cynoscion obliquatus (Cuvier and Valenciennes).
Martinique.
Otolithus obliquatus Cuvier and Valenciennes, in Sauvage, Bull. Soc. Philom. Paris, III, 1879, 209, Martinique.

2755. Cynoscion jamaicensis (Vaillant and Bocourt). *Mongolar drummer.*
Jamaica and Porto Rico.
Otolithus jamaicensis Vaillant and Bocourt, Miss. Sci. au Mexique, Poissons, 1874, 156, Jamaica.

2756. Cynoscion regalis (Bloch and Schneider). *Common weakfish; Squeteague; Sea trout; Squit; Shecutts; Chickwick; Salt-water trout; Gray trout.*
Atlantic and Gulf coasts of United States, Cape Cod southward to Mobile.
Johnius regalis Bloch and Schneider, Syst. Ichth., 1801, 75, New York.
Roccus comes Mitchill, Report, in part, Fishes New York, 1814, 25, New York.
Labrus squeteague Mitchill, Trans. Lit. Phil. Soc. New York, 1815, 396, pl. 2, fig. 1, New York.

2757. Cynoscion nothus (Holbrook). *Bastard weakfish.*
South Atlantic and Gulf coasts of United States; rather rare at Charleston. This unspotted fish is now generally regarded as a pale variant of *Cynoscion regalis.*
Otolithus nothus Holbrook, Ichth. South Carolina, 1855, 134, pl. 19, fig. 1, South Carolina.

2758. Cynoscion thalassinus (Holbrook).
Pensacola; Pass Christian, Miss.; Hampton Roads, Va.
Otolithus thalassinus Holbrook, Ichth. South Carolina, 1855, 132, pl. 18, fig. 2, Charleston, S. C.

2759. Cynoscion leiarchus (Cuvier and Valenciennes).
Coasts of Brazil and Guiana.
Otolithus leiarchus Cuvier and Valenciennes, Hist. Nat. Poiss., V, 1830, 58 (78), Brazil; Cayenne.

2760. Cynoscion microlepidotus (Cuvier and Valenciennes).
Coast of Brazil and Guiana.
Otolithus microlepidotus Cuvier and Valenciennes, Hist. Nat. Poiss.; V, 1830, 59 (79), Surinam.

Genus 952. ERISCION Jordan and Evermann.
Eriscion Jordan and Evermann, Proc. Calif. Acad. Sci., 4th ser., XVI, Apr. 27, 1927, 506 (*Otolithus nebulosus* Cuvier and Valenciennes).

2761. Eriscion reticulatus (Günther). *Corvina.*
Pacific coast of tropical America, Mazatlan to Panama.
Otolithus reticulatus Günther, Proc. Zool. Soc. Lond., 1864, 149, San Jose de Guatemala; Chiapam.

2762. Eriscion nebulosus (Cuvier and Valenciennes). *Spotted weakfish; Spotted sea trout; Spotted Squeteague.*
South Atlantic and Gulf coasts of the United States; New York to Texas; everywhere common on our southern coast; rare north of Virginia.
Labrus squeteague maculatus Mitchill, Trans. Lit. Phil. Soc., 1815, 396, New York; not *Labrus maculatus* Bloch.
Otolithus nebulosus Cuvier and Valenciennes, Hist. Nat. Poiss., V, 1830, 59 (79), locality unknown.
Otolithus carolinensis Cuvier and Valenciennes, Hist. Nat. Poiss., IX, 1833, 351, (475), South Carolina.
Otolithus drummondi Richardson, Fauna Bor.-Amer., Fish., 1836, 70, New Orleans.

2763. Eriscion parvipinnis (Ayres). *California bluefish.*
Coast of Lower California; Santa Barbara Islands to Guaymas; common along the coasts of southern California as far north as San Pedro.
Cynoscion parvipinnis Ayres, Proc. Calif. Acad. Nat. Sci., II, 1858–1862 (read Dec. 1, 1861, published Sept., 1862), 156, fig. 48, coast of Lower California.
Otolithus magdalenæ Steindachner, Ichth. Beit., III, 1875, 34, Magdalena Bay, Lower California.

2764. Eriscion xanthulus (Jordan and Gilbert). *Corvina de las aletas amarillas; Yellowmouth.*
Pacific coast of Mexico; not rare about Mazatlan.
Cynoscion xanthulum Jordan and Gilbert, Proc. U. S. Nat. Mus., IV, 1881, 460, Mazatlan.

2765. Eriscion albus (Günther).
Pacific coast of tropical America.
Otolithus albus Günther, Proc. Zool. Soc. Lond., 1864, 149, Chiapam; Panama.
Otolithus cayennensis Vaillant and Bocourt, Miss. Sci. Mexique, Poiss., 1874, 156, La Union, Salvador.

2766. Eriscion stolzmanni (Steindachner).
Pacific coast of tropical America, from Panama to Peru.
Otolithus stolzmanni Steindachner, Denkschr. Mat. Nat. Kais. Acad. Wiss., XLI, Bd. I, Abth. 35, 1879, pl. 2, fig. 1, Tumbez, Peru.

2767. Eriscion virescens (Cuvier and Valenciennes).
Coasts of Guiana and Brazil.
Otolithus virescens Cuvier and Valenciennes, Hist. Nat. Poiss., V, 1830, 54 (72), Surinam.
Otolithus microps Steindachner, Denkschr. Mat. Nat. Kais. Acad. Wiss., XLI, Bd. I, Abth. 38, 1879, pl. 8, fig. 2, Porto Alegre, Brazil.

2768. Eriscion macdonaldi (Gilbert). *Totuava.*
Gulf of California.
Cynoscion macdonaldi Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 64, head of Gulf of California.

Genus 953. ATRACTOSCION Gill.
Atractoscion Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 18 (*Otolithus æquidens* Cuvier and Valenciennes).

2769. Atractoscion nobilis (Ayres). *White sea bass of California.*
Coast of California, north to San Francisco, occasionally straying as far north as Boca de Quadra Inlet, Alaska.
Johnius nobilis Ayres, Proc. Calif. Acad. Nat. Sci., II, 1860, 77, San Francisco.
Otolithus californiensis Steindachner, Ichth. Beitr., III, 1875, 31, San Diego, Calif., and Magdalena Bay, Lower California.

2770. Atractoscion phoxocephalus (Jordan and Gilbert).
Pacific coast of tropical America; Panama.
Cynoscion phoxocephalum Jordan and Gilbert, Bull. U. S. Fish Com., I, 1881, 318, Panama.

Family 215. MALACANTHIDÆ. Matajuelos

Genus 954. MALACANTHUS Cuvier.
Malacanthus Cuvier, Règne Animal, ed. 2, II, 1829, 264 (*Coryphæna plumieri* Bloch).

2771. Malacanthus plumieri (Bloch). *Matajuelo blanco.*
West Indies, generally common.
Coryphæna plumieri Bloch, Ichth., V, 1787, 119, pl. 175, Martinique; from a drawing by Plumier.

Family 216. BRANCHIOSTEGIDÆ.[65] Blanquillos

Genus 955. CAULOLATILUS Gill.
Caulolatilus Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 240 (?*Latilus chrysops* Cuvier and Valenciennes).
Dekaya Cooper, Proc. Calif. Acad. Nat. Sci., III, pt. 1, 1863 (Nov.), 70, fig. 17 (*D. anomala* Cooper).

2772. **Caulolatilus chrysops** (Cuvier and Valenciennes). *Blanquillo.*
Gulf of Mexico and southward.
Latilus chrysops Cuvier and Valenciennes, Hist. Nat. Poiss., IX, 1833, 496, Brazil.

2773. **Caulolatilus microps** Goode and Bean.
Gulf of Mexico.
Caulolatilus microps Goode and Bean, Proc. U. S. Nat. Mus., I, 1878, 43, off Pensacola, Fla.

2774. **Caulolatilus princeps** (Jenyns). *Blanquillo.*
Cape San Lucas to the Galapagos.
Latilus princeps Jenyns, Zool. Voy. *Beagle*, Fishes, 1842, 52, Chatham Island, Galapagos Archipelago.
Caulolatilus affinis Gill, Proc. Acad. Nat. Sci. Phila., XVII, 1865, 68, Cape San Lucas.

2775. **Caulolatilus anomalus** (Cooper). *Blanquillo; Sea whitefish.*
Coast of southern California, about rocky islands from Point Conception southward; common.
Dekaya anomala Cooper, Proc. Calif. Acad. Nat. Sci., III, pt. 1, 1863 (Nov.), 70, fig. 17, Santa Catalina Island off southern California.

2776. **Caulolatilus cyanops** Poey. *Blanquillo.*
Coasts of Cuba and Porto Rico.
Caulolatilus cyanops Poey, Repertorio, I, 1866, 311–312, Cuba.

Genus 956. LOPHOLATILUS Goode and Bean. *Tilefish.*
Lopholatilus Goode and Bean, Proc. U. S. Nat. Mus., II, 1879, 205 (*L. chamæleonticeps* Goode and Bean).

2777–2778. **Lopholatilus chamæleonticeps** Goode and Bean. *Tilefish.*
Deep waters of the western Atlantic; abundant at intervals but subject to calamities; a valued food fish.
Lopholatilus chamæleonticeps Goode and Bean, Proc. U. S. Nat. Mus., II, 1879, 205; 80 miles S. by E. of No-man's Land, 40° N., 70° W., in 84 fathoms.

Family 217. TRICHODONTIDÆ

Genus 957. TRICHODON Steller.
Trichodon Steller, in Tilesius, Mém. Acad. St. Petersb., IV, 1811, 468 (*Trachinus trichodon* Telesius).

2779. **Trichodon trichodon** (Tilesius). *Sandfish.*
Coasts of Kamchatka and eastward; Herendeen Bay and elsewhere in Bering Sea, and south to coast of Oregon.
Trachinus trichodon Tilesius, Mém. Acad. St. Petersb., IV, 1811, fig. 8, 73, Kamchatka.
Trachinus gasteropelecus Tilesius, loc. cit., 1811, 466, Kamchatka.
Trichodon lineatus Ayres, Proc. Calif. Acad. Nat. Sci., II, 1860, 60, San Francisco.

Genus 958. ARCTOSCOPUS Jordan and Evermann.
Arctoscopus Jordan and Evermann, Check List, 1895, 464 (*Trichodon japonicus* Steindachner).

2780. **Arctoscopus japonicus** (Steindachner).
Sea of Japan, eastward to Sitka, Alaska.
Trichodon japonicus Steindachner, Ichth. Beitr., X, 1881, 4 Strietok and Sitka.

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[65] The name *Branchiostegus* Rafinesque (1815) has priority over *Latilus* Cuvier and Valenciennes (1830).

Family 218. CIRRHITIDÆ

Genus 959. CIRRHITUS Lacépède.
Cirrhitus Lacépède, Hist. Nat. Poiss., V, 1803, 3 (*C. maculatus* Lacépède).
Cirrhitichthys Günther, Cat., II, 1860, 73; not of Bleeker.
Cirrhites of authors; revised spelling.

2781. Cirrhitus rivulatus (Valenciennes).
Cape San Lucas to the Revillagigedos and Galapagos Islands.
Cirrhites rivulatus Valenciennes, Voy. *Vénus*, Poiss., 1855, 309, pl. 3, fig. 1, Galapagos Islands.
Cirrhitus betaurus Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 259, Cape San Lucas; young.

Family 219. ANTIGONIIDÆ

Genus 960. ANTIGONIA Lowe.
Antigonia Lowe, Proc. Zool. Soc. Lond., 1843, 85 (*A. capros* Lowe).
Caprophonus Müller and Troschel, Horæ Ichth., III, 1845, 28, pl. 5, fig. 1 (*C. aurora* Müller and Troschel).
Hypsinotus Temminck and Schlegel, Faun. Japon., Poiss., 1844, 84 (*H. rubescens* Günther).

2782. Antigonia capros Lowe.
Tropical Atlantic, in rather deep water.
Antigonia capros Lowe, Proc. Zool. Soc. Lond., 1843, 85, Madeira.
Caprophonus aurora Müller and Troschel, Horæ Ichthyologicæ, III, 1845, p. 28, pl. 5, fig. 1, Barbados.

Family 220. SCORPIDÆ. Halfmoon fishes

Genus 961. MEDIALUNA Jordan and Fesler.
Medialuna Jordan and Fesler, Rept. U. S. Fish Com., XVII, 1889–1891, 536 (*Scorpis californiensis* Steindachner).

2783. Medialuna californiensis (Steindachner). *Medialuna; Halfmoon.*
Coast of southern California from Point Conception southward to Cedros Island.
Scorpis californiensis Steindachner, Ichth. Beitr., III, 1875, 19, San Diego.

Suborder SQUAMIPENNES

Family 221. EPHIPPIDÆ

Genus 962. CHÆTODIPTERUS Lacépède.
Chætodipterus Lacépède, Hist. Nat. Poiss., IV, 1803, 503 (*Chætodon plumieri* Bloch = *Chætodon faber* Broussonet).
Parephippus Gill. Proc. Acad. Nat. Sci. Phila., XIII, 1861, 165 (*Ephippus zonatus* Girard).

2784. Chætodipterus faber (Broussonet). *Angelfish; Spadefish; Moonfish; Tripletail; Three-banded sheephead; Three-tailed porgy.*
West Indies, Cape Cod to Rio Janeiro, south Atlantic coast.
Faber marinus fere quadratus (the pilotfish) Sloane, Jamaica, II, 1793, 290, pl. 251, Jamaica.
Chætodon faber Broussonet, Ichth., V, Dec. 1, 1782, pl. 4, Jamaica.
Zeus quadratus Gmelin, Syst. Nat., I, 1788, 1225, Jamaica; after Sloane.
Chætodon plumieri Bloch, Naturgesch. Ausl. Fische, III, 1787, 104, Martinique.
Selene quadrangularis Lacépède, Hist. Nat. Poiss., IV, 1803, 564, Jamaica; after Sloane.
Chætodon oviformis Mitchill, Trans. Lit. Phil. Soc. N. Y., I, 1815, 247, pl. 5, fig. 4, New York.
Ephippus gigas Cuvier, Règne Anim., ed. 2, II, 1829, 191, America.

2785. Chætodipterus zonatus (Girard).
Pacific coast of America, from San Diego to Panama; common southward.
Ephippus zonatus Girard, Pac. R. R. Surv., X, pt. 4, Fishes, 1858, 110, San Diego, Calif.

Genus 963. PARAPSETTUS Steindachner.
Parapsettus Steindachner, Ichth. Beitr., III, 1875, 50 (*P. panamensis* Steindachner).

2786. Parapsettus panamensis Steindachner.
Panama.
Parapsettus panamensis Steindachner, Ichth. Beitr., III, 1875, 51, Panama.

Family 222. CHÆTODONTIDÆ. Butterflyfishes; Coralfishes

Genus 964. PROGNATHODES Gill.
Prognathodes Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 238 (*Chelmo pelta* Günther=*Chelmon aculeatus* Poey).

2787. Prognathodes aculeatus (Poey).
West Indies.
Chelmon aculeatus Poey, Memorias, II, 1861, 202, Cuba.
Chelmo pelta Günther, Cat., II, 1860, 38, locality unknown.

Genus 965. FORCIPIGER Jordan and McGregor.
Forcipiger Jordan and McGregor, Rept. U. S. Fish Com., XXIV, 1898, 279 (*Chætodon longirostris* Broussonet).

2788. Forcipiger longirostris (Broussonet).
South Seas east to Revillagigedo Islands.
Chætodon longirostris Broussonet, Desc. Ichth., I, 1782, 23, pl. 7, Society and Sandwich Islands.
Forcipiger flavissimus Jordan and McGregor, Rept. U. S. Fish Com., XXIV, 1898, 279, Clarion Island, Revillagigedo Archipelago.

Genus 966. CHÆTODON [66] Linnæus. *Butterflyfishes.*
Chætodon Linnæus, Syst. Nat., Ed. X, 1758, 272 (*C. capistratus* Linnæus).
Rabdophorus Swainson, Classn. Fishes, II, 1839, 21 (*Chætodon ephippium* Cuvier and Valenciennes).
Citrarœdus Kaup, Wiegmann's Archiv, XXVI, 1860, 136 (*Chætodon ornatissimus* Solander).
Linophora Kaup, loc. cit., 137 (*Chætodon auriga* Forskål).
Sarothrodus Gill, Proc. Acad. Nat. Sci. Phila., XIII, 1861, 99 (*Chætodon capistratus* Gill).
Tholichthys Günther, Ann. Mag. Nat. Hist., I, 4th ser., 1868, 457 (*T. osseus* Günther; a larval form).
Chætodontops Bleeker, Arch. Neerl. Soc. Nat., XI, 1876, 304 (*Chætodon collaris* Bloch).
Tetragonopterus Klein, in Bleeker, loc. cit., 305 (*Chætodon striatus* L.); not *Teragonopterus* of Cuvier.
Lepidochætodon Bleeker, loc. cit., 305 (*Chætodon unimaculatus* Bloch).
Gonochætodon Bleeker, loc. cit., 306 (*Chætodon triangulum* Kuhl and Van Hasselt).
Oxychætodon Bleeker, loc. cit., 306 (*Chætodon lineolatus* Quoy and Gaimard).
Hemichætodon Bleeker, Versl. Ak. Amsterdam, XII, 1876, 38 (*Chætodon capistratus* Linnæus).
Anisochætodon Klunzinger, Fische Rothen Meeres, I, 1884, 3 (*Chætodon auriga* Cuvier and Valenciennes).

Subgenus CHÆTODON Linnæus.

2789. Chætodon capistratus Linnæus. *Parché.*
West Indies, Habana, north to Woods Hole.
Chætodon capistratus Linnæus, Syst. Nat., Ed. X, 1758, 275, India.
Chætodon bricei Smith, Bull. U. S. Fish Com., XVII, 1897, 102, with text fig., Woods Hole, Mass.; young.

2790. Chætodon striatus Linnæus. *Portuguese butterfly.*
West Indies.
Chætodon striatus Linnæus, Syst. Nat., Ed. X, 1758, 275, India.

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[66] These nominal genera, here included under *Chætodon*, are mostly imperfectly defined. The following may be valid: *Chætodon*, lines of scales running upward and backward from the lateral line, no produced rays; *Linophora*, similar but one dorsal ray much produced; *Oxychætodon*, scales of sides enlarged, snout sharp; *Chætodontops*, similar, but snout blunt, etc.; *Lepidochætodon*, scales of sides much enlarged, in horizontal rows, etc.; *Rabdophorus*, scales horizontal, much reduced above lateral line (see Jordan and Jordan, Mem. Carnegie Mus. X, 58, 1922).

Subgenus CHÆTODONTOPS Bleeker.

2791. Chætodon bimaculatus Bloch.[67] *Parché; Isabelita de la alto.*
West Indies, north in Gulf Stream to New Jersey and Rhode Island.
Chætodon ocellatus Bloch, Naturgesch. Ausl. Fische, III, pl. 211, 1787, 105, "also from the East Indies."
Chætodon bimaculatus Bloch, loc. cit., 1790, pl. 219, fig. 1.
Sarothrodus maculo-cinctus Gill, Proc. Acad. Nat. Sci. Phila., XIII, 1861, 99, Newport, R. I.
Sarothrodus amplexicollis Poey, Enumeratio, 1875, 63, Cuba.

2792. Chætodon nigrirostris (Gill).
Cape San Lucas, Lower California; Panama Bay.
Sarothrodus nigrirostris Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 243, Cape San Lucas, Lower California.

2793. Chætodon humeralis Günther. *Muñeca; Dollfish.*
Pacific coast of America, from Guaymas to Panama.
Chætodon humeralis Günther, Cat., II, 1860, 19, "Sandwich Islands," by error for Central America.

2794. Chætodon sedentarius Poey.
West Indian fauna.
Chætodon sedentarius Poey, Memorias, II, 1860, 203, Cuba.

2795. Chætodon gracilis Günther.
West Indies.
Chætodon gracilis Günther, Cat., II, 1860, 20, Caribbean Sea, West Indies.

2796. Chætodon aya Jordan.
Gulf of Mexico.
Chætodon aya Jordan, Proc. U. S. Nat. Mus., IX, 1886, 225, Snapper Banks, south of Pensacola, Fla.

2797. Chætodon atæniatus (Poey).
Habana Cuba.
Sarothrodus atæniatus Poey, Synopsis, 1868, 353, Cuba.
? *Chætodon unicolor* Sauvage, Bull. Soc. Philom., IV, 1880, 222, Martinique.

Genus 967. POMACANTHUS Lacépède. *Chirivitas.*
Pomacanthus Lacépède, Hist. Nat. Poiss., IV, 1803, 517 (*Chætodon arcuatus* Linnæus, as restricted by Cuvier).

2798. Pomacanthus arcuatus (Linnæus). *Black angel; Chirivita; Portugais.*
West Indies, north to New Jersey, south to Bahia.
Chætodon arcuatus Linnæus, Syst. Nat., Ed. X, 1758, 273, "India."
Chætodon aureus Bloch, Naturgesch. Ausl. Fische, III, 1787, 49, Martinique; on drawing by Plumier.
Chætodon lutescens Bonnaterre, Encycl. Meth., 1788, 82, Jamaica; after Browne.
Chætodon littoricola Poey, Synopsis, 1868, 351, Cuba.
Pomacanthus balteatus Cuvier and Valenciennes, Hist. Nat. Poiss., VII, 1831, 156 (208), Porto Rico.
Pomacanthus cingulatus Cuvier and Valenciennes, loc. cit., 156 (209), pl. 185, West Indies (probably Porto Rico).
Pomacanthus quinquecinctus Cuvier and Valenciennes, loc. cit., 157 (210), West Indies (probably Porto Rico).

2799. Pomacanthus paru (Bloch). *Paru; Indianfish; Flatfish; Chirivita.*
West Indies, south to Bahia; Tortugas.
Chætodon paru Bloch, Naturgesch. Ausl. Fische, III, 1787, 57, Brazil; on a drawing.

Genus 968. POMACANTHODES Gill.
Pomacanthodes Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 244 (*P. zonipectus* Gill).

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[67] Poey seems to have been the first to recognize the identity of *ocellatus* (which has page priority) with *bimaculatus*. He chose to use the name *bimaculatus*, which should therefore stand.

2800. Pomacanthodes zonipectus Gill. *Mojarra de las piedras.*
West coast of tropical America, from Mazatlan to Panama.
Pomacanthodes zonipectus Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 244, San Salvador.
Pomacanthus crescentalis Jordan and Gilbert, Proc. U. S. Nat. Mus., IV, 1881, 358, Mazatlan.

Genus 969. CENTROPYGE Kaup.
Centropyge Kaup, Wiegmann's Archiv, XXVI, 1860, 140 (*Holacanthus tibicen* Cuvier and Valenciennes).

2801. Centropyge passer (Valenciennes).
West coast of tropical America; Cape San Lucas to Galapagos Islands.
Holacanthus passer Valenciennes, Voy. *Vénus*, 1846, 327, pl. 6, Galapagos Archipelago.
Holacanthus strigatus Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 243, Cape San Lucas.

2802. Centropyge clarionensis (Gilbert).
Clarion, Socorro, and San Benedicto Islands of the Revillagigedo group.
Holacanthus clarionensis Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 72, Revillagigedo Islands; Clarion, Socorro, and San Benedicto.

2803. Centropyge lunata (Blosser).
St. Croix.
Holocanthus lunatus Blosser, Ann. Carnegie Mus., VI, 1909, 299, St. Croix.
This small species with low fins and rounded caudal if fairly mature can not be placed in *Holacanthus*. It seems to belong to the genus *Centropyge*, a genus thus far known only from the Pacific.

Genus 970. HOLACANTHUS Lacépède. *Catalinetas.*
Holacanthus Lacépède, Hist. Nat. Poiss., IV, 1803, 525 (*Chætodon tricolor* Bloch).

2804. Holacanthus tricolor (Bloch). *Rock beauty; Catalineta; Vaqueta de los colores.*
West Indies and Bermudas; south to Bahia.
Chætodon tricolor Bloch, Naturgesch. Ausl. Fische, IX, 1795, 103, Cuba.
Catalineta Parra, Descr. Dif. Piez., Hist. Nat. Cuba, 1787, 12, Pl. VII, fig. 2, Cuba.

Genus 971. ANGELICHTHYS Jordan and Evermann.
Angelichthys Jordan and Evermann, Check List, 1895, 420 (*Chætodon ciliaris* Linnæus).

2805. Angelichthys ciliaris (Linnæus). *Angelfish; Isabelita; Yellow angel; Golden angel; Blue angel.*
West Indies north to Key West.
Chætodon ciliaris Linnæus, Syst. Nat., Ed. X, 1758, 276, Indies, in part.
Isabelita Parra, Dif. Piezas, Hist. Nat. Cuba, 1787, 11, pl. 7, fig. 1, Cuba.
Chætodon squamulosus Shaw, Naturalist's Miscellany, VIII, 1796, 275; after the angelfish of Catesby.
Chætodon parræ Bloch and Schneider, Syst. Ichth., 1801, 235, Cuba; after *Isabelita* of Parra.
Holacanthus cornutus Desmarest, Décade Ichthyologique, 1823, 44, pl. 3, fig. 3, Cuba.
Holacanthus formosus Castelnau, Anim. Amer. Sud, Pois., 1855, 19, Pl. XI, fig. 2, Bahia.

2806. Angelichthys isabelita Jordan and Rutter. *Angelfish.*
West Indies; north to Key West, Fla.
Angelichthys isabelita Jordan and Rutter, in Jordan and Evermann, Fishes North and Mid. Amer., 1898, 1685, Key West.

2807. Angelichthys townsendi Nichols and Mowbray.
Florida.
Angelichthys townsendi Nichols and Mowbray, Bull. Amer. Mus. Nat. Hist., XXXIII, 1914, 581, Key West, Fla.

Family 223. ZANCLIDÆ. Moorish idols

Genus 972. ZANCLUS Cuvier and Valenciennes

Zanclus Cuvier and Valenciennes, Hist. Nat. Poiss., VII, 1831, 70 (102) (*Chætodon cornutus* Linnæus).

Gonopterus Gronow, Cat Fish., ed. Gray, 1854, 77 (*G. mœrens* Gronow = *Chætodon cornutus* Linnæus).

Gnathocentrum Guichenot, Ann. Maine et Loire, IX, 1866, 4 (*Zanclus centrognathus* Cuvier and Valenciennes); young.

2808. Zanclus cornutus (Linnæus). *Moorish idol; Besan; Piquier; Porte enseigne.*

Warm seas of the Pacific; Revillagigedo, Cocos, and Galapagos islands; Hawaii; Samoa; East Indies and islands of Polynesia; common and widely distributed throughout the Pacific.

Chætodon cornutus Linnæus, Syst. Nat., Ed. X, 1758, 273, Indies; after Artedi.

Zanclus centrognathos Cuvier and Valenciennes, Hist. Nat. Poiss., VII, 1831, 397 (528), near Equator, 75° E.

Gonopterus mœrens Gronow, Cat. Fishes, ed. Gray, 1854, 77, India.

Family 224. ACANTHURIDÆ. Surgeonfishes; Tangs

Genus 973. ACANTHURUS Forskål. *Surgeonfishes.*

Acanthurus Forskål, Descr. Anim., 1775, 59 (*Chætodon unicornis*), etc.

Harpurus (Forster) Gmelin, Enchiridion, 1778, 84 (*H. fasciatus* Forster).

Aspisurus Lacépède, Hist. Nat. Poiss., IV, 1803, 556 (*Chætodon sohar* Forskål),

Acronurus Gronow, Cat. Fishes, 1854, 190 (*Teuthis hepatus* Linnæus).

Rhombotides (Klein) Bleeker, Neder. Tijdschr. Dierk., I (*Chætodon triostegus* Linnæus).

Subgenus HARPURUS Forster.

2809. Acanthurus triostegus (Linnæus).

South Pacific, from New Zealand and Australia to the Revillagigedos.

Chætodon triostegus Linnæus, Syst. Nat., Ed. X, 1758, 274, India.

Harpurus fasciatus Forster, Enchiridion, 1778, 84, South Seas.

Acanthurus zebra Lacépède, Hist. Nat. Poiss., III, 1802, 548, fig. 3, no locality.

Chætodon couaga Lacépède, loc. cit. IV, 1802, 727, no locality.

Teuthis australis Gray, in King, Surv. Australia, II, 1826, 435.

Acanthurus hirudo Bennett, Ceylon Fishes, 1851, 11, pl. 11, Ceylon.

Acanthurus subarmatus Bennett, Whaling Voyage, II, 1840, 278, Raiatea, Society Islands.

Subgenus TEUTHIS.

2810. Acanthurus cæruleus Bloch and Schneider. *Barbero; Blue surgeon; Blue tang.*

West Indies, Key West, and Bermuda to Bahia, north to Woods Hole, Mass.

Acanthurus cæruleus Bloch and Schneider, Syst. Ichth., 1801, 214, Carolinas; Habana; Jamaica; after Catesby, Parra, and Browne.

Acanthurus broussonetii Desmarest, Prem. Dec. Ichth., 1823, 26, Cuba.

Acanthurus brevis Poey, Memorias, II, 1861, 207, Antilles and Habana.

Acronurus cæruleatus Poey, Enumeratio, 1875, 69, Cuba; young.

2811. Acanthurus hepatus (Linnæus). *Common surgeon; Doctor fish; Lancet fish; Tang; Tangbarbero; Saigneur; Barbero.*

West Indian fauna; Florida to Bahia; Key West and Cuba; Charleston; north to Woods Hole, Mass.

Teuthis hepatus Linnæus, Syst. Nat., Ed. XII, 1766, 507, Carolinas.

Chætodon chirurgus Bloch, Naturgesch. Ausl. Fische, III, 1787, 99, Martinique; on drawing by Plumier.

Acanthurus phlebotomus Cuvier and Valenciennes, Hist. Nat. Poiss., X, 1835, 129 (176), pl. 287 Martinique, Brazil, Habana, New York.

Acronurus fuscus Gronow, Fish., ed. Gray, 119, 1854, West Indies; young.

Acronurus carneus Poey, Memorias, II, 1860, 207, Cuba.

2812. Acanthurus bahianus Castelnau. *Barbero; Ocean tang.*
West Indies to Brazil.
Acanthurus bahianus Castelnau, Anim. Amer. Sud, Poiss., 1855, 24, Pl. XI, fig. 1, Bahia.
Acanthurus tractus Poey, Memorias, II, 1861, 208, Cuba.
Acronurus nigriculus Poey, Enumeratio, 1875, 69, Cuba.

2813. Acanthurus crestonis (Jordan and Starks). *Barbero negro.*
West coast of Mexico and Central America, Mazatlan to Panama.
Teuthis crestonis Jordan and Starks, Proc. Calif. Acad. Sci., ser. 2, 1895, V, 485, pl. 47, Mazatlan.

2814. Acanthurus aliala Lesson. *Philosophe.*
East Indies to the west coast of Mexico; abundant at Socorro and Clarion Islands.
Acanthurus aliala Lesson, Voy. *Coquille*, Zool., II, 1830, 150, Oualan.
Acanthurus glaucopareius Cuvier and Valenciennes, Hist. Nat. Poiss., X, 1835, 139 (190), Oualan; Molucca.

Genus 974. XESURUS Jordan and Evermann.
Xesurus Jordan and Evermann, Check List, 1895, 421 (*Prionurus punctatus* Gill).

2815. Xesurus punctatus (Gill). *Cochinito.*
Cape San Lucas; Mazatlan; Creston Island.
Prionurus punctatus Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 242, Cape San Lucas.

2816. Xesurus clarionis Gilbert and Starks.
Galapagos Islands.
Xesurus clarionis Gilbert and Starks, Proc. U. S. Nat. Mus., XIX, 1896, 437, 445, Clarion Island, Galapagos Archipelago.

Genus 975. CTENOCHÆTUS Gill.
Ctenodon Bonaparte, in Klunzinger, Fische Rothen Meeres, 1884, I Theil, 54 (*Acanthurus strigosus* Bennett); name preoccupied.
Ctenochætus Gill, Proc. U. S. Nat. Mus., VII, 1884, 277 (*Acanthurus strigosus* Bennett).

2817. Ctenochætus striatus (Quoy and Gaimard). *Kale.*
South seas, recorded from Cocos Island.
Acanthurus striatus Quoy and Gaimard, Voyage *l'Uranie*, Zool., 1824, 373, pl. 63, fig. 3, Guam.
Acanthurus strigosus Bennett, Zool. Jour., IV, XIII, Art. III, 1828, 41, Honolulu.
Acanthurus ctenodon Cuvier and Valenciennes, Hist. Nat. Poiss., X, 1835, 178 (241), pl. 289, the Carolines and New Guinea.

Order RR. CATAPHRACTI

Family 225. SCORPÆNIDÆ. Rockfishes and scorpionfishes

Genus 976. SEBASTES Cuvier. *Rosefishes.*
Sebastes Cuvier, Règne Anim., ed. 2, II, 1829, 166 (*Perca norvegica* Ascanius = *Perca marina* Linnæus).
Eusebastes Sauvage, Nouv. Archives Mus. Paris, 1878, (2), 1, 1421 (*Perca norvegica* Ascanius).

2818. Sebastes marinus (Linnæus). *Rosefish; Redfish; Snapper; Hemdurgan; Red seafish; Norway haddock.*
North Atlantic, both coasts, south to Faroe Islands; Norway; Maine; in deep water off coast of middle New Jersey.
Perca marina Linnæus, Syst. Nat., Ed. X, 1758, 290, Norway.
Perca norvegica Ascanius, Icones Rev. Nat., II, 1772, 7, Norway.
Holocentrus sanguineus Faber, Natur. der Fische Islands, 1829, 126, Iceland.
Sebastes fasciatus Storer, Proc. Bost. Soc. Nat. Hist., V, 1854, 31, Provincetown, Mass.
Sebastes regulus Ekstrom, Skand. Fish., Ed. I, 197, plate only.

2819. Sebastes viviparus Krøyer.
North Atlantic, in shallow bays, more southerly not certainly recorded from America.
Sebastes viviparus Krøyer, Naturh. Tidskr., I, 1845, 275, Norway, in shallow water.

Genus 977. SEBASTOLOBUS Gill.
Sebastolobus Gill, Rept. Smithson. Inst., 1880, 375 (*Sebastes macrochir* Günther).

2820. Sebastolobus altivelis Gilbert.
Aleutian Islands, Alaska, and in deep water off the coast of California.
Sebastolobus altivelis Gilbert, Rept. U. S. Fish Com., XIX, 1893, 410, pl. 23, south of Alaska Peninsula, at *Albatross* station 3338, in 625 fathoms.

2821. Sebastolobus alascanus Bean.
Bering Sea; Pacific coast of Alaska, Washington, Oregon, and California, in deep water; recently taken in San Pedro.
Sebastolobus alascanus Bean, Proc. U. S. Nat. Mus., XIII, 1890, 44, off Trinity Islands, Alaska, at *Albatross* station 2853, 56° N., 154° W., in 159 fathoms.

Genus 978. EMMELAS Jordan and Evermann.
Emmelas Jordan and Evermann, Fishes North and Mid. Amer., 1898, 1773 (*Sebastes glaucus* Hilgendorf).

2822. Emmelas glaucus (Hilgendorf).
Hokkaido, north to Bering Island.
Sebastes glaucus Hilgendorf, Sitzber. Ges. Naturf. Freunde, Berlin, 1880, 172, Hokkaido, north Japan; no description given.

Genus 979. SEBASTODES[68] Gill. *Rockfishes.*
Sebastodes Gill, Proc. Acad. Nat. Sci. Phila., XIII, 1861, 165 (*Sebastes paucispinis* Ayres).

2823. Sebastodes paucispinis (Ayres). *Bocaccio; Mérou; Jack.*
San Diego to Barclay Sound, British Columbia; common south. A valued food fish.
Sebastes paucispinis Ayres, Proc. Calif. Acad. Nat. Sci., I, 1854, 6, San Francisco.

2824. Sebastodes jordani Gilbert.
Coast of California in deep water.
Sebastodes jordani Gilbert, Rept. U. S. Fish Com., XIX, 1893, 466, coast of California, at *Albatross* station 2935, 3103, and 3114, in 64 to 124 fathoms.

2825. Sebastodes goodei Eigenmann and Eigenmann.
San Diego to San Francisco; not common.
Sebastodes goodei Eigenmann and Eigenmann, Proc. Calif. Acad. Sci., III, 1890, 12, San Diego, Calif.

Genus 980. SEBASTOSOMUS Gill.
Sebastosomus Gill, Proc. Acad. Nat. Sci. Phila., XVI, 1864, 59 (*Sebastes melanops* Girard).
Primospina Eigenmann and Beeson, Am. Nat., XXVII, 669 (*Sebastichthys mystinus* Jordan and Gilbert).

Subgenus PRIMOSPINA Eigenmann and Beeson.

2826. Sebastosomus flavidus (Ayres). *Yellowtail rockfish.*
San Diego to San Francisco; common northward.
Sebastodes flavidus Ayres, Proc. Calif. Acad. Nat. Sci., ser. I, II, 1862, 209, fig. 64, San Francisco.

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[68] The 13-spined allies of *Sebastodes* constitute a most striking feature of the fauna of the north Pacific, the species being very numerous on the rocky coast of California, Alaska, and Japan; a few also in Chile. The species are in general well defined, showing little individual variation and no sex changes. It is extremely difficult, however, to divide them into genera, the various traits being intertangled to a remarkable degree. Yet such species as *paucispinis*, *rosaceus*, and *nigrocinctus* could hardly stand in one genus in a natural system. It may be noted that the group called *Sebastodes* is the simplest in organization and also the oldest, four well-marked species related to *Sebastodes paucispinis* occurring in the upper Miocene of California.

2827. Sebastosomus serranoides (Eigenmann and Eigenmann).
Cortez Banks, off San Diego.
Sebastodes serranoides Eigenmann and Eigenmann, Proc. Calif. Acad. Sci., 2d ser., III, 1890, 36, Cortez Banks.

2828. Sebastosomus melanops (Girard).
Pacific coast of America, from Monterey to Sitka.
Sebastodes melanops Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 135, Astoria, Oreg.
Sebastosomus simulans Gill, loc. cit., XVI, 1864, 147, Cape Flattery.

2829. Sebastosomus mystinus (Jordan and Gilbert). *Pêche prêtre; Priestfish; Black rockfish.*
Pacific coast of America, from Aleutian Islands to San Diego.
Sebastichthys mystinus Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880, 455, San Francisco.

2830. Sebastosomus ciliatus (Tilesius).
Coast of Alaska.
Epinephelus ciliatus Tilesius, Mem. Acad. Sci. St. Petersb., IV, 1810, 474, Aleutian Islands.
Perca variabilis Pallas, Zoogr. Rosso-Asiat., III, 1811 (1831), 241, Aleutian Islands; including *S. aleuticus*.

Genus 981. ROSICOLA Jordan and Evermann.
Rosicola Jordan and Evermann, Check List, 1895, 429 (*Sebastosomus pinniger* Gill.

2831. Rosicola babcocki (Thompson).
Coast of Alaska and British Columbia, common.
Sebastodes babcocki W. F. Thompson, Fisheries British Columbia, 1914, Middleton Island, Alaska.

2832. Rosicola pinniger (Gill). *Flioma; Orange rockfish.*
Pacific coast of America, from San Diego to Puget Sound.
Sebastosomus pinniger Gill, Proc. Acad. Nat. Sci. Phila., XVI, 1864, 147, San Francisco.

2833. Rosicola miniatus (Jordan and Gilbert). *Rasciera; Rasher.*
Pacific coast of America, from San Francisco to San Diego.
Sebastichthys miniatus Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880, 70, Monterey, Calif.

2834. Rosicola alexandri (Evermann and Goldsborough).
Monterey Bay.
Sebastodes alexandri Evermann and Goldsborough, Proc. U. S. Nat. Mus., XXXI, 1907, 651, Monterey Bay in 65 fathoms.

Genus 982. ZALOPYR Jordan and Evermann.
Zalopyr Jordan and Evermann, Fishes North and Mid. Amer., 1898, 1795 (*Sebastodes aleutianus* Jordan and Evermann).

2835. Zalopyr aleutianus (Jordan and Evermann).
Alaska; Aleutian Islands.
Sebastodes aleutianus Jordan and Evermann, Fishes North and Mid. Amer., 1898, 1795, Shelikof Straits, Alaska.

2836. Zalopyr atrorubens (Gilbert).
Monterey, Calif.
Sebastodes atrorubens Gilbert, in Jordan and Evermann, Check List, 1895, 429, and Fishes North and Mid. Amer., 1898, 1797, San Francisco.

2837. Zalopyr atrovirens (Jordan and Gilbert). *Garrupa.*
Coast of California, from San Diego, to San Francisco.
Sebastichthys atrovirens Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880, 289, Monterey, Calif.

Genus 983. ACUTOMENTUM [69] Eigenmann and Beeson.
Acutomentum Eigenmann and Beeson, Amer. Nat., XXVII, 1893, 669 (*Sebastes ovalis* Ayres).

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[69] As here arranged, this is far from a natural assemblage.

2838. Acutomentum ovale (Ayres). *Viuva; Widowfish.*
Pacific coast of United States from San Diego to San Francisco.
Sebastodes ovalis Ayres, Proc. Calif. Acad. Nat. Sci., II, 1862, 209–212, fig. 65, San Francisco.

2839. Acutomentum prorigerum (Jordan and Gilbert).
San Diego to San Francisco.
Sebastichthys proriger Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880, 327, Monterey, Calif.

2840. Acutomentum brevispine (Bean).
Coast of Alaska.
Sebastichthys proriger var. *brevispinis* Bean, Proc. U. S. Nat. Mus., VI, 1883, 359, Hassler Harbor, Alaska.

2841. Acutomentum clavilatum (Starks).
Puget Sound.
Sebastodes clavilatus Starks, Ann. Carnegie Mus., VII, 1911, 181, San Juan Islands, Puget Sound.

2842. Acutomentum entomelas (Jordan and Gilbert).
Pacific coast of America, from Port Harford to Monterey Bay.
Sebastichthys entomelas Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880, 142, Monterey.

2843. Acutomentum wilsoni (Gilbert).
Monterey Bay.
Sebastodes wilsoni Gilbert, Proc. U. S. Nat. Mus., XLVIII, 1915, 333, pl. 16, fig. 8, Monterey Bay.

2844. Acutomentum rufum (Eigenmann and Eigenmann).
Pacific coast of America, near San Diego; Cortez Banks.
Sebastodes rufus Eigenmann and Eigenmann, Proc. Calif. Acad. Sci., 2d ser. III, 1890, 13, Point Loma; Cortez Banks.

2845. Acutomentum macdonaldi Eigenmann and Beeson.
San Diego, Calif.
Acutomentum macdonaldi Eigenmann and Beeson, Am. Nat., XXVII, 1893, 669, San Diego, Calif.

2846. Acutomentum eigenmanni (Cramer).
Coast of California.
Sebastodes eigenmanni Cramer, Proc. Calif. Acad. Sci., VI, 1896, 239, Pl. XLII, Monterey, Calif.

2847. Acutomentum hopkinsi (Cramer).
Monterey Bay, Calif.
Sebastodes hopkinsi Cramer, Proc. Calif. Acad. Sci., V, 1895, 594, with plate, Monterey Bay, Calif.

2848. Acutomentum alutum (Gilbert).
Pacific coast of America, from Bering Sea to Santa Barbara.
Sebastichthys alutus Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 76, Santa Barbara Islands, Calif.

Genus 984. EOSEBASTES Jordan and Evermann.
Eosebastes Jordan and Evermann, Check List, 1895 430 (*Sebastichthys aurora* Gilbert).

2849. Eosebastes aurora (Gilbert).
Santa Barbara Islands, in deep water.
Sebastichthys aurora Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 80, Santa Barbara Islands, in 266 fathoms.

2850. Eosebastes melanostomus (Eigenmann and Eigenmann).
Coast of California to Alaska.
Sebastodes melanostomus Eigenmann and Eigenmann, Proc. Calif. Acad. Sci., 2d ser., III, 1890, 17, Point Loma, near San Diego, Calif.

2851. Eosebastes introniger (Gilbert).
Santa Barbara to Bering Sea.
Sebastichthys introniger Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 81, Santa Barbara Islands.

2852. Eosebastes saxicola (Gilbert).
Southern California to southeast Alaska in moderate depth.
Sebastichthys saxicola Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 78, Santa Barbara Islands at *Albatross* stations 2893, 2907, and others, in 44 to 155 fathoms.

2853. Eosebastes deani (Starks).
Puget Sound.
Sebastodes deani Starks, Ann. Carnegie Mus., VII, 1911, 178, Puget Sound.

2854. Eosebastes crameri (Jordan).
Coast of Oregon.
Sebastodes crameri Jordan, Proc. U. S. Nat. Mus., XIX, 1896, 451, coast of Oregon, at *Albatross* station 3091.

2855. Eosebastes swifti (Evermann and Goldsborough).
Southern Alaska.
Sebastodes swifti Evermann and Goldsborough, Bull. U. S. Bur. Fish., XXVI, 1906, 285, Yes Bay and Kasaan Bay, Alaska.

2856. Eosebastes semicinctus (Gilbert).
Coast of California.
Sebastodes semicinctus Gilbert, Proc. U. S. Nat. Mus., XIX, 1896, 449, Santa Barbara Channel, Calif.

2857. Eosebastes diploproa (Gilbert).
Pacific coast from the Coronado Islands northward to Nanaimo, British Colombia.
Sebastichthys diploproa Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 79, Coronado Islands at *Albatross* station 2935, in 124 fathoms.

2858. Eosebastes emphæus (Starks).
Puget Sound, in deep water.
Sebastodes emphæus Starks, Ann. Carnegie Mus., VII, 1911, 183, about San Juan Islands, Puget Sound.

Genus 985. SEBASTOMUS Gill.
Sebastomus Gill, Proc. Acad. Nat. Sci. Phila., XVI, 1864, 147 (*Sebastes rosaceus* Girard).

2859. Sebastomus constellatus (Jordan and Gilbert). *Spotted rockfish.*
Coast of California, from San Diego to San Francisco.
Sebastichthys constellatus Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880, 295, Santa Barbara Channel; San Francisco.

2860. Sebastomus rosaceus (Girard). *Corsair.*
Pacific coast from San Diego to Puget Sound.
Sebastes rosaceus Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1854, 146, San Diego, San Francisco.
Sebastes helvomaculatus Ayres, Proc. Calif. Acad. Nat. Sci., II, 1859, 26, San Francisco.

2861. Sebastomus rhodochloris (Jordan and Gilbert). *Flyfish.*
Off Monterey and San Francisco.
Sebastichthys rhodochloris Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880, 144, Monterey, Calif.

2862. Sebastomus chlorostictus (Jordan and Gilbert). *Pesca vermiglia.*
San Diego; Monterey; San Francisco.
Sebastichthys chlorostictus Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880, 294, Monterey, Calif.

2863. Sebastomus umbrosus (Jordan and Gilbert).
Coast of California, Point Conception to Coronado Islands.
Sebastichthys umbrosus Jordan and Gilbert, Proc. U. S. Nat. Mus., V, 1882, 410, Santa Barbara.
Sebastodes æreus Eigenmann and Eigenmann, Proc. Calif. Acad. Sci., 2d ser., III, 1890, 20, Coronado Islands.

2864. Sebastomus ayresii (Gilbert and Cramer).
Coast of southern California at Cortez Banks, near San Diego.
Sebastodes ayresii Gilbert and Cramer, Proc. U. S. Nat. Mus., XIX, 1896, 450, Cortez Banks, near San Diego, Calif.

2865. Sebastomus eos (Eigenmann and Eigenmann).
Coast of California at Point Loma, near San Diego.
Sebastodes eos Eigenmann and Eigenmann, Proc. Calif. Acad. Sci., 2d ser., III, 1890, 18, Point Loma, near San Diego, Calif.

2866. Sebastomus gillii (Eigenmann and Eigenmann).
Coast of California at Point Loma, near San Diego.
Sebastodes gillii Eigenmann and Eigenmann, Amer. Nat., XXV, February, 1891, 154, Point Loma, near San Diego, Calif.

2867. Sebastomus rupestris (Gilbert).
Santa Barbara Islands northward to southeast Alaska.
Sebastichthys rupestris Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 76, Santa Barbara Islands, at *Albatross* station 2946, in 150 fathoms.

Genus 986. SEBASTOPYR [70] Jordan and Evermann.
Sebastopyr Jordan and Evermann, Proc. Calif. Acad. Sci., 4th ser., XVI, Apr. 27, 1927, 506 (*Sebastodes ruberrimus* Cramer).

2868. Sebastopyr ruberrimus (Cramer). *Red rockfish; Tambor.*
Pacific coast from San Diego to Puget Sound and southeastern Alaska.
Sebastes ruber of early writers, not of Ayres.
Sebastodes ruberrimus Cramer, Proc. Calif. Acad. Sci., 2d ser., V, 1895, 597, pls. 62, 63, and 69, Monterey, Calif.

Genus 987. HISPANISCUS Jordan and Evermann.
Hispaniscus Jordan and Evermann, Check List, 1895, 431 (*Sebastichthys rubrivinctus* Jordan and Gilbert).

2869. Hispaniscus rubrivinctus (Jordan and Gilbert). *Spanish flag.*
California coast from San Diego to Monterey; not rare south. A most brilliantly colored fish.
Sebastichthys rubrivinctus Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880, 291, Santa Barbara Channel.

2870. Hispaniscus levis (Eigenmann and Eigenmann).
Coast of California, from San Diego to Monterey.
Sebastichthys levis Eigenmann and Eigenmann, West American Scientist, Nov. 9, 1889, 128, San Diego, Calif.

2871. Hispaniscus zacentrus (Gilbert).
Coast of California.
Sebastichthys zacentrus Gilbert. Proc. U. S. Nat. Mus., XIII, 1890, 77, Santa Barbara Islands, at *Albatross* station 2893 and 2946, in 145 and 150 fathoms.

2872. Hispaniscus elongatus (Ayres). *Reina.*
California coast, from San Diego to San Francisco.
Sebastes elongatus Ayres, Proc. Calif. Acad. Nat. Sci., II, 1858–1862 (Oct. 17, 1859), 26, San Francisco.

2873. Hispaniscus sinensis (Gilbert).
Gulf of California.
Sebastichthys sinensis Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 81, Gulf of California, at *Albatross* station 3015 in 145 fathoms.

Genus 988. AUCTOSPINA Eigenmann and Beeson.
Auctospina Eigenmann and Beeson, Amer. Nat., XXVII, 1893, 670 (*Sebastes auriculatus* Girard).

2874. Auctospina auriculata (Girard). *Brown rockfish.*
Pacific coast of America, from Cape Mendocino to Cedros Island; common.
Sebastes auriculatus Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 131, 146, San Francisco.
Sebastes ruber Ayres, Proc. Calif. Acad. Nat. Sci., I, 1854 (Sept. 11), 7, San Francisco.
Sebastes ruber parvus Ayres, loc. cit., I, 1854 (Sept. 11), 7, San Francisco.

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[70] This group is allied to *Sebastomus*, but of much coarser build, the cranial spines in the adult rough with blunt spinules.

2875. Auctospina dallii (Eigenmann and Beeson).
Pacific coast of America, from San Francisco to Puget Sound; perhaps a variation of *A. auriculata*.
Pteropodus dallii Eigenmann and Beeson, Amer. Nat., XXVIII, January, 1894, 56, San Francisco.

Genus 989. PTEROPODUS Eigenmann and Beeson.
Pteropodus Eigenmann and Beeson, Amer. Nat., XXVII, 1893, 670 (*Sebastichthys maliger* Jordan and Gilbert); not *Pteropus*, a genus of birds.

2876. Pteropodus rastrelliger (Jordan and Gilbert). *Grass rockfish.*
California coast, from San Diego to San Francisco.
Sebastichthys rastrelliger Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880, 296, Monterey, Calif.

2877. Pteropodus caurinus (Richardson).
Pacific coast of America from Puget Sound to Sitka.
Sebastes caurinus Richardson, Voy. *Sulphur*, Ichthyology, 1845, 77, pl. 41, fig. 1, Sitka.

2878. Pteropodus vexillaris (Jordan and Gilbert).
California coast, from San Diego to Cape Mendocino, replacing *caurinus* southward.
Sebastichthys vexillaris Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880, 292, Santa Barbara Channel; San Francisco.

2879. Pteropodus maliger (Jordan and Gilbert). *Yellow-backed rock cod; Brown rock cod.*
Pacific coast of America, from Monterey to Sitka; not rare.
Sebastichthys maliger Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880, 322, San Francisco.

2880. Pteropodus gilberti (Cramer).
Coast of California.
Sebastodes gilberti Cramer, Proc. Calif. Acad. Sci., VI, 1896, 241, Pl. XLIII, San Francisco.

2881. Pteropodus carnatus (Jordan and Gilbert). *Flesh-colored rock cod.*
California coast, from San Diego to Point Reyes, replacing *P. chrysomelas* in shallow water.
Sebastichthys carnatus Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880, 73, Monterey, Calif.

2882. Pteropodus chrysomelas (Jordan and Gilbert). *Black and yellow rock cod.*
Pacific coast of America, from Puget Sound to San Diego; common in moderate depths.
Sebastichthys chrysomelas Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880, 455, 465, Monterey, Calif.

2883. Pteropodus nebulosus (Ayres). *Yellow-spotted rock cod.*
Pacific coast; southeastern Alaska; Puget Sound region, Vancouver to Point Conception; common.
Sebastes nebulosus Ayres, Proc. Calif. Acad. Nat. Sci., I, 1854 (Sept. 11), 5, San Francisco.
Sebastes fasciatus Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 146, Presidio, California; not of Storer.
Sebastichthys fasciolaris Lockington, Proc. U. S. Nat. Mus., III, 1880, 297, San Francisco.

Genus 990. SEBASTOCARUS [71] Jordan and Evermann.
Sebastocarus Jordan and Evermann, Proc. Calif. Acad. Sci., 4th ser., XVI, Apr. 27, 1927, 507 (*Sebastichthys serriceps* Jordan and Gilbert).

2884. Sebastocarus serriceps (Jordan and Gilbert). *Treefish.*
Coast of California, from Point Reyes to Cedros Island; common south.
Sebastichthys serriceps Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880, 38, Santa Barbara and Santa Catalina Islands, Calif.

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[71] This genus is nearly allied to *Sebastichthys* differing in the more compressed body and especially in the strict and high ridges on the head, all of them free from serrations or accessory tubercles.

Genus 991. SEBASTICHTHYS Gill.
Sebastichthys Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 278, 329 (*Sebastes nigrocinctus* Ayres).

2885. Sebastichthys nigrocinctus (Ayres). *Black-banded rock cod.*
Monterey Bay to Naha Bay, Alaska.
Sebastes nigrocinctus Ayres, Proc. Calif. Acad. Nat. Sci., II, 1859, 25, fig. 6, San Francisco.

Genus 992. METZELAARIA Jordan.
Metzelaaria Jordan, Class. Fishes, 1923, 209 (*Scorpæna tridecimspinosa* Metzelaar).

2886. Metzelaaria tridecimspinosa (Metzelaar).
Caribbean Sea.
Scorpæna tridecimspinosa Metzelaar, Tropisch Atlantische Visschen, 1919, 146, fig. 44, Bonaire, Aruba.

Genus 993. SCORPÆNODES Bleeker.
Scorpænodes Bleeker, Nat. Hist. Ned. Ind., XIII, 1857, 371 (*Scorpæna polylepis* Bleeker).
Sebastopsis Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 278 (*Scorpæna polylepis* Bleeker).
Sebastodes Sauvage, Ann. Sci. Nat. Zool., V, 1873, 1 (*Sebastes minutus* Cuvier); not *Sebastodes* Gill, 1861.

2887. Scorpænodes xyris (Jordan and Gilbert).
West coast of Mexico.
Sebastopsis xyris Jordan and Gilbert, Proc. U. S. Nat. Mus., V, 1882, 369, Cape San Lucas, Lower California.

Genus 994. HELICOLENUS Goode and Bean.
Helicolenus Goode and Bean, Oceanic Ichth., 1896, 248 (*Scorpæna dactylopterus* De la Roche).

2888. Helicolenus dactylopterus (De la Roche). *Seran imperial; Fanegal; Cardonniera; Scorfanudi; Funal; Crabra; Redfish.*
Deep waters of Atlantic off both coasts from Narragansett and Chesapeake Bays, and to coasts of Italy and Spain.
Scorpæna dactyloptera De la Roche, Ann. Mus., XIII, 1809, pl. 22, fig. 2, Ivica, Barcelona.
Sebastes imperialis Cuvier and Valenciennes, Hist. Nat. Poiss., IV, 1829, 246 (336), Nice.
Helicolenus maderensis Goode and Bean, Oceanic Ichth., 1895, 250, Madeira, and in the Gulf Stream.

Genus 995. SCORPÆNA (Artedi) Linnæus.
Scorpæna (Artedi) Linnæus, Syst. Nat., ed. X, 1758 266 (*S. porcus* Linnæus).
Parascorpæna Bleeker, Versl. Ak. Amsterdam., IX, pt. 3, 1876, 295 (*Scorpæna picta* Kuhl and van Hasselt in Cuvier and Valenciennes).
Pseudosebastes Sauvage, Nouv. Arch. Mus. Hist. Nat. Paris, II, 1878 (*Sebastes bougainvillei* Cuvier and Valenciennes).

2889. Scorpæna atlantica Nichols and Breder.
Coast of Texas.
Scorpæna russula atlantica Nichols and Breder, Proc. Biol. Soc. Wash., XXXVII, 1924 (Feb. 21), 21, Pl. VII, off Galveston, Tex.

2890. Scorpæna colesi Nichols.
Coast of North Carolina.
Scorpæna colesi Nichols, Bull. Amer. Mus. Nat. Hist., XXXIII, 1914, 537, fig. 1, Cape Lookout, N. C.

2891. Scorpæna plumieri Bloch. *Rescacio; Poison grouper; Plumier's pigfoot.*
West Indies and Brazil, north to Florida; rarely northward to Woods Hole.
Scorpæna plumieri Bloch, Nya. Handl. Stockh., X, 1789, 234, Martinique.
Scorpæna bufo Cuvier and Valenciennes, Hist. Nat. Poiss., IV, 1829, 224 (306), Martinique.
Scorpæna rascacio Poey, Memorias, II, 1861, 169, Cuba.
Apistes exul Gosse, Nat. Sojourn Jamaica, 1851, 207, Jamaica.

2892. Scorpæna mystes Jordan and Starks. *Lapon.*
Coast of Mexico.
Scorpæna mystes Jordan and Starks, Proc. Calif. Acad. Sci., 2d ser. V, 1895, 491, pl. 52, Mazatlan, Mexico.

2893. Scorpæna grandicornis Cuvier and Valenciennes. *Lionfish; Poison grouper; Sculpin.*
Florida Keys to Brazil, in the Gulf Stream to Woods Hole, Mass.
Scorpæna grandicornis Cuvier and Valenciennes, Hist. Nat. Poiss., IV, 1829, 227 (309), pl. 86, Martinique, Porto Rico, Habana, San Domingo.

2894. Scorpæna brasiliensis Cuvier and Valenciennes.
Atlantic coast, from Charleston to Rio Janeiro.
Scorpæna brasiliensis Cuvier and Valenciennes, Hist. Nat. Poiss., IV, 1829, 224 (305), Brazil.
Scorpæna stearnsi Goode and Bean, Proc. U. S. Nat. Mus., V, 1882, 421, Pensacola, Fla.

2895. Scorpæna inermis Cuvier and Valenciennes.
West Indies, north to Florida.
Scorpæna inermis Cuvier and Valenciennes, Hist. Nat. Poiss., IV, 1829, 228 (311), Martinique.
Scorpæna occipitalis Poey, Memorias, II, 1861, 171, Cuba.
Scorpæna calcarata Goode and Bean, Proc. U. S. Nat. Mus., V, 1882, 422, Clearwater Harbor, Fla.

2896. Scorpæna sonoræ Jenkins and Evermann.
Guaymas, Gulf of California, and Santa Margarita Island.
Scorpæna sonoræ Jenkins and Evermann, Proc. U. S. Nat. Mus., XI, 1888, 150, Guaymas, Sonora.

2897. Scorpæna guttata Girard. *Scorpene; Scorpion; Sculpin.*
Coast of California, from Monterey southward to Cedros Island.
Scorpæna guttata Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 145, Monterey.

2898. Scorpæna russula Jordan and Bollman.
Pacific coast of Colombia.
Scorpæna russula Jordan and Bollman, Proc. U. S. Nat. Mus., XII, 1889, 165, Pacific coast of Colombia.

2899. Scorpæna histrio Jenyns.
Pacific coast of America, Panama to Juan Fernandez; Galapagos Islands.
Scorpæna histrio Jenyns, Voy. *Beagle*, Fishes, 1842, 35, pl. 8, Chatham Island, Galapagos Archipelago.

2900. Scorpæna pannosa Cramer.
Panama.
Scorpæna pannosa Cramer, Proc. U. S. Nat. Mus., XIX, 1896, 446, with plate, Panama.

2901. Scorpæna albofasciata Metzelaar.
Caribbean Sea.
Scorpæna albofasciata Metzelaar, Tropisch Atlantische Vissch., 1919, 145, fig. 43; Bonaire, Arubi.

2902. Scorpæna albifimbria Evermann and Marsh.
Porto Rico.
Scorpæna albifimbria Evermann and Marsh, Bull. U. S. Fish Com., XX, 1900, 275, fig. 82, Culebra Island; Porto Rico.

2903. Scorpæna nuttingi Evermann and Seale.
West Indies (Barbados).
Scorpæna nuttingi Evermann and Seale, University of Iowa Studies Nat. Hist., X, 1924, 14, 39, Carlisle Bay, Barbados.

2904. Scorpæna agassizii Goode and Bean.
Mid-ocean east of Cuba.
Scorpæna agassizii Goode and Bean, Oceanic Ichth., 1896, 247, fig. 243, latitude 32° 13′ N., longitude 39° 10′ W.

2905. Scorpæna cristulata Goode and Bean.
Atlantic Ocean, off coast of Georgia; perhaps also from northern Spain.
Scorpæna cristulata Goode and Bean, Oceanic Ichth., 1896, 247, fig. 242, off Georgia.
Scorpæna echinita Koehler, Ann. Univ. Lyons, XXVI, 1896, 474, pl. 27, figs. 4 and 6, Bay of Biscay, in 700 fathoms.

Genus 996. MERINTHE Snyder.
Merinthe Snyder, Bull. U. S. Fish Com., XXII, 1902, 536 (*Sebastes macrocephalus* Sauvage).

2906. Merinthe nematophthalma (Günther).
West Indies, exact locality uncertain.
Sebastes nematophthalmus Günther, Cat., II, 1861, 99, West Indies.

Genus 997. PONTINUS Poey.
Pontinus Poey, Memorias, II, 1861, 172 (*P. castor* Poey).

2907. Pontinus castor Poey.
Cuba.
Pontinus castor Poey, Memorias, II, 1861, 173, Habana, Cuba.

2908. Pontinus furcirhinus Garman.
Eastern Pacific in deep water.
Pontinus furcirhinus Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 51, Pl. VII, numerous *Albatross* stations off Panama.

2909. Pontinus pollux Poey.
Cuba.
Pontinus pollux Poey, Memorias, II, 1861, 174, Habana, Cuba.

2910. Pontinus rathbuni Goode and Bean.
Coast of North Carolina, probably in the Gulf Stream.
Pontinus rathbuni Goode and Bean, Oceanic Ichth., 1895, 255, fig. 245, off Cape Hatteras, N. C.

2911. Pontinus macrolepis Goode and Bean.
Yucatan.
Pontinus macrolepis Goode and Bean, Oceanic Ichth., 1895, 257, fig. 247, off Yucatan.

2912. Pontinus longispinis Goode and Bean.
Coast of western Florida.
Pontinus longispinis Goode and Bean, Oceanic Ichth., 1895, 258, fig. 246, west coast of Florida, lat. 28° 36′ N., long. 85° 33′ 30″ W., in 111 fathoms.

2913. Pontinus beanorum Evermann and Marsh.
Porto Rico.
Pontinus beanorum Evermann and Marsh, Bull. U. S. Fish Com., XX, pt. 1, 1900, 279, fig. 85, San Juan Harbor, Porto Rico.

2914. Pontinus sierra (Gilbert).
Gulf of California.
Scorpæna (*Sebastoplus*) *sierra* Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 82, Gulf of California, at *Albatross* stations 2996 and 3011 in 112 and 71 fathoms.

2915. Pontinus bergii (Evermann and Marsh).
Porto Rico.
Scorpæna bergii Evermann and Marsh, Bull. U. S. Fish Com., XX, pt. 1, 1900, 276, fig. 83, Mayaguez, Culebra; perhaps not a *Pontinus*.

Genus 998. SETARCHES Johnson.
Setarches Johnson, Proc. Zool. Soc. Lond., 1862, 177 (*S. guntheri* Johnson).

2916. Setarches parmatus Goode.
Coasts of Rhode Island, North Carolina, and western Florida, in deep water.
Setarches parmatus Goode, Proc. U. S. Nat. Mus., III, 1880, 480, off coast of Rhode Island.

Family 226. ANOPLOPOMIDÆ. Skilfishes; Sablefishes

Genus 999. ANOPLOPOMA Ayres.

Anoplopoma Ayres, Proc. Calif. Acad. Nat. Sci., II, 1859, 27 (*A. merlangus* Ayres=*Gadus fimbria* Pallas).

Scombrocottus Peters, Monatsber. Akad. Wiss. Berlin, 1872, 569 (*S. salmoneus* Peters=*Gadus fimbria* Pallas).

2917. Anoplopoma fimbria (Pallas). *Beshow; Coalfish; Skil; Black cod; Sablefish.*

Unalaska to San Diego, common northward; a valued food fish in Alaska when it becomes fat.

Gadus fimbria Pallas, Zoogr. Rosso-Asiat., III, 1811, 200, probably Aleutian Islands.

Anoplopoma merlangus Ayres, Proc. Calif. Acad. Nat. Sci., II, 1859, 27, San Francisco market.

Scombrocottus salmoneus Peters, Monatsber. Akad. Wiss. Berlin, 1872, 569, Vancouver Island.

Family 227. ERILEPIDÆ. Fat priests

Genus 1000. ERILEPIS Gill.

Myriolepis Lockington, Proc. U. S. Nat. Mus., III, 1880, 248 (*Myriolepis zonifer* Lockington); name preoccupied in fossil fishes.

Erilepis Gill, Science, Jan. 26, 1894, 54 (*Myriolepis zonifer* Lockington).

Ebisus Jordan and Snyder, Jour. Coll. Sci. Tokyo, XV, 1901, 308 (*E. sagamius* Jordan and Snyder).

2918. Erilepis zonifer (Lockington). *Aburabozu; Fat priest.*

Coast of Japan to Alaska; once taken at Monterey Bay, Calif.

Myriolepis zonifer Lockington, Proc. U. S. Nat. Mus., III, 1880, 248, Monterey.

Ebisus sagamius Jordan and Snyder, Jour. Coll. Sci., Tokyo, XV, 1901, 308, Misaki, Japan.

Family 228. HEXAGRAMMIDÆ. Greenlings

Genus 1001. HEXAGRAMMOS Steller.

Hexagrammos Steller, in Tilesius, Act. Ac. Petrop., II, 1810, 335 (*H. stelleri* Tilesius=*H. asper* Tilesius).

Labrax Pallas, Mém. Acad. Sci. Petersb., II, 1810, 382 (*L. lagocephalus* Pallas), not of Klein nor of Cuvier.

Lebius (Steller MS.) Pallas, Zoog. Rosso-Asiat., III, 1811, 279 (*Labrax superciliosus* Pallas).

Chirus Steller, in Pallas, loc. cit., 279 (*Labrax superciliosus* Pallas).

Octogrammus Bleeker, Versl. Akad. Amsterdam (2), VIII, 1874, 370 ("*Labrax octogrammus* Schlegel"=*Octogrammus pallasi* Bleeker).

Acantholebius Gill, Proc. Acad. Nat. Sci. Phila., XIII, 1861, 166 (*Chiropsis nebulosus* Girard=*Hexagrammos stelleri* Tilesius); specimen with broken dorsal spines.

Grammatopleurus Gill, loc. cit., XIII, 1861, 166 (*Labrax lagocephalus.* Pallas).

2919. Hexagrammos decagrammus (Pallas). *Rock trout; Boregat; Bodieron*

North Pacific, from Point Conception to southern Alaska; common south.

Labrax decagrammus Pallas, Mém. Acad. Petersb., II, 1810, 386, pl. 22, fig. 2, Elias Bay.

Chirus guttatus Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 132, San Francisco.

Grystes lineatus Ayres, Proc. Calif. Acad. Nat. Sci., I, 1854, 9, Bay of San Francisco.

Chiropsis constellatus Girard, U. S. Pac. R. R. Surv., X, Pt. 4, Fishes, 1858, 42, San Francisco.

Chirus maculo-seriatus Lockington, Proc. U. S. Nat. Mus., III, 1880, 55, San Francisco.

2920. Hexagrammos octogrammus (Pallas). *Alaska greenfish.*
Aleutian Islands, westward to Petropaulski and Robben Island.
Labrax octogrammus Pallas, Zoogr. Rosso-Asiat., III, 1811, 283, Kamchatka and Aleutian Islands; doubtful species.
Chirus ordinatus Cope, Proc. Amer. Phil. Soc., XIII, 1873, 28, Unalaska.
Octogrammus pallasi Bleeker, Versl. Akad. Amsterdam, VI, 1870; after Pallas.

2921. Hexagrammos stelleri Tilesius. *Greenling.*
Kamchatka and Unalaska to San Francisco; abundant in Puget Sound and northward.
Hexagrammos stelleri Tilesius, Mém. Acad. St. Petersb., II, 1809, 335, Kamchatka.
Hexagrammos asper Steller in Tilesius, loc. cit., 340, pl. 15, 1810, Kamchatka.
Labrus hexagrammus Pallas, loc. cit., 395, pl. 23, fig. 3, 1810, Kamchatka.
Chiropsis nebulosus Girard, U. S. Pac. R. R. Surv., X, Fishes, 1858, 45, Puget Sound and at Fort Steilacoom.
Chirus trigrammus Cope, Proc. Amer. Phil. Soc., XIII, 1873, 29, Unalaska.

2922. Hexagrammos superciliosus (Pallas). *Red rock trout.*
Bering Sea to Monterey Bay.
Labrax superciliosus Pallas, Mém. Acad. St. Petersb., II, 1810, 388, Unalaska.
Chirus pictus Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 132, San Francisco; Humboldt Bay.
Chirus balias Cope, Proc. Amer. Phil. Soc., XIII, 1873, 28, Captains Harbor, Unalaska.
Hexagrammus scaber Bean, Proc. U. S. Nat. Mus., IV, 1881, 154, Amchitka, Unalaska.

