



noaa week

U.S. Department of Commerce
NOAA
National Climatic Center

Volume 6 Number 37

LIBRARY September 12, 1975

North Pacific Fisheries Agreement Is Signed

New North Pacific fisheries agreements between the United States and the Soviet Union, signed recently in Washington, D.C., have established lower quotas and reduced the areas and time periods of Soviet fishing operations in international waters adjacent to the U.S.

The agreements, which cover an area from California north to Alaska, including the Bering Sea, and are effective through December 31, 1976, are the result of negotiations conducted during July.

Robert W. Schoning, Director of the National Marine Fisheries Service and a member of the U.S. Delegation that negotiated the agreements, said he considered the agreements "real progress toward our goal of protecting stocks of special interest to U.S. fisheries. The Soviets have agreed to improve their methods of reporting catch statistics and have taken steps to control the taking of our Continental Shelf resources by their vessels."

The "Agreement Regarding Fisheries in the Northeastern Pacific Ocean off the Coast of the United States of America" provides:

-Continued protection for the important recreational and commercial salmon fishing grounds between Grays Harbor and the Columbia River. The Soviets are

(Continued on page 4)

H. W. Pollock Is Honored By Houston U.

Howard W. Pollock, NOAA's Deputy Administrator, has been chosen Distinguished Alumnus of 1975 by the University of Houston. He will accept the award at a dinner in Houston on September 26.

In 1955, the year Mr. Pollock received his Doctor of Jurisprudence degree from University, he was selected as Outstanding Student and also as the Graduate of the Year by the Phi Delta Phi Legal Fraternity. In 1968 he was named Outstanding Law School Alumnus of the Year.

His many other honors have included being chosen one of the ten Outstanding Young Men of the United States in 1955; receiving the George Washington Honor Medal from the Freedoms Foundation at Valley Forge, Pa., in 1966; and being elected to the Hall of Fame of the Gulf Coast Junior College System, Perk-

(Continued on page 2)



Mr. Pollock

Jefferson, Holm Awards Announced

The National Weather Service has announced that eight volunteer weather observers will receive 1975 Thomas Jefferson Awards and 29 will receive 1975 John Campanius Holm Awards.

The 37 persons were selected from the nearly 13,000 volunteer observers who make daily readings of temperature, rainfall, and other weather conditions as a service to the Nation.

Monthly the volunteers mail their readings—kept on NWS forms—to the Environmental Data Service's National Climatic Center in Asheville, N.C. There, the thousands of individual records are processed and published in NOAA's "Climatological Data" to become a part of the world's weather history.

The Jefferson and Holm awards were originated by the NWS in 1959, and are the top honors in a series of awards for which volunteer observers may qualify. They are given for "unusual and outstanding accomplishments" in meteorological observations.

This year's winners of the award honoring Jefferson, who kept a daily record of the weather almost continuously from 1776 to 1816 are:

-H. Wirt Bouchelle, of Elk-

(Continued on page 2)

Privacy Act Effective September 27

Public Law 93-579, commonly called the Privacy Act of 1974, is effective September 27, 1975. The Act is intended to protect records and other information pertaining to individuals from unauthorized disclosure. It also gives individuals access to their own records and permits employees to request that these records be changed, if incorrect. Further, it provides a means for contesting any information in the record. There are, however, certain types of records that still may not be disclosed to the individual.

The implementation of the Act is complex, since it covers all records of individuals which can be retrieved by some identi-

(Continued on page 2)

NOAA Undersea Program Featured by AOO

A Senator, a Congressman and a NOAA Administration official who spent three days in a habitat 60 feet under the sea this summer will report on their experiences before the American Oceanic Organization.

Sen. Lowell Weicker of Connecticut, Cong. Bill Alexander of Arkansas, and Howard W. Pollock, Deputy Administrator of NOAA, will address the AOO's September luncheon on Thursday, Sept. 18, in Room 339, Rayburn House Office Building.

Sen. Weicker, a member of the Senate Commerce Committee, and Cong. Alexander, of the House Appropriations Committee's Subcommittee on State,

Commerce, Justice and the Judiciary, made their undersea expedition August 3-6.

Their undersea home was the Perry Hydro-Lab, a 16-foot-long cylinder off Freeport, the Bahamas. Their objective was to learn as much as possible about the practicalities of living and working while saturated in the oceans. They participated in numerous experiments under way by NOAA scientists. Prior to returning to land, they underwent 14 hours of decompression in the habitat.

