



September 8, 1972  
Volume 3  
Number 50

# NOAA WEEK

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

## Commerce, Interior Propose Marine Mammal Regulations

The Departments of Commerce and Interior have published proposed regulations under the Marine Mammal Protection Act of 1972, signed into law by President Nixon on Oct. 21.

An immediate effect of the Act will be to end polar bear and walrus hunting in Alaska on December 21, the date when the law creating a moratorium becomes effective in prohibiting the taking or importation of any marine mammal or marine mammal product.

The Department of Commerce is responsible for whales, porpoises, seals, and sea lions, while Interior is responsible for all other marine mammals--walrus, polar bears, manatees, and sea otters.

Two exceptions to the ban deal with the taking of marine mammals incidental to commercial fishing operations, and to marine mammals taken for subsistence or for making authentic native handicrafts by Indians, Aleuts, and Eskimos. The commercial fishing exemption is for two years from the date of enactment.

These exemptions are subject to regulations which in the case of commercial fishing will be designed to achieve a goal of zero mortality of marine mammals. The

(Continued on page 6)

## E.E. Wilson Edits Mariners Log

Elwyn E. Wilson has been named editor of the Environmental Data Service's Mariners Weather Log. Issued bimonthly, this periodical provides environmental information for the maritime industry, as well as serving as a contact with the cooperative observers aboard merchant ships. Mr. Wilson comes to EDS from the National Environmental Satellite Service, where he was a supervisory physical scientist. He holds a master's degree in meteorology from St. Louis University, St. Louis, Mo.



## Labor-Management Relations Message From the Administrator

Since the issuance of the first Executive Order dealing with labor-management relations in the Federal Service (Executive Order 10988) in January 1963, Government agencies have been revising the way they deal with employees. Ten years ago there was practically no general employee participation in the formulation and implementation of personnel policies and matters affecting your working conditions. Today you, our employees, through your labor organizations, participate actively with management in the formulation of these decisions. NOAA management has welcomed this participation by employee groups and believes we have better policies and procedures as a result. The most recent Executive Order (11491, as amended) provides our managers and employees with an even more effective means for creating healthy partnerships between management and our employees in guiding NOAA's policies and personnel matters and working conditions.

The principles of E. O. 11491 are basic to a sound labor relations policy. They establish an employee's right to join or refrain from joining a labor organization. They clearly define the manager's right to run his operation efficiently and economically, while recognizing an employee's right to be consulted on certain matters affecting his work environment. They also make it possible for employees and their managers to reduce to writing, in a negotiated agreement, the rules by which they will abide insofar as the labor-management relationships is concerned. In addition, they provide a means by which an impartial third party can settle disputes which might arise from this relationship.

The President recently publicized his support for collective bargaining for Federal workers and the fact that labor-management relations has a high priority in his Administration. I intend to reflect this policy of maintaining a meaningful labor relations program throughout our organization.

*Robert M. White*

## Doppler Identification of Birds Could Advance Aviation Safety

Environmental Research Laboratories' scientists are developing a doppler radar technique for identifying birds in flight. Once perfected, the technique may be applied to airport safety in areas where birds are a hazard. It also may help solve the mysteries of bird migration and other ornithological questions.

For several years, NOAA has employed doppler radar to investigate tornadoes, monitor motions of the ionosphere, and chart the life histories of thunderstorms. Now, Dr. Ben B. Balsley and John L. Green of the Aeronomy Laboratory believe that doppler radar is adaptable to identification of birds by flight characteristics.

Conventional radar techniques are currently used by some ornithologists to map bird migrations. This method involves tracking the bird's movement over the ground. Doppler radar, on the other hand, gives a continuous measurement of the bird's radial velocity--the speed at which the bird is moving towards or away from the radar antenna. To do this, doppler radar takes advantage of the fact that electromagnetic waves echoing from a moving target will be slightly changed in frequency depending upon the target's velocity. The actual radial velocity is determined by the actual amount of frequency shift.

Focusing doppler radar on a bird, Dr. Balsley and Mr. Green simultaneously measure the radial-velocity contributions of the various parts of the bird's wings and body. This information is then plotted graphically, as a "special signature," typically showing a heavy line for the body intersected perpendicularly and periodically by thinner lines representing wing beats. Preliminary results indicate that different bird types yield distinct spectral signatures.

The scientists hope their research will ideally produce a set of species-specific signatures that will enable ornithologists to establish a catalog of doppler radar bird identifications.

The U.S. Air Force, which loses several pilot lives and millions of dollars' worth of jet engine parts annually due to bird collisions, is funding the one-year NOAA study, begun July 1, to determine the feasibility of doppler radar bird species identification.

Collaborating with the NOAA researchers will be Professor Warren Flock of the University of Colorado, who has performed conventional radar bird-identification studies for the U.S. Air Force since 1968.