2923. Hexagrammos lagocephalus (Pallas).
Western Bering Sea, Kuril Islands; Alaska; Attu.
Labrax lagocephalus Pallas, Mém. Acad. St. Petersb., II, 1810, 384, Kuril Islands.

Genus 1002. PLEUROGRAMMUS Gill. *Atka mackerels.*
Pleurogrammus Gill, Proc. Acad. Nat. Sci. Phila., XIII, 1861, 166 (*Labrax monopterygius* Pallas).

2924. Pleurogrammus monopterygius (Pallas). *Atka mackerel; Atkafish; Yellowfish.*
Northern Pacific, common about Atka and other Aleutian Islands east to Unalaska.
Labrax monopterygius Pallas, Mém. Acad. Sci. St. Petersburg, II, 1810, 391, Unalaska.

Family 229. OPHIODONTIDÆ. Cultus cods

Genus 1003. OPHIODON Girard.
Ophiodon Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 133 (*Ophiodon elongatus* Girard).
Oplopoma Girard, loc. cit., VIII, 1856, 135 (*Oplopoma pantherina* Girard=*Ophiodon elongatus* Girard; young).

2925. Ophiodon elongatus Girard. *Cultus cod; Blue cod; Buffalo cod; Ling.*
Pacific coast from Alaska to Santa Barbara.
Ophiodon elongatus Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 133, San Francisco.
Oplopoma pantherina Girard, loc. cit., VIII, 1856, 135, Cape Flattery, Wash.

Family 230. OXYLEBIIDÆ

Genus 1004. OXYLEBIUS Gill.
Oxylebius Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 277 (*O. pictus* Gill).

2926. Oxylebius pictus Gill.
From Monterey northward to Puget Sound; not rare.
Oxylebius pictus Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 278, California; no definite locality given.

Family 231. ZANIOLEPIDÆ

Genus 1005. ZANIOLEPIS Girard.
Zaniolepis Girard, Proc. Acad. Nat. Sci. Phila., IX, 1857, 202 (*Z. latipinnis* Girard).

2927. Zaniolepis latipinnis Girard.
Coast of California, from San Francisco northward.
Zaniolepis latipinnis Girard, Proc. Acad. Nat. Sci. Phila., IX, 1857, 202, Fort Steilacoom, Puget Sound.

Genus 1006. XANTOCLES Jordan.
Xantocles Jordan, Copeia, Oct. 4, 1917, 88 (*Zaniolepis frenatus* Eigenmann).

2928. Xantocles frenatus (Eigenmann).
Shore banks of southern California; rare.
Zaniolepis frenatus Eigenmann, West American Scientist, VI, Nov. 9, 1889, 147, Cortez Banks off San Diego.

Family 232. JORDANIIDÆ

Genus 1007. JORDANIA Starks.
Jordania Starks, Proc. Acad. Nat. Sci. Phila., XLVII, 1895, 410 (*J. zonope* Starks).

2929. Jordania zonope Starks.
Puget Sound.
Jordania zonope Starks, Proc. Acad. Nat. Sci. Phila., XLVII, 1895, 410, Port Orchard, Puget Sound.

Genus 1008. PARICELINUS Eigenmann and Eigenmann.
Paricelinus Eigenmann and Eigenmann, West Amer. Sci., VI, 1889, 131 (*P. hopliticus* Eigenmann and Eigenmann).

2930. Paricelinus hopliticus Eigenmann and Eigenmann.
Cortez Banks, off San Diego.
Paricelinus hopliticus Eigenmann and Eigenmann, West Amer. Sci., VI, Nov. 9, 1889, 131, Cortez Banks.

Genus 1009. ALCIDEA Jordan and Evermann.
Alcidea Jordan and Evermann, Fishes North and Mid. Amer., 1886, 1898 (*Paricelinus thoburni* Gilbert).

2931. Alcidea thoburni (Gilbert).
Coast of Oregon.
Paricelinus thoburni Gilbert, Rept. U. S. Fish Com., XIX, 1893, 432, pl. 30, coast of Oregon, in 75 fathoms.

Family 233. ICELIDÆ. Scaled sculpins

Genus 1010. CHITONOTUS Lockington.
Chitonotus Lockington, Proc. U. S. Nat. Mus., IV, 1881, 141 (*C. megacephalus* Lockington = *Artedius pugetensis* Steindachner).

2932. Chitonotus pugetensis (Steindachner).
San Francisco to Puget Sound.
Artedius pugetensis Steindachner, Ichth. Beitr., V, 1876, 133, pl. 14, fig. 2, Puget Sound.
Chitonotus megacephalus Lockington, Proc. U. S. Nat. Mus., IV, 1881, 142, off San Francisco.

Genus 1011. TARANDICHTHYS Jordan and Evermann.
Tarandichthys Jordan and Evermann, Proc. Calif. Acad. Sci., 2d ser., VI, 1896, 225 (*Icelinus filamentosus* Gilbert).

2933. Tarandichthys cavifrons (Gilbert).
Coast of southern California.
Icelinus cavifrons Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 83, off Santa Barbara Islands, at *Albatross* stations 2907 and 2945, in 44 and 30 fathoms.

2934. Tarandichthys filamentosus (Gilbert).
Coast of southern California; Alaska, off St. Mary's Mission; Hood Canal, Puget Sound.
Icelinus filamentosus Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 85, off Santa Barbara Islands, in 145 and 55 fathoms.

2935. Tarandichthys tenuis (Gilbert).
Coast of southern California, Alaska, Fort Rupert and Gulf of Georgia.
Icelinus tenuis Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 86, off Santa Barbara Islands, at *Albatross* stations 2893, 2946, and others, in 45 to 150 fathoms.

Genus 1012. ICELINUS Jordan.
Icelinus Jordan, Cat. Fish. N. Amer., 1885, 110 (*Artedius quadriseriatus* Lockington).

2936. Icelinus fimbriatus Gilbert.
Southern California.
Icelinus fimbriatus Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 87, off Santa Barbara Islands, at *Albatross* stations 2893 and 2975, in 145 and 36 fathoms.

2937. Icelinus oculatus Gilbert.
Coast of southern California.
Icelinus oculatus Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 87, off Santa Barbara Islands, at *Albatross* station 2935, in 124 fathoms.

2938. Icelinus burchami Evermann and Goldsborough.
Loring and Behm Canal, Alaska.
Icelinus burchami Evermann and Goldsborough, Bull. U. S. Bur. Fish., XXVI, 1906, 297, fig. 48, off Loring, Alaska.

2939. Icelinus borealis Gilbert.
Coast of Alaska, north and south of Aleutian Islands and in Bristol Bay.
Icelinus borealis Gilbert, Rept. U. S. Fish Com., XIX, 1893, 415, pl. 25, Aleutian Islands and Bristol Bay at *Albatross* stations 3213, 3214, and others, in 11 to 121 fathoms.

2940. Icelinus quadriseriatus (Lockington).
Off San Francisco, between Point Reyes and Golden Gate.
Artedius quadriseriatus Lockington, Proc. U. S. Nat. Mus., II, 1879, 330, off San Francisco.

2941. Icelinus strabo Starks.
Puget Sound at Port Ludlow, Wash.
Icelinus strabo Starks, Proc. Calif. Acad. Sci., 2d. ser., VI, 1896, 551, Port Ludlow, Wash.

2942. Icelinus fuscescens Gilbert.
Southern California, Santa Barbara Islands to Monterey.
Icelinus fuscescens Gilbert, Proc. U. S. Nat. Mus., XLVIII, 1915, 340, pl. 17, fig. 9, Santa Barbara Islands, depth 260 to 310 fathoms.

Genus 1013. ASTROLYTES Jordan and Starks.
Astrolytes Jordan and Starks, Proc. Calif. Acad. Sci., 2d ser., V, 1895, 807 (*Artedius fenestralis* Jordan and Gilbert).

2943. Astrolytes fenestralis (Jordan and Gilbert).
Puget Sound to Unalaska.
Artedius fenestralis Jordan and Gilbert, Proc. U. S. Nat. Mus., V, 1882, 577, Puget Sound.
Artedius asperulus Starks, Proc. Calif. Acad. Sci., 2d ser., VI, 1896, 553, Port Ludlow, Wash.

Genus 1014. PARASTROLYTES Hubbs.
Parastrolytes Hubbs, Occ. Papers, Mus. Zool. Univ. Mich., No. 170, Feb. 20, 1926, 2 (*Artedius notospilotus* Girard).

2944. Parastrolytes notospilotus (Girard).
Coast of California from Straits of Fuca southward; abundant at Santa Barbara and Puget Sound.
Artedius notospilotus Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 134, Tomales Bay, Calif.

Genus 1015. AXYRIAS Starks.
Axyrias Starks, Proc. Calif. Acad. Sci., 2d ser., VI, 1896, 554 (*Axyrias harringtoni* Starks).

2945. Axyrias harringtoni Starks.
Puget Sound in the vicinity of Port Ludlow, Wash.
Axyrias harringtoni Starks, Proc. Calif. Acad. Sci., 2d ser., VI, 1896, 554, pl. 74, Port Ludlow, Wash.

Genus 1016. ARTEDIUS Girard.
Artedius Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 134 (*Scorpænichthys lateralis* Girard).

2946. Artedius lateralis (Girard).
Pacific coast of North America, from Puget Sound to Port Harford, Calif.
Scorpænichthys lateralis Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 145, San Luis Obispo (Port Harford), Calif.

Genus 1017. PARARTEDIUS Hubbs.
Pararteduis Hubbs, Occ. Papers, Mus. Zool. Univ. Mich., No. 170, Feb. 20, 1926, 3 (*P. hankinsoni* Hubbs).

2947. Pararteduis hankinsoni Hubbs.
Tidepool, near end of Point Loma, California.
Pararteduis hankinsoni Hubbs, Occ. Papers, Mus. Zool. Univ. Mich., No. 171, Feb. 20, 1926, 4, Tidepool near end of Point Loma, Calif.

Genus 1018. ALLARTEDIUS Hubbs.
Allartedius Hubbs, Occ. Papers, Mus. Zool. Univ. Mich., No. 170, Feb. 20, 1926, 8 (*A. corallinus* Hubbs).

2948. Allartedius corallinus Hubbs.
Tidepool on Point Lobos, Monterey Co., Calif. Only one specimen known.
Allartedius corallinus Hubbs, Occ. Papers, Mus. Zool. Univ. Mich., No. 170, Feb. 20, 1926, 8, deep low pool on Point Lobos, Monterey Co., Calif.

Genus 1019. ARCHAULUS Gilbert and Burke.
Archaulus Gilbert and Burke, Bull. U. S. Bur. Fish., XXX, 1910, 36 (*A. biseriatus* Gilbert and Burke).

2949. Archaulus biseriatus Gilbert and Burke.
West Bering Sea.
Archaulus biseriatus Gilbert and Burke, Bull. U. S. Bur. Fish., XXX, 1910, 36, Petrel Bank, Bering Sea.

Genus 1020. ARTEDIELLUS Jordan.
Artediellus Jordan, Cat. Fish. N. Amer., 1885, 110 (*Cottus uncinatus* Reinhardt).

2950. Artediellus uncinatus (Reinhardt).
Greenland to Labrador.
Cottus uncinatus Reinhardt, K. Dansk. Vid. Selsk. Natur. Math. Afh., VI, 1833; XLIV, 1837, Greenland.
Artediellus atlanticus Jordan and Evermann, Fishes North and Mid. Amer., 1898, 1906, Massachusetts Bay.

2951. Artediellus pacificus Gilbert.
Coast of Alaska; in Bristol Bay, south of Sannak Island, and north of Unalaska.
Artediellus pacificus Gilbert, Rept. U. S. Fish Com., XIX, 1893, 416, Unalaska, Sannak, Bristol Bay, at *Albatross* station 3216, south of Sannak Island, many other stations in Bristol Bay, and station 3323 north of Unalaska, in 8 to 61 fathoms.

2952. Artediellus clarki (Evermann and Goldsborough).
Bering Sea.
Blennicottus clarki Evermann and Goldsborough, Bull. U. S. Fish Com., XXVI, 1906, 323, fig. 85; Bering Sea. Young, perhaps of *Artediellus pacificus*.

2953. Artediellus miacanthus Gilbert and Burke.
Western Bering Sea.
Artediellus miacanthus Gilbert and Burke, Bull. U. S. Bur. Fish., XXX, 1910, 47, fig. 7, east coast of Kamchatka.

2954. Artediellus camchaticus Gilbert and Burke.
Western Bering Sea.
Artediellus camchaticus Gilbert and Burke, Bull. U. S. Bur. Fish., XXX, 1910, 46, fig. 6, Avatcha Bay, east coast of Kamchatka.

Genus 1021. RUSCARIUS Jordan and Starks.
Ruscarius Jordan and Starks, Proc. Calif. Acad. Sci., 2d series, V, 1895, 805 (*Ruscarius meanyi* Jordan and Starks).

2955. Ruscarius meanyi Jordan and Starks.
Puget Sound, at Port Orchard near Seattle.
Ruscarius meanyi Jordan and Starks, Proc. Calif. Acad. Sci., 2d series, V, 1895, 805, pl. 80, Port Orchard, Puget Sound.

Genus 1022. RUSCARIOPS Hubbs.
Ruscariops Hubbs, Occ. Papers Mus. Zool. Univ. Mich., No. 170, Feb. 20, 1926, 12 (*R. creaseri* Hubbs).

2956. Ruscariops creaseri Hubbs.
Low rock pool at Bird Rock, San Diego County, Calif.
Ruscariops creaseri Hubbs, Occ. Papers Mus. Zool. Univ. Mich., No. 170, Feb. 20, 1926, 12, very low rock pool at Bird Rock, San Diego Co., Calif.

Genus 1023. RASTRINUS Jordan and Evermann.
Rastrinus Jordan and Evermann, Check List, 1895, 437 (*Icelus scutiger* Bean).

2957. Rastrinus scutiger (Bean).
South of the Alaskan Peninsula.
Icelus scutiger Bean, Proc. U. S. Nat. Mus., XIII, 1890, 41, Trinity Islands, Alaska, at *Albatross* station 2853, in 159 fathoms.

Genus 1024. ICELUS Krøyer.
Icelus Krøyer, Natur. Hist. Tidsskr., I, 1845, 253 (*Icelus hamatus* Krøyer=*Cottus bicornis* Reinhardt).

2958. Icelus bicornis (Reinhardt).
Arctic seas, circumpolar; Spitzbergen to northern Russia, Finland, Alaska, Greenland, Labrador, and Cape Cod.
Cottus bicornis Reinhardt, Vid. Selsk. Natur. og Math. Afh., VIII, 1841, LXXV, Greenland.
Icelus hamatus Krøyer, Nat. Hist. Tidsskr., I, 1845, 253, Belsund in Spitzbergen.
Icelus furciger Malm, Förhandl. Skand. Naturf., 1865, 9 Mote, 410, Bohüslan, Sweden.

2959. Icelus spiniger Gilbert.
Coast of Alaska in the vicinity of Unalaska Island and in Bristol Bay.
Icelus spiniger Gilbert, Rept. U. S. Fish Com., XIX, 1893, 412, pl. 24, fig. 1, Bristol Bay and Unalaska, at *Albatross* stations 3216, 3223, and many others, in 17 to 121 fathoms.

2960. Icelus euryops Bean.
Bering Sea, off Trinity Islands, Alaska.
Icelus euryops Bean, Proc. U. S. Nat. Mus., XIII, 1890, 41, off Trinity Islands, at *Albatross* station 2853, in 159 fathoms.

2961. Icelus vicinalis Gilbert.
Bristol Bay, Alaska.
Icelus vicinalis Gilbert, Rept. U. S. Fish Com., XIX, 1893, 413, Bristol Bay at *Albatross* stations 3324, 3330, 3331, and 3332, in 109 to 406 fathoms.

2962. Icelus canaliculatus Gilbert.
Bering Sea north of Unalaska.
Icelus canaliculatus Gilbert, Rept. U. S. Fish Com., XIX, 1893, 412, pl. 24, fig. 2, off Unalaska, at *Albatross* station 3329, in 399 fathoms.

2963. Icelus uncinalis Gilbert and Burke.
Coast Bering Sea, off Commander Islands.
Icelus uncinalis Gilbert and Burke, Bull. U. S. Bur. Fish., XXX, 1910, 39, fig. 2, Petrel Bank, near Commander Islands.

2964. Icelus spatula Gilbert and Burke.
East coast of Kamchatka.
Icelus spatula Gilbert and Burke, Bull. U. S. Bur. Fish., XXX, 1910, 41, fig. 3, Avatcha Bay.

2965. Icelus australis (Eigenmann and Eigenmann).
Cortez Banks off San Diego.
Icelinus australis Eigenmann and Eigenmann, West Amer. Sci., 1889, 131, Cortez Banks, Calif.

Genus 1025. STELGIDONOTUS Gilbert and Thompson.
Stelgidonotus Gilbert and Thompson, Proc. U. S. Nat. Mus., XXVIII, 1905, 977 (*S. latifrons* Gilbert and Thompson).

2966. Stelgidonotus latifrons Gilbert and Thompson.
Puget Sound region, Admiralty Head, Friday Harbor.
Stelgidonotus latifrons Gilbert and Thompson, Proc. U. S. Nat. Mus., XXVIII, 1905, 977, Friday Harbor, Wash.

Genus 1026. RADULINUS Gilbert.
Radulinus Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 88 (*R. asprellus* Gilbert).

2967. Radulinus boleoides Gilbert.
Off Santa Catalina Island in shallow water.
Radulinus boleoides Gilbert, Report U. S. Fish Com., XXIV, 1898, 26, pl. 1, and in Jordan and Evermann, Fishes North and Mid. Amer., II, 1898, 1919, Santa Catalina Island, Calif.

2968. Radulinus asprellus Gilbert.
Coast of Oregon and Washington, and in Puget Sound.
Radulinus asprellus Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 88, off Oregon and Washington, at *Albatross* stations 3046, 3057, and others, in 43 to 77 fathoms.

Genus 1027. STELGISTROPS Hubbs.
Stelgistrops Hubbs, Occ. Papers, Mus. Zool. Univ. Mich. No. 170, Feb. 20, 1926, 8 (*Stelgistrum beringianum* Gilbert and Burke).

2969. Stelgistrops beringiana (Gilbert and Burke).
South Bering Sea.
Stelgistrum beringianum Gilbert and Burke, Bull. U. S. Bur. Fish., XXX, 1910, 52, fig. 9, Petrel Bank, Aleutian Islands.

Genus 1028. THYRISCUS Gilbert and Burke.
Thyriscus Gilbert and Burke, Bull. U. S. Bur. Fish., XXX, 1910, 43 (*T. anoplus* Gilbert and Burke).

2970. Thyriscus anoplus Gilbert and Burke.
Bering Sea.
Thyriscus anoplus Gilbert and Burke, Bull. U. S. Bur. Fish., XXX, 1910, 43, fig. 4, Attu Island.

Genus 1029. TRIGLOPS Reinhardt.
Triglops Reinhardt, Vid. Selsk. Natur. Math. Afh., V, 1832, LII (*T. pingeli* Reinhardt).

2971. Triglops pingeli Reinhardt.
North Atlantic, from Spitzbergen and western Norway to Greenland.
Triglops pingeli Reinhardt, Vid. Selsk. Natur., V, 1832, LII, Greenland.
Triglops pleurostictus Cope, Proc. Acad. Nat. Sci. Phila., XVII, 1865, 81, Godhaven, Greenland.

2972. Triglops ommatistius Gilbert.
North Atlantic coast of North America, Newfoundland to Cape Ann.
Triglops ommatistius Gilbert, Proc. U. S. Nat. Mus., XLIV, 1913, 465, Gloucester, Mass.; heretofore wrongly called *Triglops pingeli*, which is mainly a European species.

2973. Triglops terræ-novæ Gilbert.
Coast of Newfoundland.
Triglops ommatistius terræ-novæ Gilbert, Proc. U. S. Nat. Mus., XLIV, 1913, 467, off Newfoundland, in 39 fathoms.

2974. Triglops metopias Gilbert and Burke.
West Bering Sea.
Triglops metopias Gilbert and Burke, Bull. U. S. Bur. Fish., XXX, 1910, 50, fig. 8, Petrel Bank, Bering Sea.

2975. Triglops beani Gilbert.
Alaska, both north and south of the Aleutian Islands and in Bristol Bay.
Triglops beani Gilbert, Rept. U. S. Fish Com., XIX, 1893, 426, pl. 28, upper fig., Aleutian Islands and Bristol Bay, at *Albatross* stations 3214, 3217, and many others, in 7¼ to 42 fathoms.

2976. Triglops scepticus Gilbert.
Aleutian Islands, south of Sannak and north of Unalaska Island.
Triglops scepticus Gilbert, Rept. U. S. Fish Com., XIX, 1893, 428, pl. 28, lower fig., Aleutian Islands, at *Albatross* stations 3215, 3222, and others, in 43 to 138 fathoms.

Genus 1030. PRIONISTIUS Bean.
Prionistius Bean, Proc. U. S. Nat. Mus., VI, 1883, 355 (*P. macellus* Bean).

2977. Prionistius macellus Bean.
British Columbia, in Carter Bay.
Prionistius macellus Bean, Proc. U. S. Nat. Mus., VI, 1883, 355, Carter Bay, British Columbia.

Genus 1031. ELANURA Gilbert.
Elanura Gilbert, Rept. U. S. Fish Com., XIX, 1893, 429 (*E. forficata* Gilbert).

2978. Elanura forficata Gilbert.
Aleutian Islands, south of Sannak and north of Unimak Island.
Elanura forficata Gilbert, Rept. U. S. Fish Com., XIX, 1893, 430, pl. 30, fig. 1, Aleutian Islands, at *Albatross* stations 3213, 3214, and 3222, in 38 to 50 fathoms.

Genus 1032. STERNIAS Jordan and Evermann.
Sternias Jordan and Evermann, Fishes North and Mid. Amer., 1898, 1926 (*Triglops xenostethus* Gilbert).

2979. Sternias xenostethus (Gilbert).
Bering Sea, north to Unalaska.
Triglops xenostethus Gilbert, Rept. U. S. Fish Com., XIX, 1893, 429, pl. 29, two figures, north of Unalaska, at *Albatross* station 3230, in 34 fathoms.

Genus 1033. PTERYGIOCOTTUS Bean and Weed.
Pterygiocottus Bean and Weed, Trans. Roy. Soc. Canada, XII, 1920 73 (*Pterygiocottus macouni* Bean and Weed).

2980. Pterygiocottus macouni Bean and Weed.
Vancouver Island.
Pterygiocottus macouni Bean and Weed, Trans. Roy. Soc. Canada, XIII, 1920, 73, Vancouver Island.

Genus 1034. MELLETES Bean.
Melletes Bean, Proc. U. S. Nat. Mus., II, 1879, 354 (*M. papilio* Bean).

2981. Melletes papilio Bean.
Aleutian Islands.
Melletes papilio Bean, Proc. U. S. Nat. Mus., II, 1879, 354, St. Paul Island, Alaska.

Genus 1035. HEMILEPIDOTUS Cuvier.
Hemilepidotus Cuvier, Règne Animal, ed. 2, II, 1829, 165 (*Cottus hemilepidotus* Tilesius).
Temnistia Richardson, Fauna Bor.-Amer., III, 1831, 59 (*Blepsias ventricosus* Eschscholtz=*Cottus hemilepidotus* Tilesius).

2982. Hemilepidotus hemilepidotus (Tilesius). *Red sculpin.*
Kamchatka to San Francisco; not common in Bering Sea; abundant from Sitka to Puget Sound.
?*Cottus hemi'epidotus* Tilesius, Mém. Acad. Petersb., III, 1810, 262, Sea of Okhotsk.
Cottus trachurus Pallas, Zoogr. Ross.-Asiat., III, 1811, 138, Kuril Islands.
Hemilepidotus tilesii Cuvier and Valenciennes, Hist. Nat. Poiss., IV, 1829, 203 (276), pl. 85, after Tilesius and Pallas.
?*Blepsias ventricosus* Eschscholtz, Zool. Atlas, 3d Heft, 1829, 14, t. 13, Norfolk Sound and Sitka.
Hemilepidotus gibbsii Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 13, no definite locality; Northwest boundary survey.

2983. Hemilepidotus jordani Bean *Irish Lord; Yellow sculpin*
Alaska; Unalaska.
Hemilepidotus jordani Bean, Proc. U. S. Nat. Mus., IV, 1881, 153, Unalaska.

2984. Hemilepidotus zapus Gilbert and Burke.
Bering Sea.
Hemilepidotus zapus Gilbert and Burke, Bull. U. S. Bur. Fish., XXX, 1910, 54, fig. 10, Attu Island.

Genus 1036. CALYCILEPIDOTUS Ayres.
Calycilepidotus Ayres, Proc. Calif. Acad. Nat. Sci., ed. 2, I, 1855, 81 (76) (*C. spinosus* Ayres).

2985. Calycilepidotus spinosus Ayres.
Coast of California; known only from about Monterey and San Francisco.
Calycilepidotus spinosus Ayres, Proc. Calif. Acad. Nat. Sci., ed. 2, I, 1855, 81 (76), San Francisco.

Genus 1037. ENOPHRYS Swainson.
Enophrys Swainson, Classn. Fishes, II, 1839, 271 (*Cottus claviger* Cuvier and Valenciennes).

2986. Enophrys claviger (Cuvier and Valenciennes).
Bering Sea.
Cottus claviger Cuvier and Valenciennes, Hist. Nat. Poiss., IV, 1829, 143 (195), pl. 79, Kamchatka.
Cottus e egans Gray, in Cuvier and Valenciennes, loc. cit., 143 (195), same type.

Genus 1038. ASPICOTTUS Girard.
Aspicottus Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 130 (*A. bison* Girard).
Clypeocottus Ayres, Proc. Calif. Acad. Nat. Sci., I, 1854, 12 (*C. robustus* Ayres = *Aspicottus bison* Girard).

2987. Aspicottus bison Girard. *Buffalo sculpin.*
San Francisco to Alaska; abundant about Puget Sound.
Aspicottus bison Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 130, San Francisco.
Clypeocottus robustus Ayres, Proc. Calif. Acad. Nat. Sci., I, 1854, 11, San Francisco.

2988. Aspicottus taurinus (Gilbert).
Monterey Bay.
Enophrys taurinus Gilbert, Proc. U. S. Nat. Mus., XLVII, 1915, 135, Monterey Bay.

Genus 1039. CERATOCOTTUS Gill.
Ceratocottus Gill, Proc. Acad. Nat. Sci. Phila., XI, 1859, 165 (*Cottus diceraus* Pallas).

2989. Ceratocottus diceraus (Pallas).
Alaska and Kamchatka.
Cottus diceraus Pallas, Nov. Act. Petropol., 1783, 354, pl. 10, fig. 7, Petropaulski, Kamchatka.
Synanceia cervus Tilesius, Mém. Acad. Petersb., III, 1811, 278, pl. 13, Petropaulski.
Cottus stelleri Bloch and Schneider, Syst. Ichth., 1801, 63, after Steller.

2990. Ceratocottus lucasi Jordan and Gilbert.
Bering Sea.
Ceratocottus lucasi Jordan and Gilbert, in Jordan and Evermann, Fishes North and Mid. Amer, 1898, 1940, St. Paul Island, Bering Sea.

Family 234. BLEPSIIDÆ

Genus 1040. HISTIOCOTTUS Gill.
Peropus Lay and Bennett, Beechey's Voy., Zool., Fish., 1839, 50 (*Blepsias bilobus* Cuvier and Valenciennes); name preoccupied.
Histiocottus Gill, Proc. U. S. Nat. Mus., XI, 1888, 573 (*Blepsias bilobus* Cuvier and Valenciennes).

2991. Histiocottus bilobus (Cuvier and Valenciennes).
Coast of Alaska and Kamchatka.
Blepsias bilobus Cuvier and Valenciennes, Hist. Nat. Poiss., IV, 1829, 279 (379), no locality, somewhere off Kamchatka.

Genus 1041. BLEPSIAS Cuvier.
Blepsias Cuvier, Règne Anim., ed. 2, II, 1829, 167 (*Trachinus cirrhosus* Pallas).

2992. Blepsias cirrhosus (Pallas). *Nee-kaio-kaiung.*
Alaska to San Francisco; common at Unalaska, but not often south of Puget Sound.
Trachinus cirrhosus Pallas, Zoogr. Rosso-Asiat., III, 1811, 237, Bering Sea.
Blepsia trilobus Cuvier and Valenciennes, Hist. Nat. Poiss., IV, 1829, 276 (375); same types.

Genus 1042. NAUTICHTHYS Girard.
Nautichthys Girard, Pac. R. R. Surv., X, pt. 4, Fishes, 1858, 74 (*Blepsias oculofasciatus* Girard).
Nautiscus [72] Jordan and Evermann, Fishes North and Mid. Amer., 1898, 2019 (*Nautichthys pribilovius* Jordan and Gilbert).

Subgenus NAUTICHTHYS Girard.

2993. Nautichthys oculofasciatus (Girard).
Pacific coast, Alaska to Monterey, chiefly northward; common in Bristol Bay and about Unalaska.
Blepsias oculofasciatus Girard, Proc. Acad. Nat. Sci. Phila., IX, 1857, 202, Fort Steilacoom, Wash.

Subgenus NAUTISCUS Jordan and Gilbert.

2994. Nautichthys pribilovius (Jordan and Gilbert).
Bering Sea, Alaska.
Nautiscus pribilovius Jordan and Gilbert, in Jordan and Evermann, Fishes North and Mid. Amer. 1898, 2020, off St. George Island, Bering Sea.

Family 235. SCORPÆNICHTHYIDÆ. Cabezones

Genus 1043. SCORPÆNICHTHYS Girard.
Scorpænichthys Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 131 (*Hemitripterus marmoratus* Ayres).

2995 Scorpænichthys marmoratus (Ayres). *Cabezon.*
Pacific coast of America from Puget Sound to San Diego.
Hemitripterus marmoratus Ayres, Proc. Calif. Acad. Nat. Sci., I, 1851, 4, San Francisco.

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[72] The genus *Nautiscus* is now regarded as scarcely distinct from *Nautichthys*.

Family 236. COTTIDÆ. Scaleless sculpins

Genus 1044. COTTUS [73] **Linnæus.** *Miller's thumbs.*

Cottus Linnæus, Syst. Nat., Ed. X, 1758, 264 (*C. gobio* Linnæus).

Pegedictis Rafinesque, Ichth. Ohiensis, 1820, 85 (*P. ictalops* Rafinesque = ?*Cottus bairdi* Girard, apparently also confused with the darter *Catonotus flabellaris*).

Uranidea DeKay, New York Fauna: Fishes, 1842, 61 (*U. quiescens* DeKay = *Cottus gracilis* Heckel).

Cottopsis Girard, Proc. Bost. Soc. Nat. Hist., III, 1850, 303 (*Cottus asper* Richardson).

Potamocottus Gill, loc. cit., VIII, 1861, 40 (*P. carolinæ* Gill).

Tauridea Jordan and Rice, in Jordan, Man. Vert., Ed. II, 1878, 255 (*Cottopsis ricei* Nelson).

2996. Cottus gulosus (Girard).

Streams of the Coast Ranges in California; Columbia, Klamath, and Sacramento River regions; Alaska; Loring and Boca de Quadra.

Cottopsis gulosus Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 129, San Mateo Creek and San Joaquin River, Calif.

Cottopsis parvus Girard, loc. cit., 1854, 144, Monterey, Presidio, Fort Reading, Petaluma.

Uranidea semiscabra centropleura Eigenmann and Eigenmann, West Amer. Scientist, VI, No. 49, 1889, 149, Allen Springs, Lake Co., Calif.

Subgenus COTTOPSIS Girard.

2997. Cottus asper Richardson. *Prickly bullhead.*

Streams of the Cascade Range, southeastern Alaska to Oregon; south to Sacramento River.

Cottus asper Richardson, Fauna Bor.-Amer., Fish., 1836, 295, Columbia River at Fort Vancouver.

Trachidermis richardsoni Heckel, Ann. Wiener Mus., II, 1840, 162, Columbia River.

2998. Cottus evermanni Gilbert.

Lost River, Oreg.

Cottus evermanni Gilbert, Bull. U. S. Fish Com., XVII, 1897, 11, with figure, Lost River, Lostine, Oreg.

2999. Cottus rhothea (Rosa Smith).

Hangman Creek, Tekoa, Washington, and elsewhere in Columbia River Basin.

Uranidea rhothea Rosa Smith, Proc. U. S. Nat. Mus., V, 1882, 347, Spokane Falls, Wash.

3000. Cottus shasta Jordan and Starks.

Upper Sacramento Basin, about Mount Shasta.

Cottus shasta Jordan and Starks, Proc. Calif. Acad. Sci. 2d ser., VI, 1896, 224, McCloud River, Baird, Shasta County, Calif.

3001. Cottus punctulatus (Gill).

Headwaters of Green River, Wyo.; Silver Creek, Harney County, Oreg.

Potamocottus punctulatus Gill, Proc. Bost. Soc. Nat. Hist., VIII, 1861, 40, Bridger Pass, Wyo.

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[73] In every cold stream of northern Europe, northern Asia, and northern America species of this genus abound, lurking on the bottom and devouring the eggs of trout which inhabit the same waters. The species are ill differentiated and like those of trout subject to much individual variation. Those of the United States and Canada are not yet well known and the number of species has probably been unduly expanded. Efforts to subdivide the group have not been very successful and we place all the American forms in a single genus, *Cottus*. Western species, allies of *Cottus asper*, termed *Cottopsis*, are in general larger in size, more prickly, with well-developed palatine teeth and the ventral rays I, 4. Those of the middle west allied to *Cottus bairdi*, called *Potamocottus*, show similar characters but are for the most part smaller and smoother, the colors more mottled. Rafinesque's *Pegedictis ictalops*, the "Cat's-eye Spring fish," seems to us a *Cottus* described carelessly or more likely from memory. In New England and south to Pennsylvania the allies of *Cottus gracilis* called *Uranidea* are small, smooth, without palatine teeth and the ventral rays I, 3. But all these traits are subject to intergrading. A few species in deeper waters in Lake Michigan and Canada, allies of *Cottus ricei* called *Tauridea*, are more or less rough and have the preopercular spine larger, hooked and somewhat spiral, otherwise much as in *Cottopsis*.

3002. **Cottus semiscaber** (Cope). *Rocky Mountain bullhead.*
Rocky Mountain region in clear streams on both slopes; abundant in Colorado, northern New Mexico, Wyoming, Montana, Idaho, Utah, eastern Washington, and Oregon.
Cottopsis semiscaber Cope, Hayden Surv. Mont., 1871, 476, Fort Hall, Idaho.
Uranidea wheeleri Cope, Proc. Amer. Phil. Soc. Phila., XIV, 1874, 138, Beaver River, Utah.

3003. **Cottus asperrimus** Rutter.
California; Sacramento-San Joaquin Basin; Fall River.
Cottus asperrima Rutter, Bull. U. S. Bur. Fish., XXVII, 1907, 144, fig. 3, Fall River, Calif.

3004. **Cottus beldingii** Eigenmann and Eigenmann.
Streams of Columbia River Basin, south to Lake Lahontan; abundant east of the Cascades and in Lake Tahoe; fossil in Lahontan Basin, in Pleistocene deposits.
Cottus beldingii Eigenmann and Eigenmann, Amer. Nat., XXV, 1891, 1132, Lake Tahoe.

3005. **Cottus annæ** Jordan and Starks.
Eagle River, a tributary of Grand River, Colo., Colorado River Basin.
Cottus annæ Jordan and Starks, Proc. Calif. Acad. Sci., 2d ser., VI, 1896, 223, Pl. XXVII, Eagle River at Gypsum, Colo.

3006. **Cottus philonips** Eigenmann and Eigenmann.
Columbia River Basin at Field, British Columbia, and in Idaho.
Cottus philonips Eigenmann and Eigenmann, Amer. Nat., XXVI, 1892, 963, Kicking Horse River, Field, British Columbia.

3007. **Cottus klamathensis** Gilbert.
Klamath Lakes, Oreg.
Cottus klamathensis Gilbert, Bull. U. S. Fish. Com., XVII, 1897, 10, figure, Upper Klamath Lake, Oreg.

3008. **Cottus macrops** Rutter.
Fall River, Calif.
Cottus macrops Rutter, Bull. U. S. Bur. Fish., XXVII, 1907, 146, fig. 4, Fall River, Calif.

3009. **Cottus perplexus** Gilbert and Evermann.
Skookumchuck and Newaukum Rivers, near Chehalis, Wash.
Cottus perplexus Gilbert and Evermann, Bull. U. S. Fish Com., XIV, 1894, 202, pl. 20, fig. 1, Skookumchuck River, near Chehalis, Wash.

3010. **Cottus princeps** Gilbert.
Klamath Lakes, Oreg.
Cottus princeps Gilbert, Bull. U. S. Fish Com.. XVII, 1897, 12, figure, Upper Klamath Lake, Oreg.

3011. **Cottus bendirei** (Bean).
Walla Walla, Wash.; Rattlesnake Creek near Camp Harney, Oreg., and Goose Creek near Meadows, Idaho.
Potamocottus bendirei Bean, Proc. U. S. Nat. Mus., IV, 1881, 27, Rattlesnake Creek near Camp Harney, Oreg.

3012. **Cottus greenei** (Gilbert and Culver).
Snake River Basin, Idaho.
Uranidea greenei Gilbert and Culver, in Jordan and Evermann, Fishes North and Mid. Amer., 1898, 1965, Thousand Springs, Snake River, Idaho.

3013. **Cottus marginatus** (Bean).
Tributaries of Walla Walla River, Wash.
Uranidea marginata Bean, Proc. U. S. Nat. Mus., IV, 1881, 26, Walla Walla, Wash.

3014. **Cottus tenuis** (Evermann and Meek).
Klamath Lakes, Oreg.
Uranidea tenuis Evermann and Meek, Bull. U. S. Fish Com., XVII, 1897, 83, fig. 6, Upper Klamath Lake, Klamath Falls, Oreg.

3015. Cottus leiopomus Gilbert and Evermann.
Wood River, Shoshone, Idaho.
Cottus leiopomus Gilbert and Evermann, Bull. U. S. Fish Com., XIV, 1894, 203, pl. 20, fig. 2, Wood River, Shoshone, Idaho.

3016. Cottus aleuticus Gilbert.
Unalaska; Departure Bay, Vancouver Island; southward to Monterey in the Coast Range.
Uranidea microstoma Lockington, Proc. U. S. Nat. Mus., III, 1880, 58, St. Paul, Kadiak Island; name preoccupied in *Cottus*.
Cottus aleuticus Gilbert, Rept. U. S. Fish Com., XIX, 1893, 418, streams at Unalaska; also in Departure Bay, Vancouver Island.

3017. Cottus chamberlaini Evermann and Goldsborough.
Southeastern Alaska.
Cottus chamberlaini Evermann and Goldsborough, Bull. U. S. Bur. Fish., XXVI, 1906, 308, fig. 66, Loring, Alaska.

Subgenus PEGEDICTIS Rafinesque.

3018. Cottus ictalops (Rafinesque.) *Miller's thumb; Mufflejaws; Springfish; Blob; Bullhead.*
Middle and northern States, east of the Dakotas and Nebraska; Lake Superior to the Ohio and Potomac Rivers.
Pegedictis ictalops Rafinesque, Ichth. Ohiensis, 85, supplement, 1820. Falls of the Ohio; perhaps confused with *Catonotus flabellaris*.
Cottus richardsoni Agassiz, Lake Superior, 1850, 300, northern shore of Lake Superior; not *Trachidermis richardsoni* Heckel, also a species of *Cottus*.
Cottus bairdii Girard, Proc. Amer. Assoc. Adv. Sci., II, 1850, 410, Mahoning River, Poland, Ohio.
Cottus wilsoni Girard, Monogr. Cottoids, in Smithson. Contrib. to Knowledge, 1850, 42, Pittsburgh, Pa.
Cottus alvordii Girard, loc. cit., 46, Fort Gratiot, Lake Huron.
Uranidea spilota Cope, Proc. Acad. Nat. Sci. Phila., XVII, 1865, 82, Grand River at Grand Rapids, Mich.

3019. Cottus meridionalis Girard. *Southern miller's thumb; Blob; Mufflejaw*
Cottus meridionalis Girard, Proc. Am. Assn. Adv. Sci., II, 1850, 410, James River, Va.
Potamocottus carolinæ Gill, Proc. Bost. Soc. Nat. Hist., 1861, 40, Carolinas.
Potamocottus zopherus Jordan, Ann. Lyc. Nat. Hist. N. Y., XI, 1876, 320, small tributaries of the Etowah and Oostanaula Rivers near Rome, Ga.

Subgenus URANIDEA DeKay

3020. Cottus franklini Agassiz.
Lake Superior and Lake Michigan in deep water.
Cottus franklini Agassiz, Lake Superior, 1850, 303, north and east shores of Lake Superior.
Uranidea hoyi Putnam, in Nelson, Bull. Ill. Lab. Nat. Hist., I, No. 1, 1876, 41, Lake Michigan, in deep water.
Uranidea kumlieni Hoy, in Nelson, loc. cit., 41, Lake Michigan, in deep water.

3021. Cottus gracilis[74] Heckel. *Miller's thumb; Rock cusk; Little stargazer.*
Streams of New England, Maine to New York; recorded from tributaries of the Connecticut, Lake Champlain, Hudson, Delaware, and Susquehanna.
Cottus gracilis Heckel, Ann. Wien Mus., II, 1837, 148, New York.
Cottus viscosus Haldeman, Suppl. Mongr. Linnæa, 1840, 3, Susquehanna River.
Uranidea quiescens DeKay, New York Fauna: Fishes, 1842, 61, Lake Pleasant, Adirondack region.
Cottus gobioides Girard, Proc. Amer. Assoc. Adv. Sci., II, 1850, 411, Lamville River, Johnson, Vt.
Cottus boleoides Girard, loc. cit., II, 411, Windsor, Vt.

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[74] May not be distinct from the northern *C. cognatus*.

Cottus copei Abbott, Proc. Acad. Nat. Sci. Phila., XII, 1860, 326, probably New Jersey.
Cottus gracilis cayuga Meek, Ann. New York Acad. Sci., IV, 1888, 315, Cayuga Lake, N. Y.

3022. **Cottus formosus** Girard.
Lake Ontario, in deep water.
Cottus formosus Girard, Monogr. Cott., in Smithson. Contrib., III, 1850, 58, Lake Ontario, off Oswego, in stomach of *Lota maculosa*.

Subgenus TAURIDEA Jordan and Rice.

3023. **Cottus ricei** (Nelson).
Lake Michigan; Lake Ontario.
Cottopsis ricei Nelson, Bull. Ill. Lab. Nat. Hist., I, 1876, 40, Lake Michigan off Evanston.
Uranidea pollicaris Jordan and Gilbert, Proc. U.S. Nat. Mus., V, 1882, 222, Lake Michigan, off Racine, Wis.

3024. **Cottus onychus** Eigenmann and Eigenmann.
Saskatchewan Basin.
Cottus onychus Eigenmann and Eigenmann, Am. Nat., XXVI, November, 1892, 963, Bow River at Calgary, a tributary of the South Saskatchewan, Alberta Territory.

3025. **Cottus cognatus** Richardson. *Northern miller's thumb.*
Northern United States and northward, through Canada.
Cottus cognatus Richardson, Fauna Bor.-Amer., III, 1836, 40, Great Bear Lake.

Genus 1045. ACANTHOCOTTUS Girard. *Daddy sculpins.*
Acanthocottus Girard, Proc. Bost. Soc. Nat. Hist., III, 1849, 185 (*Cottus grœnlandicus* Cuvier and Valenciennes).

3026. **Acanthocottus mitchilli** [75] (DeKay).
Coast of southern New England and New York.
Cottus mitchilli DeKay, in Cuvier and Valenciennes, Hist. Nat. Poiss., IV, 1829, 188, New York; after *Cottus scorpio* Mitchill.

3027. **Acanthocottus bubalis** (Euphrasen). *Fatherlasher; Lucky proach.*
Barbados.
Cottus bubalis Euphrasen, Köng. Vet. Nya Abhandl., VII, 1786, 65, taf. 3, fig. 8, 1885, Barbados.
Cottus maculatus Fischer, Jahrb. Wissensch. Aust. Hamburg, II, 1885, 78, taf. 2, fig. 8, Barbados.

3028. **Acanthocottus æneus** (Mitchill). *Grubby; Brassy sculpin; Pigmy sculpin.*
Coast of southern New England and New York.
Cottus æneus Mitchill, Trans. Lit. Phil. Soc. N. Y., I, 1815, 380, New York.
Cottus anceps Sauvage, Nouv. Archiv Mus. Paris, I, 1878, 145, pl. 1, fig. 13, New York.
?*Cottus nigricans* LeSueur, in Vaillant, Bull. Soc. Philom., serie 8, tome VIII, No. 1, 1895, 12, no locality.

3029. **Acanthocottus octodecemspinosus** (Mitchill). *Long-spined sculpin; Common sculpin; Bullhead; Eighteen-spined sculpin; Hacklehead.*
Atlantic coast south to Virginia; common northward.
Cottus octodecem-spinosus Mitchill, Trans. Lit. Phil. Soc. N. Y., I, 1815, 380, New York.

3030. **Acanthocottus scorpius** (Linnæus). *European sculpin; Ulke.*
Northen Europe and Arctic regions, not common on our coasts; recorded by Doctor Lütken from the Baltic, Finland, Spitzbergen, Nova Zembla, coasts of England and northern Asia; also recorded from Eastport, Me.
Cottus scorpius Linnæus, Syst. Nat., Ed. X, 1758, 265, in Atlantic Ocean off Europe.

3031. **Acanthocottus scorpioides** (Fabricius). *Arctic sculpin.*
Arctic regions of America, Greenland to Siberia.
Cottus scorpioides Fabricius, Fauna Grœnl., 1780, 157, Greenland.
Cottus pachypus Günther, Cat., II, 1860, 161, Port Leopold.

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[75] Differentiated by Nichols, Copeia, No. 31, 40, 1916.

3032. Acanthocottus grœnlandicus (Cuvier and Valenciennes). *Daddy sculpin.*
New York to Greenland; according to Fabricius it is abundant in all the bays and inlets of Greenland.
Cottus grœnlandicus Cuvier and Valenciennes, Hist. Nat. Poiss., IV, 1829, 135 (156), no locality given, probably Greenland; after Fabricius.
Cottus porosus Cuvier and Valenciennes, loc. cit., VIII, 1831, 367 (498), Baffins Bay.
Acanthocottus mucosus Ayres, Proc. Calif. Acad. Nat. Sci., I, 1854 (Oct. 9), 12, coast of New England.
Acanthocottus ocellatus Storer, Boston Jour. Nat. Hist., 1850, 253, Labrador.
Cottus glacialis Richardson, in Belcher, Last Arctic Voy. H. M. S. *Assistant*, App. 3, 1855, 349, pl. 24, Northumberland Sound.

Genus 1046. MYOXOCEPHALUS (Steller) Tilesius.
Myoxocephalus Tilesius, Mém. Acad. Sci. Petersb., IV, 1811, 273 (*Myoxocephalus stelleri* Tilesius).
Boreocottus Gill, Proc. Acad. Nat. Sci. Phila., XI, 1859, 166 (*B. axillaris* Gill).

3033. Myoxocephalus polyacanthocephalus (Pallas). *Great sculpin; Kalog.*
Alaska to Kamchatka; abundant, Bering Sea to Puget Sound; tide pools of Karluk.
Cottus polyacanthocephalus Pallas, Zoogr. Rosso.-Asiat., III, 1811, 133, Aleutian Islands.

3034. Myoxocephalus jaok (Cuvier and Valenciennes).
Kamchatka.
Cottus jaok Cuvier and Valenciennes, Hist. Nat. Poiss., IV, 1829, 126 (172), Kamchatka.
Cottus humilis Bean, Proc. U. S. Nat. Mus., IV, 1881, 149, Chamisso Island, Bering Straits.

3035. Myoxocephalus verrucosus (Bean).
Plover Bay, Siberia, near Bering Straits; Unalaska; Sitka; Bristol Bay; Kings Island; Grantley Harbor, Port Clarence; Litnik.
Cottus verrucosus Bean, Proc. U. S. Nat. Mus., IV, 1881, 152, Plover Bay, Siberia.

3036. Myoxocephalus axillaris (Gill).
Bering Straits.
Boreocottus axillaris Gill, Proc. Acad. Nat. Sci. Phila., XI, 1859, 166, Bering Straits.

3037. Myoxocephalus stelleri Tilesius.
Western shore of Bering Sea and Okhotsk Sea.
Myoxocephalus stelleri Tilesius, Mém. Acad. Petersb., IV, 1811, 273, with plate, Petropaulski.
Cottus decastrensis Kner, Denk. Kais. Acad. Wissen., XXIV, 1865, 2, taf. 2, figs. 1, 1a, Decastris Bay, near mouth of the Amur.
?*Cottus marmoratus* Cuvier and Valenciennes, Hist. Nat. Poiss., VIII, 1831, 366 (497), Petropaulski.

3038. Myoxocephalus mednius Bean.
Medni Island, Bering Sea.
Myoxocephalus mednius Bean, in Jordan and Evermann, Fishes North and Mid. Amer., 1898, 1983, Medni Island, Bering Sea.

3039. Myoxocephalus parvulus Gilbert and Burke.
Medni Island, Commander Group.
Myoxocephalus parvulus Gilbert and Burke, Bull. U. S. Bur. Fish., XXX, 1910, 59, Preobazenskoi Bar, Medni (Copper) Island.

3040. Myoxocephalus niger (Bean). *Black sculpin.*
Pribilof Islands.
Cottus niger Bean, Proc. U. S. Nat. Mus., IV, 1881, 151, St. Paul Island, Bering Sea.
?*Cottus mertensii* Cuvier and Valenciennes, Hist. Nat. Poiss., VIII, 1831, 366 (496), Petropaulski.

Genus 1047. MEGALOCOTTUS Gill.
Megalocottus Gill, Proc. Acad. Nat. Sci. Phila., XIII, 1861, 166 (*Cottus platycephalus* Pallas).

3041. **Megalocottus platycephalus** (Pallas).
Kamchatka.
Cottus platycephalus Pallas, Zoogr. Rosso.-Asiat., III, 1811, 135, Kamchatka; after Steller.
Cottus tæniopterus Kner, Sitzungsber. Ak. Wiss. Wien, LXIII, 1868, 28, Taf. 14, fig. 10, Decastris Bay, near mouth of Amur River.

3042. **Megalocottus laticeps** (Gilbert).
Eastern shore of Bering Sea.
Acanthocottus laticeps Gilbert, Rept. U. S. Fish. Com., XIX, 1893, 422, pls. 26 and 27, Nushagak River and Herendeen Bay, Alaska.

Genus 1048. **POROCOTTUS** Gill.
Porocottus Gill, Proc. Acad. Nat. Sci. Phila., XI, 1859, 166 (*P. quadrifilis* Gill).

3043. **Porocottus sellaris** (Gilbert).
Bristol Bay, Alaska.
Acanthocottus sellaris Gilbert, Rept. U. S. Fish Com. XIX, 1893, 419, Bristol Bay, at *Albatross* stations 3229, 3231, and others, in 5 to 17 fathoms.

3044. **Porocottus quadratus** Bean.
Bering Island.
Porocottus quadratus Bean, in Jordan and Evermann, Fishes North and Mid. Amer., 1898, 1998, Bering Island.

3045. **Porocottus polaris** (Sabine).
East side of peninsula of Boothia.
Cottus polaris Sabine, App. Parry's First Voyage, CCXIII, 1824, north Georgia.

3046. **Porocottus quadrifilis** Gill.
Bering Straits.
Porocottus quadrifilis Gill, Proc. Acad. Nat. Sci. Phila., XI, 1859, 166, Bering Straits.

3047. **Porocottus bradfordi** Rutter.
Alaska; rock pools at Karluk.
Porocottus bradfordi Rutter, in Jordan and Evermann, Fishes North and Mid. Amer., 1898, 2862, Karluk.

Genus 1049. **MALACOCOTTUS** Bean.
Malacocottus Bean, Proc. U. S. Nat. Mus., XIII, 1890, 42 (*M. zonurus* Bean).

3048. **Malacocottus zonurus** Bean.
Coast of Alaska off Trinity Islands.
Malacocottus zonurus Bean, Proc. U. S. Nat. Mus., XIII, 1890, 43, off Trinity Islands, Alaska, 56° N., 154° W., at *Albatross* station 2853, in 159 fathoms.

3049. **Malacocottus kincaidi** Gilbert and Thompson.
Puget Sound.
Malacocottus kincaidi Gilbert and Thompson, Proc. U. S. Nat. Mus., XXVIII, 1905, 979, fig. 2, Brinnon, Hood's Canal, Wash.

Genus 1050. **ONCOCOTTUS** Gill.
Oncocottus Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 13 (*Cottus quadricornis* Linnæus.

3050. **Oncocottus quadricornis** (Linnæus).
Arctic America to Baltic Sea, chiefly northward; abundant in eastern Baltic and in Lakes Ladoga and Onega; north to White Sea and Nova Zembla; rare in England and eastern Greenland; unknown in western Greenland.
Cottus quadricornis Linnæus, Syst. Nat., ed. X, 1758, 264, Baltic Sea.

3051. **Oncocottus hexacornis** (Richardson).
Arctic Sea about Hershel Island.
Cottus hexacornis Richardson, Franklin's Journal, 1823, 726, mouth of Tree River near Coppermine River.
Acanthocottus labradoricus Girard, Bost. Jour. Nat. Hist., VI, 1850, 247, pl. 7, fig. 3, coast of Labrador.

3052. Oncocottus gilberti Fowler.
Point Barrow, Alaska; Arctic Sea.
Oncocottus hexacornis gilberti Fowler, Proc. Acad. Nat. Sci. Phila., LVII, 1905, 366, figs. 2, 3, 4, and 5, Point Barrow, Alaska.

Genus 1051. TRIGLOPSIS Girard.
Triglopsis Girard, Proc. Bost. Soc. Nat. Hist., IV, 1851, 16 (*T. thompsoni* Girard).

3053. Triglopsis thompsoni Girard. *Lake sculpin.*
Deep waters of Lake Ontario.
Triglopsis thompsoni Girard, Proc. Bost. Soc. Nat. Hist., IV, 1851, 19, Lake Ontario off Oswego, N. Y.

3054. Triglopsis stimpsoni Hoy.
Lake Michigan in deep water.
Triglopsis stimpsoni Hoy, Trans. Wis. Acad. Sci., 1872, 99, Lake Michigan, off Chicago.

3055. Triglopsis ontariensis Jordan and Thompson.
Deep waters of Lake Ontario.
Triglopsis ontariensis Jordan and Thompson, Proc. U. S. Nat. Mus., XXXVIII, 1911, 75, Lake Ontario, off Toronto.

Genus 1052. GYMNOCANTHUS Swainson.
Gymnocanthus Swainson, Class. Fishes, Amphib., etc., II, 1839, 271 (*Cottus ventralis* Cuvier and Valenciennes=*Cottus pistilliger* Pallas).
Phobetor Krøyer, Naturh. Tidskr., I, 1844, 263 (*Cottus tricuspis* Reinhardt).
Elaphocottus Sauvage, Nouv. Arch. Mus. Paris (2), 1, 1878, 142 (*Cottus pistilliger* Pallas).
Gymnacanthus of many authors. Corrected spelling.

3056. Gymnocanthus pistilliger (Pallas).
Coasts of Alaska; taken abundantly in Bristol Bay.
Cottus pistilliger Pallas, Zoogr. Rosso-Asiat., III, 1811, 143, Unalaska Island.
Cottus ventralis Cuvier and Valenciennes, Hist. Nat. Poiss., IV, 1829, 142 (194), Kamchatka.
Cottus cephaloides Gray, in Cuvier and Valenciennes, Hist. Nat. Poiss., IV, 1829, 142 (194), Kamchatka.

3057. Gymnocanthus tricuspis (Reinhardt).
Arctic seas, south to Norway and Labrador; not very common on our coasts.
Cottus tricuspis Reinhardt, Vidensk. Selsk. Nat. Math., V, 1832, LII, Greenland.
Acanthocottus patris Storer, Bost. Jour. Nat. Hist., VI, 1857, 250, Labrador.

3058. Gymnocanthus galeatus (Bean).
Aleutian Islands.
Gymnacanthus galeatus Bean, Proc. U. S. Nat. Mus., IV, 1881, 153, Unalaska.

Genus 1053. CROSSIAS Jordan and Starks.
Crossias Jordan and Starks, Proc. U. S. Nat. Mus., XXVII, 1904, 296 (*C. allisi* Jordan and Starks).

3059. Crossias albomaculatus Schmidt.
Bering Sea.
Crossias albomaculatus Schmidt, Ann. Mus. Zool. Russ., XX, 1923, 614, fig. 2, Bering Sea.

3060. Crossias beringi Soldatov.
Bering Sea.
Crossias beringi Soldatov, Ann. Mus. Zool. Russ., XXI, 1924, 218, Bering Sea.

3061. Crossias camtschaticus Schmidt.
Kamchatka.
Crossias camtschaticus Schmidt, Ann. Mus. Zool. Russ., XX, 1923, 17, Kamchatka.

Genus 1054. LEIOCOTTUS Girard.
Leiocottus Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 133 (*L. hirundo* Girard).

3062. Leiocottus hirundo Girard.
Coast of southern California, chiefly about the Santa Barbara Islands; extremely local.
Leiocottus hirundo Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 133, San Miguel Island near Santa Barbara, Calif.

Genus 1055. LEPTOCOTTUS Girard.
Leptocottus Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 130 (*L. armatus* Girard).

3063. Leptocottus armatus Girard. *Smooth cabezon.*
Pacific coast, from Kodiak to San Diego; abundant northward.
Leptocottus armatus Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 131, Cape Flattery, Fort Steilacoom, Shoalwater Bay, Humboldt Bay, San Francisco, Monterey, San Pedro, Fort Point, San Diego, and Tomales Bay.

Genus 1056. ASEMATICHTHYS Gilbert.
Asematichthys Gilbert (*Asematichthys taylori* Gilbert).

3064. Asematichthys taylori Gilbert.
Vancouver Island.
Asematichthys taylori Gilbert, Departure Bay, Nanaimo, Vancouver Island.

Genus 1057. CLINOCOTTUS Gill.
Clinocottus Gill, Proc. Acad. Nat. Sci. Phila., XIII, 1861, 166 (*Oligocottus analis* Girard).
Rusulus Starks and Mann, Univ. Calif. Pub. Zool., VIII, 1911, 14 (*Clinocottus sabarræ* Starks and Mann; young).

3065. Clinocottus analis (Girard).
Coast of California from Point Conception northward.
Oligocottus analis Girard, Proc. Acad. Nat. Sci. Phila., IX, 1857, 201, Monterey.
Cottus criniger Günther, Cat., II, 1860, 522, Monterey, Calif.
Rusulus saburræ Starks and Mann, Univ. Calif. Pub. Zool., VIII, 1911, 14, Ballast Point, off mouth of San Diego Bay; young.

3066. Clinocottus australis Hubbs.
Southern California from Los Angeles County and Santa Catalina Island southward to Todos Santos, San Martin, San Benito, and Guadalupe Islands. Probably varies into *C. analis*, of which it is the southern form.
Clinocottus analis australis Hubbs, Occ. Papers Mus. Zool. Univ. Mich., No. 171, Feb. 20, 1926, 11, Point Loma, San Diego, Calif.

Genus 1058. OLIGOCOTTUS Girard.
Oligocottus Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 132 (*O. maculosus* Girard).

3067. Oligocottus maculosus Girard. *Johnny.*
San Francisco to central Alaska.
Oligocottus maculosus Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 133, Tomales Bay, San Francisco.
Oligocottus borealis Jordan and Snyder, Proc. Calif. Acad. Sci., 2d ser., VI, 1896, 225, Neah Bay, Wash.

Genus 1059. GREELEYA [76] Jordan.
Eximia Greeley, Bull. U. S. Fish Com., XIX, 1899, 18 (*Eximia rubellio* Greeley); name preoccupied.
Greeleya Jordan, Genera of Fishes, IV, 1920, 493 (*Eximia rubellio* Greeley).

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[76] The separation of this genus from *Oligocottus* has been questioned by Starks and approved by Hubbs.

3068. Greeleya rubellio (Greeley).
Monterey Bay, in deep tide pools.
Eximia rubellio Greeley, Bull. U. S. Fish Com., XIX, 1899, 18, fig. 5, Pacific Grove, Calif.

Genus 1060. DIALARCHUS Greeley.
Dialarchus Greeley, Bull. U. S. Bur. Fish., XIX, 1899, 14 (*Oligocottus snyderi* Greeley).

3069. Dialarchus snyderi (Greeley).
Coast of California, Crescent City to San Luis Obispo, in tide pools.
Oligocottus snyderi Greeley, in Jordan and Evermann, Fishes North and Mid. Amer., 1898, 2871, Pacific Grove, Calif.

Genus 1061. SIGMISTES Rutter.
Sigmistes Rutter, in Jordan and Evermann, Fishes North and Mid. Amer., 1898, 2863 (*S. caulias* Rutter).

3070. Sigmistes caulias Rutter.
Rock pools at Kodiak Island, Alaska.
Sigmistes caulias Rutter, in Jordan and Evermann, Fishes North and Mid Amer., 1898, 2863, rock pools at Karluk, Kodiak Island, Alaska.

Genus 1062. OXYCOTTUS Jordan and Evermann.
Oxycottus Jordan and Evermann, Fishes North and Mid. Amer., 1898, 2015 (*Oligocottus acuticeps* Gilbert).

3071. Oxycottus acuticeps (Gilbert).
Alaska south to Cape Flattery, Departure Bay, Vancouver Island, Kadiak.
Oligocottus acuticeps Gilbert, Rept. U. S. Fish Com., XIX, 1893, 432, Unalaska.

Genus 1063. ALLOCOTTUS Hubbs.
Allocottus Hubbs, Occ. Papers Mus. Zool. Univ. Mich., No. 171, 1926, 14 (*Oligocottus embryum* Jordan and Starks).

3072. Allocottus embryum (Jordan and Starks).
Washington (Neah Bay), Point Lobos, Calif., Karluk and Sitka, Alaska.
Oligocottus embryum Jordan and Starks, Proc. Calif. Acad. Sci., 2d ser., V, 1895, 808, pl. 82, Neah Bay, Wash.

Genus 1064. RUSCICULUS Greeley.
Rusciculus Greeley, Bull. U. S. Fish Com., XIX, 1899, 13 (*R. rimensis* Greeley).

3073. Rusciculus rimensis Greeley.
Monterey Bay in tide pools.
Rusciculus rimensis Greeley, Bull. U. S. Fish Com., XIX, 1899, 13, fig. 3, Point Lobos, near Carmel, Calif.

Genus 1065. BLENNICOTTUS Gill.
Blennicottus Gill, Proc. Acad. Nat. Sci. Phila., XIII, 1861, 166 (*Oligocottus globiceps* Girard).

3074. Blennicottus globiceps (Girard).
Pacific coast from Coronado Islands northward to Cape Mendocino.
Oligocottus globiceps Girard, Pac. R. R. Surv., X, pt. 4, Fishes, 1858, 58, South Farallons.
Blennicottus globiceps bryosus Jordan and Starks, Proc. Calif. Acad. Sci., 2d ser., V, 1895, 808, Neah Bay, Wash.

Genus 1066. MONTEREYA Hubbs.
Montereya Hubbs, Occ. Papers Mus. Zool. Univ. Mich., No. 171, 1926, 16 (*Blenicottus recalvus* Greeley).

3075. Montereya recalva (Greeley).
Monterey Bay to San Diego, in tide pools.
Blennicottus recalvus Greeley, Bull. U. S. Fish Com., XIX, 1899 (Dec. 13), 9, fig. 1, Pacific Grove, Calif.

Genus 1067. ORTHONOPIAS Starks and Mann.
Orthonopias Starks and Mann, Univ. Cal. Publ. Zool., VIII, 1911, 11, (*O. triacis* Starks and Mann).

3076. Orthonopias triacis Starks and Mann.
Coast of California, Monterey to San Diego.
Orthonopias triacis Starks and Mann, Univ. Cal. Publ. Zool., VIII, 1911, 11, fig. 1, Cortez Banks off San Diego.

Genus 1068. DASYCOTTUS Bean.
Dasycottus Bean, Proc. U. S. Nat. Mus., XIII, 1890, 42 (*D. setiger* Bean).

3077. Dasycottus setiger Bean.
Puget Sound to Bering Sea.
Dasycottus setiger Bean, Proc. U. S. Nat. Mus., XIII, 1890, 42, off Sitkalidak Island, Alaska.

Genus 1069. ZESTICELUS Jordan and Evermann.
Zesticelus Jordan and Evermann, Check List, 1895, 443 (*Acanthocottus profundorum* Gilbert).

3078. Zesticelus profundorum (Gilbert).
Bering Sea, north of Unalaska.
Acanthocottus profundorum Gilbert, Rept. U. S. Fish Com., XIX, 1893, 423, pl. 27, upper fig., Bering Sea, north of Unalaska, at *Albatross* station 3328, in 399 fathoms.

Genus 1070. THECOPTERUS Smith.
Thecopterus Smith (H. M.), Proc. Biol. Soc. Wash., XVII, 1904, 163 (*Thecopterus aleuticus* Smith).

3079. Thecopterus aleuticus Smith.
Bering Sea.
Thecopterus aleuticus Smith, Proc. Biol. Soc. Wash., XVII, 1904, 163, near Rat Islands, in 270 fathoms.

Genus 1071. COTTUNCULUS Collett.
Cottunculus Collett, Norges Fiske, 1875, 20 (*C. microps* Collett).

3080. Cottunculus microps Collett.
Deep waters off coasts of Norway and Rhode Island.
Cottunculus microps Collett, Norges Fiske, 1875, 20, pl. I, figs. 1–3, Hasvig near Hammerfest, Norway, in 200 fathoms.

3081. Cottunculus thomsonii (Günther).
North Atlantic, in deep water.
Cottus thomsonii Günther, Proc. Royal Soc. Edinburgh, XI, 1882, 679, Faroe Channel, in 535 fathoms.
Cottunculus torvus Goode, Proc. U. S. Nat. Mus., III, 1880, 479, Gulf Stream off Rhode Island. A *nomen nudum.*

Genus 1072. ASCELICHTHYS Jordan and Gilbert.
Ascelichthys Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880, 264 (*A. rhodorus* Jordan and Gilbert).

3082. Ascelichthys rhodorus Jordan and Gilbert.
Pacific coast from Sitka to Cape Mendocino; abundant in Neah Bay, Wash.
Ascelichthys rhodorus Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880, 264, Waadda Island, Neah Bay, near Cape Flattery.

Genus 1073. PSYCHROLUTES Günther.
Psychrolutes Günther, Cat., III, 1861, 516 (*P. paradoxus* Günther).

3083. Psychrolutes paradoxus Günther.
Puget Sound to Kodiak Island.
Psychrolutes paradoxus Günther, Cat., III, 1861, 516, Gulf of Georgia.
Psychrolutes zebra Bean, Proc. U. S. Nat. Mus., XIII, 1890, 43, Aleutian Islands, between Unga and Nagai Islands, in 110 fathoms.

Genus 1074. GILBERTIDIA Berg.
Gilbertina Jordan and Starks, Proc. Calif. Acad. Sci., 2d ser., V, 1895, 811 (*Gilbertina sigalutes* Jordan and Starks); name preoccupied.
Gilbertidia Berg, Comun. del Museo Nac. de Buenos Aires, I, 1898, 42 (*Gilbertina sigalutes* Jordan and Starks).

3084. Gilbertidia sigalutes (Jordan and Starks).
Puget Sound.
Gilbertina sigalutes Jordan and Starks, Proc. Calif. Acad. Sci., 2d ser., V, 1895, 811, pl. 86, Port Orchard, near Seattle.

Family 237. SYNCHIRIDÆ

Genus 1075. SYNCHIRUS Bean.
Synchirus Bean, Proc. U. S. Nat. Mus., XII, 1889, 641 (*S. gilli* Bean).

3085. Synchirus gilli Bean.
Puget Sound; Barclay Sound, Port Townsend; rare.
Synchirus gilli Bean, Proc. U. S. Nat. Mus., XII, 1889, 642, Barclay Sound, British Columbia.

Family 238. RHAMPHOCOTTIDÆ

Genus 1076. RHAMPHOCOTTUS Günther.
Rhamphocottus Günther, Ann. Mag. Nat. Hist., Series 4, XIV, 1874, 369 (*R. richardsoni* Günther).

3086. Rhamphocottus richardsoni Günther.
North Pacific, Alaska to Monterey; not infrequent in Puget Sound.
Rhamphocottus richardsoni Günther, Ann. Mag. Nat. Hist., XIV, 1874, 369, Fort Rupert, British America.

Genus 1077. ULCA Jordan and Evermann.
Ulca Jordan and Evermann, Proc. Calif. Acad. Sci., 2d ser., VI, 1896, 227 (*Hemitripterus marmoratus* Bean).

3087. Ulca marmorata (Bean).
Alaska, Bering Sea and off Sitkalidak Island.
Hemitripterus marmoratus Bean, Proc. U. S. Nat. Mus., XIII, 1890, 43, off Sitkalidak Island.

Family 239. HEMITRIPTERIDÆ. Sea ravens

Genus 1078. HEMITRIPTERUS Cuvier.
Hemitripterus Cuvier, Règne Anim., ed. 2, II, 1829, 164 (*Scorpæna americanus* Gmelin).

3088. Hemitripterus americanus (Gmelin). *Sea raven; Yellow sculpin.*
Atlantic coast of America from Tortugas to Labrador, chiefly northward.
Scorpæna americana Gmelin, Syst. Nat., ed. XIV, 1788, 1220, after "Diable en Crapand de l'Amérique" of Duhamel de Moreau.
Cottus acadian Walbaum, Artedi Pisc., 1792, 392, 1784, Nova Scotia; after Pennant.
Cottus hispidus Bloch and Schneider, Syst. Ichth., 1801, 63, New York.
Cottus tripterygius Bloch and Schneider, Syst. Ichth., 1801, 63, Nova Scotia; after Pennant.

