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NOAA WEEK

U.S. DEPARTMENT OF COMMERCE National Oceanic and Atmospheric Administration

Vice Admiral Behrens Named to New NOAA Post

Vice Admiral William W. Behrens, Jr., has been appointed NOAA's Associate Administrator for Interagency Relations.

His office will become the focus for initiating joint national programs and projects with other agencies in marine and undersea science, technology, and services, and for developing interagency agreements on NOAA's behalf with the numerous Federal organizations with which NOAA interacts.



His promotion to Vice Admiral is in recognition of his full-time responsibilities in NOAA. Admiral Behrens will remain an active duty officer in the Navy and will also serve as the NOAA Administrator's Naval Deputy, providing direct liaison and coordination between NOAA and the Navy on oceanographic and similar affairs.

In September 1970, after serving in a number of positions with responsibilities related to the Navy's interests in the environmental sciences and with a background in sonar development work, Admiral Behrens became Oceanographer of the Navy, and directed the entire oceanographic effort of the U.S. Navy.

He has advanced education in nuclear engineering, was the first Director of the Navy's Nuclear Power School, and holds the degree of master of arts in international affairs from the George Washington University. He has also served in the Atomic Energy Commission and the Department of State.

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First FLARE Projects Completed Successfully

To date, four projects in the Florida Aquanaut Research Expedition, which is under the direction of NOAA's Manned Undersea Science and Technology program, have been completed. FLARE projects are conducted from a mobile habitat, EDALHAB, supported by a mother ship, LULU.

In the first project, three diver-scientists, William High, Ian E. Ellis, and Gary Loverich, of the National Marine Fisheries Service, spent three days observing marine life and the behavior of fish toward traps. The profusion of marine life they observed at the site off Elliott Key was striking, the three men reported.

In accordance with a pre-set plan to test fish traps of interest to both research scientists and commercial fishermen, they set out four oblong traps at intervals on the reefy bottom. They caught a large number of reef fish in a relatively short time and observed at close range the various patterns of behavior of fish toward the traps. They said they believed some of their observations were significant to their long-term research, which now includes data collected on TEKTITE II, an undersea project off the Virgin Islands in 1970, on the NOAA HYDROLAB experiment off Grand Bahama Island in December 1971, as well as on the current FLARE study of coral reefs.

All entrapped marine animals were released alive, and all gear was removed from the seafloor at the project's completion.

In the second project, Dr. J. Morgan Wells, of the University of North Carolina, and

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P. Peterson Is Confirmed As Commerce Secretary

The nomination of Peter G. Peterson as Secretary of Commerce was confirmed unanimously by the U. S. Senate on February 21.

Pacific Walrus Study To Include Minisub Dives Under Arctic Ice

Scientists are scheduled to begin diving under Arctic ice of the Bering Sea today in a small research submarine in their search for information needed to aid in conservation and management of the Pacific walrus.

A team of biologists and oceanographers led by Dr. G. Carleton Ray of Johns Hopkins University will make a month-long series of dives in the Perry two-man submersible PC-8. Support for their submersible operations is provided by NOAA's Manned Undersea Science and Technology (MUS&T) program.

Mother ship for the little submarine and the scientific team will be the USCGC Burton Island, an icebreaker provided by the U.S. Coast Guard.

A demonstration project of the marine mammals program, International Biological Program, the research is also supported by the National Science Foundation and the Office of Naval Research.

Dr. Ray and his team will observe behavior, acoustics, anatomy, and other characteristics of the animals and their environments both on the ice and, from the submersible, under the ice. Their objectives are to identify mating groups, determine sex ratios and social organization of these groups, and examine mother-young relationships. Walrus herds appear to be organized in a complex way. Finding out how they maintain contact in the mobile world of the pack ice is one object of the research. Some scientists believe that they do this vocally. The walrus has one of the largest of marine mammal vocabularies. Dr. Ray's group hopes, with the aid of acoustic devices, to shed more light on this characteristic.