Their assessment of the Nation's need for intensified use of the oceans for food and other vital resources is to be a highlight of the AOO session.



THE CHIEFS OF THE THREE METEOROLOGICAL SERVICES IN THE UNITED STATES, (from left) Col. Barry W. Rowe, Commander of the Air Weather Service; Dr. George P. Cressman, Director of the National Weather Service; and Capt. Willard S. Houston, Chief of the Naval Weather Service, recently attended, at NOAA's Rockville, Md., Headquarters, the first meeting of the Working Group on Meteorology under the Interdepartmental Board for the Cooperation of NOAA with the Department of Defense. The working group is one of seven established by the Departments of Commerce and Defense in accordance with Public Law 89-657, dated Oct. 14, 1966. William S. Barney, Director of the Operations, Logistics, and Emergency Planning Office in NOAA's Office of Environmental Monitoring and Prediction, is Chairman of the Interdepartmental Board.

notes about people

Dr. Rex J. Fleming has joined the NOAA Staff as Director of the U.S. First GARP Global Experiment (FGGE) Project Office. He will be responsible for coordinating the activities of all U.S. agencies, universities and other participating institutions and will serve as the focal point for coordinating with international organizations involved in the FGGE. Dr. Fleming recently was manager of applications with Texas Instruments Inc., in Austin, Tex., and earlier served as liaison between the Air Weather Service and the National Weather Service.



Dr. Fleming

Dr. Elbert H. Ahlstrom, Senior Scientist at the Fisheries Service Southwest Fisheries Center's laboratory in La Jolla, Calif., was nominated by the Fellows of the San Diego Society of Natural History and has been selected Scientist-of-the-Year by the Natural History Museum Board of Trustees. He was cited for the outstanding contributions his larval fish research has made to natural science, not only locally, but nationally and internationally. He will formally accept the honor at the 101st Anniversary Dinner of



Dr. Ahlstrom

the Trustees at the Museum of Natural History in San Diego, on Oct. 17.

Billy J. Crouch, who has been Principal Assistant at the New Orleans office of the National Weather Service since 1971, has been selected to head the Lubbock, Tex., Weather Forecast Office. He will replace Young T. Sloan, who has retired.



Mr. Crouch

With the NWS since 1956, Mr. Crouch served earlier at Birmingham, Ala.; with the Polar Operations Project, Eureka, Canada; and at Anchorage, Alaska.

Robert L. Storey, who has been serving as Principal Assistant at the National Weather Service Office in Spokane, Wash., has been named Official in Charge of the Stockton, Calif., WSO. He replaces David Powell, who has retired. With the NWS since 1962, Mr. Storey served earlier at San Francisco, Pittsburgh, Cincinnati, and Salt Lake City.



Mr. Storey

Pollock Honored

(Continued from page 1)
 inston Campus, Miss., in 1972. He received his Master of Science degree in industrial management from Massachusetts Institute of Technology in 1960.

Mr. Pollock served as the Congressman for Alaska prior to being appointed to his present position by President Nixon when NOAA was established in 1970. He was reaffirmed in the position by President Ford.

WaKeeney, Kans.; Edward Guess, Brookhaven, Miss.; Ernie A. Kock, Sedgwick, Kans.; Mrs. Maxine Leach, Phillippi, W. Va.; John O. Lewis, Marion, S.C.; Winfred B. Lucas, Frankfort, Kans.; Theodore F. Machat, McCook, Tex.; Virgil L. Mathias, Mathias, W. Va.; George L. Mitchell, State Farm, Va.; Hermon Moore, Monroe, N.C.; Guy J. Moyer, Kobuk, Alaska; Miss Thyra M. Nelson, Kaufman, Colo.; Franklin D. Nusbaum, Preston, Md.; Floyd R. Poole, Pacific House, Calif.; Walter C. Rabe, Belle Plaine, Iowa; Rollin L. McKeever, Wauseon, Ohio; Mrs. Edith Stevens, Driggs, Idaho; John T. Wade, Soldier, Iowa; and John B. Webb, Tylertown, Miss.

best fish buys

According to the NMFS National Fishery Education Center in Chicago, the best fish buys for the next week or so are likely to be fillets of haddock and whole bluefish along the Northeast Seaboard; fresh whole croaker and spot in the Middle Atlantic States, including the D.C. area; speckled trout and fresh mullet in the Southeast and along the Gulf coast; smoked chubs and fresh lake trout in the Midwest; fillets of sole and red snapper in the Northwest; and fresh fillets of rockfish and butterfish in the Southwest.