3089. Hemitripterus villosus (Pallas).
Coast of Alaska.
Cottus villosus Pallas, Zoogr. Rosso-Asiat., III, 1811, 129, Cape Kronok, Kamchatka, Itscha River.
Hemitripterus cavifrons Lockington, Proc. Acad. Nat. Sci. Phila., XXXII, 1880, 233, Kodiak Island, Alaska.

Family 240. AGONIDÆ. Sea poachers; Alligatorfishes

Genus 1079. HYPSAGONUS Gill.
Hypsagonus Gill, Proc. Acad. Nat. Sci. Phila., XIII, 1861, 167 (*Aspidophorus quadricornis* Cuvier and Valenciennes).
Cheiragonus Herzenstein, Bull. Acad. Sci. St. Petersb., XIII, 1890, 116 (*Hypsagonus gradiens* Hertzenstein = *Aspidophorus quadricornis* Cuvier and Valenciennes).

3090. Hypsagonus quadricornis (Cuvier and Valenciennes).
North Pacific; Kamchatka; Bering Sea and coasts of Alaska south to Bristol Bay and Puget Sound.
Aspidophorus quadricornis Cuvier and Valenciennes, Hist. Nat. Poiss., IV, 1829, 162 (221), Kamchatka.
Hypsagonus gradiens Herzenstein, Bull. Acad. Int. Sci. St. Petersb., XIII, 1890, 116, Kamchatka, Sinus Awatcha Bay, Petropaulski.

Genus 1080. STELLERINA Cramer.
Stellerina Cramer, in Jordan and Evermann, Check List, 1895, 447 (*Brachyopsis xyosternus* Jordan and Gilbert).

3091. Stellerina xyosterna (Jordan and Gilbert).
Coast of California and Oregon.
Brachyopsis xyosternus Jordan and Gilbert, Proc. U. S. Nat. Mus., III, July 2, 1880, 152, Santa Cruz, Calif.
Agonus annæ Steindachner, Ichth. Beitr., IX, 1880, 254, pl. 6, figs. 1, 1a, Sitzb. K. Acad. Wiss., LXXXII, San Francisco, Calif.

Genus 1081. OCCA Jordan and Evermann.
Occa Jordan and Evermann, Fishes North and Mid. Amer., 1898, 2043 (*Brachyopsis verrucosus* Lockington).

3092. Occa verrucosa (Lockington).
Coast of California, south to San Francisco.
Brachyopsis verrucosus Lockington, Proc. U. S. Nat. Mus., III, May 6, 1880, 60, Drake Bay, near San Francisco.
Agonus barkani Steindachner, Ichth. Beitr., IX, 1880, 253, pl. 5, Sitzb. K. Akad. Wiss., LXXXII, San Francisco, Calif.

Genus 1082. OCCELLA Jordan and Hubbs.
Occella Jordan and Hubbs, Mem. Carnegie Mus., X, No. 2, 1925, 291 (*Agonus dodecaëdron* Tilesius).

3093. Occella dodecaëdron (Tilesius).
North Pacific, Kamchatka, Bristol Bay, coast of Alaska.
Agonus dodecaëdrus Tilesius, Mém. Acad. Petersb., IV, 1810, pl. 13, Kamchatka.
Phalangistes loricatus Pallas, Zoog. Rosso-Asiat., III, 1811, 114, tab. 19, Kamchatka.

Genus 1083. PALLASINA Cramer.
Pallasina Cramer, Proc. Calif. Acad. Sci., 2d ser., V, 1895, 815 (*Siphagonus barbata* Steindachner).

3094. Pallasina barbata (Steindachner).
Bering Sea on both coasts to Hokkaido, northern Japan.
Siphagonus barbatus Steindachner, Ichth. Beitr., V, July, 1876, 140, pl. 5, Sitzb. der K. Akad. Wiss., LXXIV, Hakodate, Japan; the locality of Nagasaki also mentioned is impossible.

3095. Pallasina aix Starks.
Puget Sound to the Aleutian Islands.
Pallasina aix Starks, Proc. Calif. Acad. Sci., 2d ser., VI, 1896, 558, pl. 75, Puget Sound near Port Ludlow, Wash.

Genus 1084. LEPTAGONUS Gill.
Leptagonus Gill, Proc. Acad. Nat. Sci. Phila., XIII, 1861, 167, 259 (*Aspidophorus spinosissimus* Krøyer = *Aspidophorus decagonus* Cuvier and Valenciennes).

3096. Leptagonus decagonus (Bloch and Schneider).
Arctic Ocean, south to Newfoundland and Norway.
Agonus decagonus Bloch and Schneider, Syst. Ichth., I, 1801, 105, pl. 27, erroneously recorded from the East Indies; the type from Greenland.
Aspidophorus spinosissimus Krøyer, Naturhist. Tidskr., I, 1844, 250, Greenland.

Genus 1085. PODOTHECUS Gill.
Podothecus Gill, Proc. Acad. Nat. Sci. Phila., XIII, 1861, 77, 259 (*P. peristethus* Gill = *Agonus acipenserinus* Tilesius).
Paragonus Gill, loc. cit., 167, 259 (*Agonus acipenserinus* Tilesius).

3097. Podothecus acipenserinus (Tilesius). *Common alligatorfish.*
Kamchatka to Puget Sound.
Agonus acipenserinus Tilesius, Mém. Acad. Petersb., IV, 1811, 422, pl. 11, fig. 163, Unalaska.
Podothecus peristethus Gill, Proc. Acad. Nat. Sci. Phila., XIII, 1861, 259, Simeahmoo, Washington Territory.

3098. Podothecus gilberti Collett.
Kamchatka.
Podothecus gilberti Collett, Proc. Zool. Soc. London, 1894, 67, pl. 45, Kamchatka.

Genus 1086. AGONUS Bloch and Schneider.
Agonus Bloch and Schneider, Syst. Ichth., 1801, 104 (*Cottus cataphractus* Linnæus).
Aspidophorus Lacépède, Hist. Nat. Poiss., III, 1802, 221 (*A. armatus* Lacépède=*Cottus cataphractus* Linnæus).
Phalangistes Pallas, Zoog. Rosso-Asiat., III, 1811, 113 (*Cottus cataphractus* L.).

3099. Agonus cataphractus (Linnæus). *Sea poacher; Pogge.*
Northern Europe to western Greenland.
Cottus cataphractus Linnæus, Syst. Nat., Ed. X, 1758, 264; after Artedi.
Cottus brodamus Bonnaterre, Encycl. Meth., 1788, 67, northern seas.
Aspidophorus armatus Lacépède, Hist. Nat. Poiss., III, 1802, 222 Atlantic Ocean.
Cataphractus schoneveldii Fleming, British Animals, 1842, 216, Great Britain.
Aspidophorus europæus Cuvier and Valenciennes, Hist. Nat. Poiss., IV, 1829, 147 (201), sandy shores of northern Europe.

Genus 1087. STELGIS Cramer.
Stelgis Cramer, in Jordan and Starks, Proc. Calif. Acad. Sci., 2d ser., V, 1895, 821 (*Agonus vulsus* Jordan and Gilbert).

3100. Stelgis vulsus (Jordan and Gilbert).
Off San Francisco.
Agonus vulsus Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880, 330, Point Reyes, near San Francisco.

Genus 1088. AVERRUNCUS Jordan and Starks.
Averruncus Jordan and Starks, Proc. Calif. Acad. Sci., 2d ser., V, 1895, 821, 824 (*A. emmelane* Jordan and Starks).

3101. Averruncus emmelane Jordan and Starks.
Puget Sound, near Port Orchard.
Averruncus emmelane Jordan and Starks, Proc. Calif. Acad. Sci., 2d ser., V, 821, pl. 91, Port Orchard, Puget Sound.

3102. Averruncus sterletus Gilbert.
Coast of southern California.
Averruncus sterletus Gilbert, in Jordan and Evermann, Fishes North and Mid. Amer., 1898, 2072, off Coronado Island.

Genus 1089. XYSTES Jordan and Starks.
Xystes Jordan and Starks, Proc. Calif. Acad. Sci., 2d ser., V, 1895, 824 (*X. axinophrys* Jordan and Starks).

3103. Xystes axinophrys Jordan and Starks.
Puget Sound to Monterey.
Xystes axinophrys Jordan and Starks, Proc. Calif. Acad. Sci., 2d ser., V, 1895, 824, pl. 92, Port Orchard, Admiralty Inlet.

Genus 1090. SARRITOR Cramer.
Sarritor Cramer, in Jordan and Evermann, Check List, 1895, 448, and Fishes of North and Mid. Amer., 1898, 2072 (*Odontopyxis frenatus* Gilbert).

3104. Sarritor frenatus (Gilbert).
Coast of Alaska.
Odontopyxis frenatus Gilbert, Rept. U. S. Fish Com., XIX, 1893, 435, pl. 30, fig. 3, Alaska and Aleutian Islands, at *Albatross* stations 3219, 3225 and many others, in 16 to 351 fathoms.

3105. Sarritor leptorhynchus (Gilbert).
Coast of Alaska.
Odontopyxis leptorhynchus Gilbert, Rept. U. S. Fish Com., XIX, 1893, 437, north and south of the Alaska peninsula, at *Albatross* stations 3215, 3219, and others in 32 to 59 fathoms.

Genus 1091. BATHYAGONUS Gilbert.
Bathyagonus Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 89 (*B. nigripinnis* Gilbert).

3106. Bathyagonus nigripinnis Gilbert.
North Pacific; known from the Aleutian Islands, Bering Sea, south to the coast of Washington.
Bathyagonus nigripinnis Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 89, coast of Washington, at *Albatross* station 3073, in 477 fathoms.

Genus 1092. XENERETMUS Gilbert.
Xenochirus Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 90 (*X. triacanthus* Gilbert); name preoccupied.
Xeneretmus Gilbert in Jordan, Amer. Nat., 1903, 360 (*Xenochirus triacanthus* Gilbert).

3107. Xeneretmus triacanthus (Gilbert).
Pacific coast, from Santa Barbara to Washington.
Xenochirus triacanthus Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 91, off coast of California, Oregon, and Washington, at *Albatross* stations 2893, 2973, and 3059, in 145, 68, and 77 fathoms.

Genus 1093. ASTEROTHECA Gilbert.
Asterotheca Gilbert, Proc. U. S. Nat. Mus., XLVIII, 1915, 343 (*Xenochirus pentacanthus* Gilbert).

3108. Asterotheca pentacantha (Gilbert).
Coast of Washington.
Xenochirus pentacanthus Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 91, coast of Washington, at *Albatross* station 3076, in 178 fathoms.

3109. Asterotheca alascana (Gilbert).
Puget Sound to Bering Sea; coast of Washington.
Xenochirus alascanus Gilbert, Rept. U. S. Fish Com., XIX, 1893, 438, Unimak Pass, Aleutian Islands, at *Albatross* stations 3216, 3219, and others, in 35 to 138 fathoms.

3110. Asterotheca infraspinata (Gilbert).
Off coast of Washington.
Xeneretmus infraspinatus Gilbert, Proc. Calif. Acad. Sci., 3d ser., III, 1904, 262, pl. 27, off Cape Flattery, Wash., in 77 fathoms.

Genus 1094. XENOPYXIS Gilbert.
Xenopyxis Gilbert, Proc. U. S. Nat. Mus., XLIII, 1915, 345 (*Xeneretmus latifrons* Gilbert).

3111. Xenopyxis latifrons (Gilbert).
North Pacific coast from Oregon to San Diego.
Xenochirus latifrons Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 92, off coast of Oregon and San Diego, at *Albatross* stations 2898, 2935, etc., in 61 and 158 fathoms.

3112. Xenopyxis leiops (Gilbert).
Off southern California.
Xeneretmus leiops Gilbert, Proc. U. S. Nat. Mus., XLVIII, 1915, 348, pl. 17, fig. 10, off Santa Catalina Island.

3113. Xenopyxis ritteri (Gilbert).
Off San Diego, Calif.
Xeneretmus ritteri Gilbert, Proc. U. S. Nat. Mus., XLVIII, 1915, 350, pl. 17, fig. 11, off San Diego, in 176 to 181 fathoms.

Genus 1095. ODONTOPYXIS Lockington.
Odontopyxis Lockington, Proc. U. S. Nat. Mus., II, 1879, 328 (*O. trispinosus* Lockington).

3114. Odontopyxis trispinosus Lockington.
Pacific coast, Alaska to Santa Barbara.
Odontopyxis trispinosus Lockington, Proc. U. S. Nat. Mus., II, 1879, 328, San Francisco.

Genus 1096. BOTHRAGONUS Gill.
Bothragonus Gill, in Jordan and Gilbert, Synopsis, 1883, 728 (*Hypsagonus swanii* Steindachner).

3115. Bothragonus swanii (Steindachner).
Puget Sound.
Hypsagonus swanii Steindachner, Ichth. Beitr., V, July, 1876, 144, pl. 4, Sitzb. Akad. Wiss. Wien, LXXIV, Port Townsend, Wash.

Family 241. ASPIDOPHOROIDIDÆ

Genus 1097. ULCINA Cramer.
Ulcina Cramer, in Jordan and Evermann, Check List, 1895, 449, 1896 (*Aspidophoroides olriki* Lütken).

3116. Ulcina olriki (Lütken).
Arctic Ocean; known from west coast of Greenland, Davis Strait, Kara Sea, Barrants Bay, and Nova Zembla.
Aspidophoroides olriki Lütken, Forelob. Meddel. om Nord Ulkefische Vidensk. Meddel. Naturhist. Foren. Kjøb., 1876, 386, 3 figs., Greenland.

3117. Ulcina güntheri (Bean).
Coast of Alaska.
Aspidophoroides güntheri Bean, Proc. U. S. Nat. Mus., VIII, 1885, 74, Alaska.

Genus 1098. ASPIDOPHOROIDES Lacépède.
Aspidophoroides Lacépède, Hist. Nat. Poiss., III, 1802, 228 (*A. tranquebar* Lacépède=*Cottus monopterygius* Bloch).
Canthirhynchus Swainson, Nat. Hist. Fish., Amphib., etc., II, 1839, 272 (*A. monopterygius* Bloch).

3118. Aspidophoroides monopterygius (Bloch). *Sea poacher.*
Greenland to Cape Cod; accidental to New York.
Cottus monopterygius Bloch, Ichth., II, 1786, 156, pl. 178, figs. 1, 2, Tranquebar; an error.
Cottus indicus Bonnaterre, Tableau Encycl. Meth., 1788, 68, pl. 87, fig. 367, India; after Bloch.
Aspidophoroides tranquebar Lacépède, Hist. Nat. Poiss., III, 1802, 228, Tranquebar.
Aspidophoroides grœnlandicus Valenciennes, in Cuvier, Règne Anim., ed. 2, II, 1829, pl. 21, fig. 3, Greenland.

3119. Aspidophoroides bartoni Gilbert.
Aleutian Islands.
Aspidophoroides bartoni Gilbert, Rept. U. S. Fish Com., XIX, 1893, 434, Aleutian Islands and Bristol Bay, Alaska, at *Albatross* stations 3213, 3223, and many others, in 11½ to 121 fathoms.

Genus 1099. ANOPLAGONUS Gill.
Anoplagonus Gill, Proc. Acad. Nat. Sci. Phila., XIII, 1861, 259 (*Aspidophoroides inermis* Günther).

3120. Anoplagonus inermis (Günther).
Coasts of Alaska, south to Vancouver Island.
Aspidophoroides inermis Günther, Cat., II, 1860, 524, Vancouver Island.

Family 242. CYCLOPTERIDÆ

Genus 1100. CYCLOPTERUS Linnæus.
Cyclopterus Linnæus, Syst. Nat., Ed. X, 1758, 260 (*C. lumpus* Linnæus).
Lumpus Oken, Isis, 1817, 1782; based on "les Lumps" Cuvier (*Cyclopterus lumpus* Linnæus).

3121. Cyclopterus lumpus Linnæus. *Lumpfish; Cock and hen paddle; Sea owl; Paddle; Licorne de mer; Lumpsucker.*
North Atlantic; rocky shores of both coasts, south to Cape Cod and France.
Cyclopterus lumpus Linnæus, Syst. Nat., Ed. X, 1758, 260, Baltic and North Sea.
Cyclopterus minutus Pallas, Spicilegia, Zool., VII, 1769, 12, Atlantic Ocean.
Cyclopterus pavoninus Shaw, Nat. Hist., IX, 1797, pl. 310.
Cyclopterus pyramidatus Shaw, Gen. Zool., V, 1804, 390.
Cyclopterus cœruleus Mitchill, Trans. Lit. Phil. Soc. N. Y., I, 1815, 480, New York Harbor.
Cyclopterus coronatus Couch, Nat. Hist. Cornwall, in Trans. Linn. Soc. London, XIV, 1823, 47, Cornwall.

Lumpus vulgaris McMurtrie, Eng. ed. Cuvier, Anim. King., 1831; after *C. lumpus* Linnæus.
Lumpus anglorum DeKay, N. Y. Fauna: Fishes, IV, 1842, 305, after Linnæus.

Genus 1101. EUMICROTREMUS Gill.
Eumicrotremus Gill, Proc. Acad. Nat. Sci. Phila., XVI, 1864, 190 (*Cyclopterus spinosus* Müller).

3122. Eumicrotremus spinosus (Müller). *Spinous lumpfish.*
North Atlantic and Arctic Oceans, south to Maine and Denmark; and Eastport, Me.
Cyclopterus spinosus Müller, Prodr. Zool. Dan., IX, 1777, Denmark.

3123. Eumicrotremus orbis (Günther).
Aleutian Islands, south to Vancouver Island.
Cyclopterus orbis Günther, Cat., III, 1861, 158, Vancouver Island.

3124. Eumicrotremus phrynoides Burke.
Bering Sea.
Eumicrotremus phrynoides Burke, Bull. U. S. Bur. Fish., XXX, 1910, 69, Petrel Bank, Alaska.

Genus 1102. LETHOTREMUS Gilbert.
Lethotremus Gilbert, Rept. U. S. Fish Com., XIX, 1893, 449 (*L. muticus* Gilbert).

3125. Lethotremus muticus Gilbert.
Aleutian Islands.
Lethotremus muticus Gilbert, Rept. U. S. Fish Com., XIX, 1893, 449, pl. 31, Unimak Pass, Alaska, at *Albatross* stations 3223 and 3258, in 56 to 70 fathoms.

3126. Lethotremus vinolentus Jordan and Starks.
Puget Sound, Wash.
Lethotremus vinolentus Jordan and Starks, Proc. Calif. Acad. Sci., 2d ser., V, 1895, 827, pl. 94, Puget Sound, near Seattle, Wash.

Genus 1103. CYCLOPTEROIDES Garman.
Cyclopteroides Garman, Mem. Mus. Comp. Zool., XIV, 1892, 37 (*C. gyrinops* Garman).

3127. Cyclopteroides gyrinops Garman.
Pribilof Islands, Alaska.
Cyclopteroides gyrinops Garman, Mem. Mus. Comp. Zool., XIV, 1892, 37, St. Paul Island.

Family 243. LIPAROPIDÆ

Genus 1104. APTOCYCLUS De la Pylaie.
Aptocyclus De la Pylaie, Congrès Scientifique Potiers, 1834, 529 (*Cyclopterus ventricosus* Pallas; misprinted *Cyclogasterus*).
Cyclopterichthys Steindachner, Ichth. Beitr., X, 1881, 14, 192 (*C. glaber* Steindachner = *Cyclopterus ventricosus* Pallas).

3128. Aptocyclus ventricosus (Pallas).
Kamchatka; Sea of Okhotsk.
Cyclopterus ventricosus Pallas, Spicilegia Zool., VII, 1770, 15, t. 2, no locality given, somewhere about Kamchatka.
Cyclopterichthys glaber Steindachner, Ichth. Beitr., X, 1881, 14, pl. 8, Sea of Okhotsk.

Genus 1105. LIPAROPS Garman.
Liparops Garman, Mem. Mus. Comp. Zool., XV, 1892, 42 (*Cyclopterus stelleri* Pallas).

3129. Liparops stelleri (Pallas).
Peter and Paul Harbor, Kamchatka.
Cyclopterus stelleri Pallas, Zoogr. Rosso-Asiatica, III, 1811, 73, Peter and Paul Harbor, Kamchatka.

Family 244. LIPARIDÆ. Sea snails

Genus 1106. POLYPERA Burke.
Polypera Burke, Proc. U. S. Nat. Mus., XLIII, 1913, 567 (*Liparis greeni* Jordan and Starks).

3130. **Polypera greeni** (Jordan and Starks).
Puget Sound at Victoria, British Columbia.
Neoliparis greeni Jordan and Starks, Proc. Calif. Acad. Sci., 2d ser., V, 1895, 829, pl. 96, figs. 2 and 3, Victoria, British Columbia.

Genus 1107. NEOLIPARIS Steindachner.
Neoliparis Steindachner, Ichth. Beitr., III, 1875, 54 (*Liparis mucosus* Ayres).

3131. **Neoliparis atlanticus** Jordan and Evermann. *Sea snail; Lumpsucker.*
Common along rocky shores from Newfoundland to Cape Cod.
Neoliparis atlanticus Jordan and Evermann, Fishes North and Mid. Amer., 1898, 2107, Godbout, Quebec.
Liparis montagui of authors, not of Donovan, the European cognate.

3132. **Neoliparis mucosus** (Ayres).
Pacific coast from Puget Sound to San Francisco; rare.
Liparis mucosus Ayres, Proc. Calif. Acad. Nat. Sci., I, 1855, 22, San Francisco.
Neoliparis floræ Jordan and Starks, Proc. Calif. Acad. Sci., 2d. ser., V, 1895, 830, pl. 96, fig. 1, Waadda Island, Straits of Juan de Fuca.

3133. **Neoliparis fissuratus** Starks.
Puget Sound.
Neoliparis fissuratus Starks, Proc. Calif. Acad. Sci., 2d ser., VI, 1896, 560, Port Ludlow, Puget Sound.

3134. **Neoliparis rutteri** Gilbert and Snyder.
Kodiak Island, Alaska.
Neoliparis rutteri Gilbert and Snyder, in Jordan and Evermann, Fishes North and Mid. Amer., 1898, 2108, Ugah Bay, Kodiak Island.

3135. **Neoliparis bristolensis** (Burke).
Bristol Bay, Bering Sea.
Cyclogaster bristolensis Burke, Proc. U. S. Nat. Mus., XLIII, 1913, 567, Bristol Bay in about 20 fathoms.

3136. **Neoliparis callyodon** (Pallas).
Coasts of Alaska, north to Kamchatka and Bering Sea; recorded from St. Paul, Kamchatka, Plover Bay, Siberia, Unalaska, and Kodiak.
Cyclopterus callyodon Pallas, Zoogr. Rosso-Asiat., III, 1811, 75, Kamchatka and Aleutian Islands.

3137. **Neoliparis grebnitzkii** Schmidt.
Commander Islands.
Neoliparis grebnitzkii Schmidt, Fauna Mare Orientale, 1875, 61, Bering Island.

3138. **Neoliparis beringianus** (Gilbert and Burke).
Bering Island.
Cyclogaster (*Neoliparis*) *beringianus* Gilbert and Burke, Bull. U. S. Bur. Fish., XXX, 1910, 72; Nikolski, Bering Island.

3139. **Neoliparis micraspidophorus** (Burke).
Bering Island.
Cyclogaster (*Neoliparis*) *micraspidophorus* Burke, Bull. U. S. Bur. Fish., XXX, 1910, 71, Nikolski, Bering Island.

Genus 1108. LIPARIS Scopoli.
Cyclogaster [77] Gronow, Act. Helvet., IV, 1760, 265 (*Cyclopterus liparis* Linnæus); nonbinomial.
Cyclogasterus Gronow, Zoophyl., No. 198, 1763; nonbinomial.
Liparis (Artedi) Scopoli, Introd. Hist. Nat., 1777, 453 (*Cyclopterus liparis* Linnæus).
Cyclogaster Gronow, Cat. Fishes, ed. Gray, 1854, 40 (*Cyclopterus liparis* L.).

[77] We do not find that Gronow used the name *Cyclogaster* as binomial. Although later than Linnæus (1758), he had not then adopted, most likely had not heard of, the Linnæan system.

3140. Liparis liparis (Linnæus). *Sea snail; Striped sea snail.*
North Atlantic, on both shores, south to Connecticut and France, common north; very variable, a dozen color varieties having received names.
Cyclopterus liparis Linnæus, Syst. Nat., Ed. XII, I, 1766, 414, northern ocean; after Artedi and Gronow.
Cyclopterus lineatus Lepechin, Nov. Comm. Petropol., XVIII, 1774, 520, White Sea.
Cyclopterus liparis minor Fabricus, Fauna Grœnlandica, 1780, 135, Greenland.
Cyclopterus musculus Lacépède, Hist. Nat. Poiss., IV, 1802, 683, near Havre.

3141. Liparis osborni Townsend and Nichols.
Off southern California in 440 fathoms.
Liparis osborni Townsend and Nichols, Bull. Amer. Mus. Nat. Hist., LII, 1925, 14, fig. 4, off southern California.

3142. Liparis cyclopus Günther.
Aleutian Islands to Puget Sound.
Liparis cyclopus Günther, Cat., III, 1861, 162, Esquimault Harbor, Vancouver Island.

3143. Liparis megacephalus (Burke).
Southeastern Bering Sea.
Cyclogaster megacephalus Burke, Proc. U. S. Nat. Mus., XLIII, 1913, 569, southeastern Bering Sea at 37 fathoms.

3144. Liparis fucensis Gilbert.
Straits of Fuca.
Liparis fucensis Gilbert, Proc. Calif. Acad. Sci., 2d ser., V, 1895, 837, and Rept. U. S. Fish Com., XIX, 1893, 447, Port Angeles, Straits of Juan de Fuca.

Genus 1109. CARELIPARIS Garman.
Careliparis Garman, Mem. Mus. Comp. Zool., XIV, 1892, 62 (*Liparis agassizii* Putnam).

3145. Careliparis tunicatus (Reinhardt).
Greenland.
Liparis tunicata Reinhardt, Overs. Kong. Danske Vidensk. Selsk., VI, CXI, 1836, Greenland; after Fabricius.
Liparis fabricii Krøyer, Naturh. Tidsskr., II, 1847, 274, Greenland; D. XIII, 27; A. II, 30; P. 34; C. 9; Vert. 46.
Liparis arctica Gill, Proc. Acad. Nat. Sci. Phila., XVI, 1864, 191, Port Foulke, Greenland.

3146. Careliparis agassizii (Putnam)
Bering Sea; Sakhalin Island.
Liparis agassizii Putnam, Proc. Amer. Assoc. Adv. Sci., 1874, 339, Sakhalin Channel of Tartary.
Liparis gibbus Bean, Proc. U. S. Nat. Mus., IV, 1881, 148, Unalaska, St. Paul Island, Indian Point, Cape Chaplin, and Plover Bay, Siberia.

3147. Careliparis herschelinus (Scofield).
Arctic Ocean.
Liparis herschelinus Scofield, in Jordan and Evermann, Fishes North and Mid Amer., 1898, 2123, Herschel Island, Arctic Ocean, near mouth of the Mackenzie.

3148. Careliparis dennyi (Jordan and Starks).
North Pacific, from Aleutian Islands to Puget Sound.
Liparis dennyi Jordan and Starks, Proc. Calif. Acad. Sci., 2d ser., V, 1895, 835, pl. 98, Admiralty Inlet near Seattle.

Genus 1110. LYOLIPARIS Jordan and Evermann.
Lyoliparis Jordan and Evermann, Check List, 1895, 451 (*Liparis pulchellus* Ayres).

3149. Lyoliparis pulchellus (Ayres).
Point Reyes, Calif.; northern Pacific, Alaska to Monterey.
Liparis pulchellus Ayres, Proc. Calif. Acad. Nat. Sci., I, 1855, 22, San Francisco.

Genus 1111. ACTINOCHIR Gill.
Actinochir Gill, Proc. Acad. Nat. Sci. Phila., XVI, 1864, 190, 193 (*A. major* Gill).

3150. Actinochir major Gill.
Coasts of Greenland.
Actinochir major Gill, Proc. Acad. Nat. Sci. Phila., XVI, 1864, 193, Greenland.
Cyclopterus liparis major Fabricius, Fauna Grœnland., 1780, 136, Greenland; *major* is here simply an adjective.

Genus 1112. CRYSTALLICHTHYS Jordan and Gilbert.
Crystallichthys Jordan and Gilbert, in Jordan and Evermann, Fishes North and Mid. Amer., 1898, 2864 (*C. mirabilis* Jordan and Gilbert).

3151. Crystallichthys mirabilis Jordan and Gilbert.
Bering Sea.
Crystallichthys mirabilis Jordan and Gilbert, in Jordan and Evermann, Fishes North and Mid. Amer., 1898, 2865, Provostmaya, Kamchatka.

3152. Crystallichthys cyclospilus Gilbert and Burke.
Bering Sea, Petrel Bank, St. Paul Island.
Crystallichthys cyclospilus Gilbert and Burke, Bull. U. S. Bur. Fish., XXX, 1910, 74, Petrel Bank.

3153. Crystallichthys cyclostigma (Gilbert).
Bristol Bay, Alaska.
Liparis cyclostigma Gilbert, Rept. U. S. Fish Com., XIX, 1893, 446, Bristol Bay, Alaska, at *Albatross* station 3252, in 29½ fathoms.

Genus 1113. BATHYPHASMA Gilbert.
Bathyphasma Gilbert, Rept. U. S. Fish Com., XIX, 1893, 447 (*B. ovigerum* Gilbert).

3154. Bathyphasma ovigerum Gilbert.
Off Queen Charlotte Island, British Columbia.
Bathyphasma ovigerum Gilbert, Rept. U. S. Fish Com., XIX, 1893, 448, Queen Charlotte Islands, at *Albatross* station 3342 in 1,588 fathoms.

Genus 1114. CAREMITRA Jordan and Evermann.
Caremitra Jordan and Evermann, Check List, 1895, 452 (*Careproctus simus* Gilbert).

3155. Caremitra sima (Gilbert).
Off Unalaska Island.
Careproctus simus Gilbert, Rept. U. S. Fish Com., XIX, 1893, 444, off Unalaska, at *Albatross* station 3331 in 350 fathoms.

Genus 1115. LIPARISCUS Gilbert.
Lipariscus Gilbert, Proc. U. S. Nat. Mus., XLVIII, 1915, 358 (*L nanus* Gilbert).

3156. Lipariscus nanus Gilbert.
Monterey Bay, Calif.
Lipariscus nanus Gilbert, Proc. U. S. Nat. Mus., XLVIII, 1915, 358, pl. 19, Monterey Bay in 32 to 309 fathoms.

Genus 1116. EURYMEN Gilbert and Burke.
Eurymen Gilbert and Burke, Bull. U. S. Bur. Fish., XXX, 1910, 64 (*E. gyrinus* Gilbert and Burke).

3157. Eurymen gyrinus Gilbert and Burke.
Bering Sea.
Eurymen gyrinus Gilbert and Burke, Bull. U. S. Bur. Fish., XXX, 1910, 64, Avatcha Bay, east coast of Kamchatka.

Genus 1117. ACANTHOLIPARIS Gilbert and Burke.
Acantholiparis Gilbert and Burke, Bull. U. S. Bur. Fish., XXX, 1910, 83 (*A. opercularis* Gilbert and Burke).

3158. Acantholiparis opercularis Gilbert and Burke.
East coast of Kamchatka.
Acantholiparis opercularis Gilbert and Burke, Bull. U. S. Bur. Fish., XXX, 1910, 83, Starichkof Island.

Genus 1118. NECTOLIPARIS Gilbert and Burke.
Nectoliparis Gilbert and Burke, Bull. U. S. Bur. Fish., XXX, 1910, 82 (*N. pelagicus* Gilbert and Burke).

3159. Nectoliparis pelagicus Gilbert and Burke.
Bering Sea to Hokkaido, Japan; pelagic.
Nectoliparis pelagicus Gilbert and Burke, Bull. U. S. Bur. Fish., XXX, 1910, 82, fig. 27, Bering Sea.

Genus 1119. ELASSODISCUS Gilbert and Burke.
Elassodiscus Gilbert and Burke, Bull. U. S. Bur. Fish., XXX, 1910, 81 (*E. tremebundus* Gilbert and Burke).

3160. Elassodiscus tremebundus Gilbert and Burke.
Coast of Kamchatka.
Elassodiscus tremebundus Gilbert and Burke, Bull. U. S. Bur. Fish., XXX, 1910, 81, Avatcha Bay.

Genus 1120. CAREPROCTUS Krøyer.
Careproctus Krøyer, Naturh. Tidskr., I, 1862, 253-257 (*Liparis reinhardi* Krøyer).
Allochir Jordan and Evermann, Check List, 1895, 452 (*Careproctus melanurus* Gilbert).
Allurus Jordan and Evermann, loc. cit., 452 (*Careproctus ectenes* Gilbert).
Alinectes Jordan and Evermann, Fishes North and Mid. Amer., 1898, 2866 (*Careproctes ectenes* Gilbert, substitute for *Allurus*, preoccupied).

Subgenus CAREPROCTUS Krøyer.

3161. Careproctus reinhardi (Krøyer).
Greenland, Jan Mayen, and Beeren Island.
Liparis reinhardi Krøyer, Naturh. Tidskr., I, 1862, 252, Greenland.

3162. Careproctus colletti Gilbert.
South of Alaska Peninsula to Sea of Okhotsk.
Careproctus colletti Gilbert, Rept. U. S. Fish Com., XIX, 1893, 442, south of Alaska Peninsula, at *Albatross* station 3338 in 625 fathoms.

3163. Careproctus phasma Gilbert.
Bristol Bay, Alaska.
Careproctus phasma Gilbert, Rept. U. S. Fish Com., XIX, 1893, 443, Bristol Bay, Alaska, at *Albatross* stations 3254 and 3256 in 46 and 49 fathoms.

3164. Careproctus spectrum Bean.
Between Unga and Nagai Islands, Alaska.
Careproctus spectrum Bean, Proc. U. S. Nat. Mus., XIII, 1890, 40, between Unga and Nagai Islands, 160° 18′ W., 55° 10′ N., at *Albatross* station 2848 in 110 fathoms.

3165. Careproctus ranulus (Goode and Bean).
Off Halifax Harbor.
Liparis ranula Goode and Bean, Proc. U. S. Nat. Mus., II, 1879, 46, Halifax.

3166. Careproctus gelatinosus (Pallas).
Peter and Paul Harbor, Kamchatka.
Cyclopterus gelatinosus Pallas, Spicilegia, VII, 1769, 19, Peter and Paul. Harbor, Kamchatka.

3167. Careproctus ostentum Gilbert.
Unalaska Island.
Careproctus ostentum Gilbert, Rept. U. S. Fish Com., XIX, 1893, 444, north of Unalaska Island, at *Albatross* stations 3324 and 3331 in 109 and 350 fathoms.

3168. Careproctus furcellus Gilbert and Burke.
Bering Sea.
Careproctus furcellus Gilbert and Burke, Bull. U. S. Bur. Fish., XXX, 1910, 80, between Petrel Bank and Agattu Island, Bering Sea.

3169. Careproctus gilberti Burke.
Southeastern Alaska and British Columbia.
Careproctus gilberti Burke, Proc. U. S. Nat. Mus., XLIII, 1913, 570, Kodiak Island and neighborhood in 102 to 482 fathoms.

3170. **Careproctus candidus** Gilbert and Burke.
Attu Island, Aleutian Chain.
Careproctus candidus Gilbert and Burke, Bull. U. S. Bur. Fish., XXX, 1910, 77, fig. 22, East Cape, Attu Island, Alaska.

3171. **Careproctus mollis** Gilbert and Burke.
Attu Island, Aleutian Chain.
Careproctus mollis Gilbert and Burke, Bull. U. S. Bur. Fish., XXX, 1910, 77, fig. 21, East Cape, Attu Island, Alaska.

3172. **Careproctus bowersianus** Gilbert and Burke.
Bering Sea.
Careproctus bowersianus Gilbert and Burke, Bull. U. S. Bur. Fish., XXX, 1910, 76, fig. 20, Bowers Bank, Bering Sea.

3173. **Careproctus opisthotremus** Gilbert and Burke.
Bering Sea.
Careproctus opisthotremus Gilbert and Burke, Bull. U. S. Bur. Fish., XXX, 1910, 78, fig. 23, Petrel Bank, between Attu and Agattu Islands, Alaska.

3174. **Careproctus longifilis** Garman.
Off Galapagos Islands and Panama in deep water.
Careproctus longifilis Garman, Mem. Mus. Comp. Zool., XIV, 1892, 9, southwest Panama.

3175. **Careproctus longipinnis** Burke.
Arctic Ocean; Faroe Islands to Beeren Island.
Careproctus longipinnis Burke, Ann. Mag. Nat. Hist., 8th ser., IX, 1912, 510, Ingolf station 139, north of the Faroe Islands, depth 702 Danish fathoms.

3176. **Careproctus melanurus** Gilbert.
Off coast of California and Oregon.
Careproctus melanurus Gilbert, Proc. U. S. Nat. Mus., XIV, 1891, 560, off coasts of California and Oregon, at *Albatross* stations 2840, 2891, and others in 178 to 339 fathoms.

3177. **Careproctus attenuatus** Gilbert and Burke.
Bering Sea.
Careproctus attenuatus Gilbert and Burke, Bull. U. S. Bur. Fish., XXX, 1910, 79, Petrel Bank and Agattu Island, Alaska in 482 fathoms.

Subgenus ALLINECTES Jordan and Evermann.

3178. **Careproctus ectenes** Gilbert.
Unalaska Island.
Careproctus ectenes Gilbert, Rept. U. S. Fish Com., XIX, 1893, 442, north of Unalaska, at *Albatross* station 3331 in 350 fathoms.

Genus 1121. PROGNURUS Jordan and Evermann.
Prognurus Jordan and Evermann, Fishes North and Mid. Amer., 1896, 2866 (*P. cypselurus* Jordan and Gilbert).

3179. **Prognurus cypselurus** Jordan and Gilbert.
Bering Sea and north Pacific.
Prognurus cypselurus Jordan and Gilbert, in Jordan and Evermann, Fishes North and Mid. Amer., 1898, 2866, Bogoslof Island, Bering Sea.

Genus 1122. GYRINICHTHYS Gilbert.
Gyrinichthys Gilbert, Rept. U. S. Fish Com., XIX, 1893, 444 (*G. minytremus* Gilbert).

3180. **Gyrinichthys minytremus** Gilbert.
Off Unalaska Island, Alaska.
Gyrinichthys minytremus Gilbert, Rept. U. S. Fish Com., XIX, 1893, 444, north of Unalaska at *Albatross* station 3331 in 350 fathoms.

Genus 1123. PARALIPARIS [78] **Collett.**

Paraliparis Collett, Vid. Selsk. Forsk. Christiania, No. 14, 1878, 32 (*Paraliparis bathybii* Collett); species allied to *P. cephalus* with narrow gill openings.

Amitra Goode, Proc. U. S. Nat. Mus., III, 1880, 478 (*A. liparina* Goode).

Monomitra Goode, loc. cit., VI, 1883, 109 (*Amitra liparina* Goode); substitute for *Amitra* regarded as preoccupied by *Amitrus* Schönherr, a beetle.

Hilgendorfia Goode and Bean, Oceanic Ichthyol., 1895, 280 (*Paraliparis membranaceus* Günther).

Amitrichthys Jordan and Evermann, Check List, 1895. 453 (*Paraliparis cephalus* Gilbert).

3181. **Paraliparis holomelas** Gilbert.
North of Unalaska Island, Alaska.
Paraliparis holomelas Gilbert, Rept. U. S. Fish Com., XIX, 1893, 441, north of Unalaska, at *Albatross* stations 3308 and 3332 in 406 and 1,625 fathoms.

3182. **Paraliparis cephalus** Gilbert.
Alaska to California.
Paraliparis cephalus Gilbert, Proc. U. S. Nat. Mus., XIV, 1891, 561, off California and Oregon, at *Albatross* station 2919 in 984 fathoms.

3183. **Paraliparis mento** Gilbert.
Coast of Oregon.
Paraliparis mento Gilbert, Proc. U. S. Nat. Mus., XIV, 1891, 562, off coast of Oregon, at *Albatross* station 3071 in 685 fathoms.

3184. **Paraliparis albescens** Gilbert.
Off Monterey Bay, Calif.
Paraliparis albescens Gilbert, Proc. U. S. Nat. Mus., XLVIII, 355, pl. 18, fig. 13, off Monterey Bay.

3185. **Paraliparis caudatus** Gilbert.
Monterey Bay, Calif.
Paraliparis caudatus Gilbert, Proc. U. S. Nat. Mus., XLVIII, 1915, 356, pl. 18, fig. 14, Monterey Bay.

3186. **Paraliparis deani** Burke.
Bering Sea; once taken in Monterey Bay.
Paraliparis deani Burke, Proc. U. S. Nat. Mus., XLIII, 1912, 571, Stevens Passage, Alaska.

3187. **Paraliparis dactylosus** Gilbert.
Off Santa Cruz, Calif.
Paraliparis dactylosus Gilbert, Rept. U. S. Fish Com., XIX, 1893, 469, pl. 34, fig. 2, off Santa Cruz, Calif., at *Albatross* station 3112, in 296 fathoms.

3188. **Paraliparis grandiceps** Garman.
Off Lower California in deep water.
Paraliparis grandiceps Garman, Mem. Mus. Comp. Zool., XXIV, 1899, off Lower California.

3189. **Paraliparis rosaceus** Gilbert.
Pacific coast of Mexico.
Paraliparis rosaceus Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 93, Pacific coast of Mexico, at *Albatross* stations 2898, 2935, and others in 61 to 158 fathoms.

3190. **Paraliparis fimbriatus** Garman.
Off Colombia and Galapagos Islands in deep water.
Paraliparis fimbriatus Garman, in Mem. Mus. Comp. Zool., XIV, 1892, 9, southwest of Panama.

3191. **Paraliparis attenuatus** Garman.
Off Bay of Panama in deep water.
Paraliparis attenuatus Garman, Deep Sea Fishes, Mem. Mus. Comp. Zool., XXIV, 1899, 118, pl. XXVII, off Bay of Panama.

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[78] This group of degenerate liparids is excessively abundant in all northern sea bottoms at considerable depths. It should, no doubt, be subdivided, but the present knowledge of the group hardly permits this.

3192. **Paraliparis angustifrons** Garman.
Off Bay of Panama in deep water.
Paraliparis angustifrons Garman, Mem. Mus. Comp. Zool. XXIV, 1899, 119, Pl. XXVII, *Albatross* station 3394, off Bay of Panama.

3193. **Paraliparis latifrons** Garman.
Off Bay of Panama in deep water.
Paraliparis latifrons Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 120, Pl. XXVII, off Bay of Panama.

3194. **Paraliparis garmani** Burke
Off coast of New England.
Paraliparis garmani Burke, Proc. U. S. Nat. Mus., XLIII, 1912, 572, off coast of New England in 328 to 542 fathoms.

3195. **Paraliparis copei** Goode and Bean.
Gulf Stream.
Paraliparis copei Goode and Bean, Oceanic Ichth., 1896, 279, fig. 353, Gulf Stream, at *Albatross* station 2232, 39° 12′ 17″ N., 72° 9′ 30″ W., in 520 fathoms.

Subgenus AMITRA Goode and Bean.

3196. **Paraliparis liparinus** (Goode).
Atlantic Ocean, off Rhode Island.
Amitra liparina Goode, Proc. U. S. Nat. Mus., III, 1880, 478, off Rhode Island.

Subgenus HILGENDORFIA Goode and Bean.

3197. **Paraliparis ulochir** Gilbert.
Gulf of California to Unalaska.
Paraliparis ulochir Gilbert, Rept. U. S. Fish Com., XIX, 1893, 441, Gulf of California, at *Albatross* station 3010 in 1005 fathoms.

Genus 1124. RHINOLIPARIS Gilbert.
Rhinoliparis Gilbert, Rept. U. S. Fish Com., XIX, 1893, 445 (*R. barbulifer* Gilbert).

3198. **Rhinoliparis barbulifer** Gilbert.
Bering Sea.
Rhinoliparis barbulifer Gilbert, Rept. U. S. Fish Com., XIX, 1893, 445, north of Unalaska, Alaska, at *Albatross* stations 3237, 3325, and others, in 225 to 576 fathoms.

3199. **Rhinoliparis attenuatus** Burke.
Bering Sea.
Rhinoliparis attenuatus Burke, Proc. U. S. Nat. Mus., XLIII, 1912, 573, Bering Sea in 576 fathoms.

Family 245. PERISTEDIIDÆ

Genus 1125. PERISTEDION Lacépède.
Peristedion Lacépède, Hist. Nat. Poiss., III, 1802, 368 (*P. malarmat* Lacépède = *Trigla cataphracta* L.).
Peristethus Kaup, amended spelling.

3200. **Peristedion brevirostre** (Günther).
Caribbean Sea.
Peristethus brevirostre Günther, Cat., II, 1860, 217, West Indies.

3201. **Peristedion miniatum** Goode.
Gulf Stream.
Peristedion miniatum Goode, Proc. U. S. Nat. Mus., III, 1880, 349, Gulf Stream, off Rhode Island

3202. **Peristedion longispathum** (Goode and Bean).
West Indies, off Cuba and Barbados.
Peristedium longispatha Goode and Bean, Bull. Mus. Comp. Zool., XII, 1886, No. 5, 166, off Santa Cruz Island, West Indies, and off Barbados.

3203. **Peristedion gracile** Goode and Bean.
Gulf of Mexico and Porto Rico.
Peristedion gracile Goode and Bean, Oceanic Ichth., 1896, 473, Gulf of Mexico.

3204. Peristedion platycephalum (Goode and Bean).
West Indies; Barbados.
Peristedium platycephalum Goode and Bean, Bull. Mus. Comp. Zool., XII, 1886, No. 5, 167, off Barbados.

3205. Peristedion barbiger (Garman).
Off Bay of Panama in deep water.
Peristedium barbiger Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 110, off Bay of Panama.

3206. Peristedion crustosum (Garman).
Off Bay of Panama in deep water.
Peristedium crustosum Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 112, Pl. A, off Bay of Panama.

Genus 1126. VULSICULUS Jordan and Evermann.
Vulsiculus Jordan and Evermann, Check List, 1895, 489 (*Peristedion imberbe* Poey).

3207. Vulsiculus imberbis (Poey).
Gulf of Mexico.
Pterystedion imberbe Poey, Memorias, II, 1861, 367, Cuba; apparently never described.
Peristedion micronemus Poey, Ann. Lyc. Nat. Hist. N. Y., IX, 1870, 321, Cuba; substitute name on discovery of the minute barbels.

Family 246. TRIGLIDÆ

Genus 1127. COLOTRIGLA Gill.
Colotrigla Gill, Proc. U. S. Nat. Mus., XXVII, 1905, 240 (*Prionotus stearnsi* Jordan and Swain).

3208. Colotrigla stearnsi (Jordan and Swain).
Gulf of Mexico.
Prionotus stearnsi Jordan and Swain, Proc. U. S. Nat. Mus., VII, 1884, 541, Pensacola, Fla.

Genus 1128. GURNARDUS Jordan and Evermann.
Gurnardus Jordan and Evermann, Fishes North and Mid. Amer., 1898, 2152 (*Prionotus gymnostethus* Gilbert).

3209. Gurnardus birostratus (Richardson).
Gulf of Fonseca, Pacific coast of Central America.
Prionotus birostratus Richardson, Voy. *Sulphur*, Ichth., pt. II, 1845, 81, April, Gulf of Fonseca, Pacific coast of Central America.

3210. Gurnardus gymnostethus (Gilbert).
Gulf of California.
Prionotus gymnostethus Gilbert, Proc. U. S. Nat. Mus., XIV, 1891, 559, Gulf of California, in shallow water.

3211. Gurnardus xenisma (Jordan and Bollman).
Pacific Ocean, off coast of Colombia.
Prionotus xenisma Jordan and Bollman, Proc. U. S. Nat. Mus., XII, 1889, 169, Pacific coast of Colombia.

3212. Gurnardus loxias Jordan.
Pacific coast of Central America.
Prionotus loxias Jordan, Proc. U. S. Nat. Mus., XIX, 1896, 452, Bay of Panama.

3213. Gurnardus ruscarius (Gilbert and Starks).
Panama Bay; Mazatlan; Magdalena Bay.
Prionotus ruscarius Gilbert and Starks, Mem. Calif. Acad. Sci., IV, 1904, 165, Pl. XXVII, Panama Bay.

Genus 1129. MERULINUS Jordan and Evermann.
Merulinus Jordan and Evermann, Fishes North and Mid. Amer., 1898, 2148 (*Trigla carolina* Linnæus).

3214. Merulinus carolinus (Linnæus). *Common gurnard; Red-winged sea robin; Pigfish; Rock pigfish; Flyingfish; Spinous gurnard; Small-scaled sea robin; Web-fingered sea robin; Carolina robin; Carolina sea robin.*
Cape Ann to South Carolina, chiefly northward.
Trigla carolina Linnæus, Mantissa, II, 1771, 528, Carolina.
Trigla palmipes Mitchill, Trans. Lit. Phil. Soc. New York, 1815, 431, pl. 4, fig. 5, New York Harbor.
Prionotus pileatus Storer, Proc. Bost. Soc. Nat. Hist., II, 1845, 77, Massachusetts Bay.

3215. Merulinus scitulus (Jordan and Gilbert).
South Atlantic coast of United States, Beaufort to St. Augustine.
Prionotus scitulus Jordan and Gilbert, Proc. U. S. Nat. Mus., V, 1882, 288, Beaufort, N. C.

3216. Merulinus roseus (Jordan and Evermann).
Gulf of Mexico; Tampa Bay; Pensacola; Tortugas.
Prionotus roseus Jordan and Evermann, Proc. U. S. Nat. Mus., IX, 1886, 470, off Tampa Bay, Fla.

3217. Merulinus salmonicolor Fowler.
New River, Dade County, Fla.
Merulinus salmonicolor Fowler, Proc. Acad. Nat. Sci. Phila., LV, 1903, 333, New River, Fla.

Genus 1130. PRIONOTUS Lacépède. *Gurnards; Sea robins.*
Prionotus Lacépède, Hist. Nat. Poiss., III, 1802, 337 (*Trigla evolans* Linnæus).
Ornichthys Swainson, Classn. Fishes, Amphib., etc., 1839, 262 (*Trigla punctata* Bloch).
Chriolax Jordan and Gilbert, Proc. U. S. Nat. Mus., I, 1878, 374 (*Trigla evolans* Linnæus).

3218. Prionotus evolans (Linnæus). *Southern striped gurnard; Lined sea robin; Flyingfish; Striped sea robin.*
South Atlantic coast of United States.
Trigla evolans Linnæus, Syst. Nat., Ed. XII, 1766, 498, Carolinas.
Prionotus sarritor Jordan and Gilbert, Proc. U. S. Nat. Mus., V, 1882, 615, Charleston; Beaufort, N. C.

3219. Prionotus strigatus (Cuvier). *Northern striped gurnard; Brown-winged sea robin; Sea robin; Sand pigfish; Pigfish; Flyingfish; Red-winged gurnard.*
Atlantic coast of northern States, Cape Cod to Virginia; replacing *P. evolans* northward.
Trigla strigata Cuvier, Règne Anim., ed. 2, II, 1829, 161, New York; after *lineata* of Mitchill.

3220. Prionotus rubio Jordan. *Rubio volador.*
West Indies.
Prionotus rubio Jordan, Proc. U. S. Nat. Mus., IX, 1886, 50, Habana.
Rubio volador Parra, Descr. Dif. Piezas de Hist. Nat., 1787, 98, lam. 38, Habana.

3221. Prionotus punctatus Bloch. *Spotted sea robin; Rubio volador.*
West Indies and Caribbean Sea; Cameron, La.
Prionotus punctatus Bloch, Ichth., 1793, pl. 353, Martinique; on a drawing by Plumier.

3222. Prionotus ophryas Jordan and Swain.
Gulf of Mexico; Snapper Banks off Pensacola, Fla.
Prionotus ophryas Jordan and Swain, Proc. U. S. Nat. Mus., VII, 1884, 542, Snapper Banks off Pensacola, Fla.

3223. Prionotus pectoralis (Nichols and Breder).
Coast of Texas.
Prionotus miles pectoralis Nichols and Breder, Proc. Biol. Soc. Wash., XXXVII, 1924, 22, Gulf of Mexico, off Aransas Pass, Tex.

3224. Prionotus stephanophrys Lockington.
Deep water off San Francisco, Point Reyes, and Monterey; very rare.
Prionotus stephanophrys Lockington, Proc. U. S. Nat. Mus., III, 1880, 529, Point Reyes, near San Francisco.

3225. **Prionotus quiescens** Jordan and Bollman.
Pacific Ocean off the coast of Colombia; Gulf of California.
Prionotus quiescens Jordan and Bollman, Proc. U. S. Nat. Mus., XII, 1889, 166, off Pacific coast of Colombia.

3226. **Prionotus frontalis** Garman.
Off Bay of Panama in deep water.
Prionotus frontalis Garman, Deep Sea Fishes, in Mem. Mus. Comp. Zool., XXIV, 1899, 108, off Bay of Panama.

3227. **Prionotus albirostris** Jordan and Bollman.
Pacific Ocean off the coast of tropical America.
Prionotus albirostris Jordan and Bollman, Proc. U. S. Nat. Mus., XII, 1889, 168, Pacific Ocean off the coast of Colombia.

3228. **Prionotus beanii** Goode.
Off Trinidad.
Prionotus beanii Goode, in Goode and Bean, Oceanic Ichth., 1896, 468, off Trinidad.

3229. **Prionotus tribulus** Cuvier and Valenciennes. *Big-headed gurnard; Sea robin.*
South Atlantic coast from Long Island to Brazos, Tex.
Prionotus tribulus Cuvier and Valenciennes, Hist. Nat. Poiss., IV, 1829, 72 (98), pl. 74, New York; Carolinas.
?*Trigla carolina* Bloch, Ichth., 1793, 352, Carolinas; not of Linnæus.

3230. **Prionotus horrens** Richardson.
Pacific coast of tropical America.
Prionotus horrens Richardson, Voy. *Sulphur*, Ichth., 1843, 79, pl. 42, figs. 1–3, Gulf of Fonseca.

Genus 1131. FISSALA Gill.
Fissala Gill, Proc. U. S. Nat. Mus., XXVIII, 1905, 342 (*Prionotus alatus* Goode and Bean).

3231. **Fissala alata** (Goode and Bean).
Off Charleston, S. C.
Prionotus alatus Goode and Bean, Bull. Mus. Comp. Zool., X, 1883, 210, deep sea off Charleston, S. C.

Genus 1132. BELLATOR Jordan and Evermann.
Bellator Jordan and Evermann, Check List, 1895, 488 (*Prionotus militaris* Goode and Bean).

3232. **Bellator militaris** (Goode and Bean).
Off Cape Catoche, Yucatan; Gulf of Mexico.
Prionotus militaris Goode and Bean, Oceanic Ichth., 1896, 464, figs. 380 and 384, off Cape Catoche, Yucatan.

3233. **Bellator egretta** (Goode and Bean).
Barbados.
Prionatus egretta Goode and Bean, Oceanic Ichth., 1896, 465, fig. 381, off Barbados, at *Blake* station 64.

Family 247. DACTYLOPTERIDÆ

Genus 1133. DACTYLOPTERUS Lacépède. *Flying gurnards.*
Cephalacanthus Lacépède, Hist. Nat. Poiss., III, 1802, 323 (*C. spinarella* Lacépède); young examples.
Dactylopterus Lacépède, loc. cit., 325 (*D. pirapeda* Lacépède = *Trigla volitans* Linnæus); adult form.
Cephacandia Rafinesque, Analyse Nature, 1815, 85; substitute for *Cephalacanthus;* too long a name.
Gonocephalus Gronow, Cat. Fish., ed. Gray, 1854, 106 (*G. macrocephalus* Gray = *Trigla volitans* Linnæus).

3234. Dactylopterus volitans (Linnæus). *Flying robin; Batfish; Volador; Flying gurnard; Murcielago; Civetta de mer.*
Atlantic Ocean on both coasts; also Gulf of Mexico.
Trigla volitans Linnæus, Syst. Nat., Ed. X, I, 1758, 302; after Artedi.
Hirundo Catesby, Nat. Hist. Carol., II, 1771, Tab. 8, p. 8, Bahamas.
Trigla tentabunda Walbaum, Artedi Piscium, III, 1792, 362; after Klein.
Trigla fasciata Bloch and Schneider, Syst. Ichth., 1801, 16, tab. 3, fig. 1; after Klein.
Dactylopterus pirapeda Lacépède, Hist. Nat. Poiss., *III, 1802, 326,* Mediterranean and almost all warm seas.
Polynemus sexradiatus Mitchill, Trans. Lit. Phil. Soc. N. Y., I, 1815, pl. 4, fig. 10, New York.
Callionymus pelagicus Rafinesque, Amer. Month. Mag., *1818, 205,* Atlantic Ocean.
Gonocephalus macrocephalus Gronow, Cat. Fish., ed. Gray, 1854, 106; pelagic.

Order SS. HOLCONOTI

Family 248. EMBIOTOCIDÆ. Surffishes; Viviparous perches

Genus 1134. MICROMETRUS Gibbons.
Micrometrus Gibbons, Proc. Calif. Acad. Nat. Sci., in Daily Placer Times and Transcript, May 30, 1854 (*M. minimus* Gibbons).
Abeona Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 322 (*A. trowbridgii* Girard).

3235. Micrometrus minimus (Gibbons).
San Francisco to San Diego.
Cymatogaster minimus Gibbons, Proc. Acad. Nat. Sci. Phila., VII, 1854, 106, San Francisco Bay.
Holoconotus trowbridgei Girard, loc. cit., 152, no locality given.

Genus 1135. AMPHIGONOPTERUS Hubbs.
Amphigonopterus Hubbs, Proc. Biol. Soc. Wash., XXXI, May 16, 1918, 13 (*Abeona aurora* Jordan and Gilbert).

3236. Amphigonopterus aurora (Jordan and Gilbert).
Monterey Bay, Calif.
Abeona aurora Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880, 299, Monterey Bay, Calif.

Genus 1136. CYMATOGASTER Gibbons.
Cymatogaster Gibbons, Proc. Calif. Acad. Nat. Sci., in Daily Placer Times and Transcript, May 18, 1854 (*C. aggregatus* Gibbons).
Metrogaster Agassiz, Proc. Bost. Soc. Nat. Hist., VIII, 1861, 128 (*Cymatogaster aggregatus* Gibbons).
Sema Jordan, Bull. U. S. Geol. Surv., IV, 1878, 399 (*S. signifer* Jordan; larvæ with very high vertical fins and closely compressed body).

3237. Cymatogaster aggregatus Gibbons. *Sparada; Viviparous perch; Perch.*
Pacific coast from Port Wrangel, Alaska, to Todos Santos Bay.
Cymatogaster aggregatus Gibbons, Proc. Calif. Acad. Nat. Sci., in Daily Placer Times and Transcript, May 18, 1854, San Francisco.
Sema signifer Jordan, Bull. Hayden's Geol. Surv., IV, 1878, 399, Rio Grande, Tex.; error for San Francisco.
Metrogaster lineolatus Agassiz, Proc. Bost. Soc. Nat. Hist., VIII, 1861, 129, no locality.

Genus 1137. BRACHYISTIUS Gill.
Brachyistius Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 275 (*B. frenatus* Gill).

3238. Brachyistius frenatus Gill.
Vancouver Island to San Diego.
Brachyistius frenatus Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 275, California coast.
Ditrema brevipinne Günther, Cat., IV, 1862, 248, Esquimault Harbor, Vancouver Island.

Genus 1138. ZALEMBIUS Jordan and Evermann.
Zalembius Jordan and Evermann, Fishes North and Mid. Amer., 1896, 1499 (*Cymatogaster rosaceus* Jordan and Gilbert).

3239. Zalembius rosaceus (Jordan and Gilbert).
San Francisco, Calif.
Cymatogaster rosaceus Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880, 303, off San Francisco in rather deep water; the other species of this family live on sandy shores.

Genus 1139. HYPOCRITICHTHYS Gill.
Hypocritichthys Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 275 (*Hyperprosopon analis* Alexander Agassiz).

3240. Hypocritichthys analis (Agassiz).
San Francisco to Point Conception.
Hyperprosopon analis Alexander Agassiz, Proc. Bost. Soc. Nat. Hist., VIII, 1861, 133, San Francisco.

Genus 1140. TOCICHTHYS Hubbs.
Tocichthys Hubbs, Proc. Biol. Soc. Wash., XXXI, May 16, 1918, 12 (*Hyperprosopon agassizii* Gill).

3241. Tocichthys agassizii (Gill).
Coast of California, San Francisco to Santa Barbara; most common along San Luis Obispo County.
Hyperprosopon agassizii Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 276, California.

Genus 1141. HYPERPROSOPON Gibbons.
Hyperprosopon Gibbons, Proc. Calif. Acad. Nat. Sci., in Daily Placer Times and Transcript, May 18, 1854 (*H. argenteum* Gibbons).
Eunichthys Girard, Proc. Acad. Nat. Sci. Phila., VII, 1855, 322 (*E. megalops* Girard).
Bramopsis Alexander Agassiz, Proc. Bost. Soc. Nat. Hist., VIII, 1861, 132 (*B. mento* Agassiz = *Hyperprosopon argenteus* Girard).

3242. Hyperprosopon argenteus Gibbons. *Wall-eyed surffish; White perch.*
Coast of California, Cape Disappointment to Todos Santos Bay.
Hyperprosopon argenteum Gibbons, Proc. Acad. Nat. Sci. Phila., VII, 1854, 105, San Francisco.
Hyperprosopon argenteum punctatum Gibbons, loc. cit., 106, San Francisco.
Hyperprosopon arcuatum Gibbons, loc. cit., 125, San Francisco.
Holconotus megalops Girard, loc. cit., Presidio, Humboldt Bay; Astoria.
Bramopsis mento Agassiz, Proc. Bost. Soc. Nat. Hist., VIII, 1861, 133, no locality.

Genus 1142. HOLCCNOTUS Agassiz.
Holconotus Agassiz, Amer. Jour. Sci. Arts., XVII, May, 1854, 367 (*H. rhodoterus* Agassiz).
Cymatogaster Gibbons, Proc. Calif. Acad. Nat. Sci., in Daily Placer Times and Transcript, June 21, 1854 (*C. pulchellus* Gibbons); not of Gibbons, May 18, 1854.

3243. Holconotus rhodoterus Agassiz.
Coast of California, San Francisco to San Diego.
Holconotus rhodoterus Agassiz, Amer. Jour. Sci. Arts, XVII, May, 1854, 368, San Francisco.
Cymatogaster pulchellus Gibbons, Proc. Acad. Nat. Sci. Phila., VII, July, 1854, 123, San Francisco.
Cymatogaster larkinsi Gibbons, loc. cit., 123, San Francisco.
Cymatogaster ellipticus Gibbons, loc. cit., 124, San Francisco.

Genus 1143. AMPHISTICHUS Agassiz.
Amphistichus Agassiz, Amer. Jour. Sci. Arts, May, 1854, 367 (*A. argenteus* Agassiz).
Mytilophagus Gibbons, Proc. Acad. Nat. Sci. Phila., VI, July, 1854, 125 (*M. fasciatus* Gibbons = *A. argenteus* Agassiz).

3244. Amphistichus argenteus Agassiz.
Pacific coast, from Cape Flattery to San Diego; very abundant on sandy shores.
Amphistichus argenteus Agassiz, Amer. Jour. Sci. Arts, XVII, May 1854, 367, San Francisco.
Mytilophagus fasciatus Gibbons, Proc. Acad. Nat. Sci. Phila., VII, July, 1854, 125, San Francisco.
Amphistichus heermanni Girard, loc. cit., 135, Cape Flattery, San Francisco.
Amphistichus similis Girard, loc. cit., 153, San Francisco.

Genus 1144. EMBIOTOCA Agassiz.
Embiotoca Agassiz, Amer. Jour. Sci. Arts, XVI, 1853 (November), 386 (*E. jacksoni* Agassiz).

3245. Embiotoca jacksoni Agassiz. *Black surffish.*
Vancouver Island to Todos Santos Bay; abundant and variable.
Embiotoca jacksoni Agassiz, Amer. Jour. Sci. Arts, XVII, 1853, 387, and XVIII, 1854, 366, San Francisco.
Holconotus fuliginosus Gibbons, Proc. Acad. Nat. Sci. Phila., VII, 1854, 123, San Francisco.
Embiotoca cassidyi Girard, loc. cit., 151, San Diego.
?*Embiotoca webbii* Girard, loc. cit., VIII, 1855, 320, San Diego.

Genus 1145. TÆNIOTOCA Alexander Agassiz.
Holconotus Gibbons, Proc. Acad. Nat. Sci. Phila., VII, 1854 (July), 122 (*H. agassizi* Gibbons=*Embiotoca lateralis* Agassiz); not *Holconotus* Agassiz.
Tæniotoca Alexander Agassiz, Proc. Bost. Soc. Nat. Hist., VIII, 1861, 133 (*Embiotoca lateralis* Agassiz).

3246. Tæniotoca lateralis (Agassiz). *Striped surffish.*
Vancouver Island to Todos Santos Bay; abundant southward.
Embiotoca lateralis Agassiz, Amer. Jour. Sci. Arts., XVIII, 1854 (May), 356, San Francisco.
Holconotus agassizii Gibbons, Proc. Acad. Nat. Sci. Phila., VII, 1854 (July), 122, San Francisco.
Embiotoca lineata Girard, loc. cit., (Aug.), 134, San Francisco, Tomales Bay, Presidio.
Embiotoca ornata Girard, loc. cit., VII, 1855, 321, San Diego, Calif.
Embiotoca perspicabilis Girard, loc. cit., 321, Puget Sound.

Genus 1146. PHANERODON Girard.
Phanerodon Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 153 (*P. furcatus* Girard).

3247. Phanerodon furcatus Girard. *White surffish.*
Pacific coast from Vancouver Island to Todos Santos Bay; abundant southward.
Phanerodon furcatus Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 153, Presidio, San Francisco, Calif.

3248. Phanerodon atripes (Jordan and Gilbert).
Monterey to San Diego; scarce.
Ditrema atripes Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880, 320, Monterey Bay, Calif.
Ditrema orthonotus Eigenmann and Eigenmann, West American Scientist, October, 1889, 127, Cortez Banks, off San Diego.

Genus 1147. RHACOCHILUS Agassiz.
Rhacochilus Agassiz, Amer. Jour. Sci. Arts, XVIII, 1854 (May), 367 (*R. toxotes* Agassiz).
Pachylabrus Gibbons, Proc. Calif. Acad. Sci., in Daily Placer Times and Transcript, June 21, 1854 (*P. variegatus* Gibbons=*R. toxotes* Agassiz).

3249. Rhacochilus toxotes Agassiz. *Bigmouth surffish; Alfione.*
Rhachochilus toxotes Agassiz, Amer. Jour. Sci. Arts, XVIII, 1854 (May), 367, San Francisco.
Pachylabrus variegatus Gibbons, Proc. Acad. Nat. Sci. Phila., VII, 1854 (July), 126, San Francisco.

Genus 1148. HYPSURUS Alexander Agassiz.
Hypsurus Alexander Agassiz, Proc. Bost. Soc. Nat. Hist., VIII, 1861, 133 (*Embiotoca caryi* Agassiz).

3250. Hypsurus caryi (Agassiz). *Bugara.*
Cape Mendocino to San Diego; common northward.
Embiotoca caryi Agassiz, Amer. Jour. Sci. Arts, XVI, 1853, 389, and XVII, 1854, 366, San Francisco.
Holconotus gibbonsi (Gibbons MS., Proc. Calif. Acad. Sci., 1854), Gibbons, Proc. Acad. Nat. Sci. Phila., VII, 1854, 12, San Francisco

Genus 1149. DAMALICHTHYS Girard.
Damalichthys Girard, Proc. Acad. Nat. Sci. Phila., VII, 1855, 321 (*D. vacca* Girard = *D. argyrosoma* Girard).

3251. Damalichthys argyrosomus Girard.
Vancouver Island to Todos Santos Bay; very abundant northward.
Damalichthys argyrosoma Girard, Proc. Acad. Nat. Sci. Phila., VII, 1855, 136, San Francisco; young individual in bad condition.
Damalichthys vacca Girard, loc. cit., 321, Puget Sound.

Genus 1150. HYSTEROCARPUS Gibbons.
Hysterocarpus Gibbons, Proc. Calif. Acad. Nat. Sci., in Daily Placer Times and Transcript, May 18, 1854, and in Proc. Acad. Nat. Sci. Phila., VII, 1854, 124 (*H. traski* Gibbons).
Sargosomus Agassiz, in Alexander Agassiz, Proc. Bost. Soc. Nat. Hist., VIII, 1861, 128 (*S. fluviatilis* Agassiz = *Hysterocarpus traski* Gibbons).
Dacentrus Jordan, Bull. U. S. Geol. Surv., IV, 1878, 667 (*D. lucens* Jordan; very young).

3252. Hysterocarpus traski Gibbons.
Rivers of central California, chiefly in the Sacramento-San Joaquin Valley from Lake County to Santa Clara County.
Hysterocarpus traski Gibbons, Proc. Acad. Nat. Sci., Phila., VII, 1854, 105, lower Sacramento River.
Sargosomus fluviatilis Agassiz, Proc. Bost. Soc. Nat. Hist., VIII, 1861, 130, Sacramento.
Decentrus lucens Jordan, Bull. U. S. Geol. Surv., IV, 1878, 667, "Rio Grande, Tex." locality erroneous, should be San Francisco.

Order TT. CHROMIDES

Family 249. POMACENTRIDÆ

Genus 1151. AZURINA Jordan and McGregor.
Azurina Jordan and McGregor, in Jordan and Evermann, Fishes North and Mid. Amer., 1898, 1544 (*A. hirundo* Jordan and McGregor).

3253. Azurina hirundo Jordan and McGregor.
Pacific coast of Mexico.
Azurina hirundo Jordan and McGregor, in Jordan and Evermann, Fishes North and Mid. Amer., 1898, 1544, Guadalupe Island, off Lower California.

Genus 1152. FURCARIA Poey.
Furcaria Poey, Memorias, II, 1860, 194 (*F. puncta* Poey = *Heliases multilineatus* Guichenot in Ramon de la Sagra, Hist. fisica Cuba, IV).

3254. Furcaria atrilobata (Gill).
Pacific coast of America, from Cape San Lucas southward.
Chromis (*Furcaria*) *atrilobata* Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 149, Cape San Lucas, Lower California.