"If doppler radar can identify bird species on runways," Mr. Flock says, "airport control towers may be able to estimate the potential danger to aircraft. When the birds pose a hazard they may be dispersed with audio equipment or the tower may re-direct and reduce the speed of aircraft."

## Frank Named Deputy Director Of National Hurricane Center

Dr. Neil L. Frank has been named Deputy Director of the National Weather Service's



National Hurricane Center in Miami, replacing Arnold Sugg, whose retirement was effective Dec. 2.

Dr. Frank began his career in meteorology while serving as a weather officer in the Air Weather Service. He joined the National Weather Service in 1961 as a district

forecaster in Miami, became assistant director of the Tropical Analysis Center in 1966, and was designated a hurricane specialist in 1968.

Author of numerous papers on tropical meteorology, Dr. Frank has had several international assignments in the same field. As a consultant to the World Bank, he visited Pakistan in 1969 to review its warning service after the tropical cyclone disaster that took 300,000 lives.

He has a bachelor's degree in chemistry from Southwestern College and earned his master's and doctorate in meteorology from Florida State University.

## Gulf, Caribbean Fisheries Institute Meets

The Gulf and Caribbean Fisheries Institute, sponsored by the University of Miami's Rosenstiel School of Marine and Atmospheric Science and with Sea Grant support from NOAA, held its 25th annual meeting at Miami Beach, November 26-30. The Institute attracts leaders among commercial fishermen, processors of fish, boat owners, industry, technicians, scientists, conservationists, and government administrators.

Congressman Thomas N. Downing of Virginia, a senior member of the Merchant Marine and Fisheries Committee was keynote speaker. The major subjects considered were the likelihood of an agreement at the United Nations Law of the Sea Conference as a means of alleviating foreign fishing competition, new seafood quality standards and programs to upgrade edible fishery products, coastal management, and the practical application to fisheries of research accomplished as a result of the Sea Grant Program.

## Crab Meat Pasteurization Method Developed

The Sea Grant Advisory Program funded by NOAA at Virginia Polytechnic Institute has developed a new crab meat pasteurization technique in cooperation with a seafood processor. The new technique uses plastic bags instead of tin cans for one step of the process. The processor has adopted the technique as a regular part of his production operation and is saving \$50,000 annually on this step.

# Sea Grant Plaque Presented To University of Wisconsin



Dr. Robert M. White (left), NOAA Administrator, recently presented a plaque, designating the University of Wisconsin as a Sea Grant College, to the Hon. Patrick J. Lucey (right), Governor of Wisconsin. The plaque was presented on behalf of the Secretary of Commerce, and accepted by Governor Lucey for the University and the State.

The University of Wisconsin is the fifth university in the nation, and the first in the Midwest, to achieve Sea Grant College status. Now in its fifth year, UW's Sea Grant work focuses primarily on the Great Lakes, and includes water quality, fisheries, shoreline planning, and shipping studies. It involves nearly 100 faculty members and more than 200 students on campuses at Green Bay, Madison, Milwaukee, Oshkosh, and Superior, as well as University Extension.

The award ceremony in Madison was also attended by Dr. Robert Abel, Director of the Office of Sea Grant, University President John C. Weaver, and President W. Roy Kopp of the University's Board of Regents. Dr. Athelstan Spilhaus was the featured luncheon speaker.

## Sea Grant Project Studies Harbor Sloshing

Harbor sloshing, a phenomenon that can tear small boats from their moorings and wreak havoc in marinas, can be reduced with warm water, perhaps from power plants. Working on a Sea Grant from NOAA, Theodore Green, of the University of Wisconsin, has found that by injecting warm water into the bottom of a body of water, such as a harbor, it is possible to cause the sloshing to diminish or decay.

# NOS Central Chart Sales Office Moved to Riverdale, Maryland

NOAA's central sales office for official aeronautical and nautical charts of the United States has moved to 6501 Lafayette Avenue in Riverdale, Md., from its previous location, Connecticut Avenue and Van Ness Street, N.W., Washington, D. C.

Both mail and over-the-counter orders are being handled at the new location by the Distribution Division of the National Ocean Survey. The division is headed by Morris R. Jones.

In addition to nautical and aeronautical charts produced by the NOS, the sales office also handles civil requirements for Air Force charts, plus Air Force Flight Information Publications of foreign areas. Approximately 35 million charts and related publications are sold annually.

Mail orders should be addressed to: Distribution Division (C44), National Ocean Survey, Riverdale, Md. 20840. Information concerning charts can be obtained by phoning 301-344-2613.

An over-the-counter cash sales office for small orders is also maintained at NOS headquarters in Room 707, Building 1, Washington Science Center, 6001 Executive Boulevard, Rockville, Md.

Charts may also be purchased from NOS chart sales agents in the U.S. and abroad. Nautical and aeronautical chart catalogs and listings of chart sales agents are available at no cost.