They also plan to attach telemetry transmitters to some of the animals and track their daily dives to the bottom for food. The team will then use the submersible to examine closely the particular localities on the seafloor where the walrus feed. They hope also to observe the walrus in their undersea habitats.

Although marine mammals are more abundant in the Bering Sea than in any comparable area on earth, knowledge of many of them is fragmentary owing to the difficulty of access and rigorous climate. The walrus has been chosen as the first object of major study by this International Biological Program project because of the comparative ease with which it

10th Anniversary of Glenn Flight Is Observed at Cape Kennedy

National Weather Service personnel were among those invited to participate in a ceremony commemorating the 10th anniversary of the launch of John Glenn's Mercury Atlas 6 flight on February 20, 1962. The ceremony was held on February 22 at the Cape Kennedy launch site.

Ernest Amman, Meteorologist In Charge, Cape Kennedy Section of the Spaceflight Meteorology Group, and Jesse R. Gulick, Meteorologist In Charge of the Miami Section, SMG, who played important roles in the forecasting for the historic flight, attended the ceremony, accompanied by their wives. Sarah Greenfield, the secretary at the Cape Kennedy SMG office, who worked in a NASA office supporting the mission at the time of the Mercury Atlas 6 launch, also attended.

Also invited, but unable to attend, were Kenneth M. Nagler and his wife. Mr. Nagler rode with John Glenn in the transfer van from the astronaut quarters to the launch pad and gave him the final weather briefing before he entered the space craft.

Mr. Nagler said the SMG staff will never forget the very cloudy conditions early that morning, and their relief when the clouds cleared--as they had predicted--in time for the launch.

may be studied on and under the sea ice.

The Pacific walrus is a renewable resource of international importance, currently utilized only by subsistence hunters in coastal Alaska and north-eastern Siberia. It is also potentially vulnerable to more intensive exploitation on sea ice on the high seas.

Cooperating in the study is the Alaska Department of Fish and Game and, for the telemetry, the Naval Undersea Research and Development Center.

Investigators on the project, in addition to Dr. Ray, are Dr. Robert Barsdate, Sam Stoker, Michael Gottschalk, and E.H. Miller of the University of Alaska; Dr. Francis H. Fay of the U.S. Public Health Service; and Steven D. Sult, Johns Hopkins University. Participating personnel from Perry Oceanographics, Inc., are Mike Adams, E.J. Michaud, and William Barton, Jr. Michael Sparling of Ocean Applied Research, Inc., will operate the telemetry.

Tenth National Weather Service Operations Class Is Held



The Tenth National Weather Service Operations Class was held at the NWS Technical Training Center in Kansas City, Mo., from January 25-February 17. The participants, shown above, were: (front row, from left) Roy F. Freiburger, WSO Concordia, Kans.; Yuji Takemoto, WSO Lihue, Hawaii; Robert E. Lord, WSFO Boise, Idaho; Fred H. Lowery, WSO Mobile, Ala.; Morrison H. Ewing, WSO Bishop, Calif.; Charles E. Casto, NSSFC, Kansas City, Mo.; Ben P. Barker, Jr., WSO Tampa, Fla.; and Thomas E. Wahl, WSO Wilkes-

Barre-Scranton, Pa. (back row, from left) Larry Burns (Instructor); Stephen Miller, Cold Bay, Alaska; Eugene F. Visocky, WSMO, Pittsburgh, Pa.; Robert L. Hazzard, WSO Hartford, Conn.; John F. Patten, WSO Helena, Mont.; Don Whitman (Instructor); James J. Cobb, PRH, Honolulu, Hawaii; Mike Weinrich (Instructor); Robert E. Johnson, WSO Yakutat, Alaska; Jerry A. Leslie, WSO Lander, Wyo.; and Freddie E. Miller, WSO Savannah, Ga.