3255. Furcaria cyanea Poey.
Cuba.
Furcaria cyanea Poey, Memorias, II, 1860, 196, Cuba.

3256. Furcaria multilineata (Guichenot).
Cuba.
Heliases multilineatus Guichenot, in Ramon de la Sagra, Poiss. Cuba, 1853, 76, pl. 2, fig. 2, Habana.
Furcaria puncta Poey, Memorias, II, 1860, 195, Cuba.

3257. Furcaria bermudæ (Nichols).
Bermuda.
Chromis bermudæ Nichols, Proc. Biol. Soc. Wash., XXXIII, 1920, 60, Bermuda.

Genus 1153. HELIASES Cuvier and Valenciennes.
Heliases Cuvier and Valenciennes, Hist. Nat. Poiss., V, 1830, 369 (495) (*H. insolatus* Cuvier and Valenciennes).
Heliastes Günther, revised spelling.

3258. Heliases insolatus Cuvier and Valenciennes. *Chauffe soleil.*
West Indies, north to Pensacola.
Heliases insolatus Cuvier and Valenciennes, Hist. Nat. Poiss., V, 1830, 370 (494), pl. 137, Martinique.

3259. Heliases enchrysurus (Jordan and Gilbert).
Snapper Banks off Pensacola and Tampa, Fla.
Chromis enchrysurus Jordan and Gilbert, Proc. U. S. Nat. Mus., V, 1882, 286, Pensacola, Fla.

3260. Heliases marginatus Castelnau.
Brazil; St. Croix Island, West Indies.
Heliases marginatus Castelnau, Anim. Amer. Sud, Poiss., 1855, 9, Pl. III, fig. 1, Bahia.

Genus 1154. AYRESIA[79] Cooper.
Ayresia Cooper, Proc. Calif. Acad. Nat. Sci., 1st ser., III, 1863, 73 (*A. punctipinnis* Cooper).

3261. Ayresia punctipinnis Cooper. *Blacksmith.*
Coast of California, from Point Conception to Cedros Island.
Ayresia punctipinnis Cooper, Proc. Calif. Acad. Nat. Sci., 1st ser., III, 1863, 73, San Diego Bay, San Pedro, and Santa Barbara.

Genus 1155. EUPOMACENTRUS[80] Bleeker.
Eupomacentrus Bleeker, Nat. Verh. Holl. Maats., Wetensk., II, 1877, 73 (*Pomacentrus lividus* Bleeker); teeth in one row, truncate; snout scaly; lower jaw naked; dorsal not notched.
Amblypomacentrus Bleeker, loc. cit., 68 (*Pomacentrus breviceps*); similar, snout naked.

3262. Eupomacentrus fuscus (Cuvier and Valenciennes). *Maria molle.*
West Indies and coast of Brazil north to Key West.
Pomacentrus fuscus Cuvier and Valenciennes, Hist. Nat. Poiss., V, 1830, 324 (432), Brazil.
Pomacentrus variabilis Castelnau, Anim. Nouv. ou Rares, Poiss., 1855, 9, pl. 3, fig. 3, Bahia.
Pomacentrus atro-cyaneus Poey, Memorias, II, 1861, 190, Cuba.

3263. Eupomacentrus diencæus Jordan and Rutter.
Jamaica.
Eupomacentrus diencæus Jordan and Rutter, Proc. Acad. Nat. Sci. Phila., XLIX, 1897, 116, Jamaica.

3264. Eupomacentrus leucostictus (Müller and Troschel). *Cockeye pilot; Beau Gregoire; Black pilot.*
West Indies to Snapper Banks, west Florida; accidental north to Woods Hole, Mass.
Pomacentrus leucostictus Müller and Troschel, in Schomburgk's Hist. Barbados, 1848, 674, Barbados.
Pomacentrus xanthurus Poey, Memorias, II, 1861, 190, Cuba.
Pomacentrus caudalis Poey, Synopsis, 1867, 328, Cuba.
Pomacentrus dorso-punicans Poey, loc. cit., 328, Cuba.

3265. Eupomacentrus analis (Poey).
Cuba, Key West, and Porto Rico.
Pomacentrus analis Poey, Synopsis, 1867, 327, Cuba.

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[79] This genus is near the Mediterranean genus *Chromis* Cuvier, based on *Sparus chromis* Linnæus, a species with 14 dorsal spines, the head high and narrow, the tail short, the caudal not deeply forked. *Furcaria* and *Heliases* are also closely related and usually the four groups have been united into one as *Chromis* or "Heliastes."

[80] In the closely related old world genus *Pomacentrus* the teeth are in two rows. Several of the species here accepted are of very doubtful validity, and the genera of Bleeker derived from the subdivisions of *Pomacentrus* need further study.

3266. Eupomacentrus otophorus (Poey).
Cuba.
Pomacentrus otophorus Poey, Memorias, II, 1861, 188, Cuba.

3267. Eupomacentrus chrysus Bean.
Bermudas.
Eupomacentrus chrysus Bean, Proc. Biol. Soc. Wash., XIX, 1906, 32, Whites Flat Channel, Bermudas.

3268. Eupomacentrus flaviventer (Troschel).
Atlantic coast of Mexico.
Pomacentrus flaviventer Troschel, in J. W. von Müller's Reisen in den Vereinigten Staaten, Canada, und Mexico, III, 1865, 633, Atlantic Ocean.

3269. Eupomacentrus gillii (Gilbert and Starks).
Panama.
Pomacentrus gillii Gilbert and Starks, Mem. Calif. Acad. Sci., IV, 1904, 141, pl. XXII, fig. 44, Panama.

3270. Eupomacentrus partitus (Poey).
Cuba.
Pomacentrus partitus Poey, Synopsis, 1867, 327, Cuba.

3271. Eupomacentrus planifrons (Cuvier and Valenciennes). *Petite jaquette.*
Tortugas; West Indies, Jamaica to Martinique.
Pomacentrus planifrons Cuvier and Valenciennes, Hist. Nat. Poiss., V, 1830, 323 (431), Martinique.

3272. Eupomacentrus leucorus (Gilbert).
Socorro Island, one of the Revillagigedo group, off Pacific coast of Mexico.
Pomacentrus leucorus Gilbert, Proc. U. S. Nat. Mus., XIV, 1891, 554, Socorro Island.

3273. Eupomacentrus adustus (Troschel).
Cuba.
Pomacentrus adustus Troschel, in J. W. von Müller's Reisen in den Vereinigten, Staaten, Canada und Mexico, III, 1865, 633, Mexico.
Pomacentrus obscuratus Poey, Enumeratio, 1876, 101, Habana.

3274. Eupomacentrus rectifrænum (Gill). *Pescado azul de dos colores.*
Pacific coast of America from Cape San Lucas to Panama; common.
Pomacentrus rectifrænum Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 148, Cape San Lucas, Lower California.
Pomacentrus analigutta Günther, Cat., IV, 1862, 27, Cape San Lucas.

3275. Eupomacentrus flavilatus (Gill). *Pescado azul de dos colores.*
Pacific coast of America, from Cape San Lucas to Mazatlan and beyond.
Pomacentrus flavilatus Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 148, Cape San Lucas, Lower California.

3276. Eupomacentrus nepenthe Nichols.
Bahamas.
Eupomacentrus nepenthe Nichols, Amer. Mus. Novitates, XXVI, 1921, 1, fig. 1, Bahamas.

Genus 1156. NEXILARIUS Gilbert.
Nexilarius Gilbert, in Jordan and Evermann, Check List, 1895, 512 (*Euschistodus concolor* Gill); misprinted *Nexilaris*.

3277. Nexilarius concolor (Gill).
Panama.
Euschistodus concolor Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 145, Panama.

Genus 1157. ABUDEFDUF [81] **Forskål.** *Pintanos.*
Abudefduf Forskål, Descr. Anim., etc., 1775, 59 (*Chætodon sordidus* Forskål).
Glyphisodon Lacépède, Hist. Nat. Poiss., IV, 1803, 542 (*Chætodon saxatilis* Linnæus).
Euschistodus Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 145 (*E. declivifrons* Gill).

[81] The small brilliantly colored species of coral reefs in the South Seas constituting the genus *Chrysiptera* Swainson are probably separable from *Abudefduf*.

3278. **Abudefduf marginatus** (Bloch). *Pintano; Cow pilot; Jaqueta; Mojarra raiado; Demoiselle.*
Atlantic coast of tropical America, West Indies, to Brazil; once reported from Newport, R. I.
Jaguacanguare Marcgrave, Hist. Brazil, 1648, 156, Brazil.
Chætodon marginatus Bloch, Ichthyol., III, 1787, 98, Martinique; after Plumier.
Chætodon sargoides Lacépède, Hist. Nat. Poiss., IV, 1803, 452, Martinique.
Glyphisodon moucharra Lacépède, loc. cit., 542, Brazil.
Glyphidodon saxatilis of authors, not of Linnæus, an Asiatic species.
?*Chætodon mauritii* Bloch, Naturgesch. Ausl. Fische, III, 1787, 109, Brazil, on a drawing by Prince Maurice. A doubtful species, apparently the same as *A. marginatus.*

3279. **Abudefduf troschelii** (Gill).
Pacific coast of Mexico; Cape San Lucas; Socorro Island; Cocos Islands; Galapagos.
Glyphidodon troschelii Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 150, Cape San Lucas.

3280. **Abudefduf declivifrons** (Gill).
Pacific coast of tropical America, from Cape San Lucas southward.
Euschistodus declivifrons Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 145, 146, Cape San Lucas.

3281. **Abudefduf analogus** (Gill).
Atlantic coast of Central America.
Euchistodus analogus Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 220, Aspinwall.

3282. **Abudefduf taurus** (Müller and Troschel). *Dovetail fish.*
Tortugas; Barbados.
Glyphidodon taurus Müller and Troschel, in Schomburgk, Hist. Barbados, 1848, 674, Barbados.

Genus 1158. CENTROCHROMIS Norman.
Centrochromis Norman, Ann. Mag. Nat. Hist., ser. 9, IX, 1922, 534 (*Glyphidodon rudis* Poey.)

3283. **Centrochromis rudis** (Poey).
Cuba.
Glyphidodon rudis Poey, Memorias, II, 1861, 191, Cuba.

Genus 1159. HYPSYPOPS Gill. *Garibaldis.*
Hypsypops Gill, Proc. Acad. Nat. Sci. Phila., XIII, 1861, 165 (*Glyphisodon rubicundus* Girard).

3284. **Hypsypops rubicundus** (Girard). *Garibaldi; Sea goldfish;* a magnificent and hardy aquarium fish.
Coast of California south of Monterey; abundant about Santa Catalina Island.
Glyphisodon rubicundus Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 148, Monterey, Calif.

Genus 1160. STEGASTES Jenyns.
Stegastes Jenyns, Voy. *Beagle*, Fishes, 1842, 63 (*S. imbricatus* Jenyns).
Microspathodon Günther, Cat., IV, 1862, 35 (*Glyphidodon chrysurus* Cuvier and Valenciennes).
Pomataprion Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 214, 216 (*Hypsypops dorsalis* Gill).

3285. **Stegastes chrysurus** (Cuvier and Valenciennes).
Tortugas; West Indies; Cuba and St. Thomas.
Glyphisodon chrysurus Cuvier and Valenciennes, Hist. Nat. Poiss., V, 1830, 356 (476), St. Thomas.
Pomacentrus denegatus Poey, Memorias, II, 1861, 190, Cuba.

3286. **Stegastes bairdii** (Gill).
Pacific coast of tropical America, from Cape San Lucas to Panama.
Pomacentrus bairdii Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 149, Cape San Lucas.

3287. Stegastes niveatus (Poey).
Cuba.
Pomacentrus niveatus Poey, Enumeratio, 1876, 102, Habana.

3288. Stegastes dorsalis (Gill).
Pacific coast of America, from Cape San Lucas to Mazatlan.
Hypsypops dorsalis Gill, Proc. Acad. Nat. Sci. Phila. XIV, 1862, 147, Cape San Lucas; young.
Pomacentrus quadrigutta Gill, loc. cit., 149, Cape San Lucas.
Microspathodon cinereus Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 71, Clarion and Socorro Islands.
Microspathodon azurissimus Jordan and Starks, in Jordan, Proc. Calif. Acad. Sci., 2d ser., V, 1895, 478, pl. 44, Venados Islands, near Mazatlan; adult.

Family 250. CICHLIDÆ.[82] Mojarras de rio

Genus 1161. CICHLAURUS Swainson.
Cichlaurus Swainson, Nat. Hist. Classn. Fishes, etc., II, 1839, 173, definition, but no type named; this is given on p. 230, where, without assigned reason, the name is changed to *Cichlasoma*.
Cichlasoma Swainson, Nat. Hist., etc., loc. cit., 230 (*Labrus punctatus* Bloch).
Heros Heckel, Natterers Reise, II, 1840, 362 (*Heros severus* Heckel).

3289. Cichlaurus bifasciatus (Steindachner).
Mexico.
Heros bifasciatus Steindachner, Denks. Ak. Wiss. Wien, XXIII, 1864, 60, pl. II, Mexico.

3290. Cichlaurus angulifer (Günther).
East slope of Guatemala.
Heros angulifer Günther, Cat., IV, 1862, 298, River de Santa Isabel, Guatemala.

3291. Cichlaurus microphthalmus (Günther).
Rio Motagua, Guatemala.
Heros micropthalmus Günther, Cat., IV, 1862, 295, Rio Motagua, Guatemala.

3292. Cichlaurus guttulatus (Günther).
Pacific drainage of Guatemala.
Heros guttulatus Günther, Proc. Zool. Soc. Lond., 1864, 152, Lake Amatitlan, Guatemala.

3293. Cichlaurus meeki (Hildebrand). *Mojarra; Mojarra negra; Mojarra plateada.*
Lakes and rivers of El Salvador, Pacific slope of Central America.
Cichlasoma meeki Hildebrand, Bull. U. S. Bur. Fish., XLI, 1925, 275, fig. 20, Lake Guiga, El Salvador.

3294. Cichlaurus melanurus (Günther).
Lake Peten, Guatemala.
Heros melanurus Günther, Cat., IV, 1862, 288, Lake Peten, Guatemala.

3295. Cichlaurus fenestratum (Günther).
Atlantic slope of southern Mexico.
Chromis fenestrata Günther, Proc. Zool. Soc. Lond., 1860, 318, Mexico.

3296. Cichlaurus godmanni (Günther).
Atlantic slope of Guatemala.
Heros godmanni Günther, Cat., IV, 1862, 296, Rio Cahabon, Guatemala.

3297. Cichlaurus intermedius (Günther).
Lake Peten, Guatemala.
Heros intermedius Günther, Cat., IV, 1862, 298, Lake Peten, Guatemala.

3298. Cichlaurus deppii (Heckel).
Mexico.
Heros deppii Heckel, Ann. Wiener Mus., II, 1840, 382, Mexico.

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[82] The many species of this genus in the Mexican region are chiefly the overflow from the vast Brazilian fauna. The larger genera as here recognized are very closely related and were recently regarded as subgenera of *Cichlasoma* (*Cichlaurus*) = *Heros* Heckel; several of the species are only provisionally located and a few (*godmani*, *hedricki*, *lentigonosus*) may represent new groups not yet defined.

3299. **Cichlaurus calobrensis** (Meek and Hildebrand).
Streams of Panama.
Cichlasoma calobrense Meek and Hildebrand, Field Mus. Nat. Hist., Zool., X, 1913, 90, Rio Calobra, Panama.

3300. **Cichlaurus umbrifer** (Meek and Hildebrand).
Rivers of Panama.
Cichlasoma umbriferum Meek and Hildebrand, Field Mus. Nat. Hist., Zool., X, 1913, 88, Rio Cupe, Cituro, Panama.

Genus 1162. THERAPS Günther.
Theraps Günther, Cat., IV, 1862, 284 (*T. irregularis* Günther).
?*Baiodon* Agassiz, Proc. Bost. Soc. Nat. Hist., VI, 1858, 401 (*B. fasciatus* Agassiz); scanty description; said to be slender as in the *Sparoid* genus *Boops* or *Box*.

3301. **Theraps irregularis** Günther.
Atlantic slope of Guatemala and southern Mexico.
Theraps irregularis Günther, Cat., IV, 1862, 284, Guatemala.

3302. **Theraps mojarra** (Meek).
Pacific slope of Isthmus of Tehuantepec.
Cichlasoma mojarra Meek, Field Mus., Zool., V, 1904, 93, 217, San Geronimo, Oaxaca, Mexico.

3303. **Theraps nebulifer** (Günther).
Atlantic lowland streams of the Isthmus of Tehuantepec.
Heros nebulifer Günther, Proc. Zool. Soc. Lond., 1860, 318, Mexico.

3304. **Theraps gibbiceps** (Steindachner).
Rivers of Tabasco, Mexico.
Heros gibbiceps Steindachner, Denks. Ak. Wiss. Wien, XXIII, 1864, 66, Pl. V, figs. 1 and 2, Rio Teapa, Tabasco, Mexico.

3305. **Theraps zonatus** (Meek).
Pacific slope of Isthmus of Tehuantepec, Mexico.
Cichlasoma zonatum Meek, Proc. Biol. Soc. Wash., XVIII, 1905, 245, Niltepec, Oaxaca, Mexico.
Baiodon fasciatus Agassiz, Proc. Bost. Soc. Nat. Hist., VI, 1858, 408, Lake Nicaragua.

3306. **Theraps eigenmanni** (Meek).
Rio Tehuacan, Mexico.
Cichlasoma eigenmanni Meek, Field Col. Mus., Zool., III, 1902, 119, Rio Tehuacan, Mexico.

3307. **Theraps teapæ** (Evermann and Goldsborough).
Rio Teapa, Mexico.
Cichlasoma teapæ Evermann and Goldsborough, Bull. U. S. Fish Com., XXI, 1901, 156, fig. 6, Rio Teapa, Mexico.

3308. **Theraps frontalis** (Meek).
Turrubales, Costa Rica.
Cichlasoma frontale Meek, Field Col. Mus., Zool., VIII, 1909, 210, Turrubales, Costa Rica.

3309. **Theraps punctatum** (Meek).
Buenos Aires de Terraba, Costa Rica.
Cichlasoma punctatum Meek, Field Mus. Nat. Hist., Zool., VII, 1909, 210, Buenos Aires de Terraba, Costa Rica; name preoccupied in *Cichlasoma* but not in *Theraps*.
Theraps terrabæ Jordan and Evermann, Proc. Calif. Acad. Sci., 4th ser., XVI, Apr. 27, 1927, 507, substitute for *Cichlasoma punctatum* Meek, preoccupied.

3310. **Theraps gadovii** (Regan).
Atlantic slope of southern Mexico.
Cichlosoma gadovii Regan, Ann. Mag. Nat. Hist., 1905, 232, Motozorongo, Mexico.

3311. **Theraps milleri** (Meek).
El Rancho, Guatemala.
Cichlasoma milleri Meek, Field Mus. Nat. Hist., Zool., VII, 1907, 142, El Rancho, Guatemala.

3312. Theraps balteatus (Gill and Bransford).
Great Lakes of Nicaragua.
Heros balteatus Gill and Bransford, Proc. Acad. Nat. Sci. Phila., XXIX, 1877, 184, Lake Nicaragua.

3313. Theraps nicaraguensis (Günther).
Great Lakes of Nicaragua.
Heros nicaraguensis Günther, Proc. Zool. Soc. Lond., 1864, 153, Lake Nicaragua.

3314. Theraps nigritus (Meek).
Lake Nicaragua.
Cichlasoma nigritum Meek, Field Mus. Nat. Hist., Zool., VII, 1907, 128, Lake Nicaragua.

3315. Theraps lentiginosus (Steindachner).
Rivers of Mexico.
Heros lentiginosus Steindachner, Denks. Akad. Wiss. Wien, XXIII, 1864, 62, Pl. III, fig. 1, Mexico.

Genus 1163. PARAPETENIA Regan.
Hypsophrys Agassiz, Proc., Bost. Soc. Nat. Hist., VI, 1858, 401 (*H. unimaculatus* Agassiz); no description except that it resembles *Chrysophrys* (*Sparus*) and has a large round black spot on the shoulder; lakes of Nicaragua.
?*Parachromis* Agassiz, Proc., Bost. Soc. Nat. Hist., VI, 1858, 401 (*P. gulosus* Agassiz); not described but said to resemble *Dentex;* lakes of Nicaragua.
Parapetenia Regan, Ann. Mag. Nat. Hist., XVI, 7th ser., 1905, 324 (*Acara adspersum* Günther).

3316. Parapetenia adspersa (Günther).
Barbados.
Acara adspersum Günther, Cat., IV, 1862, 282, Barbados.

3317. Parapetenia dovii (Günther).
Great Lakes of Nicaragua.
Heros dovii Günther, Proc. Zool. Soc. Lond., 1864, 154, Lake Nicaragua.

3318. Parapetenia managuense (Günther).
Great Lakes of Nicaragua.
Heros managuensis Günther, Trans. Zool. Soc. Lond., VI, 1868 (Nov. 27), 392, 463, pl. 77, fig. 3, Lake Managua, Nicaragua.

3319. Parapetenia motaguensis (Günther).
Atlantic slope of Guatemala.
Heros motaguensis Günther, Trans. Zool. Soc. Lond., VI, 1868 (Nov. 27), 391, 462, pl. 77, fig. 2, Lake Motagua, Guatemala.

3320. Parapetenia friedrichstahli (Heckel).
Lake Peten, Guatemala.
Heros friedrichstahli Heckel, Ann. Mus. Wien, II, 1840, 381, Lake Peten, Guatemala.

3321. Parapetenia multifasciata (Regan).
Guatemala; British Honduras.
Cichlasoma multifasciatum Regan, Ann. Mag. Nat. Hist., 7th ser., XVI, 1905, 335, Lake Peten, Guatemala.

3322. Parapetenia salvini (Günther).
Atlantic slope of southern Mexico to Guatemala.
Heros salvini Günther, Cat., IV, 1862, 294, Rio de Santa Isabel, Guatemala.
Heros triagramma Steindachner, Denkschr. Akad. Wiss. Wien, XXIII, 1864, 70, Taf. 3, fig. 2, central Mexico.

3323. Parapetenia urophthalma (Günther).
Atlantic slope of southern Mexico to Guatemala; British Honduras and Yucatan.
Heros urophthalmus Günther, Cat., IV, 1862, 291, Lake Peten.

3324. Parapetenia istlana (Jordan and Snyder).
Rio Balsas, Mexico.
Heros istlanus Jordan and Snyder, Bull. U. S. Fish Com., XIX, 1899, 144, fig. 21, Rio Ixtla at Puente de Ixtla, Mexico.

3325. **Parapetenia tetracantha** (Cuvier and Valenciennes). *Viajaca.*
Rivers of Cuba.
Centrarchus tetracanthus Cuvier and Valenciennes, Hist. Nat. Poiss., VII, 1831, 346 (460), Habana.
Chromis fusco-maculatus Guichenot, in Ramon de la Sagra, Hist. Ile Cuba, Poiss., 1853, 78, pl. 2, fig. 3, Habana.

3326. **Parapetenia tetracantha torralbasi** (Eigenmann).
Cuba; Calabazar, Almendares River; San Cristobal; Los Palacios.
Heros tetracanthus torralbasi Eigenmann, Bull. U. S. Fish Com., XXII, 1902, 230, fig. 11, Calabazar, Cuba

3327. **Parapetenia tetracantha grisea** (Eigenmann).
San Antonio, Cuba.
Heros tetracanthus griseus Eigenmann, Bull. U. S. Fish Com., XXII, 1902, 233, San Antonio, Cuba.

3328. **Parapetenia tetracantha lata** (Eigenmann).
San Juan, Cuba.
Heros tetracanthus latus Eigenmann, Bull. U. S. Fish Com., XXII, 1902, 234, San Juan, Cuba.

3329. **Parapetenia tetracantha cincta** (Eigenmann).
Paso Real, Cuba.
Heros tetracanthus cinctus Eigenmann, Bull. U. S. Fish Com., XXII, 1902, 234, fig. 16, Paso Real, Cuba.

3330. **Parapetenia parma** (Günther).
Mexico and Guatemala.
Heros parma Günther, Cat., IV, 1862, 285, Mexico and Guatemala.

3331. **Parapetenia nigricans** (Eigenmann).
Pinar del Rio, Cuba.
Heros nigricans Eigenmann, Bull. U. S. Fish Com., XXII, 1902, 235, fig. 17, Pinar del Rio, Cuba.

3332. **Parapetenia steindachneri** (Jordan and Snyder).
Lower portion of the basin of the Rio Panuco and Rio Verde, Mexico.
Cichlasoma steindachneri Jordan and Snyder, Bull. U. S. Fish Com., XIX, 1899, 143, fig. 20, Rio Verde, Mexico.

3333. **Parapetenia bartoni** (Bean).
Upland portion of the Rio Verde in San Luis Potosi, Mexico.
Acara bartoni Bean, Proc. U. S. Nat. Mus., XV, 1892, 286, Pl. XLIV, fig. 3, Huasteca Potosina, San Luis Potosi, Mexico.

3334. **Parapetenia labridens** (Pellegrin).
Upland portion of the Rio Verde in San Luis Potosi, Mexico.
Heros labridens Pellegrin, Bull. Mus. Hist. Nat. Paris, 1903, 122, Huasteca, Potosi, Mexico.

3335. **Parapetenia beani** (Jordan). *Mojarra verde.*
Lowland streams of Sinaloa and Jalisco.
Heros beani Jordan, Proc. U. S. Nat. Mus., XI, 1888, 332, Rio Presidio, near Mazatlan, Mexico.

3336. **Parapetenia tenuis** (Meek).
Atlantic slope of the isthmus of Tehuantepec; Achatol; Vera Cruz, Mexico.
Cichlasoma tenue Meek, Field Mus. Nat. Hist., Zool., VII, 1906, 94, Achotal, Vera Cruz, Mexico.

3337. **Parapetenia centralis** (Meek).
Pacific slope of Guatemala; Caballo Blanco.
Cichlasoma centrale Meek, Field Mus. Nat. Hist., Zool., VII, 1906, 94, Caballo Blanco, Guatemala.

3338. **Parapetenia alfari** (Meek).
Atlantic slope of Costa Rica; Turrialba.
Cichlasoma alfari Meek, Field Mus. Nat. Hist., Zool., VII, 1907, 148, Turrialba, Costa Rica.

3339. **Parapetenia mento** (Vaillant and Pellegrin).
Southern Mexico.
Heros mento Vaillant and Pellegrin, Bull. Mus. Hist. Nat. Paris, 1902, 88, Rio Negro, southern Mexico.

3340. Parapetenia trimaculata (Günther).
Pacific coast streams of southern Mexico and Guatemala.
Heros trimaculatum Günther, Trans. Zool. Soc. Lond., VI, 1868, 461, pl. 76 (Nov. 27), Chiapam and Huamuchal, Mexico.

Genus 1164. ARCHOCENTRUS Gill.
Archocentrus Gill, Proc. Acad. Nat. Sci. Phila., XXIX, 1877, 186 (*Heros centrarchus* Gill and Bransford).

3341. Archocentrus centrarchus (Gill and Bransford).
Great Lakes of Nicaragua.
Heros centrarchus Gill and Bransford, Proc. Acad. Nat. Sci. Phila., XXIX, 1877, 185, Lake Nicaragua.

3342. Archocentrus nigrofasciatus (Günther).
Lakes Amatitlan and Atitlan, Guatemala.
Heros nigrofasciatus Günther, Trans. Zool. Soc. Lond., VI, 1868, 391, 452, pl. 74, fig. 3, Lakes Amatitlan and Atitlan.

3343. Archocentrus spilurus (Günther).
Rio Motagua and Lake Isabel, Guatemala.
Heros spilurus Günther, Cat., IV, 1862, 289, Lake Yzabal, Guatemala.

3344. Archocentrus spinosissimus (Vaillant and Pellegrin).
Rio Polochic, Guatemala.
Heros (Cichlasoma) spinosissimus Vaillant and Pellegrin, Bull. Mus. Hist. Nat. Paris, 1902, 87, Rio Polochic, Guatemala.

3345. Archocentrus immaculatus (Pellegrin).
Rio Palochic, Guatemala.
Cichlasoma spinosissimum immaculatum Pellegrin, Mém. Soc. Zool. France, XVI, 1903, 225, Rio Palochic, Guatemala.

Genus 1165. ASTATHEROS[83] **Pellegrin.**
Astatheros Pellegrin, Mém. Soc. Zool. France, 1833, 205 (*Heros heterodontus* Vaillant and Pellegrin).
Erythrichthys Meek, Field Mus. Nat. Hist., Zool., VII, 1907, 118, 121 (*Heros citrinellus* Günther); name twice preoccupied as *Erythrichthus*.

3346. Astatheros heterodontus (Vaillant and Pellegrin).
Isthmus of Tehuantepec, Mexico.
Heros heterodontus Vaillant and Pellegrin, Bull. Mus. Nat. Hist., Paris, 1902, 86, Isthmus of Tehuantepec.

3347. Astatheros evermanni (Meek).
Pacific slope of Isthmus of Tehuantepec.
Cichlasoma evermanni Meek, Field Col. Mus. Zool., V, 1904, 214, fig. 70, Rio Tehuantepec, Tehuantepec, Mexico.

3348. Astatheros robertsoni (Regan).
British Honduras.
Cichlasoma robertsoni Regan, Ann. Mag. Nat. Hist., ser. 7, XVI, 1905, 239, Stann Creek, British Honduras.

3349. Astatheros lethrinus (Regan).
Rio Iroquois, Costa Rica.
Cichlasoma lethrinus Regan, Ann. Mag. Nat. Hist., ser. 8, II, 1908, 462, Rio Iroquois, Costa Rica.

3350. Astatheros dorsatus (Meek).
Lake Managua, Nicaragua.
Cichlasoma dorsatum Meek, Field Col. Mus. Nat. Hist., Zool., VII, 1907, 123, Lake Managua.

3351. Astatheros longimanus (Günther).
Lake Nicaragua.
Heros longimanus Günther, Trans. Zool. Soc. Lond., VI, 1868 (Nov. 27), 391, 453, pl. 72, fig. 2, Lake Nicaragua.

3352. Astatheros altifrons (Kner and Steindachner).
Panama and Colombia.
Heros altifrons Kner and Steindachner, Sitz. Bayer. Akad., 1863, 223, Colombia.

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[83] This group is usually united with the two large-lipped species *labiatus* and *lobochilus*, to which the name *Amphilophus* was given earlier. *Citrinellus* and *Erythræus* seem intermediate.

3353. **Astatheros lauræ** (Regan).
Tampico, Mexico.
Cichlasoma lauræ Regan, Ann. Mag. Nat. Hist., 8th ser., 2, 1908, 223, Tampico, Mexico.

3354. **Astatheros margaritifer** (Günther).
Lake Peten, Guatemala.
Heros margaritifer Günther, Cat., IV, 1862, 287, Lake Peten.
Heros melanopogon Steindachner, Denks. Akad. Wiss. Wien, XXIII, 1864, 72, pl. 1, fig. 3, Central America.

3355. **Astatheros sexfasciatus** (Regan).
Guapote, Mexico.
Cichlosoma sexfasciatum Regan, Ann. Mag. Nat. Hist., (7), XVI, 1905, 230, Guapote, Mexico.

3356. **Astatheros septemfasciatus** (Regan).
Costa Rica.
Cichlosoma septemfasciatum Regan, Ann. Mag. Nat. Hist., II, ser. 8, 1908, 461, Rio Iroquois, Costa Rica.

3357. **Astatheros basilaris** (Gill and Bransford).
Lake Nicaragua.
Heros basilaris Gill and Bransford, Proc. Acad. Nat. Sci. Phila., XXIX, 1877, 182, Lake Nicaragua.

3358. **Astatheros rectangularis** (Steindachner).
Mexico.
Acara rectangulare Steindachner, Chromiden Mejicos, 1864, pl. 1, fig. 1, 1, Mexico.

3359. **Astatheros maculicauda** (Regan).
Atlantic slope of Guatemala and Panama.
Cichlosoma maculicauda Regan, Ann. Mag. Nat. Hist., XVI, ser. 7, 1905, 227, Lake Yzabal, Rio Motagua, and Rio Chagres.

3360. **Astatheros tuyrensis** (Meek and Hildebrand).
Rivers of Panama.
Cichlasoma tuyrensis Meek and Hildebrand, Field Mus. Nat. Hist., Zool., X, 1913, 89, Rio Tuyra, Boca de Cupa, Panama.

3361. **Astatheros oblongus** (Günther).
Rio Motagua; Guatemala.
Heros oblongus Günther, Trans. Zool. Soc. Lond., VI, 1868 (Nov. 27), 392, 464, Rio Motagua, Guatemala

3362. **Astatheros montezuma** (Heckel).
Mexico.
Heros montezuma Heckel, Ann. Wiener Mus., II, 1840, 382, Mexico.

3363. **Astatheros globosum** (Miller).
Puerto Barrios, Guatemala.
Cichlasoma globosum Miller, Bull. Amer. Mus. Nat. Hist., XXIII, 1907, 114, fig. 4, Puerto Barrios, Guatemala.

3364. **Astatheros rostratum** (Gill and Bransford).
Great Lakes of Nicaragua.
Heros rostratus Gill and Bransford, Proc. Acad. Nat. Sci. Phila., XXIX, 1877, 181, Lake Nicaragua.

3365. **Astatheros hedricki** (Meek).
Large Atlantic slope rivers of Mexico, south of Vera Cruz.
Cichlasoma hedricki Meek, Field Col. Mus., Zool., V, 1904, 208, fig. 66, Obispo, Vera Cruz, Mexico.

3366. **Astatheros octofasciatus** (Regan).
Atlantic slope, Isthmus of Tehuantepec to British Honduras.
Heros octofasciatus Regan, Ann. Mus. Hist. Nat. Geneva, Rev. Suisse, Zool., 1903, 417, pl. 13, fig. 1, Mexico.

3367. **Antatheros granadense** (Meek).
Lake Nicaragua.
Cichlasoma granadense Meek, Field Mus. Nat. Hist., Zool., VII, 1907, 121, Lake Nicaragua, Nicaragua, Granada.

3368. Astatheros citrinellus (Günther).
Great Lakes of Nicaragua.
Heros citrinellus Günther, Proc. Zool. Soc. Lond., 1864, 153, Lake Nicaragua.

3369. Astatheros erythræum (Günther).
Great lakes of Nicaragua.
Heros erythræus Günther, Trans. Zool. Soc. Lond., VI, 1868 (Nov. 27), 391, 457, pl. 75, fig. 2, Lake Managua.

Genus 1166. AMPHILOPHUS Agassiz.
Amphilophus Agassiz, Proc. Bost. Soc. Nat. Hist., VI, 1858, 401 (*A. frœbeli* Agassiz); a large-lipped species from Lake Nicaragua not otherwise described, probably *labiatus;* these species, *labiatus* and *lobochilus,* have been placed in *Astatheros,* but the name *Amphilophus* has priority.

3370. Amphilophus labiatus (Günther).
Great lakes of Nicaragua.
Heros labiatum Günther, Proc. Zool. Soc. Lond., 1864, 27, Pl. IV, fig. 1, Lake Nicaragua.

3371. Amphilophus lobochilus (Günther).
Lake Managua, Nicaragua.
Heros lobochilus Günther, Trans. Zool. Soc. Lond., VI, 1868 (Nov. 27), 391, 457, pl. 75, fig. 1, Lake Managua, Nicaragua.

Genus 1167. THORICHTHYS Meek.
Thorichthys Meek, Field Col. Mus., Zool., V, 1904, 222 (*T. ellioti* Meek).

3372. Thorichthys ellioti Meek.
Atlantic slope of Vera Cruz to Guatemala.
Thorichthys ellioti Meek, Field Col. Mus., Zool., V, 1904, 223, Motzorongo, Vera Cruz, Mexico.

3373. Thorichthys callolepis (Regan).
Atlantic slope of Isthmus of Tehuantepec, Mexico.
Heros callolepis Regan, Ann. Mag. Nat. Hist., ser. 7, XIII. 1904, 258, San Domingo de Guzman, Mexico.

3374. Thorichthys aureus (Günther).
Atlantic slope, Vera Cruz, Mexico, to Guatemala.
Heros aureus Günther, Cat., IV, 1862, 292, Lake Yzabal, Guatemala.

3375. Thorichthys affinis (Günther).
Lake Peten, Guatemala.
Heros affinis Günther, Cat., IV, 1862, 292, Lake Peten.

3376. Thorichthys acutus (Miller).
Small tributaries of the Rio Motagua, Guatemala.
Cichlasoma acutum Miller, Bull. Amer. Mus. Nat. Hist., XXIII, 1907, 117, fig. 6, Rio Tenedores, Guatemala.

3377. Thorichthys helleri (Steindachner).
Lowland streams of Mexico emptying into the Gulf south of Vera Cruz.
Heros helleri Steindachner, Denks. Akad. Wiss. Wien, XXIII, 1864, 64, Pl. IV, fig. 1, Rio Teapa, Tabasco, Mexico.
Heros maculipinnis Steindachner, loc. cit., 69; Pl. IV, fig. 2, Rio Zanopa, Mexico.

Genus 1168. HERICHTHYS Baird and Girard.
Herichthys Baird and Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 25 (*H. cyanoguttatus* Baird and Girard).

3378. Herichthys cyanoguttatus Baird and Girard.
East slope of Mexico from Rio Grande to Rio Panuco.
Herichtys cyanoguttatus Baird and Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 25, Rio Grande, Brownsville, Tex.
Heros teporatus Fowler, loc. cit., LV, 1903, 321, Victoria, Tamaulipas.

3379. Herichthys pavonaceus (Garman).
Spring near Monclova, Coahuila, Mexico.
Heros pavonaceus Garman, Bull. Mus. Comp Zool., VIII. 1881, 93, spring near Monclova, Coahuila, Mexico.

3380. **Herichthys bocourti** (Vaillant and Pellegrin).
Lake Isabel, Guatemala
Neetroplus bocourti Vaillant and Pellegrin, Bull. Mus. Hist. Nat., Paris, 1902, 85, Lake Isabel, Guatemala.

3381. **Herichthys carpintis** (Jordan and Snyder).
Rio Panuco, Mexico, and its lowland tributaries.
Neetroplus carpintis Jordan and Snyder, Bull. U. S. Fish Com., XIX, 1899, 146, fig. 22, Laguna de Carpinte, Tampico, Mexico.

3382. **Herichthys troscheli** (Steindachner).
Mexico.
Heros troscheli Steindachner, Ichthyologische Notizen, IV, 1867, 12, Mexico.

Genus 1169. TOMOCICHLA Regan.
Tomocichla Regan, Ann. Mag. Nat. Hist., II, ser. 8, 1908, 463 (*Herichthys underwoodi* Regan).

3383. **Tomocichla underwoodi** (Regan).
Costa Rica.
Herichthys underwoodi Regan, Biol. Central Amer., Pisces, 1908, 30, Costa Rica.

3384. **Tomocichla geddesi** (Regan).
Southern Mexico.
Herichthys geddesi Regan, Ann. Mag. Hist., XVI, ser. 7, 1905, 436, southern Mexico.

Genus 1170. PETENIA Günther.
Petenia Günther, Cat., IV, 1862, 301 (*P. splendida* Günther).

3385. **Petenia splendida** Günther.
Lake Peten, Guatemala; Montecristo; Frontera.
Petenia splendida Günther, Cat., IV, 1862, 301, Lake Peten, Guatemala.

Genus 1171. PARANEETROPLUS Regan.
Paraneetroplus Regan, Ann. Mag. Nat. Hist., XVI, ser. 7, 1905, 436 (*P. bulleri* Regan).

3386. **Paraneetroplus bulleri** Regan.
Rio de Sarabia, Mexico,
Paraneetroplus bulleri Regan, Ann. Mag. Nat. Hist., XVI, ser. 7, 1905, 437, Rio de Sarabia, Mexico.

Genus 1172. NEETROPLUS Günther.
Neetroplus Günther, Trans. Zool. Soc. Lond. VI, 1866, 469 (*N. nematopus* Günther).

3387. **Neetroplus sieboldii** (Kner and Steindachner).
New Granada, and from the Pacific slope of Panama.
Heros sieboldii Kner and Steindachner, Abhandl. Bayer Akad. Wiss., X, 1864, 13, pl. 2, fig. 2, Panama, Colombia.

3388. **Neetroplus nematopus** Günther.
Great lakes of Nicaragua.
Neetroplus nematopus Günther, Trans. Zool. Soc. Lond., VI, 1868 (Nov. 27), 392, 470, pl. 74, fig. 4, Lake Managua.

Genus 1173. HEROTILAPIA Regan.
Herotilapia Regan, Ann. Mag. Nat. Hist., V, 38 (*Tilapia buettikoferi* Boulenger).

3389. **Herotilapia multispinosa** (Günther).
Great lakes of Nicaragua.
Heros multispinosus Günther, Trans. Zool. Soc. Lond., VI, 1868 (Nov. 27), 391, 453, pl. LXXIV, fig. 2, Lake Managua.

Genus 1174. ÆQUIDENS Eigenmann and Bray.
Æquidens Eigenmann and Bray, Ann. N. Y. Acad. Sci., 1894, 616 (*Acara tetramerus* Heckel).

3390. **Æquidens cœruleopunctata** (Kner and Steindachner).
Panama to northwest Ecuador.
Acara cœruleopunctata Kner and Steindachner, Sitz. Bayer. Akad., 1863, 222, northwest Ecuador.

Genus 1175. GEOPHAGUS Heckel.
Geophagus Heckel, Ann. Mus. Wien, II, 1840. 383 (*G. magasema* Heckel=*Sparus surinamensis* Bloch).
Mesops Günther, Cat., IV, 1862, 311 (*Geophagus cupido* Heckel).
Satanoperca Günther, loc. cit., 312 (*Geophagus demon* Heckel).

Subgenus SATANOPERCA Günther.

3391. Geophagus crassilabris Steindachner.
Panama.
Geophagus (*Satanoperca*) *crassilabris* Steindachner, Sitz. Akad. Wiss. Wien, 1876, 74, 65, Pl. VII, Panama.

Order UU. PHARYNGOGNATHI

Family 251. LABRIDÆ

Genus 1176. CENTROLABRUS Günther. *Rock cooks.*
Centrolabrus Günther, Cat., IV, 1862, 92 (*Labrus exoletus* Linnæus).

3392. Centrolabrus exoletus (Linnæus). *Rock cook.*
Coast of northern Europe south to Cornwall; Greenland.
Labrus exoletus Linnæus, Syst. Nat., Ed. X, 1758, 287, Atlantic Ocean.
Labrus pentacanthus Lacépède, Hist. Nat. Poiss., III, 1803, 503; after Linnæus.
Crenilabrus microstoma Couch, in Thompson, Proc. Zool. Soc. London, 1837, 55, Cornwall.

Genus 1177. TAUTOGOLABRUS Günther. *Cunners.*
Tautogolabrus Günther, Cat., IV, 1862, 89 (*Ctenolabrus bergall* Günther=*Labrus adspersus* Walbaum).

3393. Tautogolabrus adspersus (Walbaum). *Cunner; Chogset; Blue perch; Bergall; Berg-gyll; Nibbler; Conner; Gall Bengal.*
Atlantic coasts of North America from Labrador to Sandy Hook.
Labrus adspersus Walbaum; Artedi Piscium, 1792, 254, no locality; after *Bergall* of Schöpf.
Tautoga niger Mitchill, Report, in part, in Fishes of New York, 1814, 23, New York.
Tautoga cærulea Mitchill, Report, loc. cit., 1814, 24, New York.
Labrus chogset Mitchill, Trans. Lit. Phil. Soc. N. Y., I, 1815, 402, pl. 3, fig. 2, New York.
Labrus chogset fulva Mitchill, loc. cit., 1815, 403, New York.
Ctenolabrus uninotatus Cuvier and Valenciennes, Hist. Nat. Poiss., XIII, 1839, 174 (239), New York.
Ctenolabrus bergall Günther, Cat., IV, 1862, 90, Canada.

Genus 1178. TAUTOGA Mitchill. *Tautogs.*
Hiatula Lacépède, Hist. Nat. Poiss., II, 1800, 522; name preoccupied.
Tautoga Mitchill, Rept. Fishes New York, 1814, 23 (*T niger* Mitchill=*Labrus tautoga* Mitchill=*Labrus onitis* Linnæus).

3394. Tautoga onitis (Linnæus). *Tautog; Blackfish, Oysterfish; Tautoga; Smooth blackfish; Cub; Sea dog.*
Atlantic cost of United States; Cape Ann to Charleston.
Labrus onitis Linnæus, Syst. Nat., Ed. X, 1758, 286, locality unknown.
Labrus hiatula Linnæus, Syst. Nat., Ed. XII, 1766, 475, Carolinas.
Labrus carolinus Bonnaterre, Tableau Encycloped. et Méthod., Ichthyologie, 1788, 113, Carolinas.
Labrus subfucus Walbaum, Artedi Pisc., 1792, 254; after Schöpf.
?*Labrus tassellatus* Bloch, Naturgesch. Ausl. Fische, VI, 1792, pl. 8, Norway.
Hiatula gardeniana Lacépède, Hist. Nat. Poiss., II, 1800, 522, Carolinas.
Labrus americanus Bloch and Schneider, Syst. Ichth., 1801, 261; after Schöpf.
Labrus tautoga Mitchill, Trans. Lit. Phil. Soc. N. Y., I, 1815, 398, Long Island; Rhode Island; Cape Cod; Sandy Circle.
Tautoga fusca Mitchill, Rept. Fish. N. Y., 1814, 23, New York.
Tautoga rubens Mitchill, loc. cit., 23, New York.
Tautoga alia Mitchill, loc. cit., 23, New York.
Tautoga niger Mitchill, loc. cit., 23, New York.

Genus 1179. ACHNOLAIMUS Cuvier and Valenciennes. *Capitaines.*
Lachnolaimus Cuvier and Valenciennes, Hist. Nat. Poiss., XIII, 1839, 200 (274) (*L. aigula* Cuvier and Valenciennes=*Labrus maximus* Walbaum).
Lachnolæmus Günther; corrected spelling.

3395. Lachnolaimus maximus (Walbaum). *Capitaine; Perro perro; Hogfish.*
West Indies, north to Key West and the Bermudas.
Suillus Catesby, Nat. Hist. Carol., II, 1743, 15, pl. 15; no locality; probably Bahamas.
Labrus maximus Walbaum, Artedi Pisc., 1792, 261, no locality; after Catesby.
Lachnolaimus suillus Cuvier, Règne Animal, ed. 2, II, 1829, 257; after Catesby.
Lachnolaimus aigula Cuvier and Valenciennes, Hist. Nat. Poiss., XIII, 1839, 202 (277), pl. 378, St. Bartholomew.
Lachnolaimus dux Cuvier and Valenciennes, loc. cit., 208 (285), Martinique.
Lachnolaimus caninus Cuvier and Valenciennes, loc. cit., 210 (288), St. Thomas; San Domingo.
Lachnolaimus psittacus Cuvier and Valenciennes, loc. cit., 212 (291); Porto Rico.

Genus 1180. BODIANUS Bloch.
Bodianus Bloch, Nat. Ausl. Fische, IV, 1790, 31, 33 (*B. bodianus* Bloch=*Labrus rufus* Linnæus); in part; type by tautonomy; not by first restriction to species of *Cephalopholis*.
Harpe Lacépède, Hist. Nat. Poiss., IV, 1803, 426 (*H. cæruleoaureum* Lacépède=*Labrus rufus* Linnæus).
Cossyphus Cuvier and Valenciennes, loc. cit., XIII, 1839, 102 (*Bodianus bodianus* Bloch); name twice preoccupied.
Crenilabrus Swainson, Nat. Hist. Fish., Amphib., etc., II, 1839 (*Lutianus verres* Bloch=*Labrus rufus* Linnæus); name preoccupied.

3396. Bodianus rufus (Linnæus). *Ladyfish; Spanish ladyfish; Spanish hogfish; Pudiano; Perro colorado.*
West Indies, north to Key West, south to Rio de Janeiro.
Labrus rufus Linnæus, Syst. Nat., Ed. X, 1758, 284, America; after Catesby.
Pudiano vermelho Marcgrave, Hist. Bras., 1648, 145, Brazil.
Turdus flavus Catesby, Nat. Hist. Carolina, II, 1743, 11, pl. 11, fig. 1, Bahamas.
Perro colorado Parra, Descr. Dif. Piez. Hist. Nat. Cuba, 1787, 3, lam. 3, fig. 1, Habana.
?*Bodianus bodianus* Bloch, Naturgesch. Ausl. Fische, IV, 1790, 33, Brazil.
?*Lutjanus verres* Bloch, loc. cit., V, 1791, 9, locality uncertain.
?*Sparus falcatus* Bloch, loc. cit., 20, Martinique; after Plumier.
Labrus semiruber Lacépède, Hist. Nat. Poiss., III, 1802, 428, Rio Janeiro.
Bodianus blochii Lacépède, loc. cit., IV, 1803, 279; after Bloch.
Harpe coeruleo-aureus Lacépède, loc. cit., 426, pl. 8, fig. 2, Martinique.

3397. Bodianus diplotænia (Gill).
Pacific coast of tropical America; Cape San Lucas; Panama; Revillagigedo Islands; Mazatlan.
Harpe diplotænia Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 140, Cape San Lucas; female.
Harpe pectoralis Gill, loc. cit., 141, Cape San Lucas; male.

3398. Bodianus pulchellus (Poey).
Cuba.
Cossyphus pulchellus Poey, Memorias, II, 1860, 208, Habana.

Genus 1181. DECODON Günther.
Decodon Günther, Cat., IV, 1862, 101 (*Cossyphus puellaris* Poey).

3399. Decodon puellaris (Poey).
West Indies; Cuba; Barbados; Snapper Banks off Pensacola, Fla.
Cossyphus puellaris Poey, Memorias, II, 186, 2101, Habana.

Genus 1182. PIMELOMETOPON Gill. *Fatheads.*

Pimelometopon Gill, Proc. Acad. Nat. Sci. Phila., XVI, 1864, 58 (*Labrus pulcher* Ayres).

3400. Pimelometopon pulcher (Ayres). *California redfish; Fathead; Sheepshead.*

Southern California, from Point Conception to Ascension Island, Lower California.

Labrus pulcher Ayres, Proc. Calif. Acad. Nat. Sci., I, 1854, 3, San Diego, Calif.

Genus 1183. CLEPTICUS Cuvier.

Clepticus Cuvier, Règne Anim., ed. 2, II, 1829, 261 (*Rabirubia genizara* Parra=*Brama parræ* Bloch and Schneider).

3401. Clepticus parræ (Bloch and Schneider). *Genizara; Janissary; Creole.*

West Indies.

Rabirubia genizara Parra, Dif. Piezas de Hist. Nat. Cuba, 1787, 44, pl. 21, fig. 1, Habana; author not binomial.

Brama parræ Bloch and Schneider, Syst. Ichth., 1801, 100, Habana.

Family 252. CORIDÆ

Genus 1184. IRIDIO [84] **Jordan and Evermann.** *Doncellas.*

Halichœres Rüpell, Neue Wirbelthiere, Fische, 1835, 17 (*bimaculatus*); not *Halichœrus* Nillson, 1820, a genus of seals.

Hermiulis Swainson, Nat. Hist. Classn. Fishes, II, 1839 228, (*Labrus guttatus* Bloch); as restricted by Bonaparte (1841); restricted by Swain (1882) to *Cheilio auratus* Quoy and Gaimard.

Parajulis Bleeker, Ned. Tijdschr. Dierk., II, 1865, 251 (*Julis pœcilopterus* Temminck and Schlegel).

Iridio Jordan and Evermann, Check List, 1895, 412 (*Julis dimidiotus* Agassiz=*Labrus cyanocephalus* Bloch).

3402. Iridio radiata (Linnæus). *Puddingwife; Doncella; Pudiano verde.*

West Indies, Brazil north to Florida Keys, Bermuda, and St. Paul Rocks.

Labrus radiatus Linnæus, Syst. Nat., Ed. X, 1758, 288, Bahamas; based on Catesby.

Pudiano verde Marcgrave, Hist. Pisc. Brasil., 1648, 146, Brazil.

Turdus oculo-radiato Catesby, Nat. Hist. Carolina, II, 1743, 12, pl. 12, fig. 1, Bahamas.

Doncella Parra, Desc. Dif. Piez. Hist. Nat. Cuba, 1787, 95, lam. 37, fig. 1, Habana.

Labrus brasiliensis Bloch, Naturgesch. Ausl. Fische, V, 1791, 125, Brazil.

Julis crotaphus Cuvier, Règne Anim., ed. 2, II, 1829, 258; after Parra.

Julis cyanostigma Cuvier and Valenciennes, Hist. Nat. Poiss., XIII, 1839, 286 (391), Martinique.

Julis opalina Cuvier and Valenciennes, loc cit., 287 (392), Martinique.

Julis patatus Cuvier and Valenciennes, loc. cit., 291 (398), Martinique; Cuba.

Julis principis Cuvier and Valenciennes, loc. cit., 294 (402), Bahia.

3403. Iridio bivittata [85] (Bloch). *Slippery dick; Doncella.*

West Indies, north to Beaufort, N. C., and south to Brazil.

Labrus bivittatus Bloch, Naturgesch. Ausl. Fische, V, 1791, 133, from a painting by Plumier made at Martinique.

Sparus radiatus Linnæus, Syst. Nat., ed. XII, 1766, 472, Carolinas.

Labrus psittaculus Lacépède, Hist. Nat. Poiss., III, 1800, 452, Martinique; after Plumier.

Julis humeralis Poey, Memorias, II, 1860, 212, Cuba.

Chærojulis grandisquamis Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 206, Beaufort, N. C.

Chærojulis arangoi Poey, Enumeratio, 1876, 109, Habana.

Platyglossus florealis Jordan and Gilbert, Proc. U. S. Nat. Mus., V, 1882, 287, Pensacola, Fla.

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[84] This genus is very close to the Old World genus *Halichœres*.

[85] Regarded by some authors as the young of *Iridio radiata*.

3404. Iridio cyanocephalus (Bloch).
West Indies, south to Brazil.
Labrus cyanocephalus Bloch, Naturgesch. Ausl. Fische, V, 1791, 139, location unknown; Museum of Link.
Julis dimidiatus Agassiz, in Spix, Pisc. Bras., 1829, 96, pl. 53, Brazil.
Julis internasalis Poey, Memorias, II, 1861, 421, Cuba.

3405. Iridio maculipinna (Müller and Troschel).
West Indies to Beaufort, N. C.
Julis maculipinna Müller and Troschel, in Schomburgk, Hist. Barbados, 1848, 674, Barbados.

3406. Iridio garnoti (Cuvier and Valenciennes).
West Indies, Cuba, Martinique, St. Croix.
Julis garnoti Cuvier and Valenciennes, Hist. Nat. Poiss., XIII, 1839, 285 (390), Martinique.
Julis cinctus Poey, Memorias, II, 1860, 211, Cuba.
Julis ruptus Poey, loc. cit., 212, Cuba.

3407. Iridio kirschii Jordan and Evermann.
Cuba to Brazil.
Julis crotaphus Cuvier and Valenciennes, Hist. Nat. Poiss., XIII, 1839, 289 (395), Bahia; not of Cuvier.
Iridio kirschii Jordan and Evermann, Check List, 1895, 413, Bahia, Brazil.

3408. Iridio poeyi (Steindachner).
Surinam.
Platyglossus poeyi Steindachner, Ichth. Notizen, VI, 1867, 49, Surinam.

3409. Iridio caudalis (Poey).
Cuba.
Julis caudalis Poey, Memorias, II, 1860, 213, Habana.

3410. Iridio pictus (Poey).
West Indies, north to the Snapper Banks off Pensacola, Fla.
Julis pictus Poey, Memorias, II, 1860, 214, Cuba.

3411. Iridio elegans Bean.
Bermudas to Curaçao.
Iridio elegans Bean, Field Mus. Nat. Hist., Zool., VII, 1906, 65, fig. 6, Nonesuch Island, Bermudas.

3412. Iridio similis Nichols.
Bermudas.
Iridio similis Nichols, Proc. Biol. Soc. Wash., XXXIII, 1920, 61, Bermudas.

3413. Iridio frenatus Nichols.
Bermuda.
Iridio frenatus Nichols, Proc. Biol. Soc. Wash., XXXIII, 1920, 61, Bermuda.

3414. Iridio decoratus Bean.
Bermudas.
Iridio decoratus Bean, Proc. Biol. Soc. Wash., XIX, 1906, 29, Nonesuch Island, Bermudas.

3415. Iridio meyeri Bean.
Bermudas.
Iridio meyeri Bean, Proc. Biol. Soc. Wash., XIX, 1906, 29, Nonesuch Island, Bermudas.

3416. Iridio microstomus Bean.
Bermudas.
Iridio microstomus Bean, Proc. Biol. Soc. Wash., XIX, 1906, 30, Nonesuch Island, Bermudas.

3417. Iridio semicinctus (Ayres). *Kelpfish; Señorita.*
Southern California, Santa Barbara Islands to Cedros Island.
Julis semicinctus Ayres, Proc. Calif. Acad. Nat. Sci., II, 1859, 32, Cerros [Cedros] Island, off coast of Lower California.

3418. Iridio dispilus (Günther).
Pacific coast of tropical America, Mazatlan to Panama.
Platyglossus dispilus Günther, Proc. Zool. Soc. Lond., 1864, 25, Panama.

3419. Iridio nicholsi (Jordan and Gilbert).
Revillagigedo and Galapagos Islands.
Platyglossus nicholsi Jordan and Gilbert, Proc. U. S. Nat. Mus., IV, 1881, 231, Braithwaite Bay, Socorro Island.

3420. Iridio sellifer (Gilbert).
Revillagigedo Archipelago.
Halichœres sellifer Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 67, Clarion Island.

Genus 1185. OXYJULIS Gill. *Señoritas.*
Oxyjulis Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 330 (*Julis modestus* Girard).

3421. Oxyjulis californicus (Günther). *Señorita.*
Coast of southern California; common from Monterey to Guadalupe Island.
Julis modestus Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 151, San Diego, Monterey, San Miguel; preoccupied.
Halichœres californicus Günther, Ann. Mag. Nat. Hist., ser. 3, VIII, 1861, 386, name only; substitute for *Julis modestus*, preoccupied.

Genus 1186. PSEUDOJULIS Bleeker.
Pseudojulis Bleeker, Proc. Zool. Soc. Lond., 1861, 412 (*P. girardi* Bleeker).

Subgenus PSEUDOJULIS.

3422. Pseudojulis inornatus Gilbert.
Pacific coast of México; only the type known.
Pseudojulis inornatus Gilbert, Proc. U. S. Nat. Mus.,XI II, 1890, 67, Pacific coast of Mexico.

3423. Pseudojulis melanotis Gilbert.
Pacific coast of Mexico; only the type known.
Pseudojulis melanotis Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 66, Pacific coast of Mexico.

Genus 1187. EMMEEKIA Jordan and Evermann.
Emmeekia Jordan and Evermann, Check List, 1895, 413 (*Pseudojulis venustus* Jenkins and Evermann).

3424. Emmeekia venusta (Jenkins and Evermann).
Gulf of California.
Pseudojulis venustus Jenkins and Evermann, Proc. U. S. Nat. Mus., XI, 1888, 145, Guaymas, Sonora, Mexico.

Genus 1188. JULIDIO Jordan and Evermann.
Julidio Jordan and Evermann, Check List, 1895, 413 (*Pseudojulis adustus* Gilbert).

3425. Julidio adustus (Gilbert).
Revillagigedo Islands.
Pseudojulis adustus Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 66, Socorro Island.

3426. Julidio notospilus (Günther).
Pacific coast of Mexico, Panama, and Clarion Island of Revillagigedo Archipelago.
Pseudojulis notospilus Günther, Proc. Zool. Soc. Lond., 1864, 26, Panama.

Genus 1189. THALASSOMA Swainson.
Thalassoma Swainson, Nat. Hist. Class. Fishes, II, 1839, 224 (*Labrus purpureus* Rüppell).
Chlorichthys Swainson, loc. cit., 232 (*Labrus bifasciatus* Bloch).
Julis Günther, not of Cuvier and Valenciennes.

3427. Thalassoma bifasciatum (Bloch).
West Indies; Tortugas; Jamaica; Cuba; San Domingo; and Martinique.
?*Labrus bifasciatus* Bloch, Naturgesch. Ausl. Fische, V, 1791, 131, West Indies.
Labrus bifasciatus torquatus Bloch and Schneider, Syst. Ichth., 1801, 243, Antilles; after Gronow.
Julis detersor Cuvier and Valenciennes, Hist. Nat. Poiss., XIII, 1839, 298 (408), San Domingo.
Labrus ornatus Gronow, Syst. Nat., ed. Gray, 1854, 83, Antilles.
Julis gillianus Poey, Memorias, II, 1860, 214, Cuba.
?*Julis nitida* Günther, Cat., IV, 1862, 190, Jamaica

3428. Thalassoma socorroensis Gilbert.
Revillagigedo Archipelago.
Thalassoma socorroense Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 69, Socorro Island.

3429. Thalassoma nitidum (Günther).
West Indies; Jamaica; Tortugas.
Julis nitida Günther, Cat., IV, 1862, 190, Jamaica.
Julis nitidissima Goode, Am. Jour. Sci. Arts, XIV, 1877, 293, Bermuda.

3430. Thalassoma grammaticum Gilbert.
Revillagigedo Archipelago.
Thalassoma grammaticum Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 68, Socorro Island; Clarion Island.

3431. Thalassoma virens Gilbert.
Revillagigedo Archipelago.
Thalassoma virens Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 68, Socorro Island.

3432. Thalassoma lucasanum (Gill).
Gulf of California, Cape San Lucas to Mazatlan and Tres Marias Islands; Panama Bay.
Julis lucasanus Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 142, Cape San Lucas.

3433. Thalassoma steindachneri (Jordan).
Acapulco, Pacific coast of Mexico.
Thalassoma steindachneri Jordan, Rept. U. S. Fish Com., XV, 1887, 654, Acapulco; after Steindachner.
Julis melanochir Steindachner, Ichth. Beitr., III, 1875, 63, Acapulco; not of Bleeker.

Genus 1190. DORATONOTUS Günther.
Doratonotus Günther, Cat., IV, 1862, 124 (*D. megalepis* Günther).

3434. Doratonotus megalepis Günther.
West Indies, north to Key West.
Doratonotus megalepis Günther, Cat., IV, 1862, 125, St. Christopher.
Doratonotus thalassinus Jordan and Gilbert, Proc. U. S. Nat. Mus., VII, 1884, 28, Key West, Fla.

3435. Doratonotus decoris Evermann and Marsh.
Porto Rico.
Doratonotus decoris Evermann and Marsh, Rept. U. S. Fish Com., XXV, 1899, 354, Ponce, Porto Rico.

3436. Doratonotus boekei Metzelaar.
Caribbean Sea.
Doratonotus boekei Metzelaar, Trop. Atlant. Visschen, 1919, 107, fig. 31, Curaçao, Bonaire.

Genus 1191. XYRULA Jordan.
Xyrula Jordan, Rept. U. S. Fish Com., XV, 1887, 656 (*Xyrichthys jessiæ* Jordan).

3437. Xyrula jessiæ (Jordan).
Snapper Banks off Tampa, Fla.
Xyrichthys jessiæ Jordan, Proc. U. S. Nat. Mus., X, 1887, 698, off Tampa Bay, Fla.

Genus 1192. NOVACULICHTHYS Bleeker.
Novaculichthys Bleeker, Proc. Zool. Soc. Lond., 1861, 414 (*Labrus tæniurus* Bloch).
Dimalacocentrus Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 223 (*Novacula kallasoma* Bleeker).

3438. Novaculichthys martinicensis (Cuvier and Valenciennes).
Martinique.
Xyrichthys martinicensis Cuvier and Valenciennes, Hist. Nat. Poiss., XIV, 1839, 37 (49), Martinique.
Xyrichthys vitta Cuvier and Valenciennes, loc. cit., 38 (51), no locality.

3439. Novaculichthys infirmus (Bean).
Cozumel, Yucatan.
Xyrichthys infirmus Bean, Bull. U. S. Fish Com., VIII, 1888, 199, pl. 29, fig. 2, Cozumel.

3440. Novaculichthys rosipes (Jordan and Gilbert).
Key West; Florida; Tortugas.
Xyrichthys rosipes Jordan and Gilbert, Proc. U. S. Nat. Mus., VII, 1884, 27, Key West, Tortugas.

3441. Novaculichthys ventralis (Bean).
Cozumel Island, Yucatan.
Xyrichthys ventralis Bean, Bull. U. S. Fish Com., VIII, 1888, 198, pl. 29, fig. 1, Cozumel, Yucatan.

Genus 1193. XYRICHTHYS Cuvier. *Razorfishes.*
Xyrichthys Cuvier, Mém. Mus. d'Hist. Nat., I, 1815, 324, 329 (*X. novacula* Cuvier).
Novacula Cuvier, Règne Anim., Ed. I, 1817, 265 (*Coryphæna novacula* Linnæus).
Amorphocephalus Bowdich, Exc. Madeira, 1825, 238 (*A. granulatus* Bowdich).

3442. Xyrichthys psittacus (Linnæus). *Razorfish.*
West Indies, north to Pensacola and Charleston.
Coryphæna psittacus Linnæus, Syst. Nat., Ed. XII, 1766, 448, Charleston, S. C.
Coryphæna lineata Gmelin, Syst. Nat., 1788, 1195, Charleston, S. C.
Xyrichthys venustus Poey, Enumeratio, 1876, 110, Martinique.
Xyrichthys vermiculatus Poey, Memorias, II, 1860, 215, Cuba.

3443. Xyrichthys mundiceps Gill.
Cape San Lucas, Lower California.
Xyrichthys mundiceps Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 143, Cape San Lucas.

3444. Xyrichthys modestus Poey.
Cuba.
Xyrichthys modestus Poey, Repertorio, II, 1867, 238, Cuba.

3445. Xyrichthys binghami Mowbray.
Bahama Islands.
Xyrichthys binghami Mowbray, Marine Life, I, Apr. 2, 1925, 1, Cay Sal Bank, Bahamas.

Genus 1194. INIISTIUS Gill.
Iniistius Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 143 (*Xyrichthys pavo* Cuvier and Valenciennes).

3446. Iniistius pavoninus (Cuvier and Valenciennes).
Hawaii and Pacific coast of Mexico.
Xyrichthys pavoninus Cuvier and Valenciennes, Hist. Nat. Poiss., XIV, 1839, 63, Hawaii.
Iniistius mundicorpus Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 145, Cape San Lucas.

Genus 1195. BERMUDICHTHYS Nichols.
Bermudichthys Nichols, Proc. Biol. Soc. Wash., XXXIII, 1920, 62 (*B. subfurcatus* Nichols).

3447. Bermudichthys subfurcatus Nichols.
Bermuda.
Bermudichthys subfurcatus Nichols, Proc. Biol. Soc. Wash., XXXIII, 1920, 62, Bermuda.

Family 253. SPARISOMIDÆ

Genus 1196. CRYPTOTOMUS Cope.
Cryptotomus Cope, Trans. Amer. Philos. Soc., XIV, 1870, 462 (*C. roseus* Cope).
Nicholsina Fowler, Copeia, No. 14, 1915, 3 (*Cryptotomus beryllinus* Jordan and Swain).

Subgenus CRYPTOTOMUS Cope.

3448. Cryptotomus roseus Cope.
West Indies, south to Brazil.
Cryptotomus roseus Cope, Trans. Amer. Phil. Soc., XIV, 1871, 462, St. Martins, West Indies.

3449. Cryptotomus crassiceps Bean.
Bermudas.
Cryptotomus crassiceps Bean, Proc. Biol. Soc. Wash., XIX, 1906, 32, Coopers Island, Bermudas.

Subgenus NICHOLSINA Fowler.

3450. Cryptotomus beryllinus Jordan and Swain. *Parrotfish.*
Florida Keys, north to New Jersey, south to Rio Janeiro.
Cryptotomus beryllinus Jordan and Swain, Proc. U. S. Nat. Mus., VII, 1884, 101, Habana.
Sparisoma sp. Bean, Bull. U. S. Fish Com., VII, 1887, 137, Somers Point, N. J.

3451. Cryptotomus dentiens (Poey).
Cuba.
Scarus dentiens Poey, Memorias, II, 1861, 422, Cuba.

3452. Cryptotomus retractus (Poey).
West Indies, north to Pensacola.
Calliodon retractus Poey, Synopsis, 1868, 245, Habana.

3453. Cryptotomus ustus (Cuvier and Valenciennes).
West Indies, north to Charleston, south to Bahia.
Callyodon ustus Cuvier and Valenciennes, Hist. Nat. Poiss., XIV, 1839, 212 (286), pl. 405, Brazil.

3454. Cryptotomus auropunctatus (Cuvier and Valenciennes).
San Domingo.
Callyodon auro-punctatus Cuvier and Valenciennes, Hist. Nat. Poiss., XIV, 1839, 215 (290), Santo Domingo.

Genus 1197. LEPTOSCARUS Swainson.
Leptoscarus Swainson, Nat. Hist. Classn. Fishes, 1839, 11 (*Scarus vaigiensis* Quoy and Gaimard = *Scarus spinidens* Cuvier and Valenciennes).
Calotomus Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 70 (*C. xenodon* Gilbert).

3455. Leptoscarus xenodon (Gilbert).
Socorros Island, Revillagigedo Archipelago.
Calotomus xenodon Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 70, Socorro Island, Revillagigedo Islands.

Genus 1198. SPARISOMA Swainson. *Viejas.*
Sparisoma Swainson, Nat. Hist. Classn. Fishes, etc., II, 1839, 227 (*Scarus abildgardii* Bloch).
Euscarus Jordan and Evermann, Check List, 1895, 416 (*Labrus cretensis* Linnæus).

Subgenus SPARISOMA Swainson.

3456. Sparisoma xystrodon Jordan and Swain.
West Indies, north to Key West.
Sparisoma xystrodon Jordan and Swain, Proc. U. S. Nat. Mus., VII, 1884, 99, Key West; Habana.

3457. Sparisoma atomarium (Poey).
Cuba.
Scarus atomarius Poey, Memorias, II, 1861, 423, Habana.

3458. Sparisoma radians (Cuvier and Valenciennes).
West Indies, south to Brazil; Tortugas.
Scarus radians Cuvier and Valenciennes, Hist. Nat. Poiss., XIV, 1839, 153 (206), Brazil.
Scarus lacrimosus Poey, Memorias, II, 1861, 422, Cuba.