Jefferson, Holm Award Winners Announced

(Continued from page 1)

ton, Md., who has provided local weather information for his community for 48 years. Now retired from a Postal Service career which spanned five decades—three as postmaster—he is still active in city and county civic affairs. He won the Holm award in 1967.

—Harry S. Buckner, of Stehekin, Wash., an orchardist, storekeeper, and postmaster who has kept annotated climatic records for 58 years. He lives on Lake Chelan, in a remote area of North Cascades National Park, reached only by a 55-mile boat trip or in a small, pontoon-equipped plane.

—Junius L. Crowther, of Malad, Idaho, who has continued weather observations there since the death in 1926 of his father, who had maintained weather records since 1917. Now a retired businessman, he is still active in the community and continues the weather station with an occasional assist from his son. He received the Holm award in 1969.

—James C. Faris, Jr., of Catawba, S.C., who for 41 years has collected and disseminated river and rainfall data, continuing a tradition begun by his father in 1907. He also furnishes the information to local newspapers and radio stations. He received the Holm award in 1965.

—Robert W. Ford, of Cherry Grove, Oreg., whose record of more than 39 years of volunteer weather observing and reporting has benefited his community, his State and the Nation. He is a substitute rural mail carrier, and is active in his church and community. He received the Holm award in 1967.

—Richard G. Hendrickson, of Bridgehampton, N.Y., who is particularly interested in violent

coastal storms in his area. His observations of wind, pressure, and other weather elements are published in several Long Island newspapers, and he frequently gives weather talks to schools, clubs and civic groups. A poultry farmer, he began his weather hobby in 1930.

—Torfinn Opjorden, of Milan, Minn., who has made weather observations there since 1925, continuing a family tradition begun by his father in 1893 and carried on by his sister, Regna, from 1921-1925. He has trained his son to take over the work, and has a grandson awaiting his turn. He received the Holm award in 1960.

—William M. Ray, of Bridgeville, Del., whose service to his farming community includes providing weather information to farmers, local canneries, and the University of Delaware Agricultural Experiment Station. A farmer himself, he "temporarily" took over his father's weather station—began in 1924—at his father's death in 1935, and is still operating it. He previously received the Holm award.

This year's winners of the Holm award, named for the Lutheran minister who took daily observations at Fort Christina (near Wilmington), Del., in 1644 and 1645—the earliest known systematic U.S. weather records—are Mrs. Stella H. Asling, Diamond Springs, Kans.; Mrs. Katherine Bates, Hawley, Pa.; Ivan L. Boyd, Baldwin, Kans.; Arthur E. Buskala, Buskala Ranch, S.Dak.; Miss Helen Crane, Grandfield, Okla.; J. E. Dickey, Centerville, Tex.; Mrs. Edith Force, Modena, Utah; John R. Fox, Parkton, Md.; Hugh H. Frank, Columbia City, Ind.; Jack E. Gibbard, Willis Point, Tex.; Schuyler W. Gibson,

Privacy Act

(Continued from page 1)

ifying item, such as name or Social Security number. All of the ramifications of the Act have not been fully explored. Therefore, this article cannot provide specific details; it is to acquaint NOAA employees with the facts that the Privacy Act does exist and will be effective September 27, 1975, and that NOAA is working with the Department to determine its effect on employees and to determine precisely how it will be implemented. As further clarification is developed, employees will be informed either through further NOAA WEEK articles or some other immediate means.

A focal point has been designated within each POE to provide assistance and guidance to employees seeking information or records within the purview of the Privacy Act during this interim period. Names and addresses of the focal points may be obtained from Kathy Lewis on 301-496-8913.

noaa week

Published weekly at Rockville, Md., by the Office of Public Affairs for the information of employees of the Commerce Department's National Oceanic and Atmospheric Administration.

Articles to be considered for publication should be submitted at least a week in advance to NOAA Week, Room 221, WSO, 5, Office of Public Affairs, National Oceanic and Atmospheric Administration, Rockville, Md. 20852.

NOAA Week reserves the right to make corrections, changes or deletions in submitted copy in conformity with the policies of the paper or the Administration.

Catherine S. Cawley, Editor
 Warren W. Buck, Jr., Art Director

Sea Grant to TAMU Will Help Fund Marine Advisory Services, Research

Texas A&M University has received a \$1,360,000 Sea Grant to continue its marine advisory services and its research on shrimp aquaculture and the Texas coastal zone. The grant, announced this week by Secretary of Commerce Rogers C. B. Morton, marks the university's eighth year of support from NOAA and will be augmented by more than \$952,000 in matching funds from non-federal sources.