Videotape System Aids in Selecting Aaron Woodard, Dorothy Burke for ADMIN Fellowships

Aaron Woodard and Dorothy Burke have been selected for the ADMIN Fellowship Program. Mrs. Burke is currently an Administrative Officer with the Air Resources Laboratory of the Environmental Research Laboratories and has a target position in the budget field. Mr. Woodard is a Supervisory Computer Technician in the Operations Section, National Environmental Satellite Service, who will have a target position of computer specialist.

In evaluating candidates for the Administrative Fellowship Program, a videotape system was used for the first time to assist in rating the group dynamic capabilities of each of the qualified candidates. In groups of four, candidates discussed problems on a variety of topics of concern to the entire nation, which gave each an opportunity to display skills in interpersonal relations, oral expression, problem solving ability, leadership, and listening abilities.

After the discussions, each group had the sessions played back to them on closed circuit television, giving each candidate an opportunity to observe his own performance in comparison with other members of

the group. The use of the videotape equipment including the closed circuit television also gave members of the Manpower Utilization Council, who were not at the sessions themselves, the opportunity to view each candidate's performance.

In addition to this innovation, more traditional sources of information and methods of evaluation were employed. Personnel folders and supplemental forms submitted by both candidates and their supervisors were reviewed. Candidates were encouraged to report any unpaid or voluntary experience they had outside the organization. Each candidate was interviewed individually as well as in a group. A two-hour written exercise was used to demonstrate an ability to produce clear, well-organized written material, adequate vocabulary, and knowledge of grammar. Eligible candidates were ranked on the basis of the goals of the program, their experience, education and training, result of the interviews, written exercises, awards, and supervisory appraisals. Final selections were made from among highly qualified candidates whose goals are consistent with future administrative intake needs.

FLARE Results *(Continued from page 1)*

his oceanographer wife, Anna, spent 78 hours in the mini-sub 45 feet underwater studying a coral reef. They reported the untainted reef appears to be somewhat less abundant in marine life than other similar reefs elsewhere in the world, but agreed its "community metabolism" is comparable to that of coral reefs in the Pacific and Caribbean.

Dr. Wells said that the movable habitat seemed an excellent platform from which to work, and that he saw no reason why different gas mixtures could not be tried, to permit EDALHAB or a similar habitat to be lowered to greater depths for longer periods.

In the third FLARE reef study, the three young aquanauts said they saw strong evidence of a coral reef greatly diminished by natural evolutionary processes, and emphatically stated the geological signs they saw unmistakably indicated that the site--22 miles south of Miami--had at one time in history been much larger than it is today, and much richer in coral species and populations.

Graduate student John A. Gifford, the team leader, said that the shrinkage of the reef probably stemmed from changes in sea levels following the Ice Age.

"The reef probably was under only five or ten feet of water several thousand years ago," he said. "Now it's in 50 feet--in other words, its water cover has risen considerably over the years. Since the viability of a coral reef depends heavily on sunlight for healthy reproductive rates, and light is decreased in ratio to depth, undoubtedly the changes we saw can be related to the higher sea levels."

Mr. Gifford was accompanied on the two-day dive by technician Stephen Cawthon and underwater photographer Eric Frehsee. Their land-based director was Dr. Cesare Emiliani, Professor and Chairman, Division of Marine Geology and Geophysics at the Rosenstiel School of Marine and Atmospheric Science, University of Miami. Part of the funding was contributed through the NOAA Sea Grant Office, based at the University of Miami.

A six-foot long core taken from the Elliott Key area will be compared--using Carbon-14 dating techniques--with cores taken during the early 1971 study at Discovery Bay, Jamaica, of which this experiment was an extension. An attempt will be made to determine whether growth rates of coral reefs in widely separated areas of subtropical seas are alike or dissimilar.

Results of the comparisons will be known in a few weeks, but initial observations suggested that the rates of growth seemed different between the two areas--the data collected may reveal a contrasting evolu-

Geodetic Survey Underway In Southern Louisiana

A nine-month federal geodetic survey of more than 2400 square miles has been launched in southern Louisiana, including New Orleans. The \$250,000 survey, a cooperative project of the National Geodetic Survey and the state of Louisiana, will provide over 150 geodetic control points (positions of latitude and longitude) for use in state-conducted surveys.