3459. Sparisoma hoplomystax (Cope).
West Indies, from Key West to Bahia.
Scarus hoplomystax Cope, Trans. Amer. Phil. Soc., XIV, 1871, 462, St. Martins, West Indies.
Sparisoma cyanolene Jordan and Swain, Proc. U. S. Nat. Mus., VII, 1884, 98, Key West, Fla.

3460. Sparisoma niphobles Jordan and Bollman.
Bahamas; Tortugas; Cape Florida; Key West; Porto Rico; abundant about Porto Rico.
Sparisoma niphobles Jordan and Bollman, Proc. U. S. Nat. Mus., XI, 1888, 551, Green Turtle Cay, Bahamas.

3461. Sparisoma aurofrenatum (Cuvier and Valenciennes).
West Indies.
Scarus aurofrenatus Cuvier and Valenciennes, Hist. Nat. Poiss., XIV, 1839, 142 (191), San Domingo.
Scarus miniofrenatus Poey, Memorias, II, 1860, 279, Cuba.

3462. Sparisoma oxybrachium (Poey).
Cuba.
Scarus oxybrachius Poey, Synopsis, 1868, 342, Habana.

3463. Sparisoma abildgaardi (Bloch). *Red parrotfish; Roseback parrot.*
West Indies south to Brazil; Tortugas; generally common.
Sparus abildgaardi Bloch, Nat. Ausl. Fische, V, 1791, 22, pl. 259, America.
Vieja Parra, Descr. Dif. Piezas Hist. Nat., 1787, 58, pl. 28, fig. 2, Cuba.
Scarus coccineus Bloch and Schneider, Syst. Ichth., 1801, 289, Cuba; after Parra.
Sparus aureo-ruber Lacépède, Hist. Nat. Poiss., IV, 1803, 55, 163, Martinique; on a drawing by Plumier.
Scarus amplus Ranzani, Nov. Comm. Ac. Scient. Inst. Bonon., V, 1842, 324, pl. 25, Brazil (fide Guichenot).
Scarus erythrinoides Guichenot, Mem. Soc. Sci. Nat. Cherbourg, XI, 1865, 10, San Domingo.

3464. Sparisoma distinctum (Poey).
Cuba.
Scarus distinctus Poey, Memorias, II, 1861, 423, Habana.

3465. Sparisoma chrysopterum (Bloch and Schneider). *Blue parrotfish; Vieja.*
West Indies, south to Bahia.
Scarus chrysopterus Bloch and Schneider, Syst. Ichth., 1801, 286, pl. 57, American seas.
Vieja Parra, Descr. Dif. Piezas Hist. Nat., 1787, 59, pl. 28, fig. 4, Cuba.
Scarus chloris Bloch and Schneider, Syst. Ichth., 1801, 289, Cuba.
Scarus lateralis Poey, Memorias, II, 1860, 219, Cuba.
?*Scarus spinidens* Guichenot, Mem. Soc. Sci. Nat. Cherbourg, XI, 1865, 15, Bahia.

3466. Sparisoma lorito Jordan and Swain.
West Indies.
Sparisoma lorito Jordan and Swain, Proc. U. S. Nat. Mus., VII, 1884, 95, Habana.

3467. Sparisoma viride (Bonnaterre). *Green parrotfish.*
Tortugas to West Indies.
Scarus viridis Bonnaterre, Enc. Meth., 1788, 96, Bahamas; after Catesby.
Piscis viridis bahamensis Catesby, Nat. Hist. Car., II, 1743, 29, pl. 29, Bahamas.
Scarus melanotis Bleeker, Verslagen Koning. Akad. Wetenschappen, XIV, 1862, 126, St. Croix.
Scarus (Catesby) Lacépède, Hist. Nat. Poiss., IV, 1803, 16; after Catesby.

3468. **Sparisoma flavescens** (Bloch and Schneider). *Mud parrot; Vieja colorada; Vieja muger; Parrotfish.*
West Indies; Key West to Rio Janeiro; Woods Hole, Mass.
Scarus flavescens Bloch and Schneider, Syst. Ichth., 1801, 290, Cuba; after Parra.
Vieja Parra, Descr. Dif. Piezas Hist. Nat., 1787, 59, pl. 28, fig. 4, Cuba.
Scarus squalidus Poey, Memorias, II, 1860, 218, Cuba.

3469. **Sparisoma rubripinne** (Cuvier and Valenciennes).
West Indies.
Scarus rubripinnis Cuvier and Valenciennes, Hist. Nat. Poiss., XIV, 1839, 147 (199), San Domingo.
Scarus virens Cuvier and Valenciennes, loc. cit., 1839, 150 (203), Porto Rico; Martinique.
Scarus circumnotatus Poey, Memorias, II, 1861, 423, Cuba.
Scarus truncatus Poey, Synopsis, 1868, 339, Cuba.
?*Scarus emarginatum* Poey, Synopsis, 1868, 340, Cuba.

3470. **Sparisoma strigatum** (Günther).
Scarus strigatus Günther, Cat., IV, 1862, 212, locality unknown, but as the genus *Sparisoma* is chiefly confined to American waters, this species is probably American.

3471. **Sparisoma frondosum** (Cuvier).
West Indies, south to Brazil.
Scarus frondosus Cuvier, in Agassiz, Spix, Pisc. Brasil., 1829, 98, Bahia.
Scarus aracanga Günther, Cat., IV, 1862, 209, Jamaica.

3472. **Sparisoma brachiale** (Poey).
Cuba.
Scarus brachialis Poey, Memorias, II, 1861, 345, Cuba.
?*Scarus humeralis* Poey, loc. cit., 422, Habana.

3473. **Sparisoma maschalespilos** (Bleeker).
Surinam.
Scarus maschalespilos Bleeker, Verslagen Köning. Akad. Vet., XIV, 1862, 127, Surinam.

Family 254. SCARIDÆ

Genus 1199. SCARUS Forskål.
Callyodon Gronow, Zoophyl., I, 1763, 72 (*Scarus croicensis* Bloch); work not binomial.
Scarus Forskål, Descr. Anim., 1775, 25 (*Scarus croicensis* Bloch); not of Gronow.
Hemistoma Swainson, Classn. Fish., etc., II, 1839, 226 *Scarus pepo* Bennett = *H. reticulata* Swainson).
Petronason Swainson, loc. cit., 226 (*Coryphæna psittacus* Linnæus).
Erychthys Swainson, loc. cit., 226 (*Labrus croicensis* Bloch).
Chlorurus Swainson, loc. cit., 227 (*Scarus gibbus* Rüppell).

3474. **Scarus bollmani** Jordan and Evermann.
Gulf of Mexico in moderately deep water.
Scarus bollmani Jordan and Evermann, Proc. U. S. Nat. Mus., IX, 1886, 470, snapper banks off Tampa Bay, Fla.

3475. **Scarus punctulatus** Cuvier and Valenciennes.
West Indies; Tortugas.
Scarus punctulatus Cuvier and Valenciennes, Hist. Nat. Poiss., XIV, 1839, 144 (195), Martinique.
Scarus diadema Cuvier and Valenciennes, loc. cit., 146 (196), Martinique.
Pseudoscarus tæniopterus Günther, Cat., IV, 1862, 226, Trinidad.

3476. **Scarus tæniopterus** Desmarest.
West Indies.
Scarus tæniopterus Desmarest, Dict. Classique, XV, 1831, 244, pl. 12, Cuba.
Scarus vetula Cuvier and Valenciennes, Hist. Nat. Poiss., XIV, 1839, 143 (193), St. Thomas; not of Bloch and Schneider.
Scarus virginalis Jordan and Swain, Proc. U. S. Nat. Mus., VII, 1884, 88, Habana.

3477. Scarus trispinosus Cuvier and Valenciennes.
Brazil.
Scarus trispinosus Cuvier and Valenciennes, Hist. Nat. Poiss., XIV, 1839, 135 (182), Brazil.
Scarus quadrispinosus Cuvier and Valenciennes, loc. cit., 146 (197), Martinique.

3478. Scarus aracanga Günther.
West Indies.
Scarus aracanga Günther, Cat., IV, 1862, 209, Jamaica.
?*Pseudoscarus aracanga* Günther, loc. cit., 227, Jamaica.

3479. Scarus cuzamilæ Bean.
Cozumel Island, Yucatan.
Scarus cuzamilæ Bean, Bull. U. S. Fish. Com., VIII, 1888, 196, Cozumel, Yucatan.

3480. Scarus vetula Bloch and Schneider. *Mudfish; Vieja; Oldwife.*
Tortugas; West Indies.
Vieja Parra. Dif. Piezas, etc., 1787, 58, pl. 28, fig. 1, Habana.
Scarus vetula Bloch and Schneider, Ichth., 1801, 289, Cuba.
Scarus superbus Poey, Memorias, II, 1860, 218, Cuba.

3481. Scarus gnathodus (Poey).
Cuba.
Pseudoscarus gnathodus Poey, Repertorio, II, 1867, 240, Habana.

Subgenus CALLYODON Gronow.

3482. Scarus croicensis Bloch. *Bullon.*
West Indies to Key West and Woods Hole, Mass.
Scarus croicensis Bloch, Nat. Ausl. Fische, IV, 1790, 27, St. Croix.
Scarus insulæ-santæ-crucis Bloch and Schneider, Syst. Ichth., 1801, 285, St. Croix.
Scarus alternans Cuvier and Valenciennes, Hist. Nat. Poiss., 1839, 148 (200), Martinique.
Pseudoscarus lineolatus Poey, Repertorio, II, 1867, 239, Cuba.

3483. Scarus evermanni Jordan.
Gulf of Mexico, in moderately deep water.
Scarus evermanni Jordan, Proc. U. S. Nat. Mus., IX, 1886, 469, Snapper Banks off Tampa Bay, in moderately deep water.

3484. Scarus flavomarginatus Cuvier and Valenciennes.
Martinique.
Scarus flavo-marginatus Cuvier and Valenciennes, Hist. Nat. Poiss., XIV, 1839, 150 (202), Martinique.

3485. Scarus acutus Poey.
Cuba.
Scarus acutus Poey, Memorias, II, 1861, 216, Habana.

3486. Scarus cæruleus (Bloch). *Blue parrotfish; Loro; Clamagore.*
West Indies; Chesapeake Bay.
Coryphæna cærulea Bloch, Naturgesch. Ausl. Fische, II, 1786, 120 (148), pl. 176, probably Martinique; in part; after Catesby.
Loro Parra, Descr. Dif. Piezas Hist. Nat., 1787, 57, pl. 27, fig. 1, Cuba.
Trompa Parra, loc. cit., fig. 2, Cuba.
Scarus trilobatus Lacépède, Hist. Nat. Poiss., IV, 1803, 21, Martinique.
?*Scarus holocyaneos* Lacépède, loc. cit., 45, Martinique.
Scarus obtusus Poey, Memorias, II, 1861, 217, Cuba.
Scarus nuchalis Poey, loc. cit., 220, Cuba.

3487. Scarus compressus (Osburn and Nichols).
Gulf of California.
Callyodon compressus Osburn and Nichols, Bull. Amer. Mus. Nat. Hist., XXXV, 1916, 170, fig. 12, Concepcion Bay, Gulf of California.

3488. Scarus noyesi Heller and Snodgrass.
Gulf of California to Galapagos Islands.
Scarus noyesi Heller and Snodgrass, Proc. Wash. Acad. Sci., V, 1903, 206, Tagus Cove, Albemarle Island.

3489. Scarus emblematicus Jordan and Rutter.
Jamaica.
Scarus emblematicus Jordan and Rutter, Proc. Acad. Nat. Sci. Phila., XLIX, 1897, 122, Jamaica.

Genus 1200. PSEUDOSCARUS Bleeker.
Pseudoscarus Bleeker, Versl. Akad. Vet. Amsterdam, Scaroiden, XII, 1861, 230 (*P. microrrhinos* Bleeker).
Loro Jordan and Evermann, Check List, 1895, 418 (*Scarus guacamaia* Cuvier).

Subgenus PSEUDOSCARUS Bleeker.

3490. Pseudoscarus cœlestinus (Cuvier and Valenciennes). *Loro.*
West Indies.
Scarus cœlestinus Cuvier and Valenciennes, Hist. Nat. Poiss., XIV, 1839, 134 (180), St. Thomas.

3491. Pseudoscarus microps (Osburn and Nichols).
Gulf of California.
Callyodon microps Osburn and Nichols, Bull. Amer. Mus. Nat. Hist., XXXV, 1916, 170, fig. 12, Santa Catalina Island, Gulf of California.

3492. Pseudoscarus simplex Poey.
Cuba.
Pseudoscarus simplex Poey, Repertorio, 1, 1867, 185, Habana.

3493. Pseudoscarus pleianus (Poey).
St. Thomas; only the type known.
Scarus pleianus Poey, Memorias, II, 1861, 393, St. Thomas, West Indies.

3494. Pseudoscarus guacamaia (Cuvier). *Guacamaia; Green parrotfish.*
West Indies, north to Florida Keys, south to Rio de Janeiro; straying to Argentine.
Guacamaya Parra, Descr. Dif. Piezas Hist. Nat., 1787, p. 54, pl. 26, Cuba.
Scarus guacamaia Cuvier, Regne Anim., ed. 2, II, 1829, 265; after Parra.
Scarus turchesius Cuvier and Valenciennes, Hist. Nat. Poiss., XIV, 1839, 134 (181), Porto Rico.
Scarus rostratus Poey, Memorias, II, 1861, 221, Cuba.

3495. Pseudoscarus perrico (Jordan and Gilbert). *Perrico.*
Pacific coast of Mexico, from La Paz to Mazatlan.
Scarus perrico Jordan and Gilbert, Proc. U. S. Nat. Mus., IV, 1881, 357, Mazatlan.

3496. Pseudoscarus plumbeus Bean.
Bermudas.
Pseudoscarus plumbeus Bean, Proc. Biol. Soc. Wash., XXV, 1912, 125, Bermudas.

Order VV. GOBOIDEA

Family 255. ELEOTRIDÆ. Sleepers

Genus 1201. GOBIOMORUS Lacépède.
Gobiomorus Lacépède, Hist. Nat. Poiss., II, 1800, 583 (*G. dormitor* Lacépède); first restriction to this species.
Philypnus Cuvier and Valenciennes, Hist. Nat. Poiss., XII, 1837, 255 (*Platycephalus dormitator* Bloch).
Lembus Günther, Cat., I, 1859, 505 (*L. maculatus* Günther).

3497. Gobiomorus dormitor Lacépède. *Sleeper; Guavina.*
Streams of the West Indies and the Atlantic shores of Central America, Mexico and Surinam.
Gobiomorus dormitor Lacépède, Hist. Nat. Poiss., II, 1800, 583, Martinique; from a drawing by Plumier.
Guavina Parra, Descr. Dif. Piezas Hist. Nat. Cuba, 1787, 105, lam. 39, fig. 1, Habana.
Platycephalus dormitator Bloch and Schneider, Ichth., 1801, 60, Martinique
Eleotris longiceps Günther, Proc. Zool. Soc. Lond., 1864, 151, Nicaragua.
Eleotris dormitatrix Cuvier, Règne Anim., ed. 2, II, 1829, 246, Antilles.

3498. Gobiomorus lateralis (Gill). *Aboma de mar.*
Streams of Pacific coast of Mexico and Central America; from Sonora to Panama.
Philypnus lateralis Gill, Proc. Acad. Nat. Sci. Phila., XII, 1860, 123, Cape San Lucas.

Genus 1202. DORMITATOR Gill.
Prochilus Cuvier, Règne Anim., ed. 1, II, 1817, 294 (*Sciæna maculata* Bloch); name preoccupied.
Dormitator Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 240 (*D. gundlachi* Poey).

3499. Dormitator maculatus (Bloch). *Guavina; Mapo; Paneca; Mapiro; Striped sleeper.*
Both coasts of tropical America, ranging from South Carolina through the West Indies to Para, Cape San Lucas, and Panama.
Sciæna maculata Bloch, Ichth., 1785, pl. 299, fig. 2, West Indies.
Eleotris mugiloides Cuvier and Valenciennes, Hist. Nat. Poiss., XII, 1837, 170 (226), Martinique; Surinam.
Eleotris sima Cuvier and Valenciennes, loc. cit., 174 (232), Vera Cruz.
Eleotris latifrons Richardson, Voy. *Sulphur*, Fishes, 1844, 57, pl. 35, figs. 4 and 5, locality unknown, supposed to be from Pacific coast of Central America.
Eleotris grandisquama Cuvier and Valenciennes, Hist. Nat. Poiss., XII, 1837, 173 (229), America.
Eleotris somnolentus Girard, Proc. Acad. Nat. Sci. Phila., X, 1858, 169, near mouth of Rio Grande.
Eleotris omocyaneus Poey, Memorias, II, 1861, 269, Habana.
Dormitator microphthalmus Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863. 170, Panama.
Dormitator gundlachi Poey, Synopsis, 1868, 396, Cuba.
Dormitator lineatus Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 271, Savannah.

Genus 1203. GUAVINA Bleeker.
Guavina Bleeker, Esquisse d'un Syst. Nat. Gobiod., in Archiv Neerl. Sci., IX, 1874 (*Eleotris guavina* Cuvier and Valenciennes).

3500. Guavina guavina (Cuvier and Valenciennes). *Guarubaco; Guavina.*
East coast of tropical America, Cuba to Rio Janeiro.
Eleotris guavina Cuvier and Valenciennes, Hist. Nat. Poiss., XII, 1837, 168 (223) Martinique.

Genus 1204. LEPTOPHILYPNUS Meek and Hildebrand.
Leptophilypnus Meek and Hildebrand, Field Mus. Nat. Hist., Zool., X, 1916, 361 (*L. fluviatilis* Meek and Hildebrand).

3501. Leptophilypnus fluviatilis Meek and Hildebrand.
Fresh waters of Panama.
Leptophilypnus fluviatilis Meek and Hildebrand, Field Mus. Nat. Hist., Zool., X, 1916, 361, Mindi, Canal Zone, Panama.

Genus 1205. ELEOTRIS Schneider.
Eleotris Schneider, Syst. Ichth., ed. Bloch, 1801, 65 (*Gobius pisonis*, etc., Gmelin).
Culius Bleeker, Esquisse, Gobioides, 1874, 304 (*C. fuscus* Bleeker).

3502. Eleotris pisonis (Gmelin). *Guavina; Tetard; Sleeper.*
Streams of the West Indies; southern Florida to Brazil.
Gobius pisonis Gmelin, Syst. Nat., 1789, 1206, Rio Almendares, Cuba; based on *Eleotris* of Gronow.
Amore pixuma Marcgrave, Hist. Brasil., IV, 1648, 166, Brazil.
Eleotris capite plagioplateo Gronow, Mus. Ichth., II, 1757, 168; after Marcgrave.
Gobius amorea Walbaum, Artedi Pisc., III, 1792, 205; based on *Eleotris* of Gronow.
Eleotris gyrinus Cuvier and Valenciennes, Hist. Nat. Poiss., XII, 1837, 166 (220), pl. 356, Martinique; San Domingo; Surinam.
Eleotris (*Culius*) *belizianus* Sauvage, Bull. Soc. Philom. Paris, ser. 7, IV, 1879, 55, Belize, Cayenne.

3503. **Eleotris perniger** (Cope).
West Indies, south to Rio Janeiro.
Culius perniger Cope, Trans. Amer. Phil. Soc., XIV, 1870, 473, St. Martins, West Indies.

3504. **Eleotris amblyopsis** (Cope).
Atlantic coast of America, from Charleston, S. C., to Surinam; streams of West Indies.
Culius amblyopsis Cope, Trans. Amer. Phil. Soc., XIV, 1870, 473, Surinam.

3505. **Eleotris abacurus** Jordan and Gilbert.
Coast of South Carolina.
Eleotris abacurus Jordan and Gilbert, Proc. Calif. Acad. Sci., 2d ser., VI, 1896, 228, Charleston, S. C.

3506. **Eleotris pictus** Kner and Steindachner. *Guavina.*
Streams about the Gulf of California, from Sonora south to Panama; Rio Presidio, Mazatlan.
Eleotris pictus Kner and Steindachner, Abh. Akad. Wiss. Wien, X, 1864, 18, pl. 3, fig. 1, Rio Bayano, near Panama.
Culius æquidens Jordan and Gilbert, Proc. U. S. Nat. Mus., IV, 1881, 461, Rio Presidio, near Mazatlan.

3507. **Eleotris tubularis** Heller and Snodgrass.
Cocos Island.
Eleotris tubularis Heller and Snodgrass, Proc. Wash. Acad. Sci., V, 1903, 210, Pl. X, Cocos Island.

Genus 1206. ALEXURUS Jordan.
Alexurus Jordan, Proc. Calif. Acad. Sci., 2d ser., V, 1895, 511 (*A. armiger* Jordan and Richardson); perhaps inseparable from *Eleotris*.

3508. **Alexurus armiger** Jordan.
La Paz, Lower California, to Panama.
Alexurus armiger Jordan, Proc. Calif. Acad. Sci., 2d ser., V, 1895, 511, pl. 48, La Paz, Lower California.

Genus 1207. HEMIELEOTRIS Meek and Hildebrand.
Hemieleotris Meek and Hildebrand, Field Mus. Nat. Hist., Zool., X, 1916, 364 (*Eleotris latifasciatus* Meek and Hildebrand).

3509. **Hemieleotris latifasciatus** (Meek and Hildebrand).
Streams of Panama.
Eleotris latifasciatus Meek and Hildebrand, Field Mus. Nat. Hist., Zool., X, 1912, 68, Rio Cardenis, Panama.

Genus 1208. EROTELIS Poey. *Esmeraldas de Mar.*
Erotelis Poey, Memorias, II, 1861, 273 (*E. valenciennesi* Poey = *Eleotris smaragdus* Cuvier and Valenciennes).

3510. **Erotelis smaragdus** (Cuvier and Valenciennes). *Esmeralda negra; Esmeralda de mar.*
Key West and Cuba; coral shores among algæ.
Eleotris smaragdus Cuvier and Valenciennes, Hist. Nat. Poiss., XII, 1837, 173 (231), Cuba.
Erotelis valenciennesi Poey, Memoriae, II, 1861, 273, Cuba.

Genus 1209. MICROËLEOTRIS Meek and Hildebrand.
Microëleotris Meek and Hildebrand, Field Mus. Nat. Hist., Zool., X, 1916, 362 (*M. panamensis* Meek and Hildebrand).

3511. **Microëleotris panamensis** Meek and Hildebrand.
Pacific slope of central Panama.
Microëleotris panamensis Meek and Hildebrand, Field Mus. Nat. Hist., Zool., X, 1916, 363, Rio Juan Diaz, Panama.

3512. **Microëleotris mindii** Meek and Hildebrand.
Mindi, near Atlantic coast of Canal Zone.
Microëleotris mindii Meek and Hildebrand, Field Mus. Nat. Hist., Zool., X, 1916, 364, brackish creek at Mindi, Canal Zone.

Genus 1210. EVIOTA Jenkins.
Eviota Jenkins, Bull. U. S. Fish Com., XXII, 1902, 501 (*Eviota epiphanes* Jenkins).

3513. Eviota personata Jordan and Thompson.
Coral reefs about the Tortugas, Fla.; Garden Key.
Eviota personata Jordan and Thompson, Bull. U. S. Bur. Fish., XXIV, 1904, 251, fig. 3, Garden Key, Fla.

Genus 1211. IOGLOSSUS Bean.
Ioglossus Bean, in Jordan and Gilbert, Proc. U. S. Nat. Mus., V, 1882, 297 (*I. calliurus* Bean).

3514. Ioglossus calliurus Bean.
Gulf of Mexico; Snapper Banks off Pensacola, Fla.
Ioglossus calliurus Bean, in Jordan and Gilbert, Proc. U. S. Nat. Mus., V, 1882, 297, Pensacola, Fla.

Genus 1212. GYMNELEOTRIS Bleeker.
Gymneleotris Bleeker, Esquisse d'un Syst. Nat. des Gobiod., in Archiv Néerl. Sci., IX, 1874, 304 (*Eleotris seminuda* Günther).

3515. Gymneleotris seminuda (Günther).
Panama.
Eleotris seminudus Günther, Proc. Zool. Soc. Lond., 1864, 24, pl. 4, figs. 2, 2a, Panama.

Genus 1213. PYCNOMMA Rutter.
Pycnomma Rutter, Proc. Calif. Acad. Sci., 3d ser., III, 1904, 252 (*P. semisquamatum* Rutter).

3516. Pycnomma semisquamatum Rutter.
Gulf of California.
Pycnomma semisquamatum Rutter, Proc. Calif. Acad. Sci., 3d ser., III, 1904, 252, Pl. XXIV, Gulf of California.

Genus 1214. CHRIOLEPIS Gilbert.
Chriolepis Gilbert, Proc. U. S. Nat. Mus., XIV, 1891, 557 (*C. minutillus* Gilbert).

3517. Chriolepis minutillus Gilbert.
Gulf of California.
Chriolepis minutillus Gilbert, Proc. U. S. Nat. Mus., XIV, 1891, 558, Gulf of California, at *Albatross* station 2825.

Family 256. GOBIIDÆ. Gobies

Genus 1215. LOPHOGOBIUS Gill. *Crested gobies.*
Lophogobius Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 240 (*Gobius cristagalli* Valenciennes, in Cuvier and Valenciennes=*Gobius cyprinoides* Pallas).

3518. Lophogobius cyprinoides (Pallas).
West Indies; Cuba.
Gobius cyprinoides Pallas, Spic., Zool., VIII, 1770, 17, pl. 1, fig. 5, "Amboina."
Gobius crista-galli Cuvier and Valenciennes, Hist. Nat. Poiss., XII, 1837, 98 (130), Habana.

Genus 1216. EVORTHODUS Gill.
Evorthodus Gill, Proc. Acad. Nat. Sci. Phila., XI, 1859, 195 (*E. breviceps* Gill).

3519. Evorthodus breviceps Gill.
Trinidad and Surinam.
Evorthodus breviceps Gill, Proc. Acad. Nat. Sci. Phila., XI, 1859, 195, Trinidad.

Genus 1217. CTENOGOBIUS Gill.
Ctenogobius Gill, Ann. Lyc. Nat. Hist. N. Y., VI, 1858, 374, 430 (*C. fasciatus* Gill).

3520. Ctenogobius fasciatus Gill.
West Indies.
Ctenogobius fasciatus Gill, Ann. Lyc. Nat. Hist. N. Y., VI, 1858, 376, Trinidad.

Genus 1218. RHINOGOBIUS[86] Gill.
Rhinogobius Gill, Proc. Acad. Nat. Sci. Phila., XI, 1859, 145 (*R. similis* Gill).
Coryphopterus Gill, loc. cit., XV, 1863, 263 (*C. glaucofrænum* Gill).

3521. Rhinogobius glaucofrænum (Gill).
Florida Keys; Tortugas.
Coryphopterus glaucofrænum Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 263, coast of the State of Washington; evidently an error.

3522. Rhinogobius manglicola (Jordan and Starks).
Pacific coast of Mexico at Mazatlan.
Gobius manglicola Jordan and Starks, in Jordan, Proc. Calif. Acad. Sci., 2d ser., V, 1895, 495, Mazatlan, Mexico.

3523. Rhinogobius quadriporus (Cuvier and Valenciennes).
Surinam.
Gobius quadriporus Cuvier and Valenciennes, Hist. Nat. Poiss., XII, 1837, 66 (87), Surinam.

3524. Rhinogobius stigmaturus (Goode and Bean).
Florida Keys.
Gobius stigmaturus Goode and Bean, Proc. U. S. Nat. Mus., V, 1882, 418, no type locality given, but specimens probably from Florida Keys.

3525. Rhinogobius shufeldti (Jordan and Eigenmann).
Gulf coast of United States.
Gobius shufeldti Jordan and Eigenmann, Proc. U. S. Nat. Mus., IX, 1886, 495, New Orleans.

3526. Rhinogobius boleosoma (Jordan and Gilbert).
Gulf of Mexico, Pensacola to Key West.
Gobius boleosoma Jordan and Gilbert, Proc. U. S. Nat. Mus., V, 1882, 295, Laguna Grande, Pensacola, Fla.

3527. Rhinogobius encæomus (Jordan and Gilbert).
South Carolina to Key West.
Gobius encæomus Jordan and Gilbert, Proc. U. S. Nat Mus., V, 1882, 611, Charleston, S. C.

3528. Rhinogobius eigenmanni (Garman).
Off Key West.
Gobius eigenmanni Garman, Bull. Lab. Nat. Sci. State Univ. Iowa, IV, No. 1, 1896, 88, pl. 3, fig. 1, off Key West in 60 fathoms.

3529. Rhinogobius curaçao (Metzelaar).
Caribbean Sea.
Gobius curaçao Metzelaar, Trop. Atl. Viss., 1919, 136, fig. 38, Antilles.

3530. Rhinogobius mowbrayi Bean.
Bermudas to Caribbean Sea.
Rhinogobius mowbrayi Bean, Field Mus. Nat. Hist., Zool., VII, 1906, 81, Challenger Bank, 28 fathoms, rock cavity, Bermudas.

3531. Rhinogobius tortugæ (Jordan).
Dry Tortugas, Garden Key, West Indies.
Ctenogobius tortugæ Jordan, Bull. U. S. Fish Com., XXII, 1902, 541, pl. 1, Garden Key, Tortugas.

3532. Rhinogobius parvus (Meek).
Rio San Francisco, La Antigua, Mexico.
Gobius parvus Meek, Field Col. Mus., Zool., III, 1902, 121, La Antigua.

3533. Rhinogobius claytonii (Meek).
Rio San Francisco, La Antigua, Mexico.
Gobius claytonii Meek, Field Col. Mus., Zool., III, 1902, 121, La Antigua.

3534. Rhinogobius garmani (Eigenmann and Eigenmann).
Dominica; Fort de France; Martinique; St. Kitts.
Gobius garmani Eigenmann and Eigenmann, Proc. Calif. Acad. Sci., 2d ser., I, 1888, 61, Dominica; Fort de France, Martinique, and St. Kitts.

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[86] Some of the species named below may belong to *Ctenogobius*, from which this genus differs but slightly

Genus 1219. GOBIUS Linnæus.
Gobius Linnæus, Syst. Nat., Ed. X, I, 1758, 263 (*G. niger* Linnæus).

3535. Gobius translucens Nichols.
Porto Rico.
Gobius translucens Nichols, Bull. Amer. Mus. Nat. Hist., XXXIV, 1915, 145, fig. 2, near San Antonio Bridge, San Juan, Porto Rico.

3536. Gobius hipoliti Metzelaar.
West Indies.
Gobius hipoliti Metzelaar, Bijdr. Dierk. Amsterdam, XXII, 1922, 138, with figure, West Indies.

Genus 1220. BATHYGOBIUS Bleeker. *Mapos.*
Bathygobius[67] Bleeker, Arch. Neerl. Acad. Sci., XIII, 1878, 54 (*Gobius nebulo-punctatus* Rüppell=*Gobius fuscus* Rüppell).
Mapo Smitt, Oefv. Kong. Vet. Akad. Stockholm. 1899, 542 (*Gobius soporator* Cuvier and Valenciennes).

3537. Bathygobius soporator (Cuvier and Valenciennes). *Sleeper; Mapo; Caiman; Oopu.*
Barbados, Pará, Itapuana, Cuba, Bahamas, Orange Key, Bahia, Pernambuco, St. Thomas, Charleston, Tortugas, Florida Keys, Martinique, Sao Mathias, Curaçao, Rio de Janeiro, Rio Doce.
Gobius soporator Cuvier and Valenciennes, Hist. Nat. Poiss., XII, 1837, 42 (56), Martinique.
?*Gobius albopunctatus* Cuvier and Valenciennes, loc. cit., 43 (57), Isle of France.
?*Gobius padangensis* Bleeker, Nat. Tijds. Ned. Ind., I, 1850, 249, Padang.
Gobius catulus Girard, Proc. Acad. Nat. Sci. Phila., X, 1858, 169, St. Joseph Island, Tex.
?*Gobius breviceps* Blyth, Proc. Asia. Soc. Beng., 1858, 271, Great Andaman Island (in Jour., XXVII, 1858).
Gobius mapo Poey, Memorias, II, 1861, 277, Cuba.
Gobius lacertus Poey, loc. cit., 278, Cuba.
Gobius caroliniensis Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 268, Charleston, S. C.
Gobius brunneus Poey, Synopsis, 1868, 393, Habana.

3538. Bathygobius fuscus (Rüppell).
Red Sea to Galapagos Islands.
Gobius fuscus Rüppell, Atl. Reis. Nord. Af. Fish., 1828, 137, Red Sea.
Gobius punctillatus Rüppell, loc. cit., 138, Red Sea.
Gobius nebulo-punctatus Rüppell, Neue Wirbelthiere, Fische, 1835, 139, Red Sea.
Gobius linealus Jenyns, Zool. Voy. *Beagle*, 1842, 95, pl. 19, fig. 2, Galapagos Islands.
Gobius homocyanus Vaillant and Sauvage, Rev. Mag. Zool., III, 1875, 280, Sandwich [Hawaiian] Islands.
Gobius sandvicensis Günther, Rept. Shore Fishes, *Challenger*, I, 1880, pt. 6, 60, Honolulu.

Genus 1221. RHINOGOBIOPS Hubbs.
Rhinogobiops Hubbs, Occ. Papers Mus. Zool. Univ. Mich., No. 169, Feb. 17, 1926, p. 1 (*Gobius nicholsii* Bean).

3539. Rhinogobiops nicholsii (Bean).
Coast of British Columbia, south to southern California.
Gobius nicholsii Bean, Proc. U. S. Nat. Mus., IV, 1881, 469, Departure Bay, British Columbia.

Genus 1222. GOBIONELLUS Girard.
Gobionellus Girard, Proc. Acad. Nat. Sci. Phila., X, 1858, 168 (*G. hastatus* Girard).
Smaragdus Poey, Memorias, II, 1860, 280 (*Gobius smaragdus* Cuvier and Valenciennes).

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[67] An ill-chosen name for these shallow-water gobies.

3540. Gobionellus oceanicus (Pallas). *Esmeralda; Endormi; Emerande; Bacalhao sabara.*
Gulf coast of United States, southward through the West Indies.
Gobius oceanicus Pallas, Spic., VIII, 1770, 4, locality unknown; after Gronow.
Gobius lanceolatus Bloch, Fische Deutschlands, II, 1783, 8, pl. 38, fig. 1, Martinique.
Gobius bacalaus Cuvier and Valenciennes, Hist. Nat. Poiss., XII, 1837, 90 (119), Surinam; Cayenne.

3541. Gobionellus hastatus Girard. *Emerald fish; Sharp-tailed goby.*
Gulf of Mexico.
Gobionellus hastatus Girard, Proc. Acad. Nat. Sci. Phila., X, 1858, 168, St. Joseph Island, Tex.

3542. Gobionellus smaragdus (Cuvier and Valenciennes). *Esmeralda.*
West Indies, south to Rio Janeiro, north to St. Augustine, Fla., and to Charleston, N. C.
Gobius smaragdus Cuvier and Valenciennes, Hist. Nat. Poiss., XII, 1837, 91 (120), Cuba.
Smaragdus valenciennesi Poey, Memorias, II, 1861, 280, Cuba; after Valenciennes.

3543. Gobionellus sagittula (Günther).
Gulf of California, south to Panama.
Euctenogobius sagittula Günther, Proc. Zool. Soc. Lond., 1861, pt. 3, 371, 372, Pacific coast of Central America.
Gobius longicaudus Jenkins and Evermann, Proc. U. S. Nat. Mus., XI, 1888, 146, Guaymas.

3544. Gobionellus strigatus (O'Shaughnessy).
Coast of Surinam.
Euctenogobius strigatus O'Shaughnessy, Ann. Mag. Nat. Hist., ser. IV, XV, 1875, 145, Surinam.
Gobius kraussi Steindachner, Ichth. Beitr., VIII, 1879, 16, Surinam.

3545. Gobionellus bayamonensis (Evermann and Marsh).
Porto Rico.
Gobius bayamonensis Evermann and Marsh, Rept. U. S. Fish Com., XXV, 1899 (Dec. 19), 355, San Juan Market, Porto Rico.

3546. Gobionellus lyricus (Girard).
Gulf of Mexico, from Galveston to Cuba and the Lesser Antilles.
Gobius lyricus Girard, Proc. Acad. Nat. Sci. Phila., X, 1858, 169, Brazos Santiago, Tex.
Gobius wurdemanni Girard, loc. cit., 169, Brazos Santiago.
Smaragdus costalesi Poey, Memorias, II, 1861, 280, Habana.

3547. Gobionellus stigmaticus (Poey).
Coast of North Carolina, Florida Keys, West Indies, southward to Rio Janeiro; common at Habana.
Smaragdus stigmaticus Poey, Memorias, II, 1861, 281, Cuba.

3548. Gobionellus microdon (Gilbert).
San Juan Lagoon, west coast of Mexico.
Gobius microdon Gilbert, Proc. U. S. Nat. Mus., XIV, 1891, 554, San Juan Lagoon, north of Rio Ahomè, Mexico.

Genus 1223. ZONOGOBIUS Bleeker.
Zonogobius Bleeker, Esquisse Syst. Nat. Gobioiden, 1874, 323 (*Gobius semifasciatus* Kner).

3549. Zonogobius zebra (Gilbert).
Pacific coast of Mexico and southern California.
Gobius zebra Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 73, *Albatross* station 2989, Pacific coast of Mexico.

Genus 1224. EUCTENOGOBIUS Gill
Euctenogobius Gill, Ann. Lyc. Nat. Hist. N. Y., VII, 1859, VII, 45 (*E. badius* Gill).

3550. Euctenogobius badius Gill.
Mouth of Amazon; recorded also from Martinique.
Euctenogobius badius Gill, Ann. Lyc. Nat. Hist. N Y., VII, 1859, 45, Amazon.
Gobius boscii Sauvage, Bull. Soc Philom. Paris, IV, 1880, 44, Martinique; not *Gobius bosci* Lacépède.

3551. Euctenogobius poeyi (Steindachner).
Barbados.
Gobius poeyi Steindachner, Ichth. Notizen, VI, 1867, 44, Barbados.

Genus 1225. LYTHRYPNUS Jordan and Evermann.
Lythrypnus Jordan and Evermann, Check List, 1895, 458 (*Gobius dalli* Gilbert).

3552. Lythrypnus dalli (Gilbert).
Catalina Harbor, Calif.
Gobius dalli Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 73, Avalon, Catalina Harbor, Calif., in 35 fathoms.

Genus 1226. XENOGOBIUS Metzelaar.
Xenogobius Metzelaar, Trop. Atlant. Vissch., 1919, 140 (*X. weberi* Metzelaar).

3553. Xenogobius weberi Metzelaar.
Caribbean Sea.
Xenogobius weberi Metzelaar, Trop. Atlant. Vissch., 1919, 140, fig. 40, Curaçao.

Genus 1227. ELACATINUS Jordan.
Elecatinus Jordan, Bull. U. S. Fish Com., XXII, 1902, 542 (*E. occanops* Jordan).

3554. Elacatinus oceanops Jordan.
Garden Key, Tortugas.
Elacatinus oceanops Jordan, Bull. U. S. Fish Com., XXII, 1902, 542, pl. 2, Garden Key, Fla.

Genus 1228. CHONOPHORUS Poey.
Chonophorus Poey, Memorias, II, 1860, 274 (*C. bucculentus* Poey = *Gobius banana* Cuvier and Valenciennes; published in July, 1860, and therefore presumably older in date than *Awaous*).
Awaous Steindachner, Ver. Mat. Phrs., XLII, 1860, 289 (*Gobius ocellaris* Cuvier and Valenciennes; in an article presented on July 12, 1860).

3555. Chonophorus banana (Cuvier and Valenciennes). *Guavina hoyera; Aboma de rio.*
West Indies; both coasts of Mexico, south to Brazil; Cuba; Sinaloa; common; Lower California to Panama.
?*Gobius taiasica* Lichtenstein, Abh. Akad. Wiss. Berlin, 1822, 273, Brazil; not *Tajaasica* Marcgrave.
Gobius banana Cuvier and Valenciennes, Hist. Nat. Poiss., XII, 1837, 78 (103), San Domingo.
Gobius martinicus Cuvier and Valenciennes, loc. cit., 79 (105), Martinique.
Chonophorus bucculentus Poey, Memorias, II, 1860, 275, Cuba.
Chonophorus contractus Poey, loc. cit., Cuba.
Gobius dolichocephalus Cope, Trans. Amer. Phil. Soc. Phila., XIII, 1869, 403, near Orizaba, Mexico.
Euctenogobius latus O'Shaughnessy, Ann. Mag. Nat. Hist., ser. 4, XV, 1875, 146, Bahia.

3556. Chonophorus mexicanus (Günther).
Fresh-water streams of Atlantic slope of Mexico.
Gobius mexicanus Günther, Cat., III, 1861, 61, Mexico.

3557. Chonophorus nelsoni (Evermann).
Streams of Sinaloa.
Awaous nelsoni Evermann, Proc. Biol. Soc. Wash., XII, 1898, 3, fresh-water pools at Rosario, Sinaloa, Mexico.

Genus 1229. GNATHOLEPIS Bleeker.
Gnatholepis Bleeker, Esquisse Syst. Nat. Gobioiden, 1874, 318 (*Gobius anjerensis* Bleeker).

3558. Gnatholepis thompsoni Jordan.
Bush Key, Tortugas.
Gnatholepis thompsoni Jordan, Bull. U. S. Fish Com., XXII, 1902, 541, pl. 1, Bush Key, Tortugas.

Genus 1230. BOLLMANNIA Jordan.
Bollmannia Jordan, Proc. U. S. Nat. Mus., XII, 1889, 164 (*B. chlamydes* Jordan).

3559. Bollmannia chlamydes Jordan.
Pacific Ocean off coast of Colombia.
Bollmannia chlamydes Jordan, Proc. U. S. Nat. Mus., XII, 1889, 164, Pacific Ocean off coast of Colombia.

3560. Bollmannia ocellata Gilbert.
Gulf of California.
Bollmannia ocellata Gilbert, Proc. U. S. Nat. Mus., XIV, 1891, 555, northern part of Gulf of California at *Albatross* stations 3031 and 3035 in 30 and 33 fathoms.

3561. Bollmannia macropoma Gilbert.
Gulf of California.
Bollmannia macropoma Gilbert, Proc. U. S. Nat. Mus., XIV, 1891, 556, near La Paz, Gulf of California, at *Albatross* station 2996 in 112 fathoms.

3562. Bollmannia stigmatura Gilbert.
Northern part of the Gulf of California.
Bollmannia stigmatura Gilbert, Proc. U. S. Nat Mus., XIV, 1891, 556, Gulf of California at *Albatross* stations 3016 and 3017 in 76 and 58 fathoms.

3563. Bollmannia boqueronensis Evermann and Marsh.
Porto Rico.
Bollmannia boqueronensis Evermann and Marsh, Rept. U. S Fish Com., XXV, 1899 (Dec. 19), 356, Ensenada del Boqueron, Porto Rico.

Genus 1231. ABOMA Jordan and Starks.
Aboma Jordan and Starks, Fishes of Sinaloa, Proc. Calif. Acad. Sci., 2d ser., V, 1895, 497 (*A. etheostoma* Jordan and Starks).

3564. Aboma etheostoma Jordan and Starks.
Pacific coast of Mexico.
Aboma etheostoma Jordan and Starks, Fishes of Sinaloa, Proc. Calif. Acad. Sci., 2d ser., V, 1895, 498, pl. 50, Mazatlan, Mexico.

3565. Aboma lucretiæ (Eigenmann and Eigenmann).
Pearl Island, Gulf of Panama.
Gobius lucretiæ Eigenmann and Eigenmann, Proc. Calif. Acad. Sci., 2d ser., I, 1888, 57, Pearl Island, Gulf of Panama.

3566. Aboma chiquita (Jenkins and Evermann).
Gulf of California.
Gobius chiquita Jenkins and Evermann, Proc. U. S. Nat. Mus., XI, 1888, 146, Guaymas, Sonora, Mexico.

Genus 1232. MICROGOBIUS Poey.
Microgobius Poey, Enumeratio, 126, 1876 (*M. signatus* Poey).
Zalypnus Jordan and Evermann, Check List, 1895, 459 (*Gobius emblematicus* Jordan and Gilbert).

3567. Microgobius emblematicus (Jordan and Gilbert).
Lower California to Panama.
Gobius emblematicus Jordan and Gilbert, Bull. U. S. Fish Com., I, 1881, 330, Bay of Panama.
Microgobius cyclolepis Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 74, *Albatross* station 3020, Lower California.

3568. Microgobius signatus Poey.
West Indies; common about Cuba.
Microgobius signatus Poey, Enumeratio, 1876, 127, pl. 5, fig. 3, Cuba.

3569. Microgobius gulosus (Girard).
Coast of Florida to Texas; common north to Indian River, Fla.
Gobius gulosus Girard, Proc. Acad. Nat. Sci. Phila., X, 1858, 169, Indianola, Tex.

3570. Microgobius meeki Evermann and Marsh.
Culebra and Vieques Islands, Porto Rico.
Microgobius meeki Evermann and Marsh, Rept. U. S. Fish Com., XXV, 1899 (Dec. 19), 356, between Vieques and Culebra Islands east of Porto Rico.

3571. Microgobius thalassinus (Jordan and Gilbert).
South Atlantic coast, Virginia to South Carolina.
Gobius thalassinus Jordan and Gilbert, Proc. U. S. Nat. Mus., V, 1882, 612, Charleston Harbor, S. C.
Microgobius eulepis Eigenmann and Eigenmann, Proc. Calif. Acad. Sci., 2d ser., I, 1888, 69, Fortress Monroe, Va.

3572. Microgobius miraflorensis Gilbert and Starks.
Bay of Panama.
Microgobius miraflorensis Gilbert and Starks, Mem. Calif. Acad. Sci., IV, 1904, 176, Pl. XXIX, Bay of Panama.

Genus 1233. EUCYCLOGOBIUS Gill.
Eucyclogobius Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 279 (*Gobius newberryi* Girard).

3573. Eucyclogobius newberryi (Girard).
Streams of California, in small brooks near the sea; locally common in San Luis Obispo Creek.
Gobius newberryi Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 136, Tomales Bay, Calif.

Genus 1234. LEPIDOGOBIUS Gill.
Lepidogobius Gill, Ann. Lyc. Nat. Hist. N. Y., VII, 1859, 14 (*Gobius lepidus* Girard).
Cyclogobius Steindachner, Sitzb. Kais. Akad. Wiss. Wien, XLII, 1860, 284 (*Gobius lepidus* Girard).

3574. Lepidogobius lepidus (Girard).
Pacific coast of North America, from Vancouver Island to Lower California, in rather deep water off San Francisco Bay.
Gobius lepidus Girard, Pac. R. R. Surv., X, pt. 4, Fishes, 1858, 127, 25a, figs. 5 and 6; substitute for *Gobius gracilis*, preoccupied.
Gobius gracilis Girard. Proc. Acad. Nat. Sci. Phila., VII, 1854, 134, San Francisco.

Genus 1235. GILLICHTHYS Cooper.
Gillichthys Cooper, Proc. Calif. Acad. Nat. Sci., III, 1863, 109 (*G. mirabilis* Cooper).
Gillia Günther, Zool. Rec., 1864, 137 (*Gillichthys mirabilis* Cooper); substitute name preoccupied.
Aprolepis Hubbs, Occ. Papers, Univ. Mich. Mus. Zool., I, 1921, 99 (*A. barbaræ* Hubbs); young of *Gillichthys mirabilis*.

3575. Gillichthys mirabilis Cooper. *Long-jawed goby.*
Pacific coast of North America, from San Francisco to Guaymas.
Gillichthys mirabilis Cooper, Proc. Calif. Acad. Nat. Sci., III, 1863, 109, San Diego Bay.
Gobius townsendi Eigenmann and Eigenmann, Proc. U. S. Nat. Mus., XI, 1888, 463, San Diego, Calif.
Aprolepis barbaræ Hubbs, Occ. Papers Univ. Mich. Mus. Zool., I, 1921, 99, young.

3576. Gillichthys detrusus Gilbert and Scofield.
Horseshoe Bend, near mouth of Colorado River, in Mexico.
Gillichthys detrusus Gilbert and Scofield, Proc. U. S. Nat. Mus., XX, 1896, 498, near mouth of Colorado River.

Genus 1236. QUIETULA Jordan and Evermann.
Quietula Jordan and Evermann, in Jordan and Starks, Proc. Calif. Acad. Sci., 2d ser., V, 1895, 839 (*Gillichthys y-cauda* Jenkins and Evermann).

3577. Quietula y-cauda (Jenkins and Evermann).
Pacific coast of North America from Guaymas to Vancouver Island.
Gillichthys y-cauda Jenkins and Evermann, Proc. U. S. Nat. Mus., XI, 1888, 147, Guaymas, Sonora.
Gillichthys guayamasiæ Jenkins and Evermann, loc. cit., 148, Guaymas, Sonora.

Genus 1237. CLEVELANDIA Eigenmann and Eigenmann.
Clevelandia Eigenmann and Eigenmann, Proc. Calif. Acad. Sci., 2d ser., I, 1888, 73 (*C. longipinnis* Eigenmann and Eigenmann = *Clevelandia rosæ* Jordan and Evermann).

3578. Clevelandia ios (Jordan and Gilbert).
Puget Sound and neighboring waters.
Gobiosoma ios Jordan and Gilbert, Proc. U. S. Nat. Mus., V, 1882, 437, Saanich Arm, Vancouver Island.
Clevelandia longipinnis Eigenmann and Eigenmann, Proc. Calif. Acad. Sci., 2d ser., I, 1888, 73; not of Steindachner.
Clevelandia rosæ Jordan and Evermann, Proc. Calif. Acad. Sci., 2d ser., VI, 1896, 229, San Diego, Calif.

Genus 1238. ILYPNUS Jordan and Evermann.
Ilypnus Jordan and Evermann, Check List, 1895, 460 (*Lepidogobius gilberti* Eigenmann and Eigenmann).

3579. Ilypnus gilberti (Eigenmann and Eigenmann).
San Diego Bay and southward; abundant at Magdalena Bay, Conception Bay, and St. George's Bay in the Gulf of California.
Lepidogobius gilberti Eigenmann and Eigenmann, Proc. U. S. Nat. Mus., XI, 1888, 464, San Diego Bay, Calif.

Genus 1239. EVERMANNIA Jordan.
Evermannia Jordan, Proc. Calif. Acad. Sci., 2d ser., IV, 1896, 592 (*Gobiosoma zosterurum* Jordan and Gilbert).

3580. Evermannia zosterura (Jordan and Gilbert).
Pacific coast of Mexico at Mazatlan, Mexico.
Gobiosoma zosterurum Jordan and Gilbert, Proc. U. S. Nat. Mus., IV, 1881, 361, Mazatlan.

3581. Evermannia longipinnis (Steindachner).
Gulf of California.
Gobiosoma longipinne Steindachner, Ichth. Beitr., VIII, 1879, 27, Las Animas Island, Gulf of California.

3582. Evermannia panamensis Gilbert and Starks.
Panama Bay.
Evermannia panamensis Gilbert and Starks, Mem. Calif. Acad. Sci., VI, 1904, 179, Pl. XXX, Panama Bay.

Genus 1240. GARMANNIA Jordan and Evermann. *Half-naked gobies.*
Garmannia Jordan and Evermann, Proc. Calif. Acad. Sci., 2d ser., V, 1895, 496, pl. 49 (*Gobius paradoxus* Günther).

3583. Garmannia paradoxa (Günther).
Pacific coast of Mexico, Mazatlan to Panama.
Gobius paradoxus Günther, Cat., III, 1861, 549, Pacific coast of Central America.

3584. Garmannia hemigymna (Eigenmann and Eigenmann).
West Indies.
Gobius hemigymnus Eigenmann and Eigenmann, Proc. Calif. Acad. Sci, 2d ser., I, 1888, 66, dredged in the West Indies.

3585. Garmannia rubra Rosen.
Bahamas.
Garmannia rubra Rosen, Arsekr. Univ. Lund, VII, 1912, 50, Bahamas.

Genus 1241. ENYPNIAS Jordan and Evermann.
Enypnias Jordan and Evermann, Fishes North and Mid. Amer., 1898, 2233 (*Gobius seminudus* Günther).

3586. Enypnias seminudus (Günther).
Pacific coast of Central America.
Gobius seminudus Günther, Cat., III, 1861, 554, Pacific coast of Central America.

Genus 1242. GOBIOSOMA Girard.
Gobiosoma Girard, Proc. Acad. Nat. Sci. Phila., X, 1858, 169 (*Gobius alepidotus* Bloch and Schneider = *Gobius bosci* Lacépède).

3587. Gobiosoma bosci (Lacépède). *Naked goby; Clinging goby; Goby; Variegated goby; Mud-creeper; Oysterfish.*
Atlantic coast of United States, Cape Cod to Florida.
Gobius bosci Lacépède, Hist. Nat. Poiss., II, 1798, 555, pl. 16, fig. 1, Charleston, S. C.
Gobius alepidotus Bloch and Schneider, Syst. Ichth., 1801, 547; after Lacépède.
Gobius viridipallidus Mitchill, Trans. Lit. and Phil. Soc. N. Y., I, 1814, 379, pl. 1, fig. 8, New York.

3588. Gobiosoma molestum Girard.
Gulf coast of the United States from Key West to Texas, and south to Bahia.
Gobiosoma molestum Girard, Proc. Acad. Nat. Sci. Phila., X, 1858, 169, Indianola, Tex.
Gobiosoma alepidotum Jordan and Gilbert, Proc. U. S. Nat. Mus., V, 1882, 297, Laguna Grande, Pensacola, Fla.

3589. Gobiosoma histrio Jordan.
Known only from the Gulf of California at Guaymas.
Gobiosoma histrio Jordan, Proc. U. S. Nat. Mus., VII, 1884, 260, Guaymas, Mexico.

3590. Gobiosoma crescentale Gilbert.
Gulf of California.
Gobiosoma crescentalis Gilbert, Proc. U. S. Nat. Mus., XIV, 1891, 557, Gulf of California, at *Albatross* station 2825.

3591. Gobiosoma multifasciatum Steindachner.
West Indies; known from Cuba, St. Thomas, and the Lesser Antilles.
Gobiosoma multifasciatum Steindachner, Ichth. Beitr., V, 1876, 183, Lesser Antilles.
Gobius lineatus Poey, Memorias, II, 1861, 424, Cuba; not of Jenyns.

3592. Gobiosoma horsti Metzelaar.
Curaçao, Caribbean Sea.
Gobiosoma horsti Metzelaar, Marine Fishes Lesser Antilles, 1923, Curaçao.

3593. Gobiosoma longum Nichols.
West Indies, north to Florida.
Gobiosoma longum Nichols, Bull. Amer. Mus. Nat. Hist., XXXIII, 1914, 143, fig. 1, Florida.

Genus 1243. BARBULIFER Eigenmann and Eigenmann.
Barbulifer Eigenmann and Eigenmann, Proc. Calif. Acad. Sci., 2d ser I, 1888, 70 (*B. papillosus* Eigenmann and Eigenmann = *Gobiosoma cauthœcum* Jordan and Gilbert).

3594. Barbulifer cauthœcus (Jordan and Gilbert).
About Key West, Fla.
Gobiosoma cauthœcum Jordan and Gilbert, Proc. U. S. Nat. Mus., VII, 1884, 29, Key West, Fla.
Barbulifer papillosus Eigenmann and Eigenmann, Proc. Calif. Acad. Sci., 2d ser., I, 1888, 70, Key West, Fla.

Genus 1244. EVERMANNICHTHYS Metzelaar.
Evermannichthys Metzelaar, Trop. Atl. Vissch., 1919, 139 (*E. spongicola* Metzelaar).
Radcliffiella Hubbs, Occ. Papers, Mus. Zool. Univ. Mich., No. 99, 1921, 2 (*Garmannia spongicola* Radcliffe).

3595. Evermannichthys spongicola (Radcliffe).
Off shore banks of North Carolina and Florida in cavities of sponges.
Garmannia spongicola Radcliffe, Proc. U. S. Nat. Mus., LII, 1917, 423, off Cape Hatteras, N. C., and near Tarpon Springs, west coast of Florida.

3596. Evermannichthys metzelaari Hubbs.
Caribbean sea, living in sponges.
Evermannichthys spongicola Metzelaar, Trop. Atl. Vissch., 1919, 189, figs. 39 and 40, 139, Curaçao; name preoccupied by *Evermannichthys spongicola* (Radcliffe).
Evermannichthys metzelaari Hubbs, Occ. Papers Mus. Zool. Univ. Mich., No. 144, Dec. 21, 1923, pl. 1, Curaçao; substitute for *E. spongicola* Metzelaar, preoccupied.

Genus 1245. LETHOPS Hubbs.
Lethops Hubbs, Occ. Papers Univ. Mich. Mus. Zool., 1925 (*Lethops connectens* Hubbs).

3597. Lethops connectens Hubbs.
Coast of California in tide pools.
Lethops connectens Hubbs, Occ. Papers Mus. Zool. Univ. Mich., 1925, Carmel Bay; Point Firmin, near Los Angeles.

Genus 1246. TYPHLOGOBIUS Steindachner. *Blind gobies.*
Typhlogobius Steindachner, Ichth. Beitr., VIII, 1879, 24 (*T. californiensis* Steindachner).
Othonops Rosa Smith (Mrs. Eigenmann), Proc. U. S. Nat. Mus., II, 1881, 19 (*O. eos* Smith=*Typhlogobius californiensis* Steindachner).

3598. Typhlogobius californiensis Steindachner. *Blind goby of Point Loma; Pinkfish.*
Coast of Lower California, from San Diego southward to Cedros Island; especially common at Point Loma.
Typhlogobius californiensis Steindachner, Ichth. Beitr., VIII, 1879, 24, False Bay, San Diego, Calif.
Othonops-eos Rosa Smith, Proc. U. S. Nat. Mus., II, 1881, 19, Point Loma, San Diego, Calif.

Genus 1247. SICYDIUM Cuvier and Valenciennes.
Sicydium Cuvier and Valenciennes, Hist. Nat. Poiss., XII, 1837, 126 (168) (*Gobius plumieri* Bloch).

3599. Sicydium plumieri (Bloch). *Sirago.*
Fresh waters of the West Indies.
Gobius plumieri Bloch, Ichth., 1786, 125, pl. 178, fig. 3, Martinique; on a drawing by Plumier.
Sicydium siragus Poey, Memorias, II, 1861, 278, Santiago de Cuba.

3600. Sicydium caguitæ Evermann and Marsh.
Porto Rico.
Sicydium caguitæ Evermann and Marsh, Rept. U. S. Fish Com., XXV, 1899 (Dec. 19), 355, Rio de Caguitas at Caguas, Porto Rico.

3601. Sicydium vincente Jordan and Evermann.
Kingston, St. Vincent Island; Haiti.
Sicydium vincente Jordan and Evermann, Check List, 1895, 45, St. Vincent Island.

3602. Sicydium antillarum Ogilvie-Grant.
Barbados.
Sicydium antillarum Ogilvie-Grant, Proc. Zool. Soc. Lond., 1884, 157, Barbados.

3603. Sicydium punctatum Perugia.
Martinique.
Sicydium punctatum Perugia, Annali del Museo Civico di Storia Naturali di Genova, ser. 2, XVI; 1896, 18, Martinique.

3604. Sicydium buscki Evermann and Clark.
Santo Domingo.
Sicydium buscki Evermann and Clark, Proc. U. S. Nat. Mus., XXX, 1906, 854, fig. 3, San Francisco Mountain, Santo Domingo.

Genus 1248. COTYLOPUS Guichenot.
Cotylopus Guichenot, in Maillard, Notes sur l'Isle de la Réunion, II, 1862, annex b., 9 (*C. acutipinnis*).
Sicya Jordan and Evermann, Check List, 1895, 456, (*Sicydium gymnogaster* Ogilvie-Grant).

3605. Cotylopus salvini (Ogilvie-Grant).
Streams near Panama.
Sicydium salvini Ogilvie-Grant, Proc. Zool. Soc. Lond., 1884, 159, pl. 12, fig. 2, Panama.

3606. Cotylopus cocoensis Heller and Snodgrass.
Chatham Bay, Cocos Island, northwest of Panama.
Cotylopus cocoensis Heller and Snodgrass, Proc. Wash. Acad. Sci., V, 1903, 211, Pl. XI, Cocos Island.

3607. Cotylopus punctatus Regan.
Tequesixtlan, Mexico.
Cotylopus punctatus Regan, Ann. Mag. Nat. Hist., ser. 7, XVI, 1905, 362. Tequesixtlan, Mexico.

Family 257. GOBIOIDIDÆ

Genus 1249. GOBIOIDES Lacépède.
Gobioides Lacépède, Hist. Nat. Poiss., II, 1800, 580 (*G. broussonnetii* Lacépède).

3608. Gobioides broussonnetii Lacepede.
West Indies to Brazil; once taken near New Orleans.
Gobioides broussonnetii Lacépède, Hist. Nat. Poiss., II, 1800, 580, probably from Surinam; "given by Holland to France."
Gobius brasiliensis Bloch and Schneider, Syst. Ichth., 1801, 69, Brazil.
Gobius oblongus Bloch and Schneider, loc. cit., 548; based on Lacépède.
Gobioides barreto Poey, Memorias, II, 1861, 282, Cuba.
Amblyopsis mexicanus O'Shaughnessy, Ann. Mag. Nat. Hist., ser. 4, XV, 1875, 147, Mexico.

Genus 1250. TYNTLASTES Günther.
Tyntlastes Günther, Proc. Zool. Soc. Lond., 1862, 193 (*Amblyopus sagitta* Günther).

3609. Tyntlastes sagitta (Günther).
Coast of Lower California.
Amblyopus sagitta Günther, Proc. Zool. Soc. Lond., 1862, 193, "California"; probably from Lower California.

3610. Tyntlastes brevis (Günther).
Panama.
Amblyopus brevis Günther, Proc. Zool. Soc. Lond., 1864, 151, Panama.

Genus 1251. CAYENNIA Sauvage.
Cayennia Sauvage, Bull. Soc. Philom., ser. 7, IV, 1880, 57 (*C. guichenoti* Sauvage).

3611. Cayennia guichenoti Sauvage.
Cayenne, French Guiana.
Cayennia guichenoti Sauvage, Bull. Soc. Philom., ser. 7, IV, 1880, 57, Cayenne.

Order WW. DISCOCEPHALI

Family 258. ECHENEIDÆ. Remoras

Genus 1252. ECHENEIS Linnæus.
Echeneis Linnæus, Syst. Nat., Ed. X, 1758, 261 (*E. naucrates* Linnæus, as first restricted by Gill, 1862).
Leptecheneis Gill, Proc. Acad. Nat. Sci. Phila., XVI, 1864, 60 (*Echeneis naucrates* Linnæus).

3612. Echeneis naucrates Linnæus. *Sharksucker; Pega; Pegador; Suckingfish; White-tailed remora; Indian remora.*
Warm seas, universally distributed; common north to Cape Cod and San Francisco.
Echeneis neucrates (misprint for *naucrates*) Linnæus, Syst. Nat., Ed. X, 1758, 261, Pelago Indico.
Echeneis albacauda Mitchill, Amer. Month. Mag., II, 1818, 244, New York.
Echeneis lunata Bancroft, Proc. Comm. Zool. Soc., I, 1830, 174, Kingston, Jamaica.

Echeneis vittata Lowe, Proc. Zool. Soc. Lond., 1839, 89, Madeira.
Echeneis guaican Poey, Memorias, II, 1861, 248, Cuba.
Echeneis verticalis Poey, loc. cit., 253, Cuba.
Echeneis metallica Poey, loc. cit., 252, Cuba.
Echeneis fusca Gronow, Cat. Fish., ed. Gray, 1854, 92; after Linnæus.
Echeneis neucratoides Zuieuw, Nova Acta Acad. Sci. Imp. Petropol., IV, 1789, 279, no locality.
Echeneis lineata Holbrook, Ichth. South Carolina, 1855, 101, Charleston, S. C.; not of Menzies.
Echeneis holbrooki Günther, Cat., II, 1860, 382, Jamaica.

Genus 1253. REMILEGIA Gill.
Remilegia Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 239 (*Echeneis scutata* Günther).

3613. Remilegia australis (Bennett).
Tropical seas; recorded by Doctor Lütken from 10° N., 39° W.
Echeneis australis Bennett, Nar. Whaling Voyage, II, 1840, 273, pls. 24–26.
Echeneis scutata Günther, Ann. Mag. Nat. Hist., 1860, 401, pl. 10, fig. B, Ceylon.

Genus 1254. REMORA Forster.
Remora Forster, Cat. Anim. N. Amer., 1770, 20 (*Echeneis remora* Linnæus).

3614. Remora remora (Linnæus). *Remora; Sucker; Pega.*
Warm seas, north to New York and San Francisco.
Echeneis remora Linnæus, Syst. Nat., Ed. X, 1758, 260, Pelago Indico.
Echeneis squalipeta Daldorf, Skrivt. Naturrh. Selsk., II, 1793, 157, Atlantic Ocean between the tropics.
Echeneis jacobæa Lowe, Proc. Zool. Soc. Lond., 1839, 89, Madeira.
Echeneis remoroides Bleeker, Natur. Tijd. Ned. Ind. (Batœ, IX, 1855, 70, Batœ).
Echeneis parva Gronow, Cat. Fish., ed. Gray, 1854, 92, no locality; after Linnæus.
Echeneis postica Poey, Memorias, II, 1861, 255, Habana.

Genus 1255. REMORINA Jordan and Evermann.
Remorina Jordan and Evermann, Check List, 1895, 490 (*Echeneis albescens* Temminck and Schlegel).

3615. Remorina albescens (Temminck and Schlegel).
Tropical Pacific, northward to San Francisco and Japan; common at Galapagos Islands.
Echeneis albescens Temminck and Schlegel, Fauna Japonica, Poiss., 1845, 272, pl. 120, fig. 4, Nagasaki, Japan.

Genus 1256. REMOROPSIS Gill.
Remoropsis Gill, Proc. Acad. Nat. Sci. Phila., XVI, 1864, 60 (*Echeneis brachyptera* Lowe).

3616. Remoropsis brachyptera (Lowe). *Swordfish sucker.*
Warm seas; occasionally north to Cape Cod.
Echeneis brachyptera Lowe, Proc. Zool. Soc. Lond., 1839, 89, Madeira.
Echeneis sexdecim-lamellata Eydoux and Gervais, Voy. *Favorite*, V, 1839, 77, pl. 31, Indian Ocean.
Echeneis quatuordecimlaminatus Storer, Rept. Fishes Mass., 1839, 155, Holmes Hole.
Echeneis pallida Temminck and Schlegel, Fauna Japonica, Poiss., 1845, 271, pl. 120, fig. 2, 3, Japan.
Echeneis nieuhofii Bleeker, Sumatra, Naturk. Tijd. Neder. Indie, IV, 1853, 279, Sumatra, Priaman.

Genus 1257. PHTHEIRICHTHYS Gill.
Phtheirichthys Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 239 (*Echeneis lineata* Menzies).

3617. Phtheirichthys tropicus (Euphrasen).
Tropical seas, ranging north to South Carolina and Pensacola.
Echeneis tropica Euphrasen, Nya. Handl., XII, 1791, 315, Atlantic between the tropics.
Echeneis apicalis Poey, Memorias, II, 1861, 254, Cuba.
?*Echeneis sphyrænarum* Poey, loc. cit., 255, Cuba, on barracudas.

Genus 1258. RHOMBOCHIRUS Gill.
Rhombochirus Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 88 (*Echeneis osteochir* Cuvier).

3618. Rhombochirus osteochir (Cuvier). *Spearfish sucker.*
West Indies, north to Cape Cod.
Echeneis osteochir Cuvier, Règne Animal, ed. 2, II, 1829, 348, no locality given.
Echeneis terapturorum Poey, Memorias, II, 1861, 256, Cuba.

Order XX. JUGULARES

Family 259. DRACONETTIDÆ

Genus 1259. DRACONETTA Jordan and Fowler.
Draconetta Jordan and Fowler, Proc. U. S. Nat. Mus., XXV, 1903, 939 (*D. xenica* Jordan and Fowler).

3619. Draconetta acanthopoma Regan.
Depths of north Atlantic.
Draconetta acanthopoma Regan, Ann. Mag. Nat. Hist., May, 1904; north Atlantic, in deep water.

Family 260. CALLIONYMIDÆ. Dragonets

Genus 1260. CALLIONYMUS Linnæus.
Callionymus Linnæus, Syst. Nat., Ed. X, 1758, 249, (*C. lyra* Linnæus).

3620. Callionymus bairdi Jordan.
Snapper Banks, Gulf of Mexico, between Pensacola and Tampa, Fla.
Callionymus bairdi Jordan, Proc., U. S. Nat. Mus., X, 1887, 501, Snapper Banks off Pensacola, Fla.

3621. Callionymus agassizii Goode and Bean.
West Indies off Barbados and Santa Cruz
Callionymus agassizii Goode and Bean, Three Cruises of the *Blake*, II, 1888, 29, fig., Gulf of Mexico.
Callionymus himantophorus Goode and Bean, Oceanic Ichth., 1895, 296, figs. 268 A and B, off Barbados in 209 fathoms.

3622. Callionymus calliurus Eigenmann and Eigenmann.
Key West, Fla.
Callionymus calliurus Eigenmann and Eigenmann, Proc., Calif. Acad. Sci., 2d ser., I, 1888, 76, South Beach, Key West, Fla.

3623. Callionymus pauciradiatus Gill.
Matanzas, Cuba.
Callionymus pauciradiatus Gill, Ann. Lyc. Nat. Hist. N. Y., VIII, 1867, 143, Matanzas, Cuba.

3624. Callionymus bermudarum Barbour.
Castle Island, Bermudas.
Callionymus bermudarum Barbour, Bull. Mus. Comp. Zool., XLVI, 1905, No. 7, 129, Castle Island, Bermudas.

3625. Callionymus bœkei Metzelaar.
Caribbean Sea.
Callionymus bœkei Metzelaar, Trop. Atl. Vissch., 1916, 149, fig. 47, Curaçao.

3626. Callionymus sancti-eustatii Metzelaar.
Callionymus sancti-eustatii Metzelaar, Trop. Atl. Vissch., 1916, 150, fig. 47, St. Eustatius.

3627. Callionymus atrilabiatus Garman.
Off Bay of Panama in deep water.
Callionymus atrilabiatus Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 122, off Bay of Panama.