A&M's marine advisory program provides practical information and services to users of the state's marine resources, as well as to legislators and others who make policy decisions on resource management and allocation. With the new funds, extension agents will conduct workshops and short seminars for businessmen, fishermen, and the general public on such subjects as offshore ports, recreational facilities in Texas, and demonstrations on crab harvesting, finfish trawling, and seafood processing and quality control.

Sea Grant biologists, economists, and zoologists, who already have discovered that the protein content of commercially prepared shrimp feeds can be lowered substantially without affecting the growth and development of the shrimp, will concentrate their efforts on shrimp aquaculture for the next year. Experiments now are underway to evaluate the effects of heated water from power plants on shrimp reproduction and maturation, and to determine the potential for shrimp culture using underground salt water from a river basin in west Texas.

In examining the Texas coastal zone, engineers will continue

their study of offshore pipeline failures, testing the effects of wave size, water depth, and burial depth on underwater pipelines, and geologists will study the upper Texas coastline to determine the rate at which the shoreline is retreating or advancing and the rate of erosion of dredge material from spoil islands along the coast.

Computer On-Line Data Bases Available From the OASIS System

The Oceanic Index and Meteorological and Geostrophical Abstracts data bases are now available to users for on-line interactive searching as part of the Environmental Data Service's Oceanic and Atmospheric Scientific Information System (OASIS). The data bases can be accessed through any teletype-compatible terminal over direct-dial, low cost telephone lines.

Oceanic Index is an automated, on-line version of the bi-monthly publication, *Oceanic Abstracts*. Coverage is from 1964 to the present and consists of approximately 76,500 citations. The data base contains citations to published literature relating to the oceans and freshwater-saltwater interface in the subject areas of acoustics, biology, fisheries, geology, meteorology, oceanography, optics, and pollution.

Meteorological and Geostrophical Abstracts is the automated, on-line version of the monthly journal of the same name. Present coverage of the on-line data base is for 1972-74. The years of 1975 and 1970-71 will be added during the next few months. The data base in-

Interim Report on Trace Elements Found in Fish Is Released

The vast majority of 106 species of edible fish and shellfish tested for mercury content in a recent National Marine Fisheries Service resource survey are well within interim guidelines established by the Federal Drug Administration.

More than 94 percent of the 2400 samples of the 106 species examined by the NMFS South-

east Utilization Research Center in College Park, Md., were below the FDA's guideline of 0.5 parts per million of mercury.

The approximately six percent of the samples found to contain more than 0.5 ppm were from fish not ordinarily sold in the United States for consumption—marlin, sharks, grouper, and little tunny.

The scientists gathering samples for analysis did not collect any swordfish, which some years ago all but disappeared from American tables because of reported high mercury content and the concern that too much mercury intake can cause cancer.

The resource survey is the second stage of a planned three-step investigation by the Commerce Department into the occurrence and significance of a number of trace elements in fish available to consumers.

The first stage, a product survey, was carried out earlier on 29 species of widely consumed fish for five trace elements. More than 96 percent of the 334 samples examined in this study were within FDA guidelines.

As part of the total investigation, when results from either the product or resource surveys indicate a species has elevated levels of an element, additional samples will be analyzed to obtain information necessary to define the extent of the problem and to develop a working plan to manage it.

When the resource survey is completed, more than 10,000 samples of over 200 species will have been examined for mercury, lead, nickel, manganese, silver, chromium, copper, zinc, cadmium, molybdenum, vanadium, antimony, tin, arsenic, and selenium.

The interim report provides data on nine of these elements in 2,400 samples. It is available from the Director, National Marine Fisheries Service, NOAA, Washington, D.C. 20235.

Fairweather Aids Fishing Vessel In Distress

On August 15, the NOAA Ship Fairweather responded to a Mayday call from the fishing vessel Humbolt, which had struck a reef on the southeast corner of Kiukpalik Island, southwest of Cape Douglas, Shelikof Strait, Alaska. The Fairweather, working on a hydrographic survey nearby, went to the vessel's assistance, provided a temporary patch for the 1½-by 5-foot hole stove in her bow and a portable pump, and subsequently towed her to a safe beach where a commercial tow could reach her.

cludes articles on astrophysics, hydrology, meteorology, and physical oceanography.