Preliminary field work for the project is being done by a reconnaissance party comprising Eugene A. Beauchamp and Verlin D. Novak, NGS survey technicians. They are working with state engineers in selecting the sites for which latitudes and longitudes will be determined, and securing necessary permission of landowners.

A 20-man survey party headed by Lt. John C. Albright, will begin the survey work in April.

The work will be conducted in the parishes of East Baton Rouge, Livingston, Ascension, Assumption, St. James, Lafourcade, St. John the Baptist, St. Charles, Jefferson, Plaquemines, St. Bernard, Orleans and St. Tammany, including such communities as Gonzales, Laplace, New Orleans, Norco, St. James, Slidell and Thibodaux.

tionary pattern. Earlier data from Jamaica revealed an average growth rate of one meter per 1,000 years.

In the fourth FLARE project--the second phase of the Wells study, which took place this week near a sewage outflow off Miami Beach--for the first time, the rate of productivity of a reef under the influence of human sewage was compared with that of the "untainted reef."

An "instrument habitat" recently designed and constructed by Dr. Wells and students at the University of North Carolina was used as well as the sophisticated instrumentation used on their first FLARE dive to determine rates of photosynthesis and respiration in reefs.

Dr. Wells and FLARE scientific coordinator John D. VanDerwalker worked underwater in this phase, and Mrs. Wells and Todd Atkinson, Marine Technician from Wrightsville Marine Biomedical Laboratory, University of North Carolina, aboard LULU.

After the Wells' have returned to their University of North Carolina laboratory, the data will be analyzed, and the results should be known in several weeks.

High-Speed Launch To Be Used In Completing Potomac Survey

NOAA's electronically equipped high-speed launch, commanded by Lt. Cdr. Glen R. Schaefer, is being utilized in order to hasten completion of a long-range hydrographic survey program for the Potomac River.

The project to chart the entire river from its mouth to Washington, D.C., began in 1959, but was halted in 1962 due to budgetary and manpower limitations and the need to carry out high-priority items elsewhere. Plans are now to complete the program, which also includes all navigable tributaries of the Potomac River, in a few years.

The program is being conducted by the National Ocean Survey. This is the first time the high-speed launch has been used in the Potomac River. The 59-foot, \$115,000 craft is equipped with electronic gear which enables it to record and plot hydrographic data while operating at speeds of over 20 knots. She carries a complement of four and is based at the National Ocean Survey's Atlantic Marine Center, Norfolk, Va.

The high-speed launch will be conducting the survey until early April and since it cannot work effectively in depths of less than 10 feet, the work along the shores of the Potomac River and its tributaries and north of the area being surveyed by the launch will be carried out by a land-based hydrographic field party. Present plans are to have the six-man field party begin its operations in April and continue for about five months, resuming in 1973 and succeeding years until the program is completed.

As the survey program progresses, the Marine Chart Division will prepare and issue updated nautical charts.

Vice Admiral Behrens (Continued from page 1)

He was the first to install electrical slip rings for the Navy's trainable sonar in 1944, and later was project officer for the underwater telephone used in ship-to-ship communications. He also was underway project officer for the Navy's first scanning sonar equipment, and from 1950-1952, was an instructor in the Navy's Fleet Sonar School.

A native of Newport, R.I., he was graduated from the U.S. Naval Academy and commissioned an ensign on June 9, 1943. A much decorated submarine, destroyer and amphibious officer in three wars, he was selected for Rear Admiral in 1967, when he was the youngest officer the Navy had ever promoted to Flag rank.

Pollution Forecast Services To Be Expanded in Alaska

As vehicular traffic and stationary sources of pollution increase, Alaska's larger cities--Fairbanks and Anchorage--are experiencing an increasing number and more intense episodes of air pollution.