In Alaska, nautical and aeronautical publications may be obtained at the NOS, 632 Sixth Avenue (Room 303), Anchorage.

## McQuigg Advises Urban Pollution Project

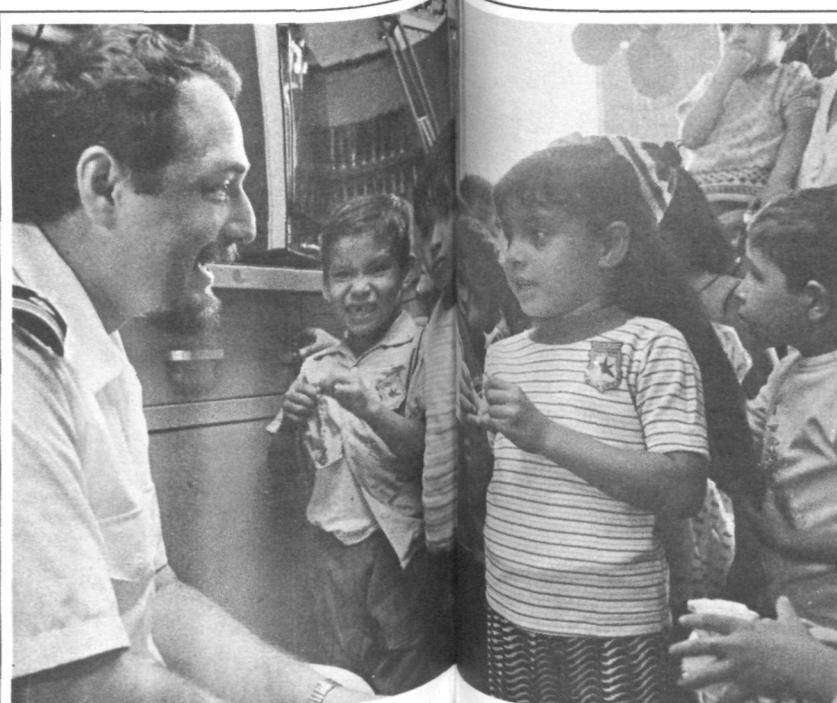
Dr. James McQuigg, EDS' research meteorologist at the University of Missouri, has been invited to serve as a member of the advisory panel to METROMEX (Metropolitan Meteorological Experiment). METROMEX is a field project in St. Louis, Mo., where four research groups are working cooperatively to study inadvertent weather modification by urban-industrial effects, and, in particular, manmade changes of precipitation. The role of the panel will be to recommend new lines of investigation in an effort to understand the effects of urbanization on the atmosphere.

## Advisory Committee Formed for URSI Meetings

Alan H. Shapley, Acting Director of EDS' National Geophysical and Solar-Terrestrial Data Center and Department of Commerce representative on the U.S. National Committee for the International Scientific Radio Union (URSI), has formed a local advisory committee for technical meetings of US-URSI to be held in Boulder, Colo., in October 1974. Members of the advisory committee are: A. H. Shapley, chairman; Dr. Helmut M. Altschuler, National Bureau of Standards; Dr. William F. Utlaut, Institute for Telecommunication Sciences; and A. Glenn Jean, Environmental Research Laboratories.



Children got a lift . . .



. . . and a friendly greeting.



University students learned about underwater soundings . . .

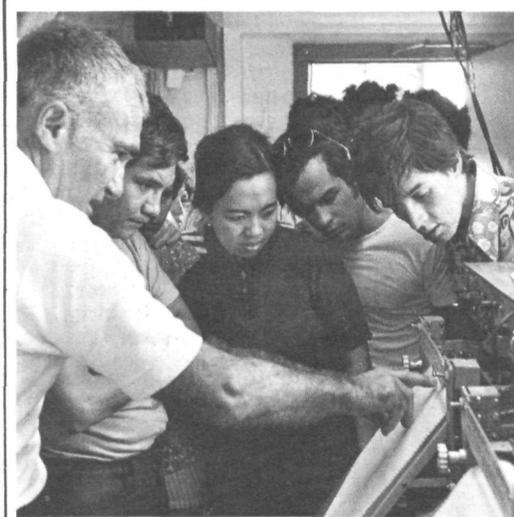
From early October to mid-December, the NOAA Ship DISCOVERER was a floating research school for young Latin American scientists, university faculty members, and students.

Stopping at ports in Mexico, Puerto Rico, Trinidad, Venezuela, and Colombia, the ship took aboard local scientists and researchers who used DISCOVERER's facilities to carry out their own marine research projects. The education and training program was known as NOAA-CARIB—was part of the Cooperative Investigation of the Caribbean and Adjacent Regions.

In each port, an open house was held. The photographs on these pages, provided by the United States Information Service, were taken during the stop to Vera Cruz, Mexico.



Up and away goes the weather balloon.