Family 261. PTEROPSARIDÆ

Genus 1261. HYPSICOMETES Goode.
Hypsicometes Goode, Proc. U. S. Nat. Mus., III, 1880, 347 (*H. gobioides* Goode).

3628. Hypsicometes gobioides Goode.
Gulf Stream.
Hypsicometes gobioides Goode, Proc. U. S. Nat. Mus., III, 1880, 348, Gulf Stream at *Albatross* station 871, 40° 2′ 54″ N., 70° 23′ 40″ W., in 115 fathoms.

Family 262. AMMODYTIDÆ. Sand lances or sand launces

Genus 1262. AMMODYTES Linnæus. *Sand launces; Sand lances.*
Ammodytes Linnæus, Syst. Nat., Ed. X, 1758, 247 (*A. tobianus* Linnæus).
Argyrolænia Gill, Fishes East Coast U. S., Suppl. to Proc. Acad. Nat. Sci. Phila., XIII, 1861, 40 (*Ammodytes vittatus* DeKay; probably a deformed example).

3629. Ammodytes americanus DeKay. *Sand launce; Sand lance; Sand eel; Lant.*
Newfoundland to Cape May and Cape Hatteras; abundant on sandy shores.
Ammodytes americanus DeKay, New York Fauna: Fishes, 1842, 317, Stratford, Conn.
Ammodytes vittatus DeKay, loc. cit., 318, pl. 60, fig. 197, New York.

3630. Ammodytes dubius Reinhardt.
Greenland to Cape Cod.
Ammodytes dubius Reinhardt, Dansk. Vidensk. Selsk. Afhandl., VII, 1838, 131, Greenland.

3631. Ammodytes personatus Girard. *Sand launce; Sand lance.*
Japan to Alaska, south to Monterey, Calif.
Ammodytes personatus Girard, Proc. Acad. Nat. Sci. Phila., VIII, 1856, 137, Cape Flattery, Wash.

3632. Ammodytes alascanus Cope. *Alaska sand lance*
North Pacific coast of North America, Sitka to Aleutian Islands.
Ammodytes alascanus Cope, Proc. Am. Phil. Soc., XIII, 1873, 30, Sitka, Alaska.

Family 263. BLEEKERIIDÆ

Genus 1263. RHYNCHIAS Gill.
Rhynchias Gill, in Jordan and Evermann, Fishes North and Mid. Amer., 1898, 2841 (*Ammodytes septipinnis* Pallas); species and genus doubtful, not seen by recent authors.

3633. Rhynchias septipinnis (Pallas).
Kamchatka.
Ammodytes septipinnis Pallas, Rosso-Asiat., III, 1811, 227, Tab. XLVIII, fig. 3, Kamchatka.

Family 264. BATHYMASTERIDÆ. Ronquils

Genus 1264. BATHYMASTER Cope.
Bathymaster Cope, Proc. Amer. Phil. Soc., XIII, 1873, 31 (*B. signatus* Cope).

3634. Bathymaster signatus Cope.
Shores of Alaska.
Bathymaster signatus Cope, Proc. Amer. Phil. Soc. XIII, 1873, 31, near Sitka, Alaska.

3635. Bathymaster cæruleofasciatus Gilbert and Burke.
Southern Bering Sea.
Bathymaster cæruleofasciatus Gilbert and Burke, Bull. U. S. Bur. Fish., XXX, 1910, 84, fig. 29, Agattu Island, Alaska.

Genus 1265. RONQUILUS Jordan and Starks.
Ronquilus Jordan and Starks, Proc. Calif. Acad. Sci., 2d ser., V, 1895, 838 (*Bathymaster jordani* Gilbert).

3636. Ronquilus jordani (Gilbert). *Ronquil.*
Alaska to Puget Sound.
Rathymaster jordani Gilbert, Proc. U. S. Nat. Mus., XI, 1888, 554, Elliott Bay at Seattle; Alaska.

Genus 1266. RATHBUNELLA Jordan and Evermann.
Rathbunella Jordan and Evermann, Check List, 1895, 463 (*Bathymaster hypoplectus* Gilbert).

3637. Rathbunella hypoplecta (Gilbert).
Coast of California about the Santa Barbara Islands.
Bathymaster hypoplectus Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 97, coast of California, south of Point Conception, at *Albatross* station 2944.

3638. Rathbunella alleni Gilbert.
Monterey Bay, Calif.
Rathbunella alleni Gilbert, Proc. Calif. Acad. Sci., 3d ser., III, 1904, 267, Monterey Bay, Calif.

Family 265. ZAPRORIDÆ

Genus 1267. ZAPRORA Jordan.
Zaprora Jordan, Proc. Calif. Acad. Sci., 2d ser., VI, 1896, 202 (*Z. silenus* Jordan).

3639. Zaprora silenus Jordan.
East coast of Vancouver Island; only four specimens known.
Zaprora silenus Jordan, Proc. Calif. Acad. Sci., 2d ser., VI, 1896, 203, pl. 20, Nanaimo, Vancouver Island.

Family 266. CHIASMODONTIDÆ. Black swallowers.

Genus 1268. CHIASMODON Johnson.
Chiasmodon Johnson, Proc. Zool. Soc. Lond., 1863, 408 (*C. niger* Johnson).
Chiasmodus Günther, altered spelling.

3640. Chiasmodon niger Johnson. *Black swallower.*
Deep waters of the Atlantic; taken at Madeira and off Massachusetts coast.
Chiasmodon niger Johnson, Proc. Zool. Soc. Lond., 1863, 408, Madeira.

3641. Chiasmodon subniger Garman.
Pacific coast of Mexico, off Lower California, in deep water.
Chiasmodon subniger Garman, Mem., Mus. Comp. Zool., XXIV, 1899, 73, off Gulf of California at *Albatross* station 3429.

Genus 1269. PSEUDOSCOPELUS Lütken.
Pseudoscopelus Lütken, Spolia Atlantica, Scopelini, 64, in Vid. Selsk. Skr. (6), VII, 1892, 285 (*P. scriptus* Lütken).

3642. Pseudoscopelus scriptus Lütken.
Old Bahama Straits, in deep water.
Pseudoscopelus scriptus Lütken, Spolia Atlantica, Scopelini, 64, in Vid. Selsk. Skr. (6), VII, 1892, 285, Old Bahama Straits.

Family 267. OPISTHOGNATHIDÆ. Jawfishes

Genus 1270. OPISTHOGNATHUS Cuvier.
Opisthognathus Cuvier, Règne Anim., Ed. I, 1817, 252 (*O. sonnerati* Cuvier).

3643. Opisthognathus macrognathum Poey.
Florida Keys to Cuba.
Opisthognathus macrognathus Poey, Memorias, II, 1861, 284, Cuba.
Opisthognathus megastoma Günther, Cat., I, 1860, 255, Gulf of Mexico.
Opisthognathus scaphiurus Goode and Bean, Proc. U. S. Nat. Mus., V, 1882, 417, Garden Key, Fla.

3644. Opisthognathus lonchurum Jordan and Gilbert.
Gulf of Mexico, in deep water; two specimens known, taken from the stomach of a red snapper at Pensacola, Fla.
Opisthognathus lonchurus Jordan and Gilbert, Proc. U. S. Nat. Mus., V, 1882, 290, Snapper Banks off Pensacola, Fla.

3645. Opisthognathus punctatum Peters.
West coast of Mexico; Mazatlan; Magdalena Bay.
Opisthognathus punctatus Peters, Berl. Monatsber., 1869, 708, Mazatlan, Mexico.

3646. Opisthognathus ommatum Jenkins and Evermann.
Bay of Guaymas, Gulf of California.
Opisthognathus ommata Jenkins and Evermann, Proc. U. S. Nat. Mus., XI, 1888, 153, Guaymas, Sonora.

Genus 1271. GNATHYPOPS [88] **Gill.**
Gnathypops Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 241 (*Opisthognathus maxillosus* Poey).

3647. Gnathypops maxillosa (Poey).
Cuba, north to Garden Key, Fla.
Opisthognathus maxillosus Poey, Memorias, II, 1861, 286, Cuba.

3648. Gnathypops macrops (Poey).
Coast of Cuba.
Opisthognathus macrops Poey, Memorias, II, 1861, 287, coast of Cuba.

3649. Gnathypops cuvieri (Cuvier and Valenciennes).
Bahia.
Opistognathus cuvieri Cuvier and Valenciennes, Hist. Nat. Poiss., XI, 1836, 504, Bahia (may be identical with *macrops*).

3650. Gnathypops rhomalea (Jordan and Gilbert).
Gulf of California.
Opisthognathus rhomaleus Jordan and Gilbert, Proc. U. S. Nat. Mus., IV, 1881, 276, Santa Maria Cove, Lower California.

3651. Gnathypops scops Jenkins and Evermann.
Gulf of California at Guaymas.
Gnathypops scops Jenkins and Evermann, Proc. U. S. Nat. Mus., XI, 1888, 152, Guaymas, Sonora, Mexico.

3652. Gnathypops snyderi Jordan and Evermann.
Gulf of California.
Gnathypops snyderi Jordan and Evermann, Fishes North and Mid. Amer., 1898, 2285, San Luis Gonzales Bay, Gulf of California.

3653. Gnathypops mystacina Jordan.
Gulf of Mexico; known from the Pensacola "Snapper Banks," from the stomach of a red snapper (*Neomænis blackfordi*).
Gnathypops mystacinus Jordan, Proc. U. S. Nat. Mus., VII, 1884, 37, Snapper Banks off Pensacola, Fla.

3654. Gnathypops aurifrons Jordan and Thompson.
Garden Key, Fla.
Gnathypops aurifrons Jordan and Thompson, Bull. U. S. Bur. Fish., XXIV, 1904, 252, fig. 4, Garden Key, Fla.

Genus 1272. LONCHOPISTHUS Gill.
Lonchopisthus Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 241 (*Opisthognathus micrognathus* Poey).

3655. Lonchopisthus micrognathus (Poey).
Cuba.
Opisthognathus micrognathus Poey, Memorias, II, 1861, 287, Cuba.

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[88] It is possible that some or all of the short-jawed forms are the females of species of *Opisthognathus*.

Family 268. URANOSCOPIDÆ. Stargazers

Genus 1273. ASTROSCOPUS Brevoort. *Stargazers.*
Astroscopus Brevoort, in Gill, Proc. Acad. Nat. Sci. Phila., XII, 1860, 20 (*Uranoscopus anoplos* Cuvier and Valenciennes = *Uranoscopus y-græcum* Cuvier and Valenciennes).

3656. Astroscopus y-græcum (Cuvier and Valenciennes). *Stargazer.*
South Atlantic coast, from Cape Hatteras to the Caribbean Sea.
Uranoscopus y-græcum Cuvier and Valenciennes, Hist. Nat. Poiss., III, 1829, 229 (308), locality unknown.
Uranoscopus anoplos Cuvier and Valenciennes, loc. cit., VIII, 1831, 363 (493), Atlantic coast of North America.

3657. Astroscopus guttatus Abbot. *Spotted stargazer.*
Atlantic coast of the United States, from Long Island to Virginia; not known south of Cape Hatteras.
Astroscopus guttatus Abbott, Proc. Acad. Nat. Sci. Phila., XII, 1860, 365, pl. 7, Cape May, N. J.

3658. Astroscopus zephyreus Gilbert and Starks.
Magdalena Bay, Lower California.
Astroscopus zephyreus Jordan and Starks, Proc. U. S. Nat. Mus., XIX, 1896, 453, Magdalena Bay, Lower California.

Genus 1274. KATHETOSTOMA Günther.
Kathetostoma Günther, Cat., II, 1860, 231 (*Uranoscopus lævis* Bloch and Schneider).

3659. Kathetostoma averruncus Jordan and Bollman.
Pacific Ocean off coast of Colombia, and Bay of Panama, in deep water.
Kathetostoma averruncus Jordan and Bollman, Proc. U. S. Nat. Mus., XII, 1889, 163, off coast of Colombia, 8° 57′ N., 79° 31′ 30″ W., at *Albatross* station 2800 in 7 fathoms.

3660. Kathetostoma albigutta (Bean).
Gulf of Mexico.
Cathetostoma albigutta Bean, Proc. U. S. Nat. Mus., XVIII, 1892, 121, Gulf of Mexico, at *Albatross* station 2403, 28° 42′ 30″ N., 85° 29′ W.

Genus 1275. EXECESTIDES Jordan and Thompson.
Execestides Jordan and Thompson, Bull. U. S. Bur. Fish., XXIV, 1904, 253, (*Execestides egregius* Jordan and Thompson).

3661. Execestides egregius Jordan and Thompson.
Garden Key, Fla.
Execestides egregius Jordan and Thompson, Bull. U. S. Bur. Fish., XXIV, 1904, 253, fig. 5, Garden Key, Fla.

Family 269. DACTYLOSCOPIDÆ. Sand stargazers

Genus 1276. DACTYLOSCOPUS Gill.
Dactyloscopus Gill, Proc. Acad. Nat. Sci. Phila., XI, 1859, 132 (*D. tridigitatus* Gill).
Congrammus Fowler, loc. cit., LVIII, 1906, 105 (*C. moorei* Fowler).

3662. Dactyloscopus tridigitatus Gill. *Sand conger.*
West Indies, north to Key West.
Dactyloscopus tridigitatus Gill, Proc. Acad. Nat. Sci. Phila., XI, 1859, 132, Barbados.
Congrammus moorei Fowler, loc. cit., LVIII, 1906, 105, Hailer's Rock, Florida Keys.

3663. Dactyloscopus pectoralis Gill.
Cape San Lucas, Lower California.
Dactyloscopus pectoralis Gill, Proc. Acad. Nat. Sci. Phila., XIII, 1861, 267, Cape San Lucas, Lower California.

3664. Dactyloscopus cinctus Osburn and Nichols.
Gulf of California.
Dactyloscopus cinctus Osburn and Nichols, Bull. Amer. Mus. Nat. Hist., XXXV, 1916, 176, fig. 14, Cape San Lucas.

3665. Dactyloscopus poeyi Gill.
Cuba.
Dactyloscopus poeyi Gill, Proc. Acad. Nat. Sci. Phila., XIII, 1861, 266, Cuba.

3666. Dactyloscopus lunaticus Gilbert.
Gulf of California.
Dactyloscopus lunaticus Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 99, Gulf of California.

Genus 1277. GILLELLUS Gilbert.
Gillellus Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 98 (*G. semicinctus* Gilbert).

3667. Gillellus semicinctus Gilbert.
Gulf of California; also off the Florida coast.
Gillellus semicinctus Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 98, near north end of Gulf of California, at *Albatross* stations 2827, 24° 11′ 45″ N., 109° 55′ W., and 2829, 22° 52′ N., 109° 55′ W., in 10 and 31 fathoms.

3668. Gillellus arenicola Gilbert.
Cape San Lucas, Lower California.
Gillellus arenicola Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 99, Cape San Lucas.

3669. Gillellus ornatus Gilbert.
Gulf of California.
Gillellus ornatus Gilbert, Proc. U. S. Nat. Mus., XIV, 1891, 558, Gulf of California.

Genus 1278. ESLOSCOPUS Jordan and Evermann.
Esloscopus Jordan and Evermann, Check List, 1895, 465 (*Dactyloscopus zelotes* Jordan and Gilbert).

3670. Esloscopus zelotes (Jordan and Gilbert).
Panama.
Dactyloscopus zelotes Jordan and Gilbert, in Jordan and Evermann, Check List, 1895, 464, Panama.

Genus 1279. DACTYLAGNUS Gill.
Dactylagnus Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 505 (*D. mundus* Gill).

3671. Dactylagnus mundus Gill.
Carmen Island, Gulf of California.
Dactylagnus mundus Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 505, Carmen Island, Gulf of California.

Genus 1280. MYXODAGNUS Gill.
Myxodagnus Gill, Proc. Acad. Nat. Sci. Phila., XIII, 1861, 269 (*M. opercularis* Gill).

3672. Myxodagnus opercularis Gill.
Cape San Lucas, Lower California.
Myxodagnus opercularis Gill, Proc. Acad. Nat. Sci. Phila., XIII, 1861, 270, Cape San Lucas, Lower California.

Family 270. CLINIDÆ

Genus 1281. MNIERPES Jordan and Evermann.
Mnierpes Jordan and Evermann, Check List, 1895, 468 (*Clinus macrocephalus* Günther).

3673. Mnierpes macrocephalus (Günther).
Pacific coast of Central America; Panama.
Clinus macrocephalus Günther, Cat., III, 1861, 266, Pacific coast of Central America.

Genus 1282. GOBIOCLINUS Gill.
Gobioclinus Gill, Proc. Acad. Nat. Sci. Phila., XII, 1860, 103 (*Clinus gobio* Cuvier and Valenciennes).

3674. Gobioclinus gobio (Cuvier and Valenciennes).
Lesser Antilles.
Clinus gobio Cuvier and Valenciennes, Hist. Nat. Poiss., XI, 1836, 292 (395), Lesser Antilles.

Genus 1283. HISTIOCLINUS Metzelaar.
Histioclinus Metzelaar, Trop. Atl. Vissch., 1919, 157 (*H. veliger* Metzelaar).

3675. Histioclinus veliger Metzelaar.
Caribbean Sea.
Histioclinus veliger Metzelaar, Trop. Atl. Vissch., 1919, 157, Bonaire.

Genus 1284. STARKSIA Jordan and Evermann.
Starksia Jordan and Evermann, Proc. Calif. Acad. Sci., 2d ser., VI, 1896, 231, (*Labrosomus cremnobates* Gilbert).

3676. Starksia cremnobates (Gilbert).
Gulf of California.
Labrosomus cremnobates Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 100, Gulf of California.

Genus 1285. ALLOCLINUS Hubbs.
Alloclinus Hubbs, Papers, Mich. Acad. Sci. Arts and Letters, VII, 1926 (1927), 351 (*Starksia holderi* Lauderbach).

3677. Alloclinus holderi (Lauderbach).
Santa Catalina, Calif.
Starksia holderi Lauderbach, Proc. U. S. Nat. Mus., XXXII, 1907, 74, fig. 6, Santa Catalina Island.

Genus 1286. CRYPTOTREMA Gilbert.
Cryptotrema Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 101 (*C. corallinum* Gilbert).

3678. Chryptotrema corallinum Gilbert.
Coast of California, south of Point Conception.
Cryptotrema corallinum Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 101, coast of California, south of Point Conception.

Genus 1287. EXERPES Jordan and Evermann.
Exerpes Jordan and Evermann, Proc. Calif. Acad. Sci., 2d ser., VI, 1896, 232 (*Auchenopterus asper* Jenkins and Evermann).

3679. Exerpes asper (Jenkins and Evermann).
Guaymas, Mexico.
Auchenopterus asper Jenkins and Evermann, Proc. U. S. Nat. Mus., XI, 1888, 154, Guaymas, Mexico.

Genus 1288. CORALLICOLA Jordan and Evermann.
Corallicola Jordan and Evermann, Fishes North and Mid. Amer., 1898, 2369 (*Cremnobates marmoratus* Steindachner).

3680. Corallicola marmoratum (Steindachner). *Rockfish.*
Florida Keys to Cuba; Key West.
Cremnobates marmoratus Steindachner, Ichth. Beitr., V, 1876, 174, pl. 12, fig. 6, near Cuba.

3681. Corallicola nigripinne (Steindachner).
Barbados.
Clinus nigripinnis Steindachner, Ichth. Notizen, VI, 1867, 45, Barbados.

3682. Corallicola altivelis (Lockington).
La Paz, Lower California.
Cremnobates altivelis Lockington, Proc. Acad. Nat. Sci. Phila., XXXIII, 1881, 116, La Paz, Lower California.

Genus 1289. AUCHENOPTERUS Günther.
Auchenopterus Günther, Cat., III, 1861, 275 (*A. monophthalmus* Günther; not *Auchenipterus* Cuvier and Valenciennes).
Cremnobates Günther, Proc. Zool. Soc. Lond., 1861, 374 (same type; substitute name).
Tekla Nichols, Copeia, No. 110, 1922, 69 (*Cremnobates fasciatus* Steindachner).

3683. Auchenopterus monophthalmus Günther.
Gulf of California to Panama.
Auchenopterus monophthalmus Günther, Cat., III, 1861, 275, Panama.

3684. Auchenopterus integripinnis (Rosa Smith).
Coast of California and southward to Todos Santos, Lower California.
Cremnobates integripinnis Rosa Smith, Proc. U. S. Nat. Mus., III, 1880, 147, La Jolla, near San Diego.

3685. Auchenopterus mexicanus Gilbert.
La Paz to Mazatlan, Mexico.
Auchenopterus mexicanus Gilbert, Proc. Calif. Acad. Sci., 3d ser., III, 1904, 269, Pl. XXIX, La Paz, Lower California.

3686. Auchenopterus affinis (Steindachner).
West Indies; Key West; St. Thomas.
Cremnobates affinis Steindachner, Ichth. Beitr., V, 1876, 178, St. Thomas.

3687. Auchenopterus fasciatus (Steindachner).
Florida Straits; north to Key West; Porto Rico.
Cremnobates fasciatus Steindachner, Ichth. Beitr., V, 1876, 176, Florida Straits.

3688. Auchenopterus nox (Jordan and Gilbert).
Key West, Fla.
Cremnobates nox Jordan and Gilbert, Proc. U. S. Nat. Mus., VII, 1884, 30, Key West.

3689. Auchenopterus albicaudus Evermann and Marsh.
Porto Rico.
Auchenopterus albicaudus Evermann and Marsh, Rept. U. S. Fish Com., XXV, 1899 (Dec. 19), 360, Arroyo, Porto Rico.

3690. Auchenopterus fajardo Evermann and Marsh.
Porto Rico.
Auchenopterus fajardo Evermann and Marsh, Rept. U. S. Fish Com., XXV, 1899 (Dec. 19), 361, Fajardo, Porto Rico.

3691. Auchenopterus rubescens Evermann and Marsh.
Porto Rico.
Auchenopterus rubescens Evermann and Marsh, Rept. U. S. Fish Com., XXV, 1899 (Dec. 19), 360, Puerto Real, Porto Rico.

3692. Auchenopterus cingulatus Evermann and Marsh.
Porto Rico.
Auchenopterus cingulatus Evermann and Marsh, Rept. U. S. Fish Com., XXV, 1899 (Dec. 19), 361, Ponce, Porto Rico,

3693. Auchenopterus grandicomus Rosen.
Bahamas.
Auchenopterus grandicomus Rosen, Fauna Bahamas, 1911, 69, Andros Island.

Genus 1290. AUCHENISTIUS Evermann and Marsh.
Auchenistius Evermann and Marsh, Rept. U. S. Fish Com., XXV, 1899 (Dec. 19), 359 (*A. stahli* Evermann and Marsh).

3694. Auchenistius stahli Evermann and Marsh.
Porto Rico.
Auchenistius stahli Evermann and Marsh, Rept. U. S. Fish Com., XXV, 1899 (Dec. 19), 359, Ponce, Porto Rico.

Genus 1291. PARACLINUS Mocquard.
Acanthoclinus Mocquard, Bull. Soc. Philom. Paris, X, 1885, 18 (*A. chaperi* Mocquard); name preoccupied.
Paraclinus Mocquard, loc. cit., I, 1888, 41 (*Acanthoclinus chaperi* Mocquard).

3695. Paraclinus chaperi (Mocquard).
Bay of Guanta, near Barcelona, in Venezuela.
Acanthoclinus chaperi Mocquard, Bull. Soc. Philom. Paris, X, 1885, 18, Bay of Guanta, Venezuela.

Genus 1292. ENNEAPTERYGIUS Rüppell.
Enneapterygius Rüppell, Neue Wirbelthiere, Fische, 1835, 2 (*E. pusillus* Rüppell).
Enneanectes Jordan and Evermann, Proc. Calif. Acad. Sci., 2d ser., V, 1895, 501 (*Tripterygium carminale* Jordan and Gilbert).

3696. Enneapterygius carminalis (Jordan and Gilbert).
Mazatlan, Mexico, and Caribbean Sea.
Tripterygium carminale Jordan and Gilbert, Proc. U. S. Nat. Mus., IV, 1881, 362, Mazatlan, Mexico.

Genus 1293. GILLIAS Evermann and Marsh.
Gillias Evermann and Marsh, Rept. U. S. Fish Com., XXV, 1899 (Dec. 19), 357 (*G. jordani* Evermann and Marsh).

3697. Gillias jordani Evermann and Marsh.
Porto Rico.
Gillias jordani Evermann and Marsh, Rept. U. S. Fish Com., XXV, 1899, (Dec. 19), 357, Cardona Lighthouse Reef, Ponce, Porto Rico.

Genus 1294. GIBBONSIA Cooper.
Gibbonsia Cooper, Proc. Calif. Acad. Nat. Sci., III, 1863, 109 (*Myxodes elegans* Cooper).
Blakea Steindachner, Ichth. Beitr., V, 1876, 148 (*Myxodes elegans* Cooper).

3698. Gibbonsia elegans (Cooper). *Spotted kelpfish; Señorita.*
Coast of southern California; Point Conception to Todos Santos.
Myxodes elegans Cooper, Proc. Calif. Acad. Nat. Sci., III, 1863, 109, San Diego; Santa Barbara.
Clinus ocellifer Mocquard, Bull. Soc. Philom. Paris, 1886, 44, California.
Clinus evides Jordan and Gilbert, Synopsis, 1883, 763, Monterey, Calif.

3699. Gibbonsia elegans montereyensis Hubbs.
Coast of southern California.
Gibbonsia elegans montereyensis Hubbs, Papers Mich. Acad. Sci. Arts and Letters, VII, 1926, 354, reef at Pacific Grove, Calif.

3700. Gibbonsia metzi Hubbs.
California coast, chiefly in tidepools.
Gibbonsia metzi Hubbs, Papers Mich. Acad. Sci. Arts and Letters, VII, 1926, 360 Pacific Grove, Calif.

Genus 1295. HETEROSTICHUS Girard.
Heterostichus Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 143 (*H. rostratus* Girard).

3701. Heterostichus rostratus Girard. *Kelpfish.*
Coast of California from San Francisco to San Diego.
Heterostichus rostratus Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 143, San Diego, Calif.

Genus 1296. NEOCLINUS Girard.
Neoclinus Girard, U. S. Pac. R. R. Surv., X, pt. 4, Fishes, 1858, 114 (*N. blanchardi* Girard).

3702. Neoclinus blanchardi Girard.
Coast of California, Monterey to San Diego.
Neoclinus blanchardi Girard, U. S. Pac. R. R. Surv., X, pt. 4, Fishes, 1858, 114, off San Diego, Calif.

Genus 1297. PTEROGNATHUS Jordan and Evermann.
Pterognathus Girard, Proc. Acad. Nat. Sci. Phila., XI, 1859, 57 (*Neoclinus satiricus* Girard); name only suggested but not adopted.
Pterognathus Jordan and Evermann, Fishes North and Mid. Amer., 1898, 2354 (*Neoclinus satiricus* Girard).

3703. Pterognathus satiricus (Girard).
Coast of California, from Monterey to Santa Barbara.
Neoclinus satiricus Girard, Proc. Acad. Nat. Sci. Phila., XI, 1859, 57, Monterey Bay.

Genus 1298. LABRISOMUS Swainson.
Labrisomus Swainson, Nat. Hist. Classn. Fishes, II, 1839, 277 (*Clinus pectinifer* Cuvier and Valenciennes = *Clinus nuchipinnis* Quoy and Gaimard).
Lepisoma DeKay, N. Y. Fauna: Fishes, 1842, 41, *L. cirrhosum* DeKay = *Clinus nuchipinnis* Quoy and Gaimard).

3704. **Labrisomus nuchipinnis** (Quoy and Gaimard).
West Indies; South Atlantic coast.
Clinus nuchipinnis Quoy and Gaimard, Voy. *Uranié*, Zool., 1824, 255, Bay of Rio de Janeiro.
Clinus pectinifer Cuvier and Valenciennes, Hist. Nat. Poiss., XI, 1836, 276 (374), Bahia.
Clinus capillatus Cuvier and Valenciennes, loc. cit., 278 (377), Martinique.
Clinus canariensis Valenciennes, in Webb and Berthelot, Poiss. Îles Canaries, 1839, 60, Pl. XVII, fig. 3, Canary Islands.
Lepisoma cirrhosum DeKay, N. Y. Fauna: Fishes, 41, 1842, Florida.

3705. **Labrisomus heilneri** Nichols.
Bahamas.
Labrisomus heilneri Nichols, Amer. Mus. Novitates, XXVI, 1921, p. 2, fig. 2, Bahamas.

3706. **Labrisomus xanti** Gill.
Pacific coast of Mexico.
Labrisomus xanti Gill, Proc. Acad. Nat. Sci. Phila., XII, 1860, 107, Cerro Blanco, Cape San Lucas.

3707. **Labrisomus herminier** (LeSueur).
St. Bartholomew, West Indies.
Blennius herminier LeSueur, Jour. Acad. Nat. Sci. Phila., IV, 1824, 361, St. Bartholomew, West Indies.

3708. **Labrisomus bucciferus** Poey.
Cuba.
Labrosomus bucciferus Poey, Synopsis, 1868, 399, Cuba.

3709. **Labrisomus lentiginosus** Bean.
Paget Parish, Bermudas.
Labrisomus lentiginosus Bean, Proc. Biol. Soc. Wash., XIX, 1906, 31, tide pool at Does Rock, Paget Parish, Bermudas.

3710–3711. **Labrisomus microlepidotus** Poey.
Cuba.
Labrosomus microlepidotus Poey, Anal. Soc. Española Hist. Nat., XIX, 1880, 246, Pl. VIII, fig. 2, Cuba.

Genus 1299–1300. MALACOCTENUS Gill.
Malacoctenus Gill, Proc. Acad. Nat. Sci. Phila., XII, 1860, 103 (*Clinus delalandi* Cuvier and Valenciennes).

3712. **Malacoctenus delalandi** (Cuvier and Valenciennes).
Coast of Brazil and the Pacific coast of Mexico.
Clinus delalandii Cuvier and Valenciennes, Hist. Nat. Poiss., XI, 1836, 279 (378), Brazil.
Clinus zonifer Jordan and Gilbert, Proc. U. S. Nat. Mus., IV, 1881, 361, Mazatlan.

3713. **Malacoctenus ocellatus** (Steindachner).
Bahama Islands.
Clinus ocellatus Steindachner, Ichth. Beitr., V, 1876, 182, Bahama Islands.

3714. **Malacoctenus varius** (Poey).
Cuba.
Myxodes varius Poey, Enumeratio, 1876, 132, pl. 5, fig. 2, Habana.

3715. **Malacoctenus macropus** (Poey).
Cuba.
Myxodes macropus Poey, Synopsis, III, 1868, 399, Habana.

3716. **Malacoctenus lugubris** (Poey).
Cuba.
Myxodes lugubris Poey, Enumeratio, 1876, 131, Cuba.

3717. **Malacoctenus gilli** (Steindachner).
Barbados.
Clinus gilli Steindachner, Ichth. Notizen, VI, 1867, 46, Barbados.

3718. **Malacoctenus bimaculatus** (Steindachner).
Small rocky islands north coast of Cuba.
Clinus bimaculatus Steindachner, Ichth. Beitr., V, 1876, 180, islands off Cuba.

3719. **Malacoctenus puertoricensis** Evermann and Marsh.
Porto Rico.
Malacoctenus puertoricensis Evermann and Marsh, Rept. U. S. Fish Com., XXV, 1899 (Dec. 19), 358, Hucares, Porto Rico.

3720. **Malacoctenus versicolor** (Poey).
Cuba.
Myxodes versicolor Poey, Enumeratio, 1876, 131, pl. 5, fig. 1, Cuba.

3721. **Malacoctenus biguttatus** (Cope).
New Providence, Bahamas.
Labrisomus biguttatus Cope, Trans. Amer. Phil. Soc. Phila., XIV, 1871, 473, New Providence, Bahamas.

Genus 1301. ERICTEIS Jordan.
Ericteis Jordan, Bull. U. S. Fish Com., XXII, 1902, 543 (*E. kalisheræ* Jordan).

3722. **Ericteis kalisheræ** Jordan.
Bush Key, Tortugas.
Ericteis kalisheræ Jordan, Bull. U. S. Fish Com., XXII, 1902, 543, pl. 2, Bush Key, Fla.

Genus 1302. ACTEIS Jordan.
Acteis Jordan, Bull. U. S. Fish Com., XXII, 1902, 543 (*Malacoctenus moorei* Evermann and Marsh).

3723. **Acteis moorei** (Evermann and Marsh).
Porto Rico.
Malacoctenus moorei Evermann and Marsh, Fishes of Porto Rico, in Bull. U. S. Fish Com., XX, 1900, 309, fig. 97, Culebra Island, Porto Rico.

3724. **Acteis culebræ** (Evermann and Marsh).
Porto Rico.
Malacoctenus culebræ Evermann and Marsh, Rept. U. S. Fish Com., XXV, 1899 (Dec. 19), 357, Culebra Island.

Family 271. BLENNIIDÆ

Genus 1303. BLENNIUS Linnæus. *Blennies.*
Blennius Linnæus, Syst. Nat., ed. X, 1758, 256 (*B. galerita* Linnæus).
Salaria Forskål, Descr. Anim., 1777, 22 (*Blennius galerita* Linnæus).
Adonis Gronow, Cat. Fish., Ed. Gray, 1854, 93 (*A. pavoninus* Gronow = *Blennius ocellaris* Linnæus).

3725. **Blennius fabbri** Nichols.
Florida.
Blennius fabbri Nichols, Bull. Amer. Mus. Nat. Hist., XXVIII, 1910, 161, Miami, Fla.; perhaps young of *Chasmodes bosquiannus*.

3726. **Blennius stearnsi** Jordan and Gilbert.
Gulf of Mexico.
Blennius stearnsi Jordan and Gilbert, Proc. U. S. Nat. Mus., V, 1882, 300, Pensacola snapper banks.

3727. **Blennius fucorum** Cuvier and Valenciennes. *Seaweed blenny.*
Off the Azores; also off New York.
Blennius fucorum Cuvier and Valenciennes, Hist. Nat. Poiss., XI, 1836, 194 (263), pl. 324, 240 miles south of the Azores.
Blennius oceanicus Cuvier and Valenciennes, loc. cit., 195 (265), open sea.

3728. **Blennius cristatus** Linnæus. *Rockfish.*
Tropical Atlantic.
Blennius cristatus Linnæus, Syst. Nat., Ed. X, 1758, 256, Indies; after Gronow.
Blennius crinitus Cuvier and Valenciennes, Hist. Nat. Poiss., XI, 1836, 175 (237), La Rochelle, France.
Blennius nuchifilis Cuvier and Valenciennes, loc. cit., 186 (253), Isle of Ascension.
Blennius asterias Goode and Bean, Proc. U. S. Nat. Mus., V, 1882, 416, Garden Key, Fla.

3729. **Blennius favosus** Goode and Bean.
Gulf of Mexico; Garden Key, Fla.
Blennius favosus Goode and Bean, Proc. U. S. Nat. Mus., V, 1882, 416, Garden Key, Fla.

3730. **Blennius pilicornis** Cuvier.
Coast of Brazil and north to the West Indies; recorded from Rio Janeiro, Bahia, the Tortugas, and off the coast of Florida.
Blennius pilicornis Cuvier, Règne Anim., ed. 2, II, 1829, 237, coasts of Europe, Rio Janeiro.

3731. **Blennius marmoreus** Poey.
Cuba.
Blennius marmoreus Poey, Enumeratio, 1876, 130, Cuba.

3732. **Blennius truncatus** Poey.
Cuba.
Blennius truncatus Poey, Memorias, II, 1861, 424, Cuba.

3733. **Blennius vinctus** Poey.
Cuba.
Blennius vinctus Poey, Repertorio, II, 1867, 243, Habana.

Genus 1304. LIPOPHRYS Gill.
Pholis Fleming, Brit. Anim., 1828, 207 (*Blennius lævis*=*Blennius pholis* Linnæus); name preoccupied.
Lipophrys Gill, Amer. Nat., XXX, June, 1896, 498 (*Blennius pholis* Linnæus).

3734. **Lipophrys carolinus** (Cuvier and Valenciennes).
South Carolina.
Pholis carolinus Cuvier and Valenciennes, Hist. Nat. Poiss., XI, 1836, 204 (276), Carolina.

Genus 1305. SCARTELLA Jordan.
Scartella Jordan, Proc. U. S. Nat. Mus., IX, 1886, 50 (*Blennius microstomus* Poey).
Blenniolus Jordan and Evermann, Fishes North and Mid. Amer., 1898, 2386 (*Blennius brevipinnis* Günther).

3735. **Scartella microstoma** (Poey).
Cuba.
Blennius microstomus Poey, Memorias, II, 1861, 288, Cuba.

3736. **Scartella brevipinnis** (Günther).
Pacific coast of Mexico, from Mazatlan to Panama.
Blennius brevipinnis Günther, Cat., III, 1861, 226, Pacific coast of Central America.

Genus 1306. HYPLEUROCHILUS Gill.
Hypleurochilus Gill, Cat. Fishes E. Coast of N. Amer., Suppl. Proc. Acad. Nat. Sci. Phila., XIII, 1861, 44 (*Blennius multifilis* Girard=*Blennius geminatus* Wood).

3737. Hypleurochilus geminatus (Wood). *Blenny.*
South Atlantic and Gulf coasts of United States.
Blennius geminatus Wood, Jour. Acad. Nat. Sci. Phila., IV, 1824, 278, Charleston, S. C.
Blennius multifilis Girard, Proc. Acad. Nat. Sci. Phila., X, 1858, 169, St. Joseph's Island, Tex.

Genus 1307. HYPSOBLENNIUS Gill.
Hypsoblennius Gill, Cat. Fishes E. Coast N. Amer., Suppl. Proc. Acad. Nat. Sci. Phila., XIII, 1861, 44 (*Blennius hentz* LeSueur).
Isesthes Jordan and Gilbert, Synopsis, 1883, 757 (*Blennius gentilis* Girard).

3738. Hypsoblennius hentz (LeSueur).
Coasts of North and South Carolina, south of Indian River, Fla.; locally common.
Blennius hentz LeSueur, Jour. Acad. Nat. Sci. Phila., 1st ser., IV, 1825, 363, Charleston, S. C.
Blennius punctatus Wood, loc. cit., 278, Charleston, S. C.; not of Fabricius, 1780.

3739. Hypsoblennius gilberti (Jordan).
California, from Point Conception southward to Todos Santos; Santa Barbara Islands, among rocks.
Isesthes gilberti Jordan, Proc. U. S. Nat. Mus., V, 1882, 349, Santa Barbara, Calif.

3740. Hypsoblennius gentilis (Girard).
Coast of California from Monterey to Cape San Lucas.
Blennius gentilis Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 149, Monterey, Calif.

3741. Hypsoblennius piersoni Gilbert and Starks.
Bay of Panama.
Hysoblennius piersoni Gilbert and Starks, Mem. Calif. Acad. Sci., IV, 1904, 191, Pl. XXXII, Bay of Panama.

3742. Hypsoblennius striatus (Steindachner).
Panama.
Blennius striatus Steindachner, Ichth. Beitr., V, 1876, 15, Panama.

3743. Hypsoblennius ionthas (Jordan and Gilbert).
Pensacola, Fla.
Isesthes ionthas Jordan and Gilbert, Proc. U. S. Nat. Mus., V, 1882, 299, Pensacola.
Isesthes scrutator Jordan and Gilbert, loc. cit., 300, Pensacola; Galveston.

Genus 1308. CHASMODES Cuvier and Valenciennes.
Chasmodes Cuvier and Valenciennes, Hist. Nat. Poiss., XI, 1836, 218 (295) (*Blennius bosquianus* Lacépède).
Blenitrachus Swainson, Classn. Fish., II, 1839, 78, 274 (*Pholis quadrifaciatus* Wood).

3744. Chasmodes bosquianus (Lacépède). *Banded blenny; Bosc's shanny; Four-banded blenny.*
New York to Florida; common southward in shallow water.
Blennius bosquianus Lacépède, Hist. Nat. Poiss., II, 1800, 493, South Carolina; female.

3745. Chasmodes quadrifasciatus (Wood).
Probably south Atlantic coast of United States.
Pholis quadrifasciatus Wood, Jour. Acad. Nat. Sci. Phila., IV, 1824, 282, locality unknown; probably South Carolina.

3746. Chasmodes saburræ Jordan and Gilbert.
Pensacola Bay, Fla.
Chasmodes saburræ Jordan and Gilbert, Proc. U. S. Nat. Mus., V, 1882, 298, Pensacola, Fla.

3747. Chasmodes novemlineatus (Wood). *Nine-lined shanny.*
South Atlantic coast of the United States, South Carolina to Florida.
Pholis novemlineatus Wood, Jour. Acad. Nat. Sci. Phila., IV, 1825, 280, Charleston Harbor, S. C.

3748. Chasmodes jenkinsi Jordan and Evermann.
Guaymas, Sonora, Mexico.
Chasmodes jenkinsi Jordan and Evermann, Proc. Calif. Acad. Sci., 2d ser., VI, 1896, 232, pl. 39, Guaymas, Mexico.

Genus 1309. HOMESTHES Gilbert.
Homesthes Gilbert, in Jordan and Evermann, Fishes North and Mid. Amer., 1898, 2394 (*H. caulopus* Gilbert).

3749. Homesthes caulopus Gilbert.
Panama Bay.
Homesthes caulopus Gilbert, in Jordan and Evermann, Fishes North and Mid. Amer., 1898, 2394, Panama.

Genus 1310. SCARTICHTHYS Jordan and Evermann.
Scartes Jordan and Evermann, Check List, 1895, 471 (*Salarias salarias rubropunctatus* Cuvier and Valenciennes); name preoccupied.
Scartichthys Jordan and Evermann, Fishes North and Mid. Amer., 1898, 2395 (*Salarias rubro-punctatus* Cuvier and Valenciennes).

3750. Scartichthys rubropunctatus (Cuvier and Valenciennes).
Coast of Peru and Chile, north to Panama.
Salarias rubro-punctatus Cuvier and Valenciennes, Hist. Nat. Poiss., XI, 1836, 257 (348), Juan Fernandez, off Chile.

Genus 1311. RUPISCARTES Swainson.
Alticus Commerson, in Lacépède, Hist. Nat. Poiss., II, 1800, 458 (*A. saltatorius* Commerson); not binomial and not accepted by Lacépède.
Alticus Cuvier and Valenciennes, Hist. Nat. Poiss., XI, 1836, 337; casual notice; the name not accepted as that of a genus (*Blennius saliens* [89]=*Salarias alticus* Cuvier and Valenciennes).
Rupiscartes Swainson, Class. Fish., II, 1839, 275 (*Salarias atlanticus* Cuvier and Valenciennes).

3751. Rupiscartes atlanticus (Cuvier and Valenciennes).
Tropical America on both coasts, north to West Indies and to Todos Santos, Lower California; abundant.
Salarias atlanticus Cuvier and Valenciennes, Hist. Nat. Poiss., XI, 1836, 238 (321), Atlantic Ocean.

Genus 1312. ENTOMACRODUS Gill.
Entomacrodus Gill, Proc. Acad. Nat. Sci. Phila., XI, 1859, 168 (*E. nigricans* Gill).

3752. Entomacrodus chiostictus (Jordan and Gilbert).
Pacific coast of Mexico.
Salarias chiostictus Jordan and Gilbert, Synopsis, 1883, 363, Mazatlan, Mexico.

3753. Entomacrodus margaritaceus (Poey).
Cuba.
Salarias margaritaceus Poey, Memorias, II, 1861, 289, Cuba.

3754. Entomacrodus decoratus Poey.
Cuba.
Entomacrodus decoratus Poey, Synopsis, 1868, 398, Cuba.

3755. Entomacrodus nigricans Gill.
West Indies.
Entomacrodus nigricans Gill, Proc. Acad. Nat. Sci. Phila., XI, 1859, 168, Barbados.

3756. Entomacrodus cruentatus Garman.
Off Cocos Island in deep water.
Entomacrodus cruentatus Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 123, Pl. L; off Cocos Island, Panama.

Genus 1313. SALARICHTHYS Guichenot.
Salarichthys Guichenot, Mém., Soc. Sci. Nat. Cherbourg, XIII, 1868, 96 (*Salarias vomerinus* Cuvier and Valenciennes=*Salarias textilis* Cuvier and Valenciennes).

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[89] "Un petit *salarias* qui nous paraît être celui, la même pour lequel Commerson a établi son genre *Alticus*."

3757. Salarichthys textilis Quoy and Gaimard.
West Indies, from Bermudas to Brazil.
Salarias textilis Quoy and Gaimard, in Cuvier and Valenciennes, Hist. Nat. Poiss., XI, 1836, 227 (307), Ascension Island.
Salarias vomerinus Cuvier and Valenciennes, loc. cit., 258 (349), Bahia.

Genus 1314. BRANNERELLA Gilbert.
Brannerella Gilbert, Proc. Wash. Acad. Sci., II, 1900, 180 (*B. brasiliensis* Gilbert).

3758. Brannerella brasiliensis Gilbert.
Brazil, north to Curaçao, in the Caribbean Sea.
Brannerella brasiliensis Gilbert, Proc. Wash. Acad. Sci., II, 1900, 180, Maceio, Brazil.

3759. Brannerella sluiteri Metzelaar.
Caribbean Sea.
Brannerella sluiteri Metzelaar, Trop. Atl. Vissch., 1919, 155, Bonaire.

Genus 1315. OPHIOBLENNIUS Gill.
Blennophis Valenciennes, in Webb and Barthelot, Îles Canaries, Poiss., 1844, 60 (*B. webbii* Valenciennes), name preoccupied.
Ophioblennius Gill, Proc. Acad. Nat. Sci. Phila., XII, 1860, 103 (*B. webbii* Valenciennes); substitute for *Blennophis* Valenciennes, not *Blennophis* Swainson, a genus of *Clinidæ*.

3760. Ophioblennius webbii (Valenciennes).
West Indies and Canary Islands.
Blennophis webbii Valenciennes, in Webb and Barthelot, Îles Canaries, Poiss., 1839, 60, pl. 20, fig. 1, Fort Aventura, Canary Islands.

3761. Ophioblennius steindachneri Jordan and Evermann.
Pacific coast of Mexico.
Ophioblennius steindachneri Jordan and Evermann, Fishes North and Mid. Amer., 1898, 2401, Tres Marias Islands; after Steindachner.

Genus 1316. CORALLIOZETUS Evermann and Marsh.
Coralliozetus Evermann and Marsh, Rept. U. S. Fish Com., XXV, 1899 (Dec. 19), 362 (*C. cardonæ* Evermann and Marsh).

3762. Coralliozetus cardonæ Evermann and Marsh.
Porto Rico.
Coralliozetus cardonæ Evermann and Marsh, Rept. U. S. Fish Com., XXV, 1899 (Dec. 19), 362, reef at Cardona Light House, Playa de Ponce, Porto Rico.

Family 272. EMBLEMARIIDÆ

Genus 1317. EMBLEMARIA Jordan and Gilbert.
Emblemaria Jordan and Gilbert, Proc. U. S. Nat. Mus., V, 1882, 627 (*E. nivipes* Jordan and Gilbert).

3763. Emblemaria atlantica Jordan and Evermann.
Snapper Banks off Pensacola; Gulf of Mexico.
Emblemaria atlantica Jordan and Evermann, Fishes North and Mid. Amer., 1908, 2402, snapper banks off Pensacola, Fla.

3764. Emblemaria nivipes Jordan and Gilbert.
Pearl Island near Panama.
Emblemaria nivipes Jordan and Gilbert, Proc. U. S. Nat. Mus., V, 1882, 627, Pearl Island, near Panama.

3765. Emblemaria oculocirris Jordan.
Gulf of California.
Emblemaria oculocirris Jordan, in Gilbert, Proc. U. S. Nat. Mus., XIX, 1896, 456, La Paz.

3766. Emblemaria pandionis Evermann and Marsh.
Porto Rico.
Emblemaria pandionis Evermann and Marsh, Bull. U. S. Fish Com., XX, 1900, 318, between Vieques and Culebra Islands.

3767. Emblemaria marki Mowbray.
Bermudas.
Emblemaria marki Mowbray, in Bean, Proc. Biol. Soc. Wash., XXV, 1912, 126, Hamilton Harbor, Bermudas.

Genus 1318. ACANTHEMBLEMARIA Metzelaar.
Acanthemblemaria Metzelaar, Trop. Atl. Vissch., 1919, 159 (*A. spinosa* Metzelaar).

3768. Acanthemblemaria spinosa Metzelaar.
Caribbean Sea.
Acanthemblemaria spinosa Metzelaar, Trop. Atl. Vissch., 1919, 159, fig. 53, Curaçao.

Family 273. ATOPOCLINIDÆ

Genus 1319. ATOPOCLINIS Vaillant.
Atopoclinus Vaillant, Bull. Soc. Philom. Paris, ser. 8, VI, 1894, 73 (*A. ringens* Vaillant).

3769. Atopoclinus ringens Vaillant.
Gulf of California.
Atopoclinus ringens Vaillant, Bull. Soc. Philom., ser. 8, VI, 1894, 74, Gulf of California.

Family 274. CHÆNOPSIDÆ

Genus 1320. CHÆNOPSIS Gill.
Chænopsis Gill, Ann. Lyc. Nat. Hist. N. Y., VIII, 1863, 141, Pl. 3, fig. 3 (*C. ocellatus* Poey).
Lucioblennius Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 103 (*L. alepidotus* Gilbert).

3770. Chænopsis ocellata Poey.
Matanzas, Cuba.
Chænopsis ocellatus Poey, in Gill, Ann. Lyc. Nat. Hist. N. Y., VIII, 1863, 143, Matanzas, Cuba.

3771. Chænopsis alepidota (Gilbert).
Gulf of California; Avalon Bay, Calif.
Lucioblennius alepidotus Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 103, Lower California.

3772. Chænopsis lucius (Osburn and Nichols).
Gulf of California.
Lucioblennius lucius Osburn and Nichols, Bull. Amer. Mus. Nat. Hist., XXXV, 1916, 179, fig. 15, San Jose Island, Gulf of California.

Genus 1321. PHOLIDICHTHYS Bleeker.
Pholidichthys Bleeker, Boerœ, in Natur. Tijd. Neder. Indie, XI, 1856, 406 (*P. leucotænia* Bleeker).

3773. Pholidichthys anguilliformis Lockington.
Gulf of California.
Pholidichthys anguilliformis Lockington, Proc. Acad. Nat. Sci. Phila., XXXIII, 1881, 118, San Jose Island, Lower California.

Genus 1322. PSEDNOBLENNIUS Jenkins and Evermann.
Psednoblennius Jenkins and Evermann, Proc. U. S. Nat. Mus., XI, 1888, 156 (*P. hypacanthus* Jenkins and Evermann).

3774. Psednoblennius hypacanthus Jenkins and Evermann.
Gulf of California at Guaymas, Sonora, Mexico.
Psednoblennius hypacanthus Jenkins and Evermann, Proc. U. S. Nat. Mus., XI, 1888, 156, Guaymas, Mexico.

Genus 1323. STATHMONOTUS Bean.
Stathmonotus Bean, Proc. U. S. Nat. Mus., VIII, 1885, 191 (*S. hemphillii* Bean).

3775. Stathmonotus hemphillii Bean.
Key West, Fla.
Stathmonotus hemphillii Bean, Proc. U. S. Nat. Mus., VIII, 1885, 191, pl. 13, Key West, Fla.

3776. Stathmonotus tekla Nichols.
Key West, Fla.
Stathmonotus tekla Nichols, Bull. Amer. Mus. Nat. Hist., XXVIII, 1910, 161, fig. 1c. XXX, Pl. XI, fig. 2, Key West, Fla.

Family 275. CEBIDICHTHYIDÆ

Genus 1324. CEBIDICHTHYS Ayres.
Cebidichthys Ayres, Proc. Calif. Acad. Nat. Sci., I, 1855, 59 (*Apodichthys violaceus* Girard).

3777. Cebidichthys violaceus (Girard).
Coast of California from Crescent City to Carpenteria.
Apodichthys violaceus Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 150, Monterey, Calif.
Cebidichthys cristagalli Ayres, Proc. Calif. Acad. Nat. Sci., I, 1855, 58, San Francisco.

Family 276. CHIROLOPHIDÆ

Genus 1325. BRYOSTEMMA Jordan and Starks.
Bryostemma Jordan and Starks, Proc. Calif. Acad. Sci. 2d ser., V, 1895, 841 (*Blennius polyactocephalus* Pallas).

3778. Bryostemma polyactocephalum (Pallas).
Northern Japan and Kamchatka to Puget Sound.
Blennius polyactocephalus Pallas, Zool. Rosso–Asiat., III, 1811, 179, Kamchatka.
Chirolophus japonicus Herzenstein, Mélanges Biologiques Soc. Sci. Petersb., XIII, 1890, 123, Yezo, Japan.

3779. Bryostemma nugator Jordan and Williams.
Puget Sound.
Bryostemma nugator Jordan and Williams, Proc. Calif. Acad. Sci., 2d ser., V, 1895, 843, pl. 101, Seattle, Wash.

3780. Bryostemma decoratum Jordan and Snyder.
Point Orchard, Wash.
Bryostemma decoratum Jordan and Snyder, Proc. U. S. Nat. Mus., XXV, 1903, 615, Point Orchard, near Seattle, Wash.

3781. Bryostemma tarsodes Jordan and Snyder.
Unalaska.
Bryostemma tarsodes Jordan and Snyder, Proc. U. S. Nat. Mus., XXV, 1903, 614, Unalaska.

Genus 1326. BRYOLOPHUS Jordan and Snyder.
Bryolophus Jordan and Snyder, Proc. U. S. Nat. Mus., XXV, 1903, 617 (*B. lysimus* Jordan and Snyder).

3782. Bryolophus lysimus Jordan and Snyder.
Unalaska.
Bryolophus lysimus Jordan and Snyder, Proc. U. S. Nat. Mus., XXV, 1903, 617, Unalaska.

Genus 1327. GYMNOCLINUS Gilbert and Burke.
Gymnoclinus Gilbert and Burke, Bull. U. S. Bur. Fish., XXX, 1910, 86 (*G. cristulatus* Gilbert and Burke).

3783. Gymnoclinus cristulatus Gilbert and Burke.
Bering Island.
Gymnoclinus cristulatus Gilbert and Burke, Bull. U. S. Bur. Fish., XXX, 1910, 86, fig. 30, Nikolski, Bering Island.

Family 277. PHOLIDÆ

Genus 1328. APODICHTHYS Girard.
Apodichthys Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 150 (*A. flavidus* Girard).

3784. Apodichthys flavidus Girard.
Point Conception to Vancouver Island.
Apodichthys flavidus Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 150, Presidio (San Francisco), Calif.
Apodichthys virescens Ayres, Proc. Calif. Acad. Nat. Sci., I, 1855, 55 (54), San Francisco.
Apodichthys sanguineus Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 279, California.
Apodichthys inornatus Gill, loc. cit., 279, Puget Sound.

3785. Apodichthys univittatus Lockington.
Lower California.
Apodichthys univittatus Lockington, Proc. Acad. Nat. Sci. Phila., XXXIII, 1881, 119, Lower California, probably from the Gulf.

Genus 1329. XERERPES Jordan and Gilbert.
Xererpes Jordan and Gilbert, Proc. Calif. Acad. Sci., 2d ser., V, 1895, 846 (*Apodichthys fucorum* Jordan and Gilbert).

3786. Xererpes fucorum (Jordan and Gilbert).
Coast of California.
Apodichthys fucorum Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880, 139, Point Pinos, near Monterey, Calif.

Genus 1330. ULVICOLA Gilbert and Starks.
Ulvicola Gilbert and Starks, Proc. U. S. Nat. Mus., XIX, 1896, 455 (*U. sanctæ-rosæ* Gilbert and Starks).

3787. Ulvicola sanctæ-rosæ Gilbert and Starks.
Santa Rosa Island, coast of California.
Ulvicola sanctæ-rosæ Gilbert and Starks, Proc. U. S. Nat. Mus., XIX, 1896, 453, Santa Rosa Island, Calif.

Genus 1331. PHOLIS Gronow.
Pholis Gronow, Acta Helvet., IV, 1760, 259 (*Blennius gunnellus* Linnæus).
Pholis Scopoli, Introd. Hist. Nat., 1777, 456 (*Blennius gunnellus* Linnæus).
Murænoides Lacépède, Hist. Nat. Poiss., II, 1800, 324 (*Murænoides sujef* Lacépède).
Centronotus Schneider, Systema, ed. Bloch, 1801, 165 (*Centronotus fasciatus* Schneider).
Dactyleptus Rafinesque, Anal. Nat., 1815, 82; substitute for *Murænoides*.
Gunnellus Fleming, Brit. Anim., 1828, 207 (*G. vulgaris* Fleming = *Blennius gunnellus* Linnæus).
Centronotus Cuvier, Regne Anim., ed. 2, II, 1829, 239 (*Blennius gunnellus* Linnæus).
Ophisomus Swainson, Classn. Anim., II, 1839, 279 (*Blennius gunnellus* Linnæus).
Urocentrus Kner, Sitzber. K. Akad. Wiss. Wien, LVIII, 1868, 51 (*U. pictus* Kner).

3788. Pholis gunnellus (Linnæus). *Gunnel; Butterfish; Rockfish.*
North Atlantic, south to Cape Cod.
Blennius gunnellus Linnæus, Syst. Nat., Ed. X, 1758, 257, Atlantic Ocean.
Ophidion imberbe Linnæus, loc. cit., 259, Europe.
Blennius europæus Olafsen, Reise Island, I, 1772, 81, Iceland.
Blennius murænoides Sujef, Act. Petrop., II, 1779, 195, no locality, probably Baltic.
Ophidium mucronatum Mitchill, Trans. Lit. and Phil. Soc. N. Y., I, 1815, 361, Pl. I, fig. 1, New York.
Gunnellus vulgaris Fleming, British Anim., 1842, 207, England.

3789. Pholis fasciatus (Bloch and Schneider).
Greenland to Alaska and Japan.
Centronotus fasciatus Bloch and Schneider, Syst. Ichth., 1801, 165, pl. 37, fig. 1, Tranquebar.
Gunnellus grœnlandicus Cuvier and Valenciennes, Hist. Nat. Poiss., XI, 1836, 326 (442), pl. 340, Greenland; after Bloch and Schneider.
?*Gunnellus murænoides* Valenciennes, in Cuvier, Règne Anim., Poiss., ed. 2, 1829, pl. 78, fig. 2, 916; after Bloch and Schneider.
Blennius tænia Pallas, Zoogr. Rosso-Asiat., III, 1811, 178, Kuril Islands.
Murænoides maxillaris Bean, Proc. U. S. Nat. Mus., IV, 1881, 147, St. Paul Island, Alaska.

3790. Pholis ornatus (Girard).
San Francisco to Alaska.
Gunnellus ornatus Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 149, Presidio (San Francisco), Calif.
Centronotus lætus Cope, Proc. Amer. Phil. Soc., XIII, 1873, 27, Sitka or Unalaska.

3791. Pholis gilli Evermann and Goldsborough.
Bering Sea.
Pholis gilli Evermann and Goldsborough, Bull. U. S. Bur. Fish., XXVI, 1906, 337, fig. 110, Bering Sea.

Genus 1332. RHODYMENICHTHYS Jordan and Evermann.
Rhodymenichthys Jordan and Evermann, Check List, 1895, 474 (*Gunnellus ruberrimus* Cuvier and Valenciennes=*Blennius dolichogaster* Pallas).

3792. Rhodymenichthys dolichogaster (Pallas). *Butterfish.*
Okhotsk Sea to San Francisco.
Blennius dolichogaster Pallas, Zoogr. Rosso-Asiat., III, 1811, 175, Kamchatka.
Gunnellus ruberrimus Cuvier and Valenciennes, Hist. Nat. Poiss., XI, 1836, 324 (440), Kuril Islands; after Pallas.

Genus 1333. ASTERNOPTERYX Rüppell.
Asternopteryx Rüppell, in Günther, Cat., III, 1861, 288 (*A. gunelliformis* Rüppell).

3793. Asternopteryx gunelliformis Rüppell.
Greenland.
Asternopteryx gunelliformis Rüppell, in Günther, Cat., III, 1861, 288, Greenland; type in Senckenberg Museum, Frankfurt; a second specimen from Greenland examined by us.

Genus 1334. ANOPLARCHUS Gill.
Anoplarchus Gill, Proc. Acad. Nat. Sci. Phila., XIII, 1861, 261 (*A. purpurescens* Gill).

3794. Anoplarchus cristagalli (Günther).
Alaska to San Francisco.
Centronotus cristagalli Günther, Cat., III, July, 1861, 289, Vancouver Island.
Anoplarchus purpurescens Gill, Proc. Acad. Nat. Sci. Phila., XIII, Sept., 1861, 262, Washington Territory.

3795. Anoplarchus cristigalli archolepis Hubbs.
Coast of central California.
Anoplarchus purpurescens archolepis Hubbs, Papers Mich. Acad. Sci., Arts and Letters, VII, 1926, 375. Reef at Carmel, Calif.

3796. Anoplarchus insignis Gilbert and Burke.
Attu Island.
Anoplarchus insignis Gilbert and Burke, Bull. U. S. Bur. Fish., XXX, 1910, 88, fig. 32, Attu Island, Bering Sea.

Genus 1335. PLECTOBRANCHUS Gilbert.
Plectobranchus Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 102 (*P. evides* Gilbert).

3797. Plectobranchus evides Gilbert.
Coasts of Oregon and Washington.
Plectobranchus evides Gilbert, Proc. U. S. Nat. Mus., XIII, 1898, 102, coasts of Oregon and Washington.

Family 278. XIPHISTERIDÆ

Genus 1336. XIPHISTER Jordan and Gilbert.
Xiphidion Girard, Pac. R. R. Surv., X, Pt. 4, Fishes, 1858, 119 (*X. mucosum* Girard); name preoccupied in *Orthoptera*.
Xiphister Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880, 135 (*Xiphidion mucosum* Girard).

3798. Xiphister mucosus (Girard).
Monterey to Alaska.
Xiphidion mucosum Girard, Pac. R. R. Surv., X, pt. 4, Fishes, 1858, 119, South Farallon Island, off California.
Xiphidium cruoreum Cope, Proc. Amer. Phil. Soc., XIII, 1873, 27, Sitka, Alaska.

Genus 1337. EPIGEICHTHYS Hubbs.
Epigeichthys Hubbs, Papers Mich. Acad. Sci. Arts and Letters, VII, 1926 (*Xiphister rupestris* Jordan and Gilbert).

3799. Epigeichthys atropurpureus (Kittlitz).
Pacific coast of America from Alaska to Monterey.
Ophidium atropurpureum Kittlitz, Denkwürd, einer Reise Russ.-Amer., I, 1858, 225, Alaska.
Xiphister rupestris Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880, 137, Monterey, Calif.

Genus 1338. PHYTICHTHYS Hubbs.
Xiphistes Jordan and Starks, Proc. Calif. Acad. Sci., 2d ser., V, 1895, 846 (*Xiphistes chirus* Jordan and Gilbert); name preoccupied in insects.
Phytichthys Hubbs, in Jordan, Class. Fishes, 1923, 234 (*Xiphister chirus* Jordan and Gilbert).

3800. Phytichthys chirus (Jordan and Gilbert).
Monterey to Alaska.
Xiphister chirus Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880, 135, Point Pinos, near Monterey, Calif.
Xiphistes ulvæ Jordan and Starks, Fishes Puget Sound, Proc. Calif. Acad. Sci., 2d ser., V, 1895, 847, pl. 102, Waadda Island, Neah Bay.

3801. Phytichthys versicolor (Gilbert and Burke).
Bering Sea.
Xiphistes versicolor Gilbert and Burke, Bull. U. S. Bur. Fish., XXX, 1910, 88, fig. 33; Attu; Agattu, Bering Sea.

Family 279. STICHÆIDÆ

Genus 1339. STICHÆUS Reinhardt.
Stichæus Reinhardt, K. Dansk. Vidensk. Selsk. Skrift. Natur. og Math. Afhandl., VI, 1837, CX (*Blennius punctatus* Fabricius).
Notogrammus Bean, Proc. U. S. Nat. Mus., IV, 1881, 147 (*N. rothrocki* Bean); young example.

3802. Stichæus punctatus (Fabricius). *Spotted snake blenny.*
Arctic seas from Greenland to northern Siberia, south to Bristol Bay and Newfoundland.
Blennius punctatus Fabricius, Fauna Grœnlandica, 1780, 153, Greenland.
Notogrammus rothrocki Bean, Proc. U. S. Nat. Mus., IV, 1881, 146, Plover Bay and Cape Lisburne, Siberia.

Genus 1340. PLAGIOGRAMMUS Bean.
Plagiogrammus Bean, Proc. U. S. Nat. Mus., XVI, 1893, 699 (*P. hopkinsi* Bean).

3803. Plagiogrammus hopkinsi Bean.
Monterey Bay, Calif.
Plagiogrammus hopkinsi Bean, Proc. U. S. Nat. Mus., XVI, 1893, 700, with fig. on p. 699; Monterey, Calif.

Genus 1341. ULVARIA Jordan and Evermann.
Ulvaria Jordan and Evermann, Check List, 1895, 475 (*Pholis subbifurcatus* Storer).

3804. Ulvaria subbifurcata (Storer). *Radiated shanny.*
North Atlantic, south of Cape Cod.
Pholis subbifurcatus Storer, Rept. Fish. Mass., 1839, 63, Nahant, Mass.

Genus 1342. EUMESOGRAMMUS Gill.
Eumesogrammus Gill, Proc. Acad. Nat. Sci. Phila., XVI, 1864, 210 (*Clinus præcisus* Krøyer).

3805. Eumesogrammus præcisus (Krøyer).
Greenland.
?*Clinus præcisus* Krøyer, Naturh. Tidsskr., I, 1837, 25, Greenland.
Clinus unimaculatus Reinhardt, Dansk. Vidensk. Selsk., VII, 1838, 114, 121, Greenland.

Family 280. LUMPENIDÆ

Genus 1343. LEPTOCLINUS Gill.
Ctenodon Nilsson, Scand. Fauna, IV, 1853, 190 (*Clinus maculatus* Fries); name preoccupied.
Leptoclinus Gill, Cat. Fish. E. coast N. Amer., Suppl., Proc. Acad. Nat. Sci. Phila., XIII, 1861, 45 (*Clinus aculeatus* Reinhardt=*Clinus maculatus* Fries).

3806. Leptoclinus maculatus (Fries). *Langbarn.*
North Atlantic coasts of Europe; this or some closely similar species is recorded from Bering Sea, Robben Island, Aleutian Islands, and Hood Canal, Puget Sound.
Clinus maculatus Fries, Kgl. Vet. Ak. Handl., 1837, 51, Bohüsläan Sweden.
Clinus aculeatus Reinhardt, K. Dansk. Vid. Selsk. Natur. Afh., VII, 1838, 114, 122, Spitzbergen.

Genus 1344. POROCLINUS Bean.
Poroclinus Bean, Proc. U. S. Nat. Mus., XIII, 1890, 40 (*P. rothrocki* Bean).

3807. Poroclinus rothrocki Bean.
Between Nagai and Big Koniushi Islands, Alaska.
Poroclinus rothrocki Bean, Proc. U. S. Nat. Mus., XIII, 1890, 40, *Albatross* station 2952, lat. 55° 15′ N., long. 159° 37′ W., in 58 fathoms.

Genus 1345. ANISARCHUS Gill.
Anisarchus Gill, Proc. Acad. Nat. Sci. Phila., XVI, 1864, 209 (*Clinus medius* Reinhardt).

3808. Anisarchus medius (Reinhardt).
Greenland to Norway and Spitzbergen; this or a similar species on coasts of southern and central Alaska.
Clinus medius Reinhardt, K. Dansk. Vidensk. Selsk. Skrift. Afh., VII, 1838, 114, 121, Greenland.

Genus 1346. LUMPENUS Reinhardt.
Lumpenus Reinhardt, Dansk. Vidensk. Selsk. Natur., VI, 1837, CX (*Blennius lumpenus* Fabricius=*Gunnellus fabricii* Cuvier and Valenciennes).
Leptogunnellus Ayres, Proc. Calif. Acad. Nat. Sci., I, 1854, 26 (*L. gracilis* Ayres=*Blennius anguillaris* Pallas).
Centroblennius Gill, Proc. Acad. Nat. Sci. Phila., XVI, 1864, 209 (*Lumpenus nubilis* Richardson=*Gunnellus fabricii* Cuvier and Valenciennes).
Leptoblennius Gill, loc. cit., 1864, 209 (*Blennius serpentinus* Storer=*Blennius lampetræformis* Walbaum).

3809. Lumpenus gracilis (Ayres).
San Francisco to Alaska.
Blennius anguillaris Pallas, Zoogr. Rosso-Asiat., III, 1811, 176, about Kamchatka; no definite locality; not of Peck.
Leptogunnellus gracilis Ayres, Proc. Calif. Acad. Nat. Sci., I, 1855, 26, San Francisco.

3810. Lumpenus mackayi Gilbert.
Nushagak River, Alaska.
Lumpenus mackayi Gilbert, Rept. U. S. Fish Com., XIX, 1893, 450, pl. 32, Nushagak River, Alaska.

3811. Lumpenus fabricii (Cuvier and Valenciennes).
Arctic seas; Greenland, Gulf of St. Lawrence, Wellington Sound, Bristol Bay, and other localities in Bering Sea.
Gunellus fabricii Cuvier and Valenciennes, Hist. Nat. Poiss., XI, 1836, 317 (431); Greenland.
Lumpenus nubilus Richardson, Last Arctic Voyage, Fishes, 1855, 259, pl. 28, Wellington Sound.

3812. Lumpenus lampetræformis (Walbaum). *Snake blenny; Tangbrosme; Eel blenny; Snakefish.*
North Atlantic and Arctic, on both shores; south to Sweden and Greenland; rarely to Cape Cod.
Blennius lampetræformis Walbaum, Artedi Pisc., III, 1792, 184, Iceland.
Centronotus islandicus Schneider, ed. Bloch, Syst. Ichth., 1801, 167, Iceland.
? *Clinus nebulosus* Fries, Vet. Akad. Handl., 1837, 55, Bohüslän, Sweden.
? *Clinus mohri* Krøyer, Naturrh. Tidsskr., I, 1837, R, 32, Iceland.
Blennius gracilis Stuvitz, Nye Mag. for Naturvid., I, 1838, 406, west coast of Norway.
Blennius serpentinus Storer, Proc. Bost. Soc. Nat. Hist., III, 1848, 30, Massachusetts Bay.