Further information on using these files may be obtained from the Systems Branch of the Environmental Science Information Center on 202-634-7335. Other files available for on-line searching include: Biological Abstracts; Engineering Index Compendex; Government Reports Announcements; Information Service in Physics, Computers and Control, and Electrotechnology; National Agricultural Library (CAIN); and Scisearch.

Connecticut Receives Second-Year CZM Grant

A \$290,000 grant has been awarded to Connecticut to continue developing a program begun last year for management of its coastal zone. The program is expected to make major recommendations for preserving unique or fragile natural areas, controlling indiscriminate development of coastal lands, and expanding public access to the seashore for recreation.

The state will add \$145,000 to this year's grant, under provisions of the Coastal Zone Management Act of 1972 which permits eligible states and territories to receive up to three annual grants for program development, and additional funds for implementation. NOAA's Office of Coastal Zone Management administers the granting process.

The Connecticut Department of Environmental Protection has been designated to receive and administer the grant, a portion of which will be allocated to six regional planning commissions for program assistance.

Last year the state received a \$194,285 NOAA grant.

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A NOAA UNIT CITATION was presented recently to the NOAA Ship Mt Mitchell for its "outstanding contribution to the XIV Federation International Geometres Conference, Washington, D.C., during the week of September 8, 1974." (In foreground) Cdr. R. M. Buffington, Commanding Officer of the Ship, accepted the citation from R. Adm. A. C. Holmes, Director of the National Ocean Survey's Atlantic Marine Center in Norfolk, Va., as crew members watched.

Grant Enables "Polyculture" To Continue

The Woods Hole Oceanographic Institution has received a \$425,000 Sea Grant with which it will continue its unique "polyculture" program of finding nutrients to nourish marine organisms vital to the natural food chain.

"The institution's unique project—a form of highly intensive aquaculture—makes use of effluent from secondary sewage treatment, agricultural and fisheries wastes, and commercial fertilizer as sources of nutrients for a wide variety of marine organisms that make up a natural food chain," according to Dr. Robert B. Abel, Director of the Office Sea Grant.

To date, Sea Grant scientists have maintained oysters and hard clams, winter flounder and bait worms, trout, brine shrimp, lobsters, and several types of algae and seaweed through various stages of development. An incidental attribute of the system is that it tends to consume its own wastes and acts, in effect, like a tertiary sewage treatment plant.

With the new funds, the Woods Hole team will concentrate on eliminating "weed" algae from the system, examining the problems of growth and mortality of the shellfish, and increasing the yield of the system's commercially valuable seaweeds. In addition, mass culture of brine shrimp will be carried out to assess growth rates and optimal harvesting techniques. The brine shrimp, in turn, will be fed to either juvenile scup or juvenile winter flounder in the polyculture system.

A DEPARTMENT OF COMMERCE BRONZE MEDAL was presented recently to Walter J. Gully, (right) Chief of the Personnel

Division at the National Weather Service's Western Region Headquarters in Salt Lake City, Utah, by Regional Director Hazen H. Bedke. Mr. Gully, who has been in charge of the Region's personnel office since 1946, was cited for "Dynamic and Progressive Leadership in Personnel Management."



U.S., U.S.S.R. Sign Fisheries Agreement

(Continued from page 1)

prohibited from fishing in this area, out to the 60-fathom depth contour.

—Additional year-round trawling restrictions include an area off Vancouver, Wash., which is important to the maintenance of the Pacific Ocean perch stocks in those waters. The Soviets also agreed to refrain from trawling in some areas off the Washington coast, as well as off the California coast from San Francisco to the U.S. Mexican border. In addition, an area off the Washington-Oregon coast will be closed to Soviet trawlers between Nov. 1, 1975, and April 25, 1976, to reduce the incidental catch of rockfish and other groundfish taken by the Soviet hake fishery.

—In the Gulf of Alaska, the Yakutat area is closed to Soviet trawlers from Dec. 1, 1975, to Feb. 15, 1976, and two areas off Kodiak are closed to Soviet trawling from Feb. 16 to May

15, 1976. An expanded area south of the Aleutian Islands will be closed to Soviet trawlers from Aug. 10 through May 31, 1976.

—The periods during which the U.S.S.R. is permitted to conduct fishing and loading operations in the contiguous fisheries zone (CFZ), as well as the area in which such operations are permitted, were also reduced. Loading operations within the CFZ on the north and south side of Unalaska Island, previously permitted year-round, are now restricted to a period from Jan. 1 through Oct. 14, 1976. An additional loading zone is provided from October 15 through December 31, 1976, in the area around Umnak Island. An area which encompasses the highly productive Amlia Island king crab grounds was closed to Soviet fishing and loading operations.