The episodes are caused by the development of intense radiation temperature inversions which tend to cause ice fogging and an accumulation of pollutants, such as particulate matter and carbon monoxide, near the surface in urban areas.

The National Weather Service and the Environmental Protection Agency recently investigated means of providing advanced warning to state and local control agencies of meteorological conditions that would be conducive to the development of air pollution episodes. As a consequence of these efforts, the NWS National Meteorological Center has been appending an "Alaska Outlook" to the Air Stagnation Narratives issued twice daily on teletypewriter Service C.

Also, NWS is establishing a new position at the Weather Service Office in Fairbanks (which appears to be most susceptible to serious air pollution outbreaks) to provide a specially trained meteorologist dedicated to environmental problems. The duties of the incumbent, who will be known as an environmental control meteorologist, will include monitoring atmospheric conditions which could lead to air pollution episodes, providing support to the fire control and smoke management efforts of the Interior Department's Bureau of Land Management, and also providing the latter with meteorological expertise to an on-going pilot project for the suppression of wildfires through local weather modification. The position is scheduled to be filled this Spring.

Burton H. Kirschner, NWS Air Pollution Weather Services, reports that the NWS actions have received enthusiastic local and Congressional support.

Method of Estimating Soil Temperatures Is Developed Under EDS R&D Grant

A statewide network of soil temperature observations has been established in Indiana, with the aid of a research and development grant from the Environmental Data Service. From these data, a method of estimating long-term mean temperatures in the near surface layers of soil has been developed at Purdue University. With about one year of observations at a given soil site, agricultural climatologists can estimate "normal" soil temperatures as accurately as from 30 years of air temperatures.

Information System for IFYGL Is Developed by EDS' NODC

An automated information system for the International Field Year for the Great Lakes (IFYGL) program has been developed by the Environmental Data Service's National Oceanographic Data Center, using its General Information Processing System (GIPSY). (IFYGL is an international effort scheduled to begin about April 1, 1972, to improve the scientific basis for management of Great Lakes water resources.) Computer listings of the files have been provided to the IFYGL Project Office for review and updating. Continued updating will become a part of the permanent documentation for the program.

Civil Service Commission Issues Reminder About Voting Registration Requirements

The Civil Service Commission has reminded Federal employees of the provisions of a 1970 law which makes it possible for every citizen to vote in Presidential elections without regard to lengthy residence requirements or to a citizen's location at the time of the election.

Principal features of the law (Section 1973aa-1 of Title 42, United States Code) are as follows:

1. Length-of-residence requirements for voting in Presidential elections have been abolished. States may still close registration for voting in Presidential elections 30 days prior to the election but may keep registration open longer. A person who moves into a State after its registration is closed may vote in person or by absentee ballot in the State where he previously resided if he was registered in that State or if he satisfies the absentee voting requirements of that State.

2. Each State is required to have an absentee registration procedure, and anyone who will be away from his State of residence during the registration period should use this procedure to register. Likewise, each State is required to have an absentee balloting procedure for Presidential elections, and registered voters who will be absent from their election districts on election day will be able to apply for an absentee ballot up to 7 days before an election.

Additional information for Federal employees is contained in Commission Bulletin 733-10 of February 9, 1972.

SSB Network Is Dedicated In Tegucigalpa, Honduras



Shown above at the dedication of the Single Sideband Radio (SSB) Network in Tegucigalpa, Honduras, last month are: (from left) Roberto Cossio, WMO expert in meteorology; Don Enrique Alvarez Cordova, Ministro De Agricultura Y Ganaderia; Robert Buchholz, U.S. expert for VAP installations; Sr. Reyes Rivera, Director Servicio Meteorologico Nacional; and Ing. Julio Cesar Aninonez, Subdirector General De Recursos Naturales Renovables. Also present at the dedication, but not in the photo, was Ing. Joaquim Alonso Guevara Moran, Director General De Recursos Naturales Renovables.

Mr. Buchholz supervised the installation of the nine-station SSB tranceiver network, which was established with assistance from the United States and the Voluntary Assistance Program of the WMO.