Genus 1347. LUMPENELLA Hubbs.
Lumpenella Hubbs, Papers Mich. Acad. Sci. Arts and Letters, VII, 1926, 378 (*Lumpenus longirostris* Evermann and Goldsborough).

3813. Lumpenella longirostris (Evermann and Goldsborough).
Southeastern Alaska.
Lumpenus longirostris Evermann and Goldsborough, Bull. U. S. Bur. Fish., XXVI, 1906, 340, fig. 115, Lynn Canal, Alaska.

Family 281. PTILICHTHYIDÆ

Genus 1348. PTILICHTHYS Bean.
Ptilichthys Bean, Proc. U. S. Nat. Mus., IV, 1881, 157 (*P. goodei* Bean).

3814. Ptilichthys goodei Bean.
Aleutian Islands.
Ptilichthys goodei Bean, Proc. U. S. Nat. Mus., IV, 1881, 157, Port Levasheff, Unalaska.

Family 282. CRYPTACANTHODIDÆ

Genus 1349. CRYPTACANTHODES Storer.
Cryptacanthodes Storer, Rept. Fish. Mass., 1839, 27 (*C. maculatus* Storer).

3815. Cryptacanthodes maculatus Storer. *Wrymouth; Ghostfish.*
North Atlantic, south to Cape Cod.
Cryptacanthodes maculatus Storer, Rept. Fish. Mass., 1839, 28, Massachusetts.
Fierasfer borealis DeKay, New York Fauna: Fishes, 1842, 316, New York; after Peck.
Cryptacanthodes inornatus Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 332, coast of Massachusetts.

Genus 1350. LYCONECTES Gilbert.
Lyconectes Gilbert, Rept. U. S. Fish Com., XIX, 1893, 452 (*L. aleutensis* Gilbert).

3816. Lyconectes aleutensis Gilbert.
Aleutian Islands.
Lyconectes aleutensis Gilbert, Rept. U. S. Fish Com., XIX, 1893, 452, pl. 34, near Unalaska.

Genus 1351. DELOLEPIS Bean.
Delolepis Bean, Proc. U. S. Nat. Mus., IV, 1881, 465 (*D. virgatus* Bean).

3817. Delolepis giganteus Kittlitz.
Coasts of British Columbia and southern Alaska, south to Puget Sound.
Delolepis giganteus Kittlitz, Denk. Reise Russ. Amer., 226, 1858, Siberia.
Delolepis virgatus Bean, Proc. U. S. Nat. Mus., IV, 1881, 466, Kingcombe Inlet, British Columbia, and Port Wrangel, Alaska.

Family 283. ANARHICHADIDÆ

Genus 1352. ANARHICHAS Linnæus.
Anarhichas Linnæus, Syst. Nat., Ed. X, 1758, 247 (*A. lupus* Linnæus).

3818. Anarhichas lupus Linnæus. *Wolffish.*
North Atlantic, south to Cape Cod and France: rather common in America and Europe.
Anarhichas lupus Linnæus, Syst. Nat., Ed. X, 1758, 247, no definite locality.
Anarhichas strigosus Gmelin, Syst. Nat., Tome I, Pt. III, 1789, 1144, British seas.
Anarrhichas vomerinus Agassiz, in Storer, Hist. Fish. Mass., 1867, 265, pl. 18, fig. 1, Cusk Rocks between Boston and Cape Ann.

3819. Anarhichas orientalis Pallas.
Alaska.
Anarhichas orientalis Pallas, Zoogr. Rosso-Asiat., III, 1811, 77, Kamchatka.
Anarrhichas lepturus Bean, Proc. U. S. Nat. Mus., II, 1879, 212, St. Michaels, Alaska.

Genus 1353. LYCICHTHYS Gill.
Lycichthys Gill, Ann. Rec. Indust. & Sci., 1876, CLXVII (*Anarrhichas latifrons* Steenstrup and Hallgrimsson).

3820. Lycichthys latifrons (Steenstrup and Hallgrimsson).
North Atlantic, on both coasts; chiefly north of the Arctic Circle.
Anarrhichas latifrons Steenstrup and Hallgrimsson, Förh. Skand. Naturf., 3 die Möte, 1842, 647; name only, no description; Videnskabelige Meddeleker Natur Forening Kjobenhavn, 1877–1878, 109–114.

3821. Lycichthys minor (Olafsen).
North Atlantic, on both coasts, chiefly north of the Arctic Circle.
Anarrhichas minor Olafsen, Reise i. Island, sec. 682b, 1774, tab. 42, Iceland.
Anarrhichas karrak Bonnaterre, Encycl. Ichth., 1788, 38, Iceland, after Olafsen.
Anarrhichas maculatus Bloch and Schneider, Syst. Ichth., 1801, 496, Iceland; after Olafsen.
Anarrhichas leopardus Agassiz, in Spix, Pisc. Brasil., 1829, 92, tab. 51, "Atlantic Ocean."

Family 284. ANARRHICHTHYIDÆ

Genus 1354. ANARRHICHTHYS Ayres.
Anarrhichthys Ayres, Proc. Calif. Acad. Nat. Sci., I, 1855, 31 (*A. ocellatus* Ayres = *A. felis* Girard).

3822. Anarrhichthys felis (Girard). *Wolf eel.*
Pacific coast, from Monterey north to Puget Sound; common.
Anarrhichas felis Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 150, San Francisco; brief notice.
Anarrhichthys ocellatus Ayres, Proc. Calif. Acad. Nat. Sc., I, 1855, 31, San Francisco.

Family 285. CERDALIDÆ

Genus 1355. MICRODESMUS Günther.
Microdesmus Günther, Proc. Zool. Soc. Lond., 1864, 26 (*M. dipus* Günther).

3823. Microdesmus dipus Günther.
Pacific coast of tropical America.
Microdesmus dipus Günther, Proc. Zool. Soc. Lond., Jan. 26, 1864, 26, pl. 3, fig. 2, Central America.

3824. Microdesmus retropinnis Jordan and Gilbert.
Panama.
Microdesmus retropinnis Jordan and Gilbert, Bull. U. S. Fish Com., I, 1881, 331, Panama.

Genus 1356. CERDALE Jordan and Gilbert.
Cerdale Jordan and Gilbert, Bull. U. S. Fish Com., I, 1881, 332 (*C. ionthas* Jordan and Gilbert).

3825. Cerdale ionthas Jordan and Gilbert.
Panama.
Cerdale ionthas Jordan and Gilbert, Bull. U. S. Fish Com., I, 1881, 332, Panama.

Genus 1357. LEPTOCERDALE Weymouth.
Leptocerdale Weymouth, Proc. U. S. Nat. Mus., XXXVIII, 1910, 142 (*L. longipinnis* Weymouth).

3826. Leptocerdale longipinnis Weymouth.
Coast of Louisiana.
Leptocerdale longipinnis Weymouth, Proc. U. S. Nat. Mus., XXXVIII, 1910, 142, Cameron, La.

Family 286. SCYTALINIDÆ

Genus 1358. SCYTALINA Jordan and Gilbert.
Scytalina Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880, 266 (*S. cerdale* Jordan and Gilbert).
Scitaliscus Jordan and Gilbert, Proc. U. S. Nat. Mus., VI, 1883, III; same type, there being already a genus *Scytalinus*.

3827. Scytalina cerdale Jordan and Gilbert.
Straits of Juan de Fuca, Waadda Island, near Cape Flattery; also in Aleutian Islands burrowing deep in gravel and sand.
Scytalina cerdale Jordan and Gilbert, Proc. U. S. Nat. Mus., III, 1880, 267, Waadda Island, Neah Bay.

Family 287. ZOARCIDÆ

Genus 1359. MACROZOARCES Gill.
Macrozoarces Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 258 (*Blennius anguillaris* Peck).

3828. Macrozoarces americanus (Bloch and Schneider). *Eelpout; Muttonfish; Mother-of-eels; Ling; Lamper eel; Conger eel.*
Delaware to Labrador; rather common northward.
?*Enchelyopus* Gronow, Zoophyl., No. 266, 1763, 77, America.
?*Blennius americanus* Bloch and Schneider, Syst. Ichth., 1801, 171, America; after Gronow.
Blennius anguillaris Peck, Mem. Amer. Acad. Sci., II, 1804, 46, fig. 3, New Hampshire.
? *Blennius fimbriatus* Mitchill, Trans. Lit. and Phil. Soc. N. Y., 1815, 374, pl. 1, fig. 6, New York.
Blennius ciliatus Mitchill, loc. cit., 374, pl. 1, fig. 6, New York.
Zoarces labrosus Cuvier, Règne Anim., ed. 2, II, 1829, 240, America.
Zoarces gronovii Cuvier and Valenciennes, Hist. Nat. Poiss., XI, 1836, 246 (469); after Gronow.

Genus 1360. EMBRYX Jordan and Evermann.
Embryx Jordan and Evermann, Fishes North and Mid. Amer., 1898, 2458 (*Lycodopsis crotalinus* Gilbert).

3829. Embryx crotalinus (Gilbert).
Northern Pacific and off Santa Barbara Islands.
Lycodopsis crotalinus Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 105, off Santa Barbara Islands at *Albatross* station 2980 in 603 fathoms.

3830. Embryx crassilabris (Gilbert).
Coast of southern California.
Lycodopsis crassilabris Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 106, off southern California at *Albatross* station 2839.

3831. Embryx parallelus Gilbert.
Monterey Bay.
Embryx parallelus Gilbert, Proc. U. S. Nat. Mus., XLVIII, 1915, 360, Pl. X, IX, fig. 16, Monterey Bay, 394 to 406 fathoms.

Genus 1361. LYCODOPSIS Collett.
Lycodopsis Collett, Proc. Zool. Soc. Lond., 1879, 381 (*Lycodes pacificus* Collett).
Leurynnis Lockington, Proc. U. S. Nat. Mus., II, 1879, 326 (*L. paucidens* Lockington = *Lycodes pacificus* Collett).

3832. Lycodopsis pacificus (Collett).
San Francisco to central Alaska; Afognak Bay.
Lycodes (*Lycodopsis*) *pacificus* Collett, Proc. Zool. Soc. Lond., 1879, 381; said to be from Japan; doubtless an error.
Leurynnis paucidens Lockington, Proc. U. S. Nat. Mus., II, 1879, 326, off San Francisco, Calif.

3833. Lycodopsis scaurus Garman.
Off Bay of Panama in deep water.
Lycodopsis scaurus Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 132, Pl. XXXII, off Bay of Panama.

Genus 1362. APRODON Gilbert.
Aprodon Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 106 (*A. corteziana* Gilbert).

3834. Aprodon cortezianus Gilbert.
Cortez Banks, near San Diego, Calif.
Aprodon corteziana Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 107, Cortez Banks, off San Diego, at *Albatross* stations 2925 and 2948 in 339 and 266 fathoms.

Genus 1363. LYCODES Reinhardt.
Lycodes Reinhardt, Köngl. Danske. Vidensk. Selsk. Naturv. Math. Afh., VII, 1838, 153 (*L. vahli* Reinhardt).

3835. Lycodes vahlii Reinhardt. *Vahl's lydodes; Misarkornak.*
Coast of Greenland.
Lycodes vahlii Reinhardt, Köngl. Danske. Vidensk. Selsk. Nat. Math. Afh., VII, 1838, 153, pl. 5, Greenland.

3836. Lycodes frigidus Collett.
North Atlantic, off New England coast; Spitzbergen.
Lycodes frigidus Collett, Forh. Vid. Selsk. Christ., 1878, Nos. 14, 45, near Spitzbergen.

3837. Lycodes terræ-novæ Collett.
Newfoundland Banks.
Lycodes terræ-novæ Collett, Campagnes Scientifiques *L'Hirondelle*, Poiss., 1896, 55, Newfoundland Banks in 25 fathoms.

3838. Lycodes reticulatus Reinhardt. *Akulliakitsok; Spotted lycodes.*
North Atlantic from Greenland south to Narragansett Bay; also northern Europe.
Lycodes reticulatus Reinhardt, Köngl. Danske Vid. Selsk. Afh., VII, 1838, 167, Greenland.
Lycodes perspicillum Krøyer, Dansk. Vidensk. Selsk. Afhandl., XI, 1845, p. ccxxxiii, Newfoundland.

3839. Lycodes esmarkii Collett.
North Atlantic; Gulf Stream, in about latitude 40°, to Finmark and Spitzbergen.
Lycodes esmarkii Collett, Norges Fiske, 1875, 95; American specimens from the Gulf Stream in about latitude 40°.

3840. Lycodes jordani Evermann and Goldsborough.
Puget Sound and southeastern Alaska.
Lycodes jordani Evermann and Goldsborough, Bull. U. S. Bur. Fish., XXVI, 1906, 343, fig. 120, Puget Sound.

3841. Lycodes gracilis Sars.
Atlantic Ocean off Nova Scotia.
Lycodes gracilis Sars, Christ. Vid. Selsk. Forh., 1866, 40–45, Drøbak, Norway.
Lycodes zoarchus Goode and Bean, Oceanic Ichth., 1896, 308, off Nova Scotia.

3842. Lycodes concolor Gill and Townsend.
Bering Sea.
Lycodes concolor Gill and Townsend, Proc. Biol. Soc. Wash., XI, 1897, 233, Bering Sea in 276 fathoms.

3843. Lycodes digitatus Gill and Townsend.
Bering Sea.
Lycodes digitatus Gill and Townsend, Proc. Biol. Soc. Wash., XI, 1897, 232, Bering Sea in 49 fathoms.

3844. Lycodes palearis Gilbert.
Bristol Bay, Alaska.
Lycodes palearis Gilbert, Rept. U. S. Fish Com., XIX, 1893, 454, Bristol Bay, Alaska, at *Albatross* stations 3253 and 3254 in 36 and 46 fathoms.

3845. Lycodes brevipes Bean.
Aleutian Islands to Puget Sound.
Lycodes brevipes Bean, Proc. U. S. Nat. Mus., XIII, 1890, 38, between Unga and Nagai islands in 110 fathoms.

3846. Lycodes anguis Garman.
Off Lower California and Panama in deep water.
Lycodes anguis Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 133, off Bay of Panama.

3847. Lycodes serpens Garman.
Off Lower California in deep water.
Lycodes serpens Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 134, off Gulf of California.

3848. Lycodes incisus Garman.
Off Bay of Panama in deep water.
Lycodes incisus Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 135, Pl. XXX, off Bay of Panama.

3849. Lycodes cicatrifer Garman.
Off Bay of Panama in deep water.
Lycodes cicatrifer Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 136, Pl. XXXI, off Bay of Panama.

Genus 1364. LYCIAS Jordan and Evermann.
Lycias Jordan and Evermann, Fishes North and Mid. Amer., 1898, 2461 (*Lycodes seminudus* Reinhardt).

3850. Lycias nebulosus (Krøyer). *Cloudy lycodes.*
Greenland.
Lycodes nebulosus Krøyer, Köngl. Danske Vidensk. Selsk. Afhand., XI, 1845, p. cexxxii, Greenland.

3851. Lycias seminudus (Reinhardt). *Half-naked lycodes.*
North Atlantic, from Greenland to Spitzbergen.
Lycodes seminudus Reinhardt, Köngl. Danske Selsk. Afhand., VII, 1838, 221, Omenak, Greenland

Genus 1365. LYCENCHELYS Gill.
Lycenchelys Gill, Proc. Acad. Nat. Sci. Phila., XXXVI, 1884, 180 (*Lycodes muræna* Collett).

3852. Lycenchelys verrillii (Goode and Bean).
Coast of Massachusetts and northward.
Lycodes verrillii Goode and Bean, Amer. Jour. Sci. Arts, XIV, 1877, 474; 27 miles south and west of Chebucto Head near Halifax.

3853. Lycenchelys paxillus (Goode and Bean).
Gulf Stream.
Lycodes paxillus Goode and Bean, Proc. U. S. Nat. Mus., II, 1879, 44, between La Have and Sable Island Banks.
Lycodes paxilloides Goode and Bean, Bull. Mus. Comp. Zool., X, No. 5, 1883, 207, off Newfoundland.

3854. Lycenchelys porifer (Gilbert).
Off Lower California.
Lycodes porifer Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 104, off Lower California at *Albatross* station 3009 in 857 fathoms.

Genus 1366. LYCODALEPIS Bleeker.
Lycodalepis Bleeker, Versl. Akad. Amst., ed. 2, VIII, 1874, 369 (*Lycodes mucosus* Richardson).

3855. Lycodalepis polaris (Sabine). *Arctic lycodes.*
Gulf of Georgia and Alaska.
Blennius polaris Sabine, Parry's Jour., Voyage 1819–20, App. CCXII, north Georgia.
Lycodes turneri Bean, Proc. U. S. Nat. Mus., I, 1878, 463, St. Michaels, Alaska.
Lycodes coccineus Bean, Proc. U. S. Nat. Mus., IV, 1881, 144, Big Diomede Island, Bering Strait.

3856. Lycodalepis mucosus (Richardson).
Arctic seas.
Lycodes mucosus Richardson, Last Arctic Voyage, 1855, 362, pl. 26, Northumberland Sound.

Genus 1367. FURCIMANUS Jordan and Evermann.
Furcella Jordan and Evermann, Fishes North and Mid. Amer., 1896, 480 (*Lycodes diapterus* Gilbert); name preoccupied.
Furcimanus Jordan and Evermann, Fishes North and Mid. Amer., 1898, 2472 (*Lycodes diapterus* Gilbert).

3857. Furcimanus diapterus (Gilbert).
Coasts of California and Oregon.
Lycodes diapterus Gilbert, Proc., U. S. Nat. Mus., XIV, 1891, 564, off coast of Oregon at *Albatross* stations 2892, 2896, and others in 82 to 376 fathoms.

Genus 1368. LYCODONUS Goode and Bean.
Lycodonus Goode and Bean, Bull. Mus. Comp. Zool., X, No. 5, 1883, 208 (*L. mirabilis* Goode and Bean).

3858. Lycodonus mirabilis Goode and Bean.
Off the New England coast.
Lycodonus mirabilis Goode and Bean, Bull. Mus. Comp. Zool., X, No. 5, 1883, 208, lat. 38° 20′ 8″ N., long. 73° 23′ 20″ W., in 740 fathoms.

Genus 1369. LYCONEMA Gilbert.
Lyconema Gilbert, Rept. U. S. Fish Com., XIX, 1893, 471 (*L. barbatum* Gilbert).

3859. Lyconema barbatum Gilbert.
Coast of Alaska.
Lyconema barbatum Gilbert, Rept. U. S. Fish Com., XIX, 1893, 471, pl. 35, coast of Alaska, at *Albatross* station 3129 in 204 fathoms.

Genus 1370. LYCOGRAMMA Gilbert.
Lycogramma Gilbert, Proc. U. S. Nat. Mus., XLVIII, 1915, 364, (*Maynea brunnea* Bean).

3860. Lycogramma brunnea (Bean).
Coast of California to Alaska.
Maynea brunnea Bean, Proc. U. S. Nat. Mus., XIII, 1890, 38, off Queen Charlotte Island in 876 fathoms.

Genus 1371. MAYNEA Cunningham.
Maynea Cunningham, Trans. Linn. Soc. Lond., XXVII, 1871, 471 (*M. patagonica* Cunningham).

3861. Maynea californica Gilbert.
Santa Barbara Islands.
Maynea californica Gilbert, Proc. U. S. Nat. Mus., XLVIII, 1915, 362, pl. 19, fig. 17, San Nicolas Island off southern California.

3862. Maynea bulbiceps Garman.
Off Bay of Panama in deep water.
Maynea bulbiceps Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 140, Pl. E, off Bay of Panama.

Genus 1372. BOTHROCARA Bean.
Bothrocara Bean, Proc. U. S. Nat. Mus., XIII, 1890, 38 (*B. mollis* Bean).

3863. Bothrocara pusilla (Bean).
Coast of Alaska north to Unalaska.
Maynea pusilla Bean, Proc. U. S. Nat. Mus., XIII, 1890, 39, Aleutian Islands, lat. 55° 10′ N., long. 160° 18′ W., in 110 fathoms.

3864. Bothrocara mollis Bean.
North Pacific to southern California.
Bothrocara mollis Bean, Proc. U. S. Nat. Mus., XIII, 1890, 39, off Queen Charlotte Islands in 876 fathoms.

3865. Bothrocara remigera Gilbert.
Monterey Bay.
Bothrocara remigera Gilbert, Proc. U. S. Nat. Mus., XLVIII, 1915, 366, pl. 20, fig. 19, Monterey Bay in 718 to 756 fathoms.

Genus 1373. BOTHROCAROPSIS Garman.
Bothrocaropsis Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 127 (*B. alalonga* Garman).

3866. Bothrocaropsis alalonga Garman.
Off Gulf of California in deep water.
Bothrocaropsis alalonga Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 127, XXXII, off Gulf of California.

3867. Bothrocaropsis rictolata Garman.
Off Bay of Panama in deep water.
Bothrocaropsis rictolata Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 128, Pl. XXIII, off Bay of Panama.

3868. Bothrocaropsis elongata Garman.
Off Bay of Panama in deep water.
Bothrocaropsis elongata Garman, Mem. Comp. Zool., XXIV, 1899, 129, Pl. XXXIII, off Bay of Panama.

Genus 1374. GYMNELIS Reinhardt.
Gymnelis Reinhardt, Dansk. Vidensk. Selsk. Afhandl., VII, 1838, 116, 131 (*Ophidium viridis* Fabricius).
Cepolopolis Kaup, Archiv für Natur., 1856, 96 (*Ophidium viridis* Fabricius).

3869. Gymnelis viridis (Fabricius). *Unernak.*
Arctic seas south to Alaska and Nova Scotia.
Ophidium viridis Fabricius, Fauna Grœn., 1780, 141, Greenland.
Ophidium unernak Lacépède, Hist. Nat. Poiss., II, 1800, 280, Greenland.
?*Gymnelus pictus* Günther, Cat., IV, 1862, 324, no locality.

3870. Gymnelis stigma (Lay and Bennett).
Kotzebue Sound, Alaska.
Ophidium stigma Lay and Bennett, Zool. Beechey's Voy., 1839, 67, pl. 20, fig. 1, Kotzebue Sound.
Gymnelis viridis unimaculatus Richardson, Last Arctic Voyage, 1855, 371, Northumberland Sound.

3871. Gymnelis conorhynchus Garman.
Off Bay of Panama in deep water.
Gymnelis conorhynchus Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 131, Pl. XXXI, off Bay of Panama.

Genus 1375. LYCOCARA Gill.
Uronectes Günther, Cat., IV, 1862, 325 (*Ophidium parrii* Ross); name preoccupied.
Lycocara Gill, Proc. Acad. Nat. Sci. Phila., XXXVI, 1884, 180 (*Ophidium parrii* Ross).

3872. Lycocara parrii (Ross).
Baffins Bay.
Ophidium parrii Ross, in Parry's Third Voyage, App., 1826, 109, Baffins Bay.

Genus 1376. MELANOSTIGMA Günther.
Melanostigma Günther, Proc. Zool. Soc. Lond., 1881, 20 (*M. gelatinosum* Günther).

3873. Melanostigma gelatinosum Günther.
Deep waters of the western Atlantic; originally known from the Straits of Magellan, but since obtained in various localities from Cape Cod to the West Indies.
Melanostigma gelatinosum Günther, Proc. Zool. Soc. Lond., 1881, 21, pl. 2, fig. A, Straits of Magellan.

3874. Melanostigma pammelas Gilbert.
Coast of Alaska.
Melanostigma pammelas Gilbert, Rept. U. S. Fish Com., XIX, 1893, 472, pl. 35, coast of Alaska at *Albatross* station 3202, lat. 36° 46′ 10″ N., long. 121° 58′ 45″ W., in 382 fathoms.

Genus 1377. PHYCOCŒTES Jenyns.
Phycocœtes Jenyns, Zool. *Beagle*, 1842, 168 (*P. latitans* Jenyns).

3875. Phycocœtes suspectus Garman.
Off Gulf of California in deep water.
Phycocœtes suspectus Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 137, Pl. XXX, off Gulf of California.

Family 288. LYCODAPODIDÆ.

Genus 1378. LYCODAPUS Gilbert.
Lycodapus Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 107 (*L. fierasfer* Gilbert).

3876. Lycodapus fierasfer Gilbert.
Pacific coast of America, Lower California to southeastern Alaska.
Lycodapus fierasfer Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 108, off Lower California and Washington at *Albatross* stations 2980, 3010, and 3072 in 610 to 1005 fathoms.

3877. Lycodapus dermatinus Gilbert.
Coast of California in deep water.
Lycodapus dermatinus Gilbert, Rept. U. S. Fish Com., XIX, 1893, 471, pl. 35, coast of California at *Albatross* station 3162, 37° 54′ 10″ N., 123° 30′ W., in 552 fathoms.

3878. Lycodapus parviceps Gilbert.
Bering Sea, north of Unalaska Island.
Lycodapus parviceps Gilbert, Rept. U. S. Fish Com., XIX, 1893, 455, Bering Sea north of Unalaska Island at *Albatross* station 3324 in 109 fathoms.

3879. Lycodapus extensus Gilbert.
Bering Sea north of Unalaska Island.
Lycodapus extensus Gilbert, Rept. U. S. Fish Com., XIX, 1893, 455, Bering Sea north of Unalaska Island at *Albatross* station 3324 in 109 fathoms.

3880. Lycodapus lycodon Gilbert.
Monterey Bay.
Lycodapus lycodon Gilbert, Proc. U. S. Nat. Mus., XLVIII, 1915, 371, Monterey Bay, 152 to 268 fathoms.

3881. Lycodapus grossidens Gilbert.
Bering Sea.
Lycodapus grossidens Gilbert, Proc. U. S. Nat. Mus., XLVIII, 1915, 373, Funter Bay, southeast Alaska, in 350 fathoms.

3882. Lycodapus attenuatus Gilbert.
Monterey Bay.
Lycodapus attenuatus Gilbert, Proc. U. S. Nat. Mus., XLVIII, 1915, 372, pl. 21, Monterey Bay, in 285 to 357 fathoms.

3883. Lycodapus mandibularis Gilbert.
Monterey Bay.
Lycodapus mandibularis Gilbert, Proc. U. S. Nat. Mus., XLVIII, 1915, 369, pl. 20, fig. 20, Monterey Bay, in 144 to 293 fathoms.

Family 289. DEREPODICHTHYIDÆ

Genus 1379. DEREPODICHTHYS Gilbert.
Derepodichthys Gilbert, Rept. U. S. Fish Com., XIX, 1893, 456 (*D. alepidotus* Gilbert).

3884. Derepodichthys alepidotus Gilbert.
Coast of British Columbia, off Queen Charlotte Island.
Derepodichthys alepidotus Gilbert, Rept. U. S. Fish Com., XIX, 1893, 456, Queen Charlotte Island at *Albatross* station 3342 in 1,588 fathoms.

Family 290. BROTULIDÆ

Genus 1380. BROTULA Cuvier.
Brotula Cuvier, Règne Anim., ed. 2, II, 1829, 335 (*Enchelyopus barbatus* Bloch and Schneider).

3885. Brotula barbata (Bloch and Schneider). *Brotula.*
West Indies.
Enchelyopus barbatus Bloch and Schneider, Syst. Ichth., 1801, 52, Habana; after Parra.
Brotula Parra, Dif. Piezas Hist. Nat., 1787, 70, lam. 31, fig. 2, Habana.

Genus 1381. STYGICOLA Gill.
Stygicola Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 252 (*Lucifuga dentatus* Poey).

3886. Stygicola dentatus (Poey).
Caves in southern Cuba.
Lucifuga dentatus Poey, Memorias, II, 1861, 102, cave of Cajio, Cuba.

Genus 1382. LUCIFUGA Poey.
Lucifuga Poey, Memorias, II, 1860, 95 (*L. subterraneus* Poey).

3887. Lucifuga subterranea Poey. *Pez ciego.*
Cuba, in caves.
Lucifuga subterraneus Poey, Memorias, II, 1861, 96, caves of San Antonio in southern Cuba.

Genus 1383. BROSMOPHYCIS Gill.
Brosmophycis Gill, Proc. Acad. Nat. Sci. Phila., XIII, 1861, 168 (*Brosmius marginatus* Ayres).
Halias Ayres, Proc. Calif. Acad. Nat. Sci., II, 1861, 52 (*Brosmius marginatus* Ayres).

3888. Brosmophycis marginatus (Ayres).
San Francisco to Puget Sound; scarce, recently taken at San Pedro, Calif.
Brosmius marginatus Ayres, Proc. Calif. Acad. Nat. Sci., I, 1854, 13, Bay of San Francisco.

Genus 1384. OGILBIA Jordan and Evermann.
Ogilbia Jordan and Evermann, in Evermann and Kendall, Bull. U. S. Fish Com., XVII, 1897, 132 (*O. cayorum* Evermann and Kendall).

3889. **Ogilbia cayorum** Evermann and Kendall.
Key West.
Ogilbia cayorum Evermann and Kendall, Bull. U. S. Fish Com., XVII, 1897, 132, pl. 9, fig. 14, Key West, Fla.

3890. **Ogilbia verrillii** (Garman).
Bermudas.
Brosmophycis verrillii Garman, Trans. Conn. Acad. Sci., X, 1900, 511, Bailey Bay, Bermuda Islands.

3891. **Ogilbia ventralis** (Gill).
Lower California, about Cape San Lucas.
Brosmophycis ventralis Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 253, Cape San Lucas.

Genus 1385. BYTHITES Reinhardt.
Bythites Reinhardt, Kongl. Dansk. Vidensk. Selsk. Skrift. Afhandl., VII, 1837, 178 (*B. fuscus* Reinhardt).

3892. **Bythites fuscus** Reinhardt.
The only specimen known, now in the Museum at Copenhagen, was obtained in Greenland nearly a century ago.
Bythites fuscus Reinhardt, Köngl. Dansk. Vidensk. Selsk. Skrift. Afhandl., VII, 1838, 179, Greenland.

Genus 1386. CATÆTYX Günther.
Catætyx Günther, *Challenger* Rept., XXII, 1887, 104 (*Sirembo messieri* Günther).

3893. **Catætyx rubrirostris** Gilbert.
Coast of California south of Point Conception, in deep water.
Catætyx rubrirostris Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 111, coast of California, at *Albatross* stations 2909, 2925, and 2936 in 205 and 356 fathoms.

3894. **Catætyx simus** Garman.
Off Galapagos Islands to Bay of Panama, in deep water.
Catætyx simus Garman, Mem. Mus. Comp. Zool., XXIV, 1899, Pl. E 1, 168, off Bay of Panama.

Genus 1387. DICROMITA Goode and Bean.
Dicromita Goode and Bean, Oceanic Ichth., 1895, 319 (*D. agassizii* Goode and Bean).

3895. **Dicromita agassizii** Goode and Bean.
Granada and Gulf of Mexico.
Dicromita agassizii Goode and Bean, Oceanic Ichth., 1896, 319, fig. 285, Gulf of Mexico in 26 fathoms.

Genus 1388. MONOMITOPUS Alcock.
Monomitopus Alcock, Ann. Mag. Nat. Hist., ser. 6, VI, 1890, 297 (*Sirembo nigripinnis* Alcock).

3896. **Monomitopus torvus** Garman.
Off Bay of Panama in deep water.
Monomitopus torvus Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 157, Pl. XL, off Bay of Panama.

Genus 1389. MONOMEROPUS Garman.
Monomeropus Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 157 (*Monomeropus malispinosus* Garman).

3897. **Monomeropus malispinosus** Garman.
Off Bay of Panama in deep water.
Monomeropus malispinosus Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 158, Pl. XL, off Bay of Panama.

Genus 1390. BASSOZETUS Gill.
Bathynectes Günther, Ann. Nat. Hist., II, 1878, 20 (*B. compressus* Günther); name preoccupied.
Bassozetus Gill, Proc. U. S. Nat. Mus., VI, 1883, 259 (*B. normalis* Gill).
Bathyonus Goode and Bean, Proc. U. S. Nat. Mus., VIII, 1886, 603 (*Bassozetus catena* Goode and Bean).

3898. Bassozetus compressus (Günther).
Gulf of Mexico and elsewhere in deep water.
Bathynectes compressus Günther, Ann. Mag. Nat. Hist., II, 1878, 20, southeast of New Guinea in 1,400 fathoms.

3899. Bassozetus normalis Gill.
West Indies, off Dominica, to 40° north latitude, in region of Gulf Stream.
Bassozetus normalis Gill, Proc. U. S. Nat. Mus., VI, 1883, 259, Gulf Stream, at *Albatross* station 2042, 39° 33′ N., 68° 26′ 45″ W., in 1,555 fathoms.

3900. Bassozetus catena (Goode and Bean).
Gulf of Mexico in deep water.
Bathyonus catena Goode and Bean, Proc. U. S. Nat. Mus., VIII, 1885, 603, at *Albatross* station 2379, 28° 00′ 15″ N., 87° 42′ W., in 1,467 fathoms.

3901. Bassozetus tænia (Günther).
Mid-Atlantic.
Bathyonus tænia Günther, *Challenger* Rept., XXII, 1887, 110, pl. 23, fig. A, Mid-Atlantic.

3902. Bassozetus nasus Garman.
Off Gulf of Panama and Pacific coast of southern Mexico in deep water.
Bassozetus nasus Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 159, Pl. LXXVII, off Pacific coast of southern Mexico.

Genus 1391. ERETMICHTHYS Garman.
Eretmichthys Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 164 (*E. pinnatus* Garman).

3903. Eretmichthys pinnatus Garman.
Galapagos Islands to Bay of Panama in deep water.
Eretmichthys pinnatus Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 165, Pl. XXXV, off Bay of Panama.

3904. Eretmichthys ocella Garman.
Off Bay of Panama in deep water.
Eretmichthys ocella Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 166, Pl. XXVII, off Bay of Panama.

Genus 1392. MŒBIA Goode and Bean.
Mœbia Goode and Bean, Oceanic Ichth., 1895, 331 (*Bathynectes gracilis* Günther).

3905. Mœbia promelas (Gilbert).
Gulf of California.
Porogadus promelas Gilbert, Proc. U. S. Nat. Mus., XIV, 1891, 546, Gulf of California in 1,005 fathoms.

Genus 1393. NEOBYTHITES Goode and Bean.
Neobythites Goode and Bean, Proc. U. S. Nat. Mus., VIII, 1885, 600 (*N. gillii* Goode and Bean).

3906. Neobythites gillii Goode and Bean.
Gulf of Mexico to Brazil, in deep water.
Neobythites gillii Goode and Bean, Proc. U. S. Nat. Mus., VIII, 1885, 601, Gulf of Mexico, at *Albatross* station 2402, 28° 36′ N., 85° 33′ W., in 111 fathoms.
Neobythites ocellatus Günther, *Challenger* Rept., XXII, 1887, 103, pl. 21, fig. B, off Pernambuco in 350 fathoms.

3907. Neobythites marginatus Goode and Bean.
Off Barbados.
Neobythites marginatus Goode and Bean, Bull. Mus. Comp. Zool., XII, 1886, off Barbados in 209 fathoms.

Genus 1394. HOLCOMYCTERONUS Garman.
Holcomycteronus Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 162 (*H. digitatus* Garman).

3908. Holcomycteronus digittatus Garman.
Gulf of California to Colombia in deep water.
Holcomycteronus digittatus Garman, Mem. Mus. Comp. Zool., XXXVI, 1899, 163, Gulf of California.

Genus 1395. BENTHOCOMETES Goode and Bean.
Benthocometes Goode and Bean, Oceanic Ichth., 1895, 327 (*Neobythites robustus* Goode and Bean).

3909. Benthocometes robustus (Goode and Bean).
West Indies to lat. 29° N. in Gulf Stream.
Neobythites robustus Goode and Bean, Bull. Mus. Comp. Zool., XII, 1883, 161, off Morro Castle, Cuba.

Genus 1396. BASSOGIGAS Gill.
Bassogigas Gill, in Goode and Bean, Oceanic Ichth., 1895, 328 (*B. gillii* Goode and Bean).

3910. Bassogigas gillii Goode and Bean.
Off Cape Henlopen, Del.
Bassogigas gillii Goode and Bean, Oceanic Ichth., 1895, 328, fig. 291, off Cape Henlopen, Del., at *Albatross* station 2684 in 1,106 fathoms.

3911. Bassogigas stelliferoides (Gilbert).
Off Bay of Panama in deep water, and Gulf of California.
Neobythites stelliferoides Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 112, off Lower California at *Albatross* station 2996 in 112 fathoms.

Genus 1397. BARATHRODEMUS Goode and Bean.
Barathrodemus Goode and Bean, Bull. Mus. Comp. Zool., X, No. 5, 1882, 200 (*B. manatinus* Goode and Bean).

3912. Barathrodemus manatinus Goode and Bean.
Gulf Stream, north to Bermudas.
Barathrodemus manatinus Goode and Bean, Bull. Mus. Comp. Zool., X, No. 5, 1882, 200, lat. 33°. 51′ 20″ N., long. 76° W., in 647 fathoms.

Genus 1398. NEMATONUS Günther.
Nematonus Günther, *Challenger* Rept., XXII, 1887, 114 (*Bathyonus pectoralis* Goode and Bean).

3913. Nematonus pectoralis (Goode and Bean).
Gulf of Mexico and off Dominica.
Bathyonus pectoralis Goode and Bean, Proc. U. S. Nat. Mus., VIII, 1885, 604, *Albatross* station 2380, lat. 28° 02′ 30″ N., long. 87° 43′ 45″ W., in 1,430 fathoms.

Genus 1399. POROGADUS Goode and Bean.
Porogadus Goode and Bean Proc. U. S. Nat. Mus., VIII, 1885, 602 (*P. miles* Goode and Bean).

3914. Porogadus miles Goode and Bean.
Atlantic coast, off Delaware Bay, in deep water.
Porogadus miles Goode and Bean, Proc. U. S. Nat. Mus., VIII, 1885, 602, at *Albatross* station 2230, lat. 38° 27′ N., long. 73° 2′ W., in 1,168 fathoms.

3915. Porogadus longiceps Garman.
Off Cocos Islands to Bay of Panama in deep water.
Porogadus longiceps Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 153, Pl. F, off Bay of Panama.

3916. Porogadus atripectus Garman.
Off Bay of Panama and Pacific coast of Mexico in deep water.
Porogadus atripectus Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 154, Pl. XXXVII, off Bay of Panama.

3917. Porogadus breviceps Garman.
Gulf of California in deep water.
Porogadus breviceps Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 155, Gulf of California.

Genus 1400. PENOPUS Goode and Bean.
Penopus Goode and Bean, Oceanic Ichth., 1895, 335 (*P. macdonaldi* Goode and Bean).

3918. Penopus macdonaldi Goode and Bean.
Gulf Stream.
Penopus macdonaldi Goode and Bean, Oceanic Ichth., 1895, 336, fig. 293, Gulf Stream at *Albatross* station 2716, lat. 38° 29′ 30″., long. 70° 57′ W., in 1,631 fathoms.

Genus 1401. DICROLENE Goode and Bean.
Dicrolene Goode and Bean, Bull. Mus. Comp. Zool., X, No. 5, 1882, 202 (*D. introniger* Goode and Bean).

3919. Dicrolene intronigra Goode and Bean.
Gulf Stream, from lat. 15° to 40° N.
Dicrolene introniger Goode and Bean, Bull. Mus. Comp. Zool., X, No. 5, 1882, 202, Gulf Stream, lat. 34° N.

3920. Dicrolene pullata Garman.
Off Gulf of Panama in deep water.
Dicrolene pullata Garman, Mem. Comp Zool., XXIV, 1899, 152, off Gulf of Panama.

3921. Dicrolene nigra Garman.
Off Galapagos Islands to Bay of Panama in deep water.
Dicrolene nigra Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 150, Pl. XXXVII, off Galapagos Islands.

3922. Dicrolene filamentosa Garman.
Off Bay of Panama and Pacific coast of Mexico in deep water.
Dicrolene filamentosa Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 149, Pl. F, off Bay of Panama.

Genus 1402. MIXONUS Günther.
Mixonus Günther, *Challenger* Rept., XXII, 1887, 108 (*Bathynectes laticeps* Günther).

3923. Mixonus laticeps (Günther).
Mid-Atlantic in deep water.
Bathynectes laticeps Günther, Ann. Mag. Nat. Hist., II, 1878, 20, Mid-Atlantic at *Challenger* station 104 in 2,500 fathoms.
Sirembo guentheri Vaillant, Expd. Sci. *Travailleur* et *Talisman*, 1888, 268, Pl. XXIV, fig. 5, off the Cape Verde Islands at a depth of 3,200 meters.

3924. Mixonus caudalis Garman.
Between Galapagos and Cocos Islands in deep water.
Mixonus caudalis Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 148, Pl. XXXVI, off Cocos Islands.

Genus 1403. ACANTHONUS Günther.
Acanthonus Günther, Ann. Mag. Nat. Hist., II, 1878, 22 (*A. armatus* Günther).

3925. Acanthonus spinifer Garman.
Off Bay of Panama in deep water.
Acanthonus spinifer Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 170, Pl. F, off Bay of Panama.

Genus 1404. LEUCICORUS Garman.
Leucicorus Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 146 (*L. lusciosus* Garman).

3926. Leucicorus lusciosus Garman.
Off Pacific coast of Mexico in deep water.
Leucicorus lusciosus Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 146, Pl. XXXVIII, off Pacific coast of Mexico.

Genus 1405. SCIADONUS Garman.
Sciadonus Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 171 (*S. pedicellaris* Garman).

3927. Sciadonus pedicellaris Garman.
Off Cocos Island in deep water.
Sciadonus pedicellaris Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 172, Pl. F, off Cocos Island.

Genus 1406. LAMPROGRAMMUS Alcock.
Lamprogrammus Alcock, Ann. Mag. Nat. Hist., VIII, 1891, 32 (*L. niger* Alcock).

3928. Lamprogrammus illustris Garman.
Off Bay of Panama.
Lamprogrammus illustris Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 174, Pl. XXXIV, off Bay of Panama.

Genus 1407. BARATHRONUS Goode and Bean.
Barathronus Goode and Bean, Mem. Mus. Comp. Zool., XII, 1886, 164 (*B. bicolor* Goode and Bean).

3929. Barathronus bicolor Goode and Bean.
Off Guadaloupe Island in deep water.
Barathronus bicolor Goode and Bean, Bull. Mus. Comp. Zool., XII, 1886, 164, off Guadaloupe at *Blake* station 71 in 769 fathoms.

Genus 1408. APHYONUS Günther.
Aphyonus Günther, Ann. Mag. Nat. Hist., II, 1878, 22 (*A. gelatinosus* Günther).

3930. Aphyonus mollis Goode and Bean.
Gulf of Mexico in deep water.
Aphyonus mollis Goode and Bean, Bull. Mus. Comp. Zool., XII, 1886, 163, Gulf of Mexico at *Blake* station 221, lat. 24° 36′ N., long. 84° 5′ W., in 955 fathoms.

Genus 1409. ALLECTOR Heller and Snodgrass.
Allector Heller and Snodgrass, Proc. Wash. Acad. Sci., V, 1903, 228 (*A. cheloniæ* Heller and Snodgrass).

3931. Allector cheloniæ Heller and Snodgrass.
Between Clipperton Island and Galapagos Archipelago.
Allector cheloniæ Heller and Snodgrass, Proc. Wash. Acad. Sci., V, 1903, 228, fig. 1, between Clipperton Island and the Galapagos.

Family 291. OPHIDIIDÆ

Genus 1410. LEPOPHIDIUM Gill.
Lepophidium Gill, Am. Nat., XXIX, 1895, 16; substitute for *Leptophidium* Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 210 (*L. profundorum* Gill); preoccupied in serpents by *Leptophidium* Hallowell, 1860.

3932. Lepophidium marmoratum (Goode and Bean).
Gulf Stream.
Leptophidium marmoratum Goode and Bean, Proc. U. S. Nat. Mus., VIII, 1885, 423, lat. 23° 10′ 39″ N., long. 82° 20′ 21″ W., in 213 fathoms.

3933. Lepophidium profundorum (Gill).
Gulf Stream, off coast of Florida.
Leptophidium profundorum Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 211, Gulf Stream, off coast of Florida.

3934. Lepophidium cervinum (Goode and Bean).
Gulf Stream.
Leptophidium cervinum Goode and Bean, Proc. U. S. Nat. Mus., VIII, 1885, 422, lat. 40° 01′ N., long. 69° 56′ W., depth 76 fathoms.

3935. Lepophidium brevibarbe (Cuvier).
West Indies and Brazil.
Ophidium brevibarbe Cuvier, Règne Anim., ed. 2, II, 1829, 359, Brazil.

3936. Lepophidium prorates (Jordan and Bollman).
Panama and south of Panama.
Leptophidium prorates Jordan and Bollman, Proc. U. S. Nat. Mus., XII, 1889, 172, Panama and south of Panama.

3937. Lepophidium emmelas (Gilbert).
Coast of Lower California.
Leptophidium emmelas Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 110, coast of Lower California at *Albatross* stations 3007 and 3008 in 362 and 306 fathoms.

3938. Lepophidium pardale (Gilbert).
Lower California.
Leptophidium pardale Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 108, off Lower California.

3939. Lepophidium microlepis (Gilbert).
Off Lower California.
Leptophidium microlepis Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 109, off Lower California.

3940. Lepophidium stigmatistium (Gilbert).
Coast of Lower California.
Leptophidium stigmatistium Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 109, off Lower California at *Albatross* station 2996 in 112 fathoms.

Genus 1411. OPHIDION Linnæus. *Cusk eels.*
Ophidion Linnæus, Syst. Nat., Ed. X, 1758, 259 (*Ophidion barbatum* Linnæus).
Ophidium of most authors; revised spelling.

3941. Ophidion graëllsi Poey.
Cuba.
Ophidion graëllsi Poey, Memorias, II, 1861, 425, Habana.

3942. Ophidion beani Jordan and Gilbert.
Gulf of Mexico; Snapper Banks off Pensacola, Fla.
Ophidion beani Jordan and Gilbert, Proc. U. S. Nat. Mus., VI, 1883, 143, Snapper Banks off Pensacola.

3943. Ophidion holbrooki (Putnam).
Key West, Fla.; Gulf of Mexico.
Ophidium holbrooki Putnam, Proc. Bost. Soc. Nat. Hist., XVI, 1874, 342, Key West, Fla.

Genus 1412. RISSOLA Jordan and Evermann.
Rissola Jordan and Evermann, Check List, 1895, 483 (*Ophidium marginatum* DeKay).

3944. Rissola marginata (DeKay). *Sand eel; Slippery dick.*
South Atlantic coast of United States from New York south to Pensacola.
Ophidium marginatum DeKay, New York Fauna: Fishes, 1842, 315, New York Harbor.
?*Ophidium josephi* Girard, U. S. and Mex. Bound. Surv., Zool., 1859, 29, Saint Joseph Island, Tex.

Genus 1413. OTOPHIDIUM Gill.
Otophidium Gill, in Jordan, Cat. Fish. N. Amer., 1885, 914 (*Genypterus omostigma* Jordan and Gilbert).
Chilaria Jordan and Evermann, Check List, 1895, 482 (*Ophidium taylori* Girard).

3945. Otophidium taylori (Girard).
Coast of California, from Monterey to San Diego.
Ophidium taylori Girard, Pac. R. R. Surv., X, Pt. 4, Fishes, 1858, 138, Monterey, Calif.

3946. Otophidium omostigma (Jordan and Gilbert).
Gulf of Mexico, Pensacola snapper banks.
Genypterus omostigma Jordan and Gilbert, Proc. U. S. Nat. Mus., V, 1882, 301, Pensacola snapper banks.

3947. Otophidium scrippsi Hubbs.
Long Beach to Cedros Island, Calif.
Otophidium scrippsi Hubbs, Univ. Calif. Publ. Zool., XVI, 1916, 166, pl. 20, Cedros Island, off coast of Lower California.

3948. Otophidium galeoides (Gilbert).
Coast of Lower California.
Otophidion galeoides Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 110, off Lower California.

3949. Otophidium welshi Nichols and Breder.
Coast of Texas.
Otophidium welshi Nichols and Breder, Proc. Biol. Soc. Wash., XXXV, 1922, 15, fig. 3, Texas, *Grampus* station 10478, southwest from Brayes Light.

Family 292. CARAPIDÆ

Genus 1414. CARAPUS Rafinesque.
Carapus Rafinesque, Indice, 1810, 57, restricted by the International Commission of Nomenclature to *Ophidium imberbe* [90] Linnæus.
Fierasfer Cuvier, Règne Anim., ed. 1, II, 1817, 239 (*Ophidium imberbe* Linnæus).
Echiodon Thompson, Proc. Zool. Soc. Lond., 1837, 55 (*E. drummondi* Thompson).
Diaphasia Lowe, loc. cit., 1843, 92 (*Gymnotus acus* Brünnich).
Oxybeles Richardson, Voy. *Erebus* and *Terror*, Fishes, 1844–48, 73 (*O. homei* Richardson).
Porobronchus Kaup, Ann. Mag. Nat. Hist., 1860, 272 (*P. linearis* Kaup; larva of *Fierasfer acus*).
Vexillifer Gasco, Bull. Assoc. Nat. Med. Napoli, 1870, 59 (*V. dephillippi* Gasco; larva of *Fierasfer acutus*).
Lefroyia Jones, Zoologist, IX, 1874, 3838 (*L. bermudensis* Jones).

3950. Carapus affinis (Günther). *Pearlfish.*
Lower California to Panama; abundant about the Pearl Islands off Panama, north to Point Loma, San Diego, Calif.
Fierasfer affinis Günther, Cat., IV, 1862, 381, no locality given.
Fierasfer dubius Putnam, Proc. Bost. Soc. Nat. Hist., XVI, 1874, 344, Pearl Islands.

3951. Carapus arenicola (Jordan and Gilbert).
Pacific coast of Mexico.
Fierasfer arenicola Jordan and Gilbert, Proc. U. S. Nat. Mus., IV, 1881, 363, Mazatlan, Mexico.

3952. Carapus bermudensis (Jones).
West Indies; recorded from Bermuda, Habana, Key West, and St. Thomas.
Lefroyia bermudensis Jones, Zoologist, IX, 1874, 3837, Bermuda.

Genus 1415. LEPTOFIERASFER Meek and Hildebrand.
Leptofierasfer Meek and Hildebrand, Field Mus. Nat. Hist., Zool., XV, 1928, 964 (*L. macrurus* Meek and Hildebrand).

3953. Leptofierasfer macrurus Meek and Hildebrand.
Leptofierasfer macrurus Meek and Hildebrand, Field Mus. Nat. Hist., Zool., XV, 1928, 964, Pl. XCIX, fig. 1, Chame Point, Panama.

Suborder HAPLODOCI

Family 293. BATRACHOIDIDÆ

Genus 1416. BATRACHOIDES Lacépède.
Batrachoides Lacépède, Hist. Nat. Poiss., II, 1800, 451 (*B. tau* Lacépède); not *Gadus tau* Linnæus = *Batrachus surinamensis* Schneider.
Batrachus Schneider, ed. Bloch, Syst. Ichth., 1801, 42 (*B. surinamensis* Schneider); substitute for *Batrachoides*.
Batrictius Rafinesque, Anal. Nat., 1815, 82; substitute for *Batrachoides*.

3954. Batrachoides surinamensis (Schneider). *Sapo.*
Coast of Guiana and Brazil.
Batrachus surinamensis Schneider, ed. Bloch, Syst. Ichth., 1801, 43, Surinam; from a specimen in the museum of Paris.

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[90] With this decision we do not willingly concur, as the name *Carapus* is clearly cognate with *Gymnotus carapo*, a species of Gymnotidæ included but not named in the original account.

3955. Batrachoides goldmani Evermann and Goldsborough.
Rio Usumacinta at Montecristo, Tabasco, Mexico.
Batrachoides goldmani Evermann and Goldsborough, Bull. U. S. Fish Com., XXI, 1901, 159, fig. 8, Rio Usumacinta, Mexico.

3956. Batrachoides boulengeri Gilbert and Starks.
Bay of Panama.
Batrachoides boulengeri Gilbert and Starks, Mem. Calif. Acad. Sci., IV, 1904, 182, Pl. XXXI, Bay of Panama.

3957. Batrachoides pacifici (Günther).
Panama.
Batrachus pacifici Günther, Cat., III, 1861, 173, Panama.

Genus 1417. OPSANUS Rafinesque. *Toadfishes.*
Opsanus Rafinesque, Amer. Month. Mag., II, 1818, 203 (*O. cerapalus* Rafinesque=*Gadus tau* Linnæus).
Batrachus of authors, not of Schneider.

3958. Opsanus tau (Linnæus). *Toadfish; Sapo; Slimer; Oysterfish; Scorpion.*
Atlantic coast, Massachusetts to the West Indies.
Gadus tau Linnæus, Syst. Nat., ed. XII, 1766, 439, Charleston, S. C.
Cottus glaber Schöpf, Schrift. Naturf. Freunde, VII, 1788, 146, Long Island.
Cottus chætodon Bloch and Schneider, Syst. Ichth., 1801, 62, New York; after Schöpf.
Lophius bufo Mitchill, Trans. Lit. Phil. Soc., I, 1815, 463, New York.
Opsanus cerapolus Rafinesque, Amer. Month. Mag., II, 1818, 204, south coast of Long Island.
Batrachoides vernullas LeSueur, Mém. Mus. Hist. Nat., V, 1819, 157, pl. 17, coast of Rhode Island.
Batrachoides variegata LeSueur, Jour. Acad. Nat. Sci. Phila., III, pt. 2, 1824, 398, Egg Harbor, N. J.
Batrachus celatus DeKay, New York Fauna: Fishes, 1842, 170, pl. 50, fig. 161, New York.

3959. Opsanus hildebrandi Breder.
Colon Market, Panama.
Opsanus hildebrandi Breder, Amer. Mus. Novit., No. 188, Sept. 28, 1925, I, Colon Market, Panama; place of collection unknown.

3960. Opsanus pardus (Goode and Bean). *Sapo.*
Gulf of Mexico in deep water.
Batrachus tau pardus Goode and Bean, Proc. U. S. Nat. Mus., II, 1879, 336, Pensacola snapper banks.

Genus 1418. PORICHTHYS Girard. *Midshipmen.*
Porichthys Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 141 (*P. notatus* Girard).

3961. Porichthys notatus Girard. *Singingfish; Midshipman; Cabezon; Sapo.*
Pacific coast from Puget Sound to Panama.
Porichthys notatus Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 141, San Francisco.

3962. Porichthys margaritatus (Richardson).
Pacific coast of tropical America.
Batrachus margaritatus Richardson, Voy. *Sulphur*, Fishes, 1844–1843, 67, Pacific coast of Central America.
Porichthys nautopædium Jordan and Bollman, Proc. U. S. Nat. Mus., XII, 1889, 171, Pacific Ocean off coast of Colombia in 16 fathoms.

3963. Porichthys greenei Gilbert and Starks.
Panama Bay.
Porichthys greenei Gilbert and Starks, Mem. Calif. Acad. Sci., IV, 1904, 184, Panama Bay.

Genus 1419. NAUTOPÆDIUM Jordan.
Nautopædium Jordan, Proc. Acad. Nat. Sci. Phila., 1919, 342 (*Batrachus porosissimus* Cuvier and Valenciennes).

3964. Nautopædium porosissimum (Cuvier and Valenciennes). *Bagre sapo.*
South Carolina to Montevideo; Pensacola.
Batrachus porosissimus Cuvier and Valenciennes, Hist. Nat. Poiss., XII, 1837, 373 (501), Surinam, Cayenne, Rio Janeiro, and St. Catherine.
Porichthys plectrodon Jordan and Gilbert, Proc. U. S. Nat. Mus., V, 1882, 291, Galveston, Tex.

Genus 1420. THALASSOPHRYNE Günther. *Poison toadfishes.*
Thalassophryne Günther, Cat., III, 1861, 175 (*T. maculosa* Günther).
Dæctor Jordan and Evermann, Fishes North and Mid. Amer., 1898, 2325 (*Thalassophryne dowi* Jordan and Gilbert).

Subgenus THALASSOPHRYNE.

3965. Thalassophryne maculosa Günther.
Caribbean Sea.
Thalassophryne maculosa Günther, Cat., III, 1861, 175, Puerto Cabello near Aspinwall.

3966. Thalassophryne reticulata Günther.
Panama.
Thalassophryne reticulata Günther, Proc. Zool. Soc. Lond., 1864, 150, 155, Panama.

Subgenus DÆCTOR Jordan and Evermann.

3967. Thalassophryne dowi (Jordan and Gilbert).
Pacific coast of North America from Punta Arenas to Panama.
Thallassophryne dowi Jordan and Gilbert, Proc. U. S. Nat. Mus., X, 1887, 388, Punta Arenas.

Order YY. XENOPTERYGII

Family 294. GOBIESOCIDÆ

Genus 1421. CAULARCHUS Gill.
Caularchus Gill, Proc. Acad. Nat. Sci. Phila., XIV, 1862, 330 (*Lepadogaster mæandricus* Girard=*Lepadogaster reticulatus* Girard); name preoccupied.

3968. Caularchus mæandricus (Girard). *Suckfish.*
Pacific coast of United States, from Vancouver Island to Monterey.
Lepadogaster reticulatus Girard, Proc. Acad. Nat. Sci. Phila., VII, 1854, 155, San Luis Obispo, Calif.; name preoccupied.
Lepadogaster mæandricus Girard, Pac. R. R. Surv., X, Pt. 4, Fishes, 1858, 130, San Luis Obispo, Calif., and the Farallons.

Genus 1422. BRYSSETÆRES Jordan and Evermann.
Bryssetæres Jordan and Evermann, Proc. Calif. Acad. Sci., 2d ser., VI, 1896, 230 (*Gobiesox pinniger* Gilbert).

3969. Bryssetæres pinniger (Gilbert).
Gulf of California; known from Puerto Refugio (Angel Island), San Luis Gonzales Bay, and La Paz.
Gobiesox pinniger Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 94, Puerto Refugio, Gulf of California.

Genus 1423. CAULISTIUS Jordan and Evermann.
Caulistius Jordan and Gilbert, Check List, 1895, 491 (*Gobiesox papillifer* Gilbert).
Bryssophilus Jordan and Evermann, Fishes North and Mid. Amer., 1898, 2329 (*Gobiesox papillifer* Gilbert); accidental duplication overlooked in proof reading.

3970. Caulistius papillifer (Gilbert).
Magdalena Bay, Lower California.
Gobiesox papillifer Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 96, Magdalena Bay, Lower California.

Genus 1424. GOBIESOX Lacépède. *Clingfishes.*
Gobiesox Lacépède, Hist. Nat. Poiss., II, 1800, 595 (*G. cephalus* Lacepede).
Megaphalus Rafinesque, Anal. Nat., 1815, 86 (substitute for *Gobiesox* Lacépède).
Sicyogaster Brisout de Barneville, Rev. Zool., 1846, 144 (*Gobiesox marmoratus* Jenyns.

3971. Gobiesox nigripinnis (Peters).
Puerto Cabello, near Aspinwall, Colon.
Cotylis nigripinnis Peters, Monatsber. Akad. Wiss. Berlin, 1859, 412, Puerto Cabello, near Aspinwall, Colon.

3972. Gobiesox macrophthalmus Günther.
Probably West Indies.
Gobiesox macrophthalmus Günther, Cat., III, 1861, 502, locality unknown.

3973. Gobiesox androsiensis Rosen.
Bahamas.
Gobiesox androsiensis Rosen, Arsskr. Univ. Lund., VII, 1912, 50, Bahamas.

3974. Gobiesox costaricensis Meek.
Costa Rica.
Gobiesox costaricensis Meek, Field Mus. Nat. Hist., Zool., X, 1912, 74, Zent, Costa Rica.

3975. Gobiesox gyrinus Jordan and Evermann.
West Indies.
Gobiesox gyrinus Jordan and Evermann, Fishes North and Mid. Amer., 1898, 2331, Cordova; name only in Check List, 1895, 491.

3976. Gobiesox cephalus Lacépède. *Tétard; Testar.*
West Indies.
Gobiesox cephalus Lacépède, Hist. Nat. Poiss., II, 1800, 595, Martinique.
Lepadogaster testar Bloch and Schneider, Syst. Ichth., 1801, 4, Martinique; after Plumier.

3977. Gobiesox tudes Richardson.
Probably West Indies.
Gobiesox tudes Richardson, Voy. *Sulphur*, Fishes, 1845, 103, pl. 46, figs. 1–3; habitat unknown, erroneously supposed to be China.

3978. Gobiesox strumosus Cope.
Maryland to Florida.
Gobiesox strumosus Cope, Proc. Acad. Nat. Sci. Phila., XXII, 1870, 121, Hilton Head, S. C.

3979. Gobiesox virgatulus Jordan and Gilbert.
From Pensacola Bay north to Charleston, S. C.
Gobiesox virgatulus Jordan and Gilbert, Proc. U. S. Nat. Mus., V, 1882, 293, Pensacola, Fla.

3980. Gobiesox adustus Jordan and Gilbert.
Pacific coast of Mexico.
Gobiesox adustus Jordan and Gilbert, Proc. U. S. Nat. Mus., IV, 1881, 360, Mazatlan, Mexico.

3981. Gobiesox funebris Gilbert.
Gulf of California; Puerto Refugio (Angel Island) and La Paz.
Gobiesox funebris Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 95, Puerto Refugio, Gulf of California.

3982. Gobiesox rhodospilus Günther.
Panama.
Gobiesox rhodospilus Günther, Proc. Zool. Soc. Lond., 1864, 25, Panama.

3983. Gobiesox cerasinus Cope.
St. Martins, West Indies.
?*Cyclopterus nudus* Linnæus, Syst. Nat., ed. X, 1758, 260, "India"; not identifiable.
Gobiesox cerasinus Cope, Trans. Amer. Phil. Soc., XIV, 1871, 473, St. Martins, West Indies.

3984. Gobiesox vittatus Metzelaar.
Caribbean Sea.
Gobiesox vittatus Metzelaar, Marine Fish. Lesser Antilles, Bijdr. Dierk., 1922, 140, with fig., Curaçao.

3985. Gobiesox sancti-martini Metzelaar.
West Indies.
Gobiesox sancti-martini Metzelaar, Trop. Atl. Vissch., 1919, 154, fig. 48, St. Martin's Island.

3986. Gobiesox yuma Nichols.
Coast of Florida.
Gobiesox yuma Nichols, Bull. Amer. Mus. Nat. Hist., XXXVII, Dec. 29, 1917, 876, fig. 1, south of Sanibel Light, Florida west coast.

Genus 1425. SICYASES Müller and Troschel.
Sicyases Müller and Troschel, Wiegmann's Archiv, 1843, 298, *S. sanguineus*.
Tomicodon Brisout de Barneville, Rev. Zool., 1846, 144 (*T. chilensis* Barneville).

3987. Sicyases erythrops (Jordan and Gilbert).
Mazatlan; also Tres Marias Islands.
Gobiesox erythrops Jordan and Gilbert, Proc. U. S. Nat. Mus., IV, 1881, 360, Mazatlan, Mexico.

3988. Sicyases rubiginosus Poey.
Matanzas, Cuba.
Sicyases rubiginosus Poey, Synop., 1868, 391, wharves of Palmasola, Matanzas, Cuba.

3989. Sicyases carneus Poey.
Matanzas, Cuba.
Sicyases carneus Poey, Synop., 1868, 392, wharves of Palmasola, Matanzas, Cuba.

3990. Sicyases hæres (Jordan and Bollman).
Green Turtle Cay, Bahamas.
Gobiesox hæres Jordan and Bollman, Proc. U. S. Nat. Mus., XI, 1888, 552, Green Turtle Cay, Bahamas.

3991. Sicyases punctulatus Poey.
Cuba.
Sicyases punctulatus Poey, Enumeratio, 1876, 124, Habana.

3992. Sicyases fasciatus Peters.
Puerto Cabello near Aspinwall.
Sicyases fasciatus Peters, Monatsber. Akad. Wiss. Berlin, 1859, 412, Puerto Cabello.

Genus 1426. RIMICOLA Jordan and Evermann.
Rimicola Jordan and Evermann, Proc. Calif. Acad. Sci., 2d ser., VI, 1896, 231 (*Gobiesox muscarum* Meek and Pierson).

3993. Rimicola eigenmanni (Gilbert).
Point Loma, near San Diego, to Monterey Bay, Calif.
Gobiesox eigenmanni Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 96, Point Loma near San Diego, Calif.
Gobiesox muscarum Meek and Pierson, Proc. Calif. Acad. Sci., 2d ser., V, 1895, 571, pl. 71, Monterey Bay, Calif.

3994. Rimicola beryllinus (Hildebrand and Ginsberg).
Key West, Fla.
Gobiesox (Rimicola) beryllinus Hildebrand and Ginsberg, Bull. U. S. Bur. Fish., XLII, 1926, 213, fig. 5, Boca China, Key West, Fla.

Genus 1427. ARBACIOSA Jordan and Evermann.
Arbaciosa Jordan and Everman, Proc. Calif. Acad. Sci., 2d ser., VI, 1896, 230 (*Gobiesox humeralis* Gilbert).

3995. Abraciosa rhessodon (Rosa Smith).
San Diego to the northern part of the Gulf of California.
Gobiesox rhessodon Rosa Smith (Mrs. Eigenmann), Proc. U. S. Nat. Mus., IV, 1881, 140, San Diego, Calif.

3996. Abraciosa humeralis (Gilbert).
Gulf of California; Puerto Refugio, Angel Island; La Paz.
Gobiesox humeralis Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 95, Puerto Refugio, Gulf of California.

3997. Arbaciosa rupestris (Poey).
Coral reefs of Cuba.
Gobiesox rupestris Poey, Memorias, II, 1861, 283, Cuba.

3998. Arbaciosa zebra (Jordan and Gilbert).
Mazatlan, Mexico.
Gobiesox zebra Jordan and Gilbert, Proc. U. S. Nat. Mus., IV, 1881, 359, Mazatlan, Mexico.

3999. Arbaciosa eos (Jordan and Gilbert).
Pacific coast of Mexico.
Gobiesox eos Jordan and Gilbert, Proc. U. S. Nat. Mus., IV, 1881, 360, Mazatlan, Mexico.

Order ZZ. PLECTOGNATHI

Suborder SCLERODERMI

Family 295. TRIACANTHIDÆ

Genus 1428. HOLLARDIA Poey.
Hollardia Poey, Memorias, II, 1861, 348 (*H. hollardi* Poey).

4000. Hollardia hollardi Poey.
West Indies.
Hollardia hollardi Poey, Memorias, II, 1861, 348, pl. 18, fig. 11, Cuba

Family 296. BALISTIDÆ

Genus 1429. BALISTES Linnæus.
Balistes Linnæus, Syst. Nat., ed. X, 1758, 327 (*B. vetula* Linnæus).
Capriscus Rafinesque, Indice, 1810, 41, 58 (*C. porcus* Rafinesque = *Balistes capriscus* Gmelin).

4001. Balistes naufragium Jordan and Starks. *Pez puerco de piedra.*
Mazatlan; Panama Bay.
Balistes naufragium Jordan and Starks, Proc. Calif. Acad. Sci., 2d ser., V, 1895, 488, Mazatlan.

4002. Balistes capriscus Gmelin. *Leatherjacket; Cucuyo; Turbot; Triggerfish; Filefish.*
Tropical parts of the Atlantic; Gulf Stream; Mediterranean.
Balistes carolinensis Gmelin, Syst. Nat., I, 1788, 1468, Carolinas.
Balistes capriscus Gmelin, loc. cit., 1789, 1471, Indian and American oceans; after Gronow (this name preferred by first reviewer).
Balistes buniva Lacépède, Hist. Nat. Poiss., V, 1798, 669, pl. 21, fig. 1, Nice.
Balistes caprinus Valenciennes, Ichth. Îles Canaries, 1836, 94, pl. 16, Canaries.
Balistes fuliginosus DeKay, N. Y. Fauna: Fishes, 1842, 339, pl. 57, fig. 188, New York.
Balistes tæniopterus Poey, Memorias, II, 1861, 326, Cuba.

4003. Balistes vetula Linnæus. *Oldwife; Old wench; Cochino; Blue-striped triggerfish; Bessy cerka.*
Tropical parts of the Atlantic; West Indies; Gulf Stream to Woods Hole.
Guaperva Marcgrave, Hist. Bras., 1648, 163, Brazil.
Balistes vetula Linnæus, Syst. Nat., Ed. X, 1758, 329, Ascension Island; after *Balistes vetula* of Osbeck, Iter Chinensis, 294, 1757.
Balistes bellus Walbaum, Artedi Pisc., III, 1792, 467, West Indies; after Krøyer.
Balistes equestris Gronow, Cat. Fishes, ed. Gray, 1854, 31, American seas.

4004. Balistes forcipatus Gmelin.
West coast of Africa to Rhode Island and Brazil.
Balistes forcipatus Gmelin, Syst. Nat., I. 1789, 1472, Brazil; after *Guaperva lata* of Lista.
Balistes punctatus Gmelin, loc. cit., 1472; after Stipvisch of Willoughby.
Balistes spilotopterygius Walbaum, Artedi Pisc., III, 1792, 455, Brazil.
Balistes guttatus Walbaum, loc. cit., 467, St. Vincent.
Balistes ciliaris Bloch and Schneider, Syst. Ichth., 1801, 471, Brazil.
Balistes liberiensis Steindachner. Ichth. Notizen, IV, 1867, 9, Monrovia in Liberia.
?*Balistes powelli* Cope, Proc. Acad. Nat. Sci. Phila., XXII, 1870, 120, Newport, R. I.
Balistes moribundus Cope, Trans. Amer. Phil. Soc., XIV, 1870, 478, St. Martins.

Genus 1430. SUFFLAMEN Jordan.
Pachynathus Swainson, Classn. Fishes, II, 1839, 326 (*Balistes triangularis*=*Balistes capistratus* Shaw); not *Pachygnatha* nor *Pachygnathus;* both these names earlier used for genera of spiders, the name *Pachygnathus* regarded as a misprint and not valid according to decision of the International Commission of Nomenclature.
Sufflamen Jordan, Copeia, April 12, 1916, 27 (*Balistes capistratus* Shaw).

4005. Sufflamen verres (Gilbert and Starks). *Pez puerco.*
Pacific coast of tropical America, from Magdalena Bay to the Galapagos.
Balistes capistratus of authors; not of Shaw, Gen. Zool., V, 1804, 417; after *Balistes bridé* Lacépède, a species of the South Seas and East Indies.
Balistes verres Gilbert and Starks, Mem. Calif. Acad. Sci., V, 1904, 153, Pl. XXVI, fig. 49, Panama and Mazatlan.