—The Soviets will not trawl in two areas off the Klamath and Columbia Rivers during the period from Nov. 1, 1975, to June 30, 1976, to protect the black cod pot gear of U.S. fishermen.

The time during which use of Soviet mobile gear was prohibited during the U.S. king crab fishing season in six areas adjacent to Kodiak Island was extended. Closing these areas has proven to be valuable in reducing potential gear conflict between Soviet trawlers and U.S. crab pot fishermen, and has been instrumental in reducing the incidental catch of king and tanner crab as well as conserving groundfish, halibut, and shrimp stocks.

The Soviets agreed to refrain from trawling in certain areas in the eastern Bering Sea from December 1 to May 15 and not to bottom trawl in other areas during the same time period. One area is closed to Soviet trawling year-round.

The agreements also imposed new controls on incidental catches of Continental Shelf fishery resources. The Soviets are prohibited from conducting a specific fishing for Creatures of the Shelf—such as lobsters and crabs—except for those which can be taken under the king and

Water Quality Off Ocean City Being Measured

A deep ocean automated data-gathering buoy has been deployed approximately 38 miles east of Ocean City, Md., to monitor the effect of industrial and municipal wastes on surrounding waters.

The buoy is equipped with experimental water quality indicating systems developed under the direction of the NOAA Data Buoy Office at Bay St. Louis, Miss.

The data collected by the buoy, which is located near several municipal ocean dumping grounds, will be furnished to the Environmental Protection Agency and correlated with water sampling data collected by that agency.

The water quality indicating systems were designed to determine the feasibility of attaining water quality measurements from buoys and other unattended ocean platforms. The systems were integrated into a small, vertical cylinder environmental buoy designed to remain at an ocean site for up to three months. The unattended buoy can relay data on temperature, the amounts of molecular oxygen acidity, suspended solids and algae growth.

Save The Date

NOAA's Annual Awards Luncheon will be held Friday, October 3, at 11:30 a.m. in Bolling Air Force Base Officers' Club. Further details will appear at an early date.

tanner crab agreement. They are required to return any Creature of the Shelf to the sea immediately with a minimum of injury when they are taken incidentally to other fishing. Detailed records in their log books of these catches are also required. Soviet fishermen may not have any Creatures of the Shelf which were taken off the coast of another country on board their vessels when they are fishing over the U.S. Continental Shelf. Boarding and inspection of Soviet vessels by U.S. personnel to insure compliance with these agreements is now permitted.

Provisions of the agreement permit an expansion of the collection of scientific and statistical data. Statistics are to be provided on catches by species, area, vessel class, and month by specified categories and areas. The agreement also provides for cooperative fisheries research, meetings of scientists on biennial basis, and exchange of fisheries specialists on fishing vessels to obtain biostatistical data.

obituaries

DeVer Colson

DeVer Colson, former Research Meteorologist with the Systems Development Office of the National Weather Service Techniques Development Laboratory, died on August 28. He was Chief of the Empirical Techniques Section in the Objective Forecast Branch prior to his retirement in 1971 after 31 years of Federal service.

He contributed significantly to severe storms, public aviation, and fire weather research, and participated in the Barbados Oceanographic and Meteorological Analysis Project. He received a Commerce Bronze Medal in 1971.

His wife, Olive, resides at 9210 Long Branch Parkway, Silver Spring, Md. 20901.

W. Byron Hale

W. Byron Hale, former Aerial Photogrammetrist in the Photogrammetry Division of the Coast and Geodetic Survey (predecessor of

the National Ocean Survey), died in Jefferson, Tenn., on August 6. During his 26 years with the C&GS, he helped build and operate a nine-lens camera, the world's largest aerial camera. He lived in Washington, D.C. for many years prior to his retirement in 1965.

His sister, Mrs. William E. Kingswell, resides in Kensington, Md.

Russel J. Younkin

Russel J. Younkin, former Chief of the Quantitative Precipitation Forecast Branch of the Forecast Division at the National Meteorological Center in Suitland, Md., died on September 3 in Oak Ridge, Tenn. He had retired in 1973 after 35 years' Federal service, which included assignments at Knoxville, Tenn., and Kansas City, Mo.

He is survived by his wife, Ethel, of 1019 West Outer Drive, Oak Ridge, Tenn. 37830, and three sons, also of Oak Ridge.



National Oceanic and Atmospheric Administration

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July 23, 2010