The new network should greatly facilitate collection of weather data from outlying districts of Honduras.

Ice Flights, Thickness Measurements Made in Lakes Navigation Program

Lake Survey Center personnel, under the direction of Dr. L. Bajorunas, Chief of the LSC's Limnology Division, have begun ice flights in connection with the Demonstration Program for Extension of the Navigation Season on the Great Lakes-St. Lawrence Seaway System. Since January 15, three flights have been made, covering Lake St. Clair, the St. Clair River, the St. Marys River and western Lake Erie.

In addition, the ice thickness measurement network has been increased to 36 stations. Two-point thermographs have been set up at Algonac and St. Clair on the St. Clair River. This winter, both air and water temperatures will be obtained at St. Clair, and only air temperatures at Algonac. All of this is part of an effort to determine the feasibility of extending the navigation season on the Great Lakes, an important economic factor involving the entire area.

Sea Grants Awarded to Lehigh, Florida, Washington Universities

The University of Washington has been awarded a \$1,352,000 Sea Grant, which, along with matching funds from non-Federal sources, will support the University's fifth year of Sea Grant Program activities in marine-related education, research and advisory services. The University, which was designated by the Secretary of Commerce last August as one of the nation's first Sea Grant Colleges, offers courses in ocean law, marine affairs, ocean engineering, aquatic stock management, and the technology of marine food processing for practicing management biologists.

Participating community colleges in its Sea Grant Program include Grays Harbor Community College for technician training in fish and game management; Peninsula College for pollution monitoring training; Seattle Community College for courses in marine hydraulics and marine diesel propulsion; and Shoreline Community College for on-the-job training for marine technicians.

The Sea Grant Program is under the direction of Dr. Stanley Murphy.

In addition to expanding some projects (as Project NORFISH--directed toward conservation of fish resources of the North Pacific Ocean), and continuing others, including important aquaculture projects, a new project will be started to investigate the pathogenic effects of various strains of the bacteria *Vibrio*, on oysters.

The State University System of Florida has been awarded a \$250,000 Sea Grant for marine-related research, and advisory services.

Initially composed of the University of Florida and Florida State University, with other institutions becoming involved later, the System will use the Sea Grant for a number of projects designed to protect, enhance, and utilize Florida's coastal resources.

Dr. Hugh L. Popenoe, Acting Director of the Center for Aquatic Sciences, University of Florida, coordinates the Sea Grant Program.

The Sea Grant, along with matching funds from non-Federal sources, will fund an advisory services program and research projects in selective breeding and hybridization of clams and oysters, near-shore hydromechanics and sediment transport, the effects of chlorinated hydrocarbon insecticides on estuarine animals, and three projects concerning enhancement and use of coastal zone resources.

Lehigh University, Bethlehem, Pa., has been awarded a \$182,200 Sea Grant to develop two sea-floor areas for equipment and instrument testing.

Researchers from Lehigh have established relocatable areas in the Gulf of Maine and the San Diego Trough and are documenting the geological characteristics of each. The adequately characterized "demonstration" areas will make it unnecessary to determine geotechnical properties of the sea floor each time a piece of bottom-resting equipment is to be operationally tested by industry, government agencies and universities.

Under the direction of James M. Parks and Adrian F. Richards, the project is now in its third and final year. A major portion of the project has been the development of two geotechnical probes for the measurement of sea-bottom parameters.

The university scientists believe they now have sufficient data from the Wilkinson Basin in the Gulf of Maine to characterize that test area, and third year plans for the project include on-site measurements and coring in the San Diego Trough; laboratory measurements, data analysis, and reduction for both test areas; and related analyses for improved understanding of the areas. The previously developed probes will be improved during the third year and work will continue on the development of a computerized geotechnical information storage and retrieval system for the project.