Genus 1431. VERRUNCULUS Jordan.
Verrunculus Jordan, Copeia, Sept., 1924, 82 (*Balistes polylepis* Steindachner).

4006. Verrunculus polylepis (Steindachner). *Pez puerco.*
San Diego to Panama; common southward.
Balistes polylepis Steindachner, Ichth. Beitr., V, 1876, 21, Magdalena Bay; Mazatlan; Acapulco.

Genus 1432. CANTHIDERMIS Swainson. *Sobacos.*
Canthidermis Swainson, Nat. Hist. Classn. Anim., II, 1839, 325, (*Balistes angulosus* Quoy and Gaimard).

4007. Canthidermis angulosus (Quoy and Gaimard).
Hawaii to Cocos Island; rare.
Balistes angulosus Quoy and Gaimard, Voy. *Uranie*, Zool., 1824, 210, Sandwich Islands (Hawaiian Islands).

4008. Canthidermis sobaco (Poey). *Sobaco.*
West Indies.
Balistes sobaco Poey, Memorias, II, 1861, 324, Habana.
Balistes asperrimus Cope, Trans. Amer. Phil. Soc., XIV, 1870, 478, St Martins.

4009. Canthidermis sufflamen (Mitchill). *Sobaco.*
West Indies; Habana.
Sobaco Parra, Dif. Piezas, Hist. Cuba, 1787, 17, fig. 10, Habana.
Balistes sufflamen Mitchill, Trans. Lit. Phil. Soc. N. Y., I, 1815, 467, locality unknown, said by DeKay to be from the south Atlantic.
Balistes macrops Poey, Memorias, II, 1861, 326, Habana.

4010. Canthidermis maculatus (Bloch). *Ocean turbot.*
West Indies.
Balistes maculatus Bloch, Nat. Ausl. Fisch., II, 1786, 25, West Indies.
Balistes americanus Gmelin, Syst. Nat., I, 1789, 1473, America; after Gronow.
Balistes macropterus Walbaum, Artedi Pisc., III, 1792, 465, America.
Balistes rufus Gronow, Cat. Fishes, ed. Gray, 1854, 36, American oceans.
Balistes longus Gronow, loc. cit., 1854, American oceans.
Balistes melanopterus Cope, Trans. Amer. Phil. Soc., XIV, 1870, 478, Darien.

4011. Canthidermis willughbeii (Lay and Bennett).
Pacific coast of Mexico.
Balistes willughbeii Lay and Bennett, Zoology Beechey's Voyage, 1839, 68, pl. 21, fig. 2, Acapulco, Mexico.

Genus 1433. XANTHICHTHYS Kaup.
Xanthichthys Kaup, in Richardson, Enc. Brit., ed. XII, 1856, 313 (*Balistes curassavicus* Gmelin).

4012. Xanthichthys ringens (Linnæus). *Cocuyo.*
West Indies and southward, recorded from Mauritius.
Balistes ringens Linnæus, Syst. Nat., Ed. X, 1758, 329, no locality.
Cucuyo Parra, Dif. Piezas, etc., Cuba, 1787, 19, Habana; after Linnæus.
Balistes curassavicus Gmelin, Syst. Nat., I, 1788, 1472, Curaçao.
Balistes notatus Gronow, Cat. Fishes, ed. Gray, 1854, 36, both Indies.
Balistes nitidus Gronow, loc. cit., 36, American oceans.
Balistes cicatricosus Poey, Memorias, II, 1861, 327, Cuba.
Balistes heckeli von Müller, Reisen in Vereinigten Staaten, Canada und Mexico, I, 1864, 182, Mexico.

4013. Xanthichthys lineopunctatus (Hollard).
Panama; Pacific coast of Mexico to East Indies; taken at San Diego.
Balistes lineopunctatus Hollard. Ann. Sci. Nat., ser. 4, I, 1854, 65, Bourbon Island.
Balistes mento Jordan and Gilbert, Proc. U. S. Nat. Mus., IV, 1881, 228 Clarion Island of the Revillagigedo group.

Genus 1434. MELICHTHYS Swainson.
Melichthys Swainson, Class. Anim., II, 1839, 325 (*Balistes ringens* Bloch= *Balistes buniva* Lacépède).

4014. Melichthys piceus (Poey). *Galafate; Black oldwife; Calafate.*
West Indies and southward.
?*Balistes nigra* Osbeck, Iter Chinensis, 1757, 295, Ascension Island; pre-Linnæan.
Galafate Parra, Dif. Piezas, etc., 1787, 18, Habana.
Balistes piceus Poey, Proc. Acad. Nat. Sci. Phila., XV, 1863, 180, Cuba.

4015. Melichthys rádula (Solander).
East Indies, Clarion and Socorro Islands; Cocos Island.
Balistes radula Solander, in Richardson, Voy. H. M. S. *Samarang*, Fishes, 1848, 21.
Melichthys bispinosus Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 125, Clarion and Socorro Islands of the Revillagigedo group.

Family 297. MONACANTHIDÆ. Filefishes

Genus 1435. CANTHERINES Swainson.
Cantherines Swainson, Classn. Fishes, II, 1839, 327 (*Cantherines nasutus* Swainson= *Balistes sandwichensis* Quoy and Gaimard).
Pseudomonacanthus Bleeker, loc. cit., 12 (*Monacanthus macrurus* Bleeker).
Liomonacanthus Bleeker, Ned. Tijdskr., III, 1866, 13 (*Monacanthus pardalis* Rüppell).

4016. Cantherines pullus (Ranzani). *Lija colorado.*
West Indies and coast of Brazil; southern Florida.
Lija colorado Parra, Dif. Piezas, etc., 1787, pl. 23, p. 49, Cuba.
Monacanthus pullus Ranzani, Nov. Comm. Act. Sci. Inst. Bonon., V, 1842, 4, pl. 1, Brazil.
Monacanthus macrocerus Holland, Ann. Sci. Nat., II, 1854, 327, pl. 12, fig. 1, Bahia.
Monacanthus ruppelii Castelnau, Anim. Nouv. Amer. Sud., Poiss., 1855, 97, pl. 47, fig. 2, Bahia.
Monacanthus irroratus Poey, Memorias, II, 1861, 330, Cuba.
Monacanthus striatus Poey, loc. cit., 329, Cuba.
Monacanthus parraianus Poey, Proc. Acad. Nat. Sci. Phila., XV, 1863, 185, Cuba; after Parra.
Monacanthus punctatus Poey, Synopsis, 1868, 437, Cuba.

4017. Cantherines carolæ (Jordan and McGregor).
Islands off the Pacific coast of Mexico; Revillagigedo Islands.
?*Balistes sandwichensis* Quoy and Gaimard, Voy. *l'Uranie*, Zool., 1824, 214, Sandwich [Hawaiian] Islands.
?*Cantherines nasutus* Swainson, Nat. Hist. Class. Fishes, II, 1839, 327; substitute for *B. sandwichensis*.
Cantherines carolæ Jordan and McGregor, in Jordan and Evermann, Fishes North and Mid. Amer., 1898, 1713 (Clarion Island by error), Socorro Island.

4018. Cantherines amphioxys (Cope).
St. Martins Island, West Indies.
Monacanthus amphioxys Cope, Trans. Amer. Phil. Soc., XIV, 1870, 477, St. Martins Island.

Subgenus MONACANTHUS.

Genus 1436. MONACANTHUS Cuvier.
Monacanthus Cuvier, Regne Anim., Ed. I, 1817, 152 (*Balistes chinensis* Bloch).
Trichoderma Swainson, Nat. Hist. Fish., Amphib., etc., II, 1839, 328 (*Balistes scapus* Lacépède).
Stephanolepis Gill, Proc. Acad. Nat. Sci. Phila., XIII, 1861, 78 (*Monacanthus setifer* Bennett).

4019. Monacanthus ciliatus (Mitchill). *Leatherfish; Lija; Flapmingo.*
West Indies and Florida; Florida Keys.
Balistes ciliatus Mitchill, Amer. Month. Mag. and Crit. Rev., II, March, 1818, 326, Bahama Straits.
Monacanthus piraaca Kner, Reise Fregatte *Novara* um Erde, Zool., Fische, 1867, 396, Rio Janeiro.
Monacanthus occidentalis Günther, Cat., VIII, 1870, 237, Puerto Caballo.
Monacanthus davidsonii Cope, Trans. Amer. Phil. Soc. Phila., XIV, 1870 (1871), 476, Florida Reef.

Subgenus STEPHANOLEPIS Gill.

4020. Monacanthus hispidus (Linnæus). *Foolfish; Filefish; Leatherfish; Horny cony; Lija; Thread filefish; Mingo.*
Cape Cod to Cuba; south Atlantic coast and Florida Keys; West Indies to Brazil.
Balistes hispidus Linnæus, Syst. Nat., Ed. XII, 1766, 405, Carolinas.
Balistes broccus Mitchill, Trans. Lit. Phil. Soc., I, 1815, 467, New York.
Monacanthus filamentosus Valenciennes, Îles Canaries Ichth. Atl., 1836, 95, pl. 16, fig. 1, Canaries.
Monacanthus gallinula Valenciennes, loc. cit., 95, Canaries.
Monacanthus varius Ranzani, Novi Comment Ac. Sci. Inst. Bonon., V, 1842, 6, Pl. II, Brazil.
Monacanthus massachusettensis DeKay, N. Y. Fauna: Fishes, 1842, 336, pl. 57, fig. 187, Massachusetts Bay.
Monacanthus setifer DeKay, loc. cit., 337, pl. 59, fig. 194, New York.
Monacanthus signifer Storer, Synop. Fish. N. Amer., 1846, 497, Massachusetts.
Monacanthus auriga Lowe, Proc. Zool. Soc. Lond., 1850, 253, Madeira.

4021. Monacanthus oppositus Poey.
Cuba.
Monacanthus oppositus Poey, Memorias, II, 1861, 331, Habana.

4022. Monacanthus spilonotus Cope.
Gulf of Mexico.
Monacanthus spilonotus Cope, Trans. Amer. Phil. Soc. Phila., XIV, 1870, 476, Gulf of Mexico.

4023. Monacanthus tuckeri Bean.
West Indies, north to Bermudas.
Monacanthus tuckeri Bean, Field Mus. Nat. Hist., Zool., VII, 1906, 78, fig. 11, Bermudas.

Genus 1437. CERATACANTHUS Gill.
Ceratacanthus Gill, Fish. E. Coast N. Amer., Proc. Acad. Nat. Sci. Phila, XIII, 1861, 57 (*Balistes aurantiacus* Mitchill = *Balistes schœpfii* Walbaum).

4024. Ceratacanthus schœpfii (Walbaum). *Filefish; Orange filefish; Lija; Foolfish; Unicornfish; Sunfish.*
Cape Cod to the Carolinas and Florida.
Balistes schœpfii Walbaum, Artedi Pisc., 1792, 461, Long Island; after Schöpf, Berlin Ges. Naturf., VIII, 1788, 186.
Balistes aurantiacus Mitchill, Trans. Lit. Phil. Soc. N. Y., I, 1815, 468, New York.
Aluteres cuspicauda DeKay, New York Fauna: Fishes, 1842, 338, New York.
Aluterus holbrooki Hollard, Ann. Sci. Nat., IV, 1855, 7, North America.
Aluterus cultrifrons Hollard, Ann. Sci. Nat., ser. 4, IV, 1855, 8, pl. 1, fig. 2, New York and Bahia.

Genus 1438. DAVIDIA Miranda Ribeiro.
Davidia Miranda Ribeiro, Archiv Mus. Nac. Rio Janeiro, XVII, 1915, 9 (*Alutera punctata* Agassiz).

4025. Davidia punctata (Agassiz). *Long mingo.*
Jamaica to Bahia.
Alutera punctata Agassiz, Pisc. Brasil., 1829, 134, pl. 76, Brazil.

Genus 1439. OSBECKIA Jordan and Evermann.
Osbeckia Jordan and Evermann, Check List, 1895, 424 (*Balistes scripta* Osbeck).

4026. Osbeckia scripta[91] (Osbeck). *Unicornfish; Lija trompa; Olilepa; Ohua.*
Tropical seas; West Indies; North Carolina; off west coast of Mexico; Clarion Island, Revillagigedo Islands.
Balistes scriptus Osbeck, Iter Chinensis, I, 1757, 144, Canaries.
Unicornis piscis bahamensis Catesby, Nat. Hist. Carolina, etc., II, 1743, 19, pl. 19, Bahamas.
Balistes lævis Bloch, Naturgesch. Ausl. Fische, IV, 1795, 82, pl. 414, Morocco.
Monacanthum proboscideum Ranzani, Nov. Comm. Ac. Sc. Inst. Bonon., V, 1842, 8, Brazil.
Aluterus venosus Hollard, Ann. Sc. Nat., ser. 4, IV, 1855, 14, pl. 1, fig. 3, New Ireland.
Alutera picturata Poey, Proc. Acad. Nat. Sci. Phila., XV, 1863, 183, Cuba.

Genus 1440. ALUTERA Cuvier.
Les Alutères Cuvier, Règne Anim., ed. 1, 1817, 153 (*Balistes monoceros* Osbeck).
Alutera Oken, Isis, 1817, 153 ("Les Alutères" Cuvier; *Balistes monoceros* Linnæus).

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[91] Whether *Osbeckia venosa* Hollard, East Indies to Hawaii and the Revillagigedos, is distinct from *O. scripta* of the Atlantic is a matter not yet determined. The distinction of *Osbeckia* and *Ceratacanthus* from *Alutera* is questionable.

4027. Alutera monoceros[92] Linnæus. *Lija barbuda; Loulu.*
Pacific Ocean; East Indies; Japan; Hawaii.
Capriscus minima etc., Klein, Miasus, II, 1742, 25 (no locality; figure very bad).
Balistes monoceros Osbeck, Iter Chinensis, 1757, 110, Asia; Linnæus, Syst. Nat., ed. X, 1758, 327, Asia and America.
Lija barbuda Parra, Dif. Piezas Hist. Nat., 1787, 48, pl. 22, fig. 2, Habana.
Balistes kleinii Gmelin, Syst. Nat., 1788, 1472, Indian seas; after Klein.
Balistes barbatus Walbaum, Artedi Pisc., III, 1792, 464; after Klein.
Balistes monoceros unicolor Bloch and Schneider, Syst. Ichth., 1801, 463, after Gmelin.
Aluteres berardi Lesson, Voy. *Coquille*, Zool., 1830, 108, pl. 7, New Guinea.
Alutera cinerea Temminck and Schlegel, Fauna Japon., Poiss., 1850, 292, pl. 131, fig. 1, Japan.
Alutarius macracanthus Bleeker, Verh. Bat. Gen., Balistini, XXIV, Art. 11, 1852, 22, pl. 3, fig. 7, East Indies.
Alutarius amphacanthoides Bleeker, loc. cit., 23, pl. 2, fig. 5, East Indies.
Alutarius obliteratus Cantor, Malayan Fishes, 1850, 352, Pinang.
Balistes linguatula Gronow, Cat., ed. Gray, 1854, 35, Indian seas.
Aluterus anginosus Hollard, Ann. Sci. Nat., IV, 1855, 11, East Indies.
Balistes unicornu Basilewsky, Nouv. Mém. Soc. Nat. Moscow, X, 1855, 263, China.

4028. Alutera guntheriana Poey. *Liza barbuda.*
West Indies; once taken at Woods Hole (1898).
Alutera guntheriana Poey, Proc. Acad. Nat. Sci. Phila., XV, 1863, 184, Habana.

Suborder OSTRACODERMI

Family 298. OSTRACIIDÆ. Trunkfishes

Genus 1441. OSTRACION Linnæus.
Ostracion Linnæus, Syst. Nat., Ed. X, 1758, 330 (*O. cubicus* Linnæus).
Cibotion Kaup, Wiegmann's Archiv, XXI, 1855, 215 (*Ostracion cubicus* Linnæus).
Ostracium of authors; improved orthography.

4029. Ostracion punctatum Bloch and Schneider.
Tropical Pacific in general; Clipperton Island, Galapagos Islands, Hawaiian Islands.
Ostracion lentiginosum Bloch and Schneider, Syst. Ichth., 1801, 501, Ile de France.
Ostracion punctatus Bloch and Schneider, loc. cit., 501, Honolulu.

4030. Ostracion clippertonense Snodgrass and Heller.
Clipperton Island.
Ostracion clippertonense Snodgrass and Heller, Shore Fishes, Galapagos Islands, in Proc. Wash. Acad. Sci., VI, 1904, 410, Clipperton Island.

Genus 1442. RHINESOMUS Swainson.
Rhinesomus Swainson, Nat. Hist. Classn. Fishes, II, 1839, 194, 324 (*Ostracion triqueter* Linnæus).

4031. Rhinesomus triqueter (Linnæus). *Trunkfish; Rock shellfish; Drunkenfish; Chapin; Platefish.*
West Indies, north to the Bermudas; Key West and Pensacola; Woods Hole, Mass.
Ostracion triqueter Linnæus, Syst. Nat. Ed. X, 1758, 330, "India."
Ostracion concatenatus Bloch, Naturgesch. Ausl. Fische, I, 1785, 101, Martinique.

Genus 1443. CHAPINUS Jordan and Evermann.
Chapinus Jordan and Evermann, Check List, 1895, 424 (*Ostracion bicaudalis* Linnæus).

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[92] Whether the West Indian *Alutera guntheriana* is distinguishable from *Alutera monoceros* of the Pacific is uncertain.

4032. Chapinus bicaudalis (Linnæus). *Chapin; Spotted trunkfish; Pesce toro; Bullfish.*
West Indies, from Cuba to Ascension Island; Tortugas.
Ostracion bicaudalis Linnæus, Syst. Nat., Ed. X, 1758, 330, "India"; after Artedi.

Genus 1444. LACTOPHRYS Swainson. *Three-angled trunkfishes.*
Lactophrys Swainson, Nat. Hist. Classn. Fishes, II, 1839, 194, 324 (*Ostracion trigonus* Linnæus, etc.).

4033. Lactophrys trigonus (Linnæus). *Common trunkfish; Chapin; Shellfish; Cuckold; Boxfish.*
West Indies, north to Bermuda and Key West; occasionally northward in Gulf Stream to Holmes Hole, Mass., and Chesapeake Bay.
Ostracion trigonus Linnæus, Syst. Nat., Ed. X, 1758, 330, India.
Ostracion yalei Storer, Bost. Jour. Nat. Hist., I, 1836, 353, Holmes Hole and Marthas Vineyard.
Ostracion undulatus Poey, Synopsis, 1868, 441, Habana.
Ostracium expansum Cope, Trans. Amer. Phil. Soc., XIV, 1870, 474, figs. 9–10, locality unknown.

Genus 1445. ACANTHOSTRACION Bleeker.
Acanthostracion Bleeker, Atlas Ichth., V, 1865, 27, (*Ostracion quadricornis* Linnæus=*Ostracion tricornis* Linnæus).

4034. Acanthostracion quadricornis (Linnæus). *Cuckold; Toro; Cowfish; Horned trunkfish.*
Tropical seas; common from Carolina to Brazil; Marquesas Islands; Florida Keys; occasionally at Pensacola and Galveston and north in the Gulf Stream to Charleston and Chesapeake Bay.
Ostracion tricornis Linnæus, Syst. Nat., Ed. X, 1758, 331, "India"; after Artedi.
Ostracion quadricornis Linnæus, loc. cit., 331, "India"; after Artedi; (this name preferred to the preceding by the first reviser).
Ostracion lister Lacépède, Hist. Nat. Poiss., I, 1798, 468; after Willoughby.
Ostracion sexcornutus Mitchill, Amer. Month. Mag., II, 1818, 328, mouth of Mississippi River.
Ostracion guineensis Bleeker, Ned Tydskr. Dierk., II, 1865?, 298, Guinea.
Ostracion gronovii Bleeker, loc. cit., II, 298, Guinea.
Acanthostracion polygonius Poey, Enumeratio, 1876, 175, Cuba.

Suborder GYMNODONTES

Family 299. TETRAODONTIDÆ. Puffers

Genus 1446. LAGOCEPHALUS[92] Swainson.
Lagocephalus Swainson, Nat. Hist. Classn. Fishes, II, 1839, 194, 328 (*Tetraodon stellatus* Donovan).

4035. Lagocephalus lævigatus (Linnæus). *Smooth puffer; Rabbitfish; Smooth swellfish; Tambor.*
Cape Cod to Brazil; rare north of Cape Hatteras.
Tetrodon lævigatus Linnæus, Syst. Nat., Ed. XII, 1766, 411, Charleston, S. C.
Tetrodon curvus Mitchill, Trans. Lit. Phil. Soc., I, 1815, 472, New York.
Tetrodon mathematicus Mitchill, loc. cit., I, 1815, 474, New York.
Holocanthus melanothos Gronow, Syst. Nat., ed. Gray, 1854, 24, Carolinas.
Tetrodon lineolatus Poey, Synopsis, 1868, 432, Cuba.

4036. Lagocephalus pachycephalus (Ranzani). *Jugfish.*
Jamaica to Brazil.
Tetrodon pachycephalus Ranzani, Nov. Comm. Ac. Sci. Inst. Bonon., IV, 1840, 73, Pl. X, fig. 2, Brazil.

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[92] The American species of *Lagocephalus* are very well separated from *Sphæroides* but various Japanese species of the former genus grade off into the latter.

Genus 1447. SPHŒROIDES Lacépède. *Swellfishes.*
Les *Sphéroides* Lacépède, Hist. Nat. Poiss., II, 1798, 22, Pl. I, fig. 1 (*La Spheroide tuberculée*, a front view of *Tetraodon spengleri* Bloch).
Sphæroides, Allegem. Lit. Zeit. Berlin, Sept. 24, 1798, unsigned review, adopts this spelling as a technical name for the genus.
Spheroides Duméril, Zool. Anal., 1806, 342; after Lacépède.
Orbidus Rafinesque, Analyse de la Nature, 1815, 90 (substitute for Les *Sphéroides* Lacépède).
Crayracion Klein, Gesellschaft Schauplatz, IV, 1777, 788 (*Tetraodon spengleri* Bloch; not binomial); after Klein, 1742.
Holocanthus Gronow, Cat. Fish., 1854 (*H. leionothus* Gronow).
Anchisomus (Kaup) Richardson, Zool. H. M. S. *Herald*, 1854, 156 (*Tetraodon spengleri* Bloch).
Crayracion Bleeker, Atlas Ichth., 1865, 65 (*Tetraodon spengleri* Bloch).
Stenometopus Bibron, Rev. Mag. Zool., VIII, 1855, 279 (*Tetraodon testudineus* Linnæus).

4037. Sphœroides maculatus (Bloch and Schneider). *Puffer; Swelltoad; Blower; Swellbelly; Swellfish; Toadfish.*
Atlantic coast of the United States from Cape Ann to St. Johns River and Biscayne Bay, Fla.
Tetrodon hispidus var. *maculatus* Bloch and Schneider, Syst. Ichth., 1801, 504, Rhode Island; after Schöpf.
Tetrodon turgidus Mitchill, Trans. Lit. Phil. Soc. N. Y., I, 1815, 473, pl. 5, fig. 5, New York.

4038. Sphœroides spengleri (Bloch). *Southern puffer; Swelltoad; Tambor.*
West Indies; coasts of Texas and Florida, south to Rio Janeiro and to the Madeiras and Canaries; rarely north to Woods Hole.
Tetrodon spengleri Bloch, Ichth., I, 1782, 135, pl. 144, East Indies.
Le *Tetrodon* Plumier Hist. Nat. Poiss., I, 1797, 504, Martinique.
Le *Sphéroide tubercule* Lacépède, Hist. Nat. Poiss., II, 1798, 22, Martinique.
Sphæroides tuberculatus Pillot edition of Lacépède, VI, 1831, 279, Martinique.

4039. Sphœroides nephelus (Goode and Bean). *Puffer; Swellingfish.*
Florida.
Tetrodon nephelus Goode and Bean, Proc. U. S. Nat. Mus., V, 1882, 412, Indian River and Pensacola, Fla.

4040. Sphœroides marmoratus (Ranzani). *Spinyback blowfish; Swellfish.*
West Indies to Brazil; Jamaica.
Tetrodon marmoratus Ranzani, Nov. Comm. Ac. Sci. Inst. Bonon., IV, 1840, 72, pl. 10, fig. 1, Brazil.

4041. Sphœroides harperi Nichols.
West Indies (St. Eustatius) north to Florida.
Spheroides harperi Nichols, Bull. Am. Mus. Nat. Hist., XXXIII, 1914, 81, Cape Sable, Fla.

4042. Sphœroides asterias (Blosser).
St. Croix.
Spheroides asterias Blosser, Ann. Carnegie Mus., VI, 300, 1909, St. Croix.

4043. Sphœroides eulepidotus (Metzelaar).
Caribbean Sea.
Tetrodon (*Spheroides*) *eulepidotus* Metzelaar, Trop. Atl. Visschen, 1919, 170, Curaçao.

4044. Sphœroides lobatus (Steindachner). *Botete.*
Gulf of California to Galapagos Islands; Mazatlan; Panama.
Canthogaster? lobatus Steindachner, Ichth. Notizen, X, 1870, 18, pl. 5, fig. 3, Altata.

4045. Sphœroides angusticeps (Jenyns).
Pacific coast Lower California (La Paz), to the Galapagos Islands.
Tetrodon angusticeps Jenyns, Voyage *Beagle*, Fishes, 1842, 154, 28, Galapagos Islands.

Genus 1448. CHEILICHTHYS Müller.

Cheilichthys Müller, Abhandl. Akad. Wiss. Berl., 1839, 252 (*Tetraodon testudineus* Linnæus).

Apsicephalus Hollard, Ann. Sci. Nat., Zool., VIII, 1857, 275 (*Tetrodon fluviatilis* Hamilton).

4046. Cheilichthys testudineus (Linnæus). *Tambor; Glovefish; Blowfish; Swellfish; Puffer.*

West Indies; Gulf Stream, occasionally to Newport, R. I.

Orbis lævis variegatus Catesby, Nat. Hist. Carolinas, II, 1743, 28, pl. 28, Virginia.

Tetraodon testudineus Linnæus, Syst. Nat., Ed. X, 1758, 332, India; based on Balk and Artedi.

?*Tetrodon punctatus* Bloch and Schneider, Syst. Ichth., 1801, 506, Brazil.

Tetrodon geometricus Bloch and Schneider, loc. cit., 508, Virginia; after Catesby.

Tetraodon ammocryptus Gosse, Nat. Sojourn Jamaica, 1851, 287, Jamaica.

Holocanthus leionothos Gronow, Cat. Fishes, ed. Gray, 1854, 24, American oceans.

4047. Cheilichthys annulatus (Jenyns).

Pacific coast of tropical America; Galapagos Islands.

Tetrodon annulatus Jenyns, Zool. *Beagle*, 1842, 153, Galapagos Islands.

Anchisomus geometricus (Kaup) Richardson, Voyage *Herald*, 1854, 156, pl. 30, Galapagos Islands.

Tetrodon heraldi Günther, Cat., VIII, 1870, 283, Galapagos Islands and Panama.

4048. Cheilichthys politus (Girard).

Pacific coast of tropical America, San Diego to Mazatlan.

Tetraodon politus Girard, Pacific R. R. Surv., X, 1858, 340, San Diego, Calif.

4049. Cheilichthys fürthi (Steindachner).

Panama.

Tetrodon fürthii Steindachner, Ichth. Beitr., V, 1876, 22, Panama.

4050. Cheilichthys trichocephalus (Cope). *Hairy blowfish.*

Gulf Stream off Newport, R. I.; only the type known.

Tetraodon trichocephalus Cope, Proc. Acad. Nat. Sci. Phila., XXII, 1870, 120, Gulf Stream off Newport, R. I.

4051. Cheilichthys pachygaster (Müller and Troschel).

Barbados.

Tetrodon (*Cheilichthys*) *pachygaster* Müller and Troschel, in Schomburgk's Hist. Barbados, 1848, 677, Barbados.

Genus 1449. TETRAODON Linnæus.

Tetraodon Linnæus, Syst. Nat., Ed. X, 1758, 333 (*T. lineatus* Linnæus).

Les Ovoides Lacépède, Hist. Nat. Poiss., I, 1797, 256 (fasce, face view).

Ovoides Cuvier, Leçons Anat. Comp., I, 1800, tab. 1 (*Ovoides fasciatus* Lacépède = *Tetraodon stellatus* Linnæus).

Ovum Bloch and Schneider, Syst. Ichth., 1801, 530 (*O. commersoni* Bloch and Schneider = "l'Ovoide Fascé" Lacépède, 1797); preoccupied in mollusks.

Oonidus Rafinesque, Anal. Nat., 1815, 90, for "les Ovoides" of Lacépède.

Arothron Müller, Abh. Akad. Wies. Berlin, 1839, 252 (*A. testudinatus* Müller = *Tetraodon reticularis* Bloch and Schneider).

Dilobomycter Bibron, Rev. Mag. Zool., VIII, 1855, 279 (*Tetraodon reticularis* Bloch and Schneider).

Dichotomycter Bibron, loc. cit., 279 (*Tetraodon pluviatilis* Hamilton).

4052. Tetraodon hispidus Linnæus. *Maki-maki; Kete.*
Panama and neighboring islands; Hawaii; Samoa; to China and the Red Sea.
Tetraodon hispidus Linnæus, Syst. Nat., Ed. X, 1758, 333, India.
Tetraodon perspicillaris Rüppell, Atlas, Reise Nord Africa, 1828, 63, Red Sea.
Tetrodon implutus Jenyns, Voy. *Beagle*, Fish., 1842, 152, Keeling Island.
Tetrodon laterna Richardson, Voy. *Sulphur*, Zool., 1844, 124, pl. 61, fig. 2, Canton, China.
Arothron erethizon[94] Jordan and Gilbert, Proc. U. S. Nat. Mus., V, 1882, 631, Panama.

Subgenus OVOIDES Cuvier.

4053. Tetraodon setosus Smith.
West coast of Mexico; Revillagigedo, Clipperton, Cocos, and Galapagos Islands.
Tetraodon setosus Smith, Bull. Calif. Acad. Sci., 2d ser., VI, Nov. 13, 1886, Mexico.

Genus 1450. GUENTHERIDIA Gilbert and Starks.
Guentheridia Gilbert and Starks, Mem. Calif. Acad. Sci., IV, 1904, 158 (*Tetrodon formosus* Günther).

4054. Guentheridia formosa (Günther).
Panama.
Tetrodon formosus Günther, Cat., VIII, 1870, 283, "South America."

Genus 1451. COLOMESUS Gill.
Colomesus Gill, Proc. U. S. Nat. Mus., VII, 1884, 422 (*Tetrodon psittacus* Bloch and Schneider).

4055. Colomesus psittacus (Bloch and Schneider).
River mouths, Guiana and northern Brazil; Rio Branco, Essequibo, Marañon, and Capin at Para; West Indies in fresh waters only.
Tetrodon psittacus Bloch and Schneider, Syst. Ichth., 1801, 505, "Malabar."
Cheilichthys asellus Müller and Troschel, in Schomburgk, British Guiana, III, 1848, 641, Guiana.

Family 300. CANTHIGASTERIDÆ. Sharp-nosed puffers

Genus 1452. CANTHIGASTER Swainson.
Canthigaster Swainson, Nat. Hist. Fish., Amphib., etc., II, 1835, 194 (*Tetraodon rostratus* Bloch, called *Psilonotus* later in the text).
Psilonotus Swainson, loc. cit., 1835, 328, same type.
Prilonotus (Kaup) Müller, Richardson, Voyage *Herald*, 1854, 162 (*Tetrodon rostratus* Bloch).
Tropidichthys Bleeker, Nat. Tijdschr. Neder-Indie, VI, 501 (*T. margaritatus* Bleeker).
Anosmius Peters, Monatsber. Akad. Wiss. Berlin, XXI, 1855, 274 (*T. tæniatus* Peters).
Eumycterias Jenkins, Bull. U. S. Fish Com., XIX, 1899, 399 (*E. bitæniatus* Jenkins).

4056. Canthigaster rostratus (Bloch).
West Indian fauna; Pensacola; Madeiras and Bermudas.
Tetrodon rostratus Bloch, Ichth., I, 1782, pl. 146, India.
Tetrodon capistratus Lowe, Proc. Zool. Soc. Lond., 1839, 90, Madeira.
Prilonotus (*Anchisomus*) *caudacinctus* Richardson, Voyage *Herald*, 1854, 162, pl. 30, figs. 1–3, locality unknown.
Tetrodon ornatus Poey, Synopsis, 1868, 433, Cuba.

4057. Canthigaster punctatissimus (Günther).
Pacific coast of America, Gulf of California to Panama.
Tetrodon punctatissimus Günther, Cat., VIII, 1870, 302, Panama.
Tetrodon oxyrhynchus Lockington, Proc. Acad. Nat. Sci. Phila., XXXIII, 1881, 116, Gulf of California.

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[94] This American form shows no distinction from the widespread *Tetraodon hispidus*.

Family 301. DIODONTIDÆ

Genus 1453. DIODON Linnæus. *Porcupinefishes.*
Diodon Linnæus, Syst. Nat., Ed. X, 1758, 335 (*D. hystrix* Linnæus).
Paradiodon Bleeker, Neder. Tijdschr. Dierk., II, 1865, 271 (*Diodon hystrix* Linnæus).

4058. Diodon hystrix Linnæus. *Porcupinefish; Erizo; Puerco espino; Soursap.*
Tropical seas, north to Lower California, Hawaii, and Florida.
Diodon hystrix Linnæus, Syst. Nat., Ed. X, 1758, 335, India; after Artedi.
Guamajacu guara Marcgrave, Hist. Nat. Bras., 1648, 159, Brazil.
Erizo Parra, Desc. Dif. Piezas Hist. Nat. Cuba, 1787, 60, pl. 29, fig. 1, Habana.
Le Diodon plumier Lacépède, Hist. Nat. Poiss., II, 1798, 1, pl. 3, fig. 3, Martinique.
Diodon brachiatus Bloch and Schneider, Syst. Ichth., 1801, 513, Cuba.
Diodon punctatus Cuvier, Mém. du Mus. d'Hist. Nat., IV, 1818, 132, no locality.
Diodon echinus Rafinesque, in Bonaparte, Cat. Met. Pisc. Eur., 1846, 87, Mediterranean Sea.

4059. Diodon holacanthus Linnæus. *Balloonfish.*
All warm seas; north to Florida Keys, Lower California, and Hawaiian Islands.
Diodon holocanthus Linnæus, Syst. Nat., ed. X, 1758, 335, India; based on Artedi (misprint).
Erizo guanabana Parra, Desc. Dif. Piezas Hist. Nat. Cuba, 1787, 62, pl. 29, fig. 2, Habana.
Le Diodon tacheté Lacepede, Hist. Nat. Poiss., II, 1798, 13, New Cytherea.
Diodon liturosus Shaw, Gen. Zool., V, 1804, 436; after Lacépède.
Diodon spinosissimus Cuvier, Mém. Mus. Hist. Nat., IV, 1818, 134, pl. 7, no locality.
Diodon novem-maculatus Cuvier, loc. cit., 136, pl. 6, no locality.
Diodon sex-maculatus Cuvier, loc. cit., 136, pl. 7, no locality.
Diodon multimaculatus Cuvier, loc. cit., 137, no locality.
Diodon 4-maculatus Cuvier, loc. cit., 137, pl. 6, Otaiti.
Diodon maculatus var. a, Günther, Cat., VIII, 1870, 307, St. Croix; Jamaica; Panama; South America, etc.; after Lacépède.
Diodon melanopsis Kaup, Wiegmann's Archiv, 1855, 228.

4060. Diodon maculifer Kaup.
Cape of Good Hope; recorded doubtfully from Cuba.
Diodon maculifer Kaup, Wiegmann's Archiv, 1855, 229, Cape of Good Hope.

Genus 1454. TRICHODIODON Bleeker.
Trichodiodon Bleeker, Atlas Ichth., Gymnodontes, V, 1867, 49 (*Diodon pilosus* Mitchill).
Trichocyclus Günther, Cat., VIII, 316 (*T. erinaceus* Günther).

4061. Trichodiodon pilosus (Mitchill). *Balloonfish; Hairy porcupinefish; Hairy boxfish.*
New York.
Diodon pilosus Mitchill, Trans. Lit. Phil. Soc. N. Y., I, 1815, 471; supposed to be from New York Harbor.
Diodon asper Cuvier, Mém. Mus. Hist. Nat., IV, 1818, 138; no locality.
?*Trichocyclus erinaceus* Günther, Cat., VII, 1870, 316; no locality.

Genus 1455. CYCLICHTHYS Kaup. *Swelltoads.*
Cyclichthys Kaup, Wiegmann's Archiv, XXI, 1855, 231 (*Diodon orbiculatus* Bloch).

4062. Cyclichthys schœpfi (Walbaum). *Burrfish; Cucumberfish; Spotted balloonfish; Balloonfish; Rabbitfish; Swellload; Spiny boxfish.*
Cape Cod to West Indies and occasionally northward to Woods Hole, Mass.
Diodon schœpfi Walbaum, Artedi Pisc., 1792, 601, Long Island; after Schöpf.
?*Diodon meulenii* Walbaum, loc. cit., 602; no locality.
Diodon geometricus lineatus Bloch and Schneider, Syst. Ichth., 1801, 513, New York.
Diodon maculato striatus Mitchill, Fish. N. Y., 470, pl. 56, fig. 3, 814, New York.
Diodon rivulatus Cuvier, Mém. Mus. Hist. Nat., IV, 1818, 129, pl. 6, New York.
Diodon nigrolineatus Ayres, Proc. Bost. Soc. Nat. Hist., I, 1842, 68, Brookhaven, Long Island.
Diodon verrucosus DeKay, N. Y. Fauna: Fishes, 324, 1842, pl. 56, fig. 184, New York.

4063. Cyclichthys spinosus (Linnæus).
West Indies and coast of Brazil.
Guamaicu atinga Marcgrave, Hist. Brasil., 1648, 168, Brazil.
Diodon spinosus Linnæus, Syst. Nat., Ed. X, 1758, 335, India.
Le Diodon orbe Lacépède, Hist. Nat. Poiss., II, 1798, 16, Rio Janeiro.
Diodon geometricus Bloch and Schneider, Ichth., 1801, 513, pl. 96, America.
Cyclichthys cornutus Kaup, Wiegmann's Archiv, 1855, 231, Bahia.

4064. Cyclichthys fuliginosus (DeKay). *Black burrfish; Unspotted balloonfish.*
Atlantic coast from Cape Cod southward; not common.
Diodon fuliginosus DeKay, N. Y. Fauna: Fishes, 1842, 324, pl. 55, fig. 181, New York Harbor.

4065. Cyclichthys antillarum (Jordan and Rutter).
Cuba and Jamaica.
Chilomycterus antillarum Jordan and Rutter, Proc. Acad. Nat. Sci. Phila., XLIX, 1897, 131, Kingston, Jamaica.

4066. Cyclichthys briareos (Metzelaar).
Lesser Antilles.
Chilomycterus briareos Metzelaar, Trop. Atl. Vissch., 1919, 173, fig. 55, St. Eustatius.

4067. Cyclichthys antennatus (Cuvier).
West Indies and southward; St. Croix; Jamaica; Porto Rico; Cape of Good Hope.
Diodon antennatus Cuvier, Mém. Mus. Hist. Nat., IV, 1818, 131; no locality.
?*Chilomycterus puncticulatus* Poey, Anal. Soc. Española Hist. Nat., X, 1881, 346, Porto Rico.

Genus 1456. CHILOMYCTERUS Bibron. *Burrfishes.*
Chilomycterus Bibron, in Barneville, Rev. Zool., 1846, 40 (*Diodon reticulatus* Linnæus=*Diodon atinga* Linnæus).
Cyanichthys Kaup, Wiegmann's Archiv, IV, 1855, 231 (*C. cærulæus* Kaup; not of Quoy and Gaimard).
Diodon Bleeker, Atlas Ind. Gymnod., 1865, 55 (*D. atinga*); not of authors, who, after Kaup, restrict *Diodon* to *D. hystrix*.

Subgenus CHILOMYCTERUS Bibron.

4068. Chilomycterus atinga (Linnæus). *Atinga.*
West Indies to Bermuda and Florida Keys.
Diodon atinga (misprinted *atringa*) Linnæus, Syst. Nat., Ed. X, 1758, 334, India.
Diodon reticulatus Linnæus, loc. cit., 334, India; after Artedi.

4069. Chilomycterus affinis Günther.
Galapagos; coast of southern California; Hawaii, Japan; scarce.
Chilomycterus affinis Günther, Cat., VIII, 1870, 314, no locality; California?
Chilomycterus californiensis Eigenmann, Amer. Nat., V, 1891, 1133, San Pedro, Calif.

Genus 1457. LYOSPHÆRA Evermann and Kendall.
Lyosphæra Evermann and Kendall, Bull. U. S. Fish Com., XVII, 1897, 131 (*L. globosa* Evermann and Kendall).

4070. **Lyosphæra globosa** Evermann and Kendall. *Marblefish.*
Atlantic coast of the United States; known from the mouth of the Rappahannock River and from Biscayne Bay, Fla.
Lyosphæra globosa Evermann and Kendall, Bull. U. S. Fish Com., XVII, 1897, 131, pl. 9, figs. 11 and 12, Rappahannock River near mouth of Windmill Creek, Va.

Family 302. MOLIDÆ. Headfishes

Genus 1458. MOLA Kœlreuter. *Headfishes.*
Mola Kœlreuter, Nova Comm. Act. Petropol., VII, 1770, 337 (*Diodon mola* Kœlreuter=*Diodon mola* Linnæus).
Mola Cuvier, Tableau Elem. Hist. Nat. Anim., 1798, 323 (*M. rotunda* Cuvier=*Tetrodon mola* Linnæus).
Orthogoriscus Schneider, ed. Bloch, Syst. Ichth., 1801, 510 (*Diodon mola* Bloch).
Cephalus Shaw, Gen. Zool., V, 1804, 432 (*Diodon mola* Linnæus).
Orthragus Rafinesque, Caratteri, 1810, 17 (*Tetrodon mola* Linnæus).
Diplanchias Rafinesque, loc. cit., 17 (*D. nasus* Rafinesque).
Tympanomium Ranzani. Novi Comm. Acad. Sci. Inst. Bonon., III, 1839, 81 (*T. planci* Ranzani).
Ozadura Ranzani, loc. cit., 81 (*O. orsini* Ranzani=*Mola mola* Linnæus).
Trematopsis Ranzani, loc. cit., 81 (*T. willughbeii* Ranzani).
Pedalion Swainson, Nat. Hist. Fish. Amphib. etc., I, 1838, 199, II, 195, 329 (*Tetrodon mola* Linnæus).
Molacanthus Swainson, loc. cit., II, 1839, 329 (*M. pallasi* Swainson=*Diodon mola* Pallas, young).
Pallasia Nardo, Ann. Sci. Lombardo-Veneto, X, 1839, V, 10, 112 (*P. pallasi* Nardo).
Acanthosoma DeKay, Nat. Hist. N. Y., 1842, 350 (*A. carinatum* DeKay).
Centaurus Kaup, Wiegemann's Archiv Naturg., XXI, 1855, 221 (*Ostracion boops* Richardson; larval).
Aledon Castelnau, Mém. Poiss., Afr. Aust., VII, 1861, 75 (*A. storeri* Castelnau).

4071. **Mola mola** (Linnæus). *Ocean sunfish; Globefish; Sunfish; Headfish; Mola; Pez luna; Pez mola.*
Temperate and tropical seas, northward to England, Cape Cod, and San Francisco; rare in the West Indies.
Tetrodon mola Linnæus, Syst. Nat., Ed. X, 1758, 334, 412, Mediterranean.
Diodon carinatus Mitchill, Ann. Lyc. Nat. Hist. New York, II, 1815, 264, pl. 5, fig. 1, New York.
Ozodura orsini Ranzani, Nov. Comm. Ac. Sci. Inst. Bonon., III, 1839, 82, Mediterranean Sea.
Tympanomium planci Ranzani, loc. cit., table, Adriatic Sea.
Diplanchias nasus Ranzani, loc. cit., table, "in marei siculo" (Sicily).
Trematopsis willughbei Ranzani, loc. cit., table, "in oceano."
Orthragoriscus retzii Ranzani, loc. cit., table, no locality.
Orthragoriscus ghini Ranzani, loc. cit., table, Mediterranean Sea.
Orthragoriscus rondeletii Ranzani, loc. cit., Mediterranean Sea.
Orthragoriscus blochii Ranzani, loc. cit., "in mari oceano."
Orthragoriscus alexandrini Ranzani, loc. cit., Adriatic Sea.
Orthragoriscus redi Ranzani, loc. cit., Mediterranean Sea.
Orthragoriscus oculeatus Ranzani, loc. cit., no locality.
Orthragoriscus elegans Ranzani, loc. cit., Atlantic Ocean.
Orthragoriscus battaræ Ranzani, loc. cit., Adriatic Sea.
Orthragoriscus lunaris Gronow, Cat. Fishes, ed. Gray, 1854, 165, Mediterranean.
Orthragoriscus solaris Gronow, loc. cit., 165, Mediterranean.
Orthragoriscus analis Ayres, Proc. Calif. Acad. Nat. Sci., II, 1859, 31, fig. 54, San Francisco.
Ostracion boops Richardson, Voy, *Erebus* and *Terror*, Ichth., 1844, 52, South Atlantic (larva).

Genus 1459. RANZANIA Nardo. *King of the mackerels.*
Ranzania Nardo, Ann. Sci. Regn. Lombard. Venet., X, 1840, 105 (*Tetrodon truncatus* Retzius).

4072. Ranzania truncata (Retzius).
Pelagic; occasionally on the Atlantic coast; Bermudas; Martinique.
Tetrodon truncatus Retzius, Vet. Ak. Nya. Handl., VI, 1785, 2, 121, Brazil.

4073. Ranzania makua Jenkins.
Open Pacific, Hawaii to Japan; very rare, once found on Pismo Beach near Oceano, San Luis Obispo County, Calif.
Ranzania makua Jenkins, Proc. Calif. Acad. Sci., 2d ser., V, 1895, 779, with colored plate (frontispiece), Honolulu; probably not different from *Ranzania truncata;* see Snyder, Proc. U. S. Nat. Mus., XLIV, 1913, 455.

Order AAA. PEDICULATI

Family 303. LOPHIIDÆ. Fishing frogs

Genus 1460. LOPHIUS Linnæus.
Lophius Linnæus Syst. Nat., Ed. X, 1758, 236 (*Lophius piscatorius* Linnæus); after Artedi.

4074. Lophius piscatorius Linnæus. *Fishing frog; Monkfish; Goosefish; Angler; Allmouth; Bellowsfish.*
North Atlantic, on both coasts.
Lophius piscatorius Linnæus, Syst. Nat., Ed. XII, 1766, 402, Seas of Europe.
Lophius americanus Cuvier and Valenciennes, Hist. Nat. Poiss., XII, 1837, 380, Philadelphia.

Genus 1461. LOPHIOMUS Gill.
Lophiomus Gill, Proc. U. S. Nat. Mus., V, 1882, 552 (*Lophius setigerus* Vahl.)

4075. Lophiomus setigerus (Vahl).
Pacific Ocean; not uncommon in rather deep water off coasts of China and Japan; one specimen from *Albatross* station 2805, southwest of Panama.
Lophius setigerus Vahl, Skrivt. Naturh., IV, 1797, 214, tab. 3, figs. 5 and 6, China Sea.
Lophius viviparus Bloch and Schneider, Syst. Ichth., 142, 1801, tab. 32, China Sea; after Vahl.

Family 304. ANTENNARIDÆ. Frogfishes

Genus 1462. HISTRIO Fischer.
Histrio[95] Fischer, Zoog., Tab. Syn. Illust., Ed. III, I, 1813 (*Lophius histrio* Linnæus).
Pterophryne Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 90 (*Chironectes lævigatus* Cuvier; name preoccupied).
Pterophrynoides Gill, Proc. U. S. Nat. Mus., I, 1878, 216 (*Chironectes lævigatus* Cuvier); substitute for *Pterophryne*).

4076. Histrio pictus (Cuvier and Valenciennes). *Mousefish; Sargassumfish.*
Tropical parts of the Atlantic; abundant on our Gulf coast and occasional to Cape Hatteras and beyond.
Lophius tumidus Osbeck, Iter Chinensis, 1757, 400, open sea; pre-Linnæan.
Chironectes pictus Cuvier and Valenciennes, Hist. Nat. Poiss., XII, 1837, 393, Surinam.
Chironectes tumidus Cuvier and Valenciennes, loc. cit., 397, Sargasso Sea.
Chironectes arcticus Düben and Koren, K. Vet. Akad. Stockholm, 1844, 72, Vadsö, Norway, carried northward on the Gulf Stream.

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[95] Name questionable on account of error in the published diagnosis, the description interchanged with that of *Lophius*.

4077. Histrio gibba (Mitchill).
West Indies, north to Key West and the Tortugas.
Lophius gibbus Mitchill, Trans. Lit. Phil. Soc. N. Y., I, 1815, 1, pl. 4, fig. 9, off St. Croix, lat 22° N., long. 64° W.
Chironectes lævigatus Cuvier, Mém. Mus., III, 1817, 423, pl. 16, fig. 1; South Carolina.

4078. Histrio jagua Nichols.
Bermuda.
Histrio jagua Nichols, Proc. Biol. Soc. Wash., XXXIII, 1920, 62, Bermuda.

Genus 1463. ANTENNARIUS[96] **Lacépède.**
Antennarius Lacépède, Hist. Nat. Poiss., I, 1798, 421 (*Antennarius bivertex totus ater puncto mediorum, laterum albo* Commerson (in footnote)=*Lophius commersonianus* Lacépède).
Chironectes Cuvier, Mém. Mus., III, 1817, 418 (*Lophius commersonianus* Lacépède).
Capellaria Gistel, Thierreich, VIII, 1848 (*Lophius commersonianus* Lacépède).

4079. Antennarius scaber (Cuvier).
Caribbean Sea; Port Castries; St. Lucia.
Chironectes scaber Cuvier, Mém. Mus., III, 1817, 425, pl. 16, fig. 2, Martinique.
Lophius spectrum Gronow, Cat. Fish., ed. Gray, 1854, 49, Antilles; after *Lophius acute scabra* Gronow, Zoophyl., 1781, 210.

4080. Antennarius inops Poey.
Porto Rico.
Antennarius inops Poey, Anal. Soc. Esp. Hist. Nat., X, 1881, 340 Porto Rico.

4081. Antennarius principis (Cuvier and Valenciennes).
West Indies to Brazil.
Chironectes principis Cuvier and Valenciennes, Hist. Nat. Poiss., XII, 1837, 416, Brazil; on a drawing by Prince Maurice.
?*Chironectes mentzeli* Cuvier and Valenciennes, loc. cit., 416, Brazil; on a drawing.

4082. Antennarius tenebrosus (Poey).
Cuba.
Chironectes tenebrosus Poey, Memorias, I, 1853, 219, pl. 17, fig. 1, Cuba.

4083. Antennarius reticularis Gilbert.
Gulf of California; only the type known.
Antennarius reticularis Gilbert, Proc. U. S. Nat. Mus., XIV, 1891, 566; Gulf of California at *Albatross* station 2825.

4084. Antennarius strigatus Gill.
Cape San Lucas; Panama.
Antennarius strigatus Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 92; Cape San Lucas.
Antennarius tenuifilis Günther, Fish. Cent. Amer., 1869, 440, Panama; young.

4085. Antennarius sanguineus Gill.
Pacific coast of tropical America, Cape San Lucas to Panama; scarce.
Antennarius sanguineus Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 91; Cape San Lucas.
Antennarius leopardinus Günther, Proc. Zool. Soc. Lond., 1864, 151; Panama.

4086. Antennarius ocellatus (Bloch and Schneider).
West Indies, north to Florida.
Pescador Parra, Dif. Piezas, Hist. Nat., 1780, 1, tab. 1, Cuba.
Lophius histrio, var. *ocellatus* Bloch and Schneider, Syst. Ichth., 142, 180; after Parra.
Antennarius pleuropthalmus Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 92; Key West.

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[96] These fishes vary nordinately in color and more or less in form. It is likely that the number of species should be reduced.

4087. Antennarius tigris (Poey).
Cuba.
Chironectes tigris Poey, Memorias, I, 1853, 217, pl. 17, fig 2; Cuba.

4088. Antennarius nuttingii Garman.
Great Bahama Banks.
?*Chironectes mentzelii* Cuvier and Valenciennes, Hist. Nat. Poiss., XII, 1837, 417; Brazil; on a drawing by Prince Maurice.
Antennarius nuttingii Garman, Bull. Iowa Lab. Nat. Hist., 1896, 83, Pl. II; Great Bahama Banks.

4089. Antennarius multiocellatus (Cuvier and Valenciennes). *Martin pescador.*
Garden Key, Fla., to Martinique.
Chironectes multiocellatus Cuvier and Valenciennes, Hist. Nat. Poiss., XI, 1837, 422, Martinique.
Antennarius annulatus Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 91, Garden Key, Fla.
Antennarius corallinus Poey, Repertorio, I, 1865, 188, Cuba.

4090. Antennarius radiosus Garman.
Key West.
Antennarius radiosus Garman, Bull. Lab. Nat. Hist. Iowa Univ., 1896, 85, pl. 1, off Key West in 50 fathoms.

4091. Antennarius sonntagii (Baron Müller).
Gulf of Mexico.
Chironectes sonntagii Baron J. W. von Müller, Reisen in den Verein. Staat., etc., Band I, 1864, 180, in floating seaweed, no exact locality stated.

4092. Antennarius avalonis Jordan and Starks.
Santa Barbara Islands.
Antennarius avalonis Jordan and Starks, Proc. U. S. Nat. Mus., XXXII, 1907, 77, fig. 8, Santa Catalina Island at Avalon, Calif.

4093. Antennarius verrucosus Bean.
Bermudas.
Antennarius verrucosus Bean, Proc. Biol. Soc. Wash., XIX, 1906, 31, St. George Island, Bermuda Islands.

4094. Antennarius astroscopus Nichols.
Barbados.
Antennarius astroscopus Nichols, Bull. Amer. Mus. Nat. Hist., XXXI, 1912, 109, Barbados.

Family 305. CHAUNACIDÆ

Genus 1464. CHAUNAX Lowe.
Chaunax Lowe, Proc. Zool. Soc. Lond., XIV, 1846, 339 (*C. pictus* Lowe).

4095. Chaunax pictus Lowe.
Madeira; taken off the coast of Rhode Island in the Gulf Stream.
Chaunax pictus Lowe, Trans. Zool. Soc. Lond., 1846, 339, Camera de Lobos, Madeira.

4096. Chaunax nuttingi Garman.
Florida Keys,
Chaunax nuttingi Garman, Bull. Nat. Hist. Iowa Univ., 1896, 86, Sand Key Light, Fla.

Family 306. OGCOCEPHALIDÆ. Batfishes

Genus 1465. OGCOCEPHALUS Fischer. *Seabats.*
Ogcocephalus Fischer, Zoognosia, ed. 3, I, 1813, 70, 78 (*Lophius vespertilio* Linnæus).
Oncocephalus Gill, corrected spelling.
Malthe Cuvier, Règne Anim., ed. 1, II, 1817, 311 (*Lophius vespertilio* Linnæus).
Malthæa of authors, modified spelling.

4097. Ogcocephalus vespertilio (Linnæus). *Batfish; Diablo.*
West Indies, north to Carolina.
Lophius vespertilio Linnæus, Syst. Nat., Ed. X, I, 1758, 236, American seas; after *Lophius fronti unicorni* of Artedi.

4098. Ogcocephalus nasutus (Cuvier and Valenciennes).
West Indies.
Malthæa nasuta Cuvier and Valenciennes, Hist. Nat. Poiss., XII, 1837, 452, Martinique.
Malthæa notata Cuvier and Valenciennes, loc. cit., 453, Surinam; snout 15 in length; body spotted.

4099. Ogcocephalus radiatus (Mitchill).
Coast of Florida and neighboring waters; very common in shallow bays among weeds, especially about the Florida keys.
Lophius radiatus Mitchill, Amer. Month. Mag., March, 1818, 326, Straits of the Bahamas.
Malthe cubifrons Richardson, Fauna Bor.-Amer., III, 1836, 103; said to be from Labrador, which is certainly an error.
?*Malthæa truncata* Cuvier and Valenciennes, Hist. Nat. Poiss., XII, 1837, 454, America; snout wholly obsolete; perhaps a species of *Zalieutes*.

Genus 1466. ZALIEUTES Jordan and Evermann.
Zalieutes Jordan and Evermann, Check List, 1895, 511 (*Malthe elater* Jordan and Gilbert).

4100. Zalieutes elater (Jordan and Gilbert).
Pacific coast of Mexico, south to Panama, in water of moderate depth; very rare near the shore but obtained in abundance by the *Albatross* at stations 2794 and 2795 near Panama.
Malthe elater Jordan and Gilbert, Proc. U. S. Nat. Mus., IV, 1881, 365, Mazatlan.

Genus 1467. MALTHOPSIS Alcock.
Malthopsis Alcock, Deep Sea Fish. Invest., Ann. Mag. Nat. Hist., VIII, 1891, 26 (*M. luteus* Alcock).

4101. Malthopsis spinosa Garman.
Off Bay of Panama in deep water.
Malthopsis spinosa Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 104, Pl. XXII, *Albatross* stations 3392 and 3393, off Panama, in 1,020 to 1,270 fathoms.

4102. Malthopsis spinulosa Garman.
Off Bay of Panama, in deep water.
Malthopsis spinulosa Garman, Mem. Mus. Comp. Zool., XXIV, 1899, 106, Pls. XXI, XXVI, *Albatross* station 3394, lat. 7° 21″ N., long. 79° 35′ W. in 511 fathoms.

Genus 1468. HALIEUTICHTHYS Poey.
Halieutichthys Poey, Proc. Acad. Nat. Sci. Phila., XV, 1863, 90 (*H. reticulatus* Poey=*Lophius aculeatus* Mitchill).

4103. Halieutichthys aculeatus (Mitchill).
Cuba to southern Florida.
Lophius aculeatus Mitchill, Amer. Month. Mag., II, 1818, 325, Straits of Bahamas.
Halieutichthys reticulatus Poey, in Gill, Proc. Acad. Nat. Sci. Phila., XV, 1863, 91, Cuba.

4104. Halieutichthys caribbæus Garman.
Jamaica to Barbados, in depths of 70 to 150 fathoms or more.
Halieutichthys caribbæus Garman, Bull. Lab. Nat. Hist. Iowa Univ., 1896, 87, pl. 4, fig. 2, Jamaica to Barbados.

4105. Halieutichthys smithii Evermann and Marsh.
Porto Rico.
Halieutichthys smithii Evermann and Marsh, Bull. U. S. Fish Com., XX, 1900, 339, fig. 112, Mayaguez Harbor, Porto Rico.

Genus 1469. HALIEUTÆA Cuvier and Valenciennes.
Halieutæa Cuvier and Valenciennes, Hist. Nat. Poiss., XII, 1837, 455 (*H. stellata* Cuvier and Valenciennes).

4106. Halieutæa spongiosa Gilbert.
Pacific Ocean, off Lower California.
Halieutæa spongiosa Gilbert, Proc. U. S. Nat. Mus., XIII, 1890, 124, west of Revillagigedo Islands, at *Albatross* station 2992, lat. 18° 17′ 30″ N., long. 114° 43′ 15″ W., in 460 fathoms.

Genus 1470. HALIEUTELLA Goode and Bean.
Halieutella Goode and Bean, Proc. Biol. Soc. Wash., II, 1885, 88 (*H. lappa* Goode and Bean).

4107. Halieutella lappa Goode and Bean.
Gulf Stream.
Halieutella lappa Goode and Bean, Proc. Biol. Soc. Wash., II, 1882, 88, Gulf Stream at *Fish Hawk* station 1151, lat. 39° 58′ 30″ N., long. 70° 37′ W., in 125 fathoms.

Genus 1471. DIBRANCHUS Peters.
Dibranchus Peters, Monatsber. Akad. Wiss. Berlin, 1875, 736 (*D. atlanticus* Peters).

4108. Dibranchus atlanticus Peters.
Gulf Stream.
Dibranchus atlanticus Peters, Monatsber. K. Akad. Wiss. Berlin, 1875, 736, with plate; West Africa, lat. 10° N. long. 17° W., in 360 fathoms.

Family 307. CERATIIDÆ. Sea devils

Genus 1472. CERATIAS Krøyer.
Ceratias Krøyer, Naturhist. Tidsskr., I, 1845, 639 (*C. hollbolli* Krøyer).

4109. Ceratias hollbolli Krøyer.
Greenland to Nova Scotia; four specimens known.
Ceratias hollbolli Krøyer, Naturh. Tidsskr., 1844, 639, Greenland.

Genus 1473. MANCALIAS Gill.
Mancalias Gill, Proc. U. S. Nat. Mus., I, 1878, 227 (*Ceratias uranoscopus* Murray).
Typhlosaras Gill, Forest and Stream, 1883, Nov. 8, 284 (*T. shufeldti* Gill).

4110. Mancalias uranoscopus (Murray).
Deep seas; taken at Madeira and off the coast of southern New England.
Ceratius uranoscopus Murray, in Wyville Thompson, The Atlantic, II, 1878, 67, off Madeira.

4111. Mancalias shufeldti (Gill).
Western Atlantic.
Typhlosaras shufeldti Gill, Forest and Stream, November 8, 1883, 284, western Atlantic.

Genus 1474. CRYPTOSARAS Gill.
Cryptosaras Gill, Forest and Stream, Nov. 8, 1883 (*C. couesi* Gill).

4112. Cryptosaras couesii Gill.
Gulf Stream.
Cryptosaras couesii Gill, Forest and Stream, Nov. 8, 1883, 284, Gulf Stream off New England.

Genus 1475. EDRIOLYCHNUS Regan.
Edriolychnus Regan, Proc. Roy. Soc. Lond., ser. B, XCVII, 1925, 398 (*E. schmidti* Regan).

4113. Edriolychnus schmidti Regan.
Deep waters of the western Atlantic.
Edriolychnus schmidti Regan, Proc. Royal Soc. Lond., ser. B, XCVII, 1925, 398, western Atlantic; *Dana* expedition.

Genus 1476. MONOCERATIAS Gilbert.
Monoceratias Gilbert, Proc. U. S. Nat. Mus., XLVIII, 1915, 379 (*M. acanthias* Gilbert).

4114. Monoceratias acanthias Gilbert.
Off Santa Barbara Islands, Calif.
Monoceratias acanthias Gilbert, Proc. U. S. Nat. Mus., XLVIII, 1915, 379, pl. 22, fig. 24, off Santa Cruz Island, 764 to 891 fathoms.

Genus 1477. BOROPHRYNE Regan.
Borophryne Regan, Ann. Mag. Nat. Hist., ser. 9, XV, 1925, 564 (*B. apogon* Regan).

4115. Borophryne apogon Regan.
Gulf of Panama.
Borophryne apogon Regan, Ann. Mag. Nat. Hist., ser. 9., XV, 1925, 564, Gulf of Panama.

Genus 1478. PHOTOCORYNUS Regan.
Photocorynus Regan, Proc. Roy. Soc. Lond., ser. B, XCVII, 1925, 393 (*P. spiniceps* Regan).

4116. Photocorynus spiniceps Regan.
Deep waters of Panama.
Photocorynus spiniceps Regan, Proc. Roy. Soc. Lond., ser. B, XCVII, 1925, 393, figs. 6–7, deep waters off Panama.

Family 308. HIMANTOLOPHIDÆ

Genus 1479. ONEIRODES Lütken.
Oneirodes Lütken, Overs. Dansk. Vid. Selsk. Kjøbenhavn, 1871, 56 (*O. eschrichtii* Lütken).

4117. Oneirodes eschrichtii Lütken.
Deep sea off Greenland.
Oneirodes eschrichtii Lütken, Overs. Dansk. Vid. Selsk. Forhandl., 1871, 56, 9–18, pl. 2, deep sea off Greenland.

Genus 1480. HIMANTOLOPHUS Reinhardt.
Himantolophus Reinhardt, Dansk. Vid. Selsk. Afh. Kjøbenhavn, VII, 1838, 74 (*H. grœnlandicus* Reinhardt).

4118. Himantolophus grœnlandicus Reinhardt.
Greenland.
Himantolophus grœnlandicus Reinhardt, Dansk. Vid. Selsk. Nat. Math. Afh., 1837, 74, Greenland.

Genus 1481. LOPHODOLUS Lloyd.
Lophodolus Lloyd, Mem. Indian Mus., II, 1909, 167 (*L. indicus* Lloyd).

4119. Lophodolus acanthognathus Regan.
North Atlantic.
Lophodolus acanthognathus Regan, Ann. Mag. Nat. Hist., 9 ser., XV, May, 1925, 563, north Atlantic.

Genus 1482. CORYNOLOPHUS Gill.
Corynolophus Gill, Proc. U. S. Nat. Mus., I, 1878, 219 (*Himantolophus reinhardtii* Lütken).

4120. Corynolophus reinhardtii (Lütken).
Greenland; one specimen known.
Himantolophus reinhardtii Lütken, Köng. Dansk. Vid. Selsk.. 1878, 321, Greenland. Perhaps a species of *Himantolophus*.

Genus 1483. DOLOPICHTHYS Garman.
Dolopichthys Garman in Mem. Mus. Comp. Zool., XXIV, 1899, 81, (*D. allector* Garman).

4121. Dolopichthys gracilispinis Regan.
North Atlantic.
Dolopichthys gracilispinis Regan, Ann. Mag. Nat. Hist., 9 ser., XV, May, 1925, 563, north Atlantic.

4122. Dolopichthys microlophus Regan.
North Atlantic.
Dolopichthys microlophus Regan, Ann. Mag. Nat. Hist., 9 ser., XV, May, 1925, 563, north Atlantic.

4123. Dolopichthys anisacanthus Regan.
North Atlantic.
Dolopichthys anisacanthus Regan, Ann. Mag. Nat. Hist., 9 ser., XV, May 1925, 562, north Atlantic.

4124. Dolopichthys luetkeni Regan.
Gulf of Panama.
Dolopichthys luetkeni Regan, Ann. Mag. Nat. Hist., 9 ser., XV, May, 1925, 562, Gulf of Panama.

4125. Dolopichthys heteracanthus Regan.
Gulf of Panama.
Dolopichthys heteracanthus Regan, Ann. Mag. Nat. Hist., 9 ser., XV, May, 1925, Gulf of Panama.

Genus 1484. LASIOGNATHUS Regan.
Lasiognathus Regan, Ann. Mag. Nat. Hist., 9 ser., XV, 1925, 563 (*L. saccostoma* Regan).

4126. Lasiognathus saccostoma Regan.
Caribbean Sea.
Lasiognathus saccostoma Regan, Ann. Mag. Nat. Hist., 9 ser., XV, May, 1925, 563, Caribbean Sea.

Genus 1485. LINOPHRYNE Collett.
Linophryne Collett, Proc. Zool. Soc. Lond., 1886, 138 (*L. lucifer* Collett).

4127. Linophryne lucifer Collett.
Open Atlantic.
Linophryne lucifer Collett, Proc. Zool. Soc. Lond., 1886, 138, pl. 15, off Madeira, lat. 36° N., long. 20° W.

4128. Linophryne polypogon Regan.
North Atlantic.
Linophryne polypogon Regan, Ann. Mag. Nat. Hist., 9 ser., XV, May, 1925, 565, north Atlantic.

4129. Linophryne arborifer Regan.
North Atlantic.
Linophryne arborifer Regan, Ann. Mag. Nat. Hist., 9 ser., XV, May, 1925, 564, north Atlantic.

4130. Linophryne macrodon Regan.
Gulf of Panama.
Linophryne macrodon Regan, Ann. Mag. Nat. Hist., 9 ser., XV, May, 1895, 564, Gulf of Panama.

Genus 1486. CHÆNOPHRYNE Regan.
Chænophryne Regan, Ann. Mag. Nat. Hist., 9 ser., XV, May, 1925, 564 (*C. longiceps* Regan).

4131. Chænophryne longiceps Regan.
North Atlantic and Gulf of Panama.
Chænophryne longiceps Regan, Ann. Mag. Nat. Hist., 9 ser., XV, May, 1925, 564, north Atlantic.

Family 309. MELANOCETIDÆ

Genus 1487. MELANOCETUS Günther.
Melanocetus Günther, Proc. Zool. Soc. Lond., 1864, 301 (*M. johnsoni* Günther).

4132. Melanocetus polyactis Regan.
Gulf of Panama.
Melanocetus polyactis Regan, Ann. Mag. Nat. Hist., 9 ser., XV, May, 1925, 565, Gulf of Panama.

4133. Melanocetus niger Regan.
Gulf of Panama.
Melanocetus niger Regan, Ann. Mag. Nat. Hist., ser. 9, XV, May, 1925, 565, Gulf of Panama.

Genus 1488. LYOCETUS Günther.
Lyocetus Günther, *Challenger* Rept., XXII, 1887, 57 (*L. murrayi* Günther).

4134. Lyocetus murrayi (Günther).
Mid-Atlantic at *Challenger* stations 106 and 348.
Melanocetus (*Liocetus*) *murrayi* Günther, *Challenger* Rept., XXII, 1887, 57, pl. 11, fig. A, mid-Atlantic.

Family 310. CAULOPHRYNIDÆ

Genus 1489. CAULOPHRYNE Goode and Bean.
Caulophryne Goode and Bean, Oceanic Ichth., 1895, 496 (*Caulophryne jordani* Goode and Bean).

4135. Caulophryne jordani Goode and Bean.
Gulf Stream.
Caulophryne jordani Goode and Bean, Oceanic Ichth., 1895, 496, pl. 21, fig. 409, Gulf Stream off Carolinas in 1,276 fathoms.

Family 311. ACERATIIDÆ

Genus 1490. RHYNCHOCERATIAS Regan.
Rhynchoceratias Regan, Ann. Mag. Nat. Hist., 9 ser., XV, May, 1925, 566 (*R. brevirostris* Regan).

4136. Rhynchoceratias leucorhinus Regan.
North Atlantic and Gulf of Panama.
Rhynchoceratias leucorhinus Regan, Ann. Mag. Nat. Hist., 9 ser., XV, May, 1925, 566, north Atlantic.

4137. Rhynchoceratias rostratus Regan.
Gulf of Panama.
Rhynchoceratias rostratus Regan, Ann. Mag. Nat. Hist., 9 ser., XV, May, 1925, 567, Gulf of Panama.

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