\$287,000 Granted to NOAA Will Finance 41 Internships in Science and Engineering

NOAA has been granted \$287,000 from the National Science Foundation for 41 Presidential Internships in Science and Engineering to work in Research and Development laboratories. This is a nationwide program recommended by the Office of Science and Technology and funded by the Department of Labor, to assist young, unemployed scientists and engineers possessing advanced degrees. The National Science Foundation administers this program, allocating \$7,000 per internship to Federally funded Research and Development laboratories. The purpose is to provide a stipend for the interns while they are given one year of Research and Development experience, which will facilitate their transition to future full employment.

Administrative Procedures for Supervisors Course Is Held



Shown above are the NOAA employees who attended the Administrative Procedures for Supervisors course at the Washington Science Center, Rockville, Md., from February 7 - 11. They are (front row, from left) William A. Rammer, NWS; Robert A. Urick, NOAA ADMIN; Alta M. Tutor, NWS; Elwynda K. Chapman, EDS; Mary Skotzko, NOS; Wilma Amante, NOAA ADMIN; Jack Davis, NOS; William A. Barr, NWS; (back row, from left) Richard Feeny, NOAA ADMIN;

John S. Burgett, NESS; Robert Derouin, NWS; Darrel J. Foat, NWS; Harry E. Brown, NWS; Henry C. Besmen, NWS; Daniel A. Darr, NOS; Jack Kelly, NWS; Harrel McCarty, NOS; Maurice H. Cummings, NWS; Celestino Lo Schiavo, NOAA ADMIN; Lee Larson, NWS; Albert K. Heywood, NOS; Demetrio A. Dinardi, NOS; Thomas A. Doyle, Jr., NOAA ADMIN; Worthington S. Ross, EDS; Clark F. Edwards, NOAA ADMIN; and Daniel E. Bella (Course Director).

NOTES ABOUT PEOPLE

Jack E. Fancher, Oceanographer in the Processing Section, Tides Branch, of the National Ocean Survey's Oceanographic Division in Rockville, Md., recently completed his Master of Science degree in Marine Sciences at the University of Puerto Rico, Mayaguez Campus. With the Division since 1963, Mr. Fancher's work in tides and tidal currents led to graduate studies concerning seasonal variations of sea level of the Caribbean Sea near Puerto Rico.

Dr. James D. McQuigg, of the Environmental Data Service's Laboratories for Environmental Data Research, recently addressed the American Meteorological Society's Committee on Agricultural Meteorology at its meeting in New Orleans. Dr. McQuigg is outgoing chairman of the Committee.

William Muldoon, an Official In Charge from the National Weather Service's Atlantic Weather Project, is presently in Mexico City assisting the Mexican Meteorological Service conduct a special training course for civil and military weather observers who man the cooperative upper-air stations. Mr. Muldoon speaks Spanish fluently and has had several previous details to Latin America. The training program is expected to result in the improvement of the quality of weather data from Mexico.

1971 Shrimp Catch Up 10 Million Pounds

U.S. shrimp fishermen caught more than 234 million pounds (heads-off weight) of shrimp during 1971--about 10 million pounds more than in 1970--and for the third consecutive year set a record, according to preliminary data gathered by the National Marine Fisheries Service.

The catch was worth \$166.2 million to the fishermen--the highest overall value of any species taken commercially in the United States.

Catches from the Gulf of Mexico and the Atlantic accounted for 66 percent of the total; from Alaska (where the shrimp catch has increased over 300 percent since 1966), about one quarter of the total; from off the Northeastern States, about six percent; and from off Washington and Oregon, three percent.

Alaska, Louisiana and Texas--accounted for 70 percent of the entire U.S. shrimp catch in 1971.

The white, pink, and brown shrimp that make up the catch in the Gulf and South Atlantic are an annual crop, while the smaller, different species of pink shrimp taken in waters off Alaska, the Northeast and Oregon and Washington are not harvested until they are three to five years old.

Items to be considered for publication in NOAA WEEK should be submitted to:
Office of Public Affairs, NOAA, Room 221, Bldg. 5, Rockville, Md. 20852. Phone (301) 496-8243.

National Oceanic and Atmospheric Administration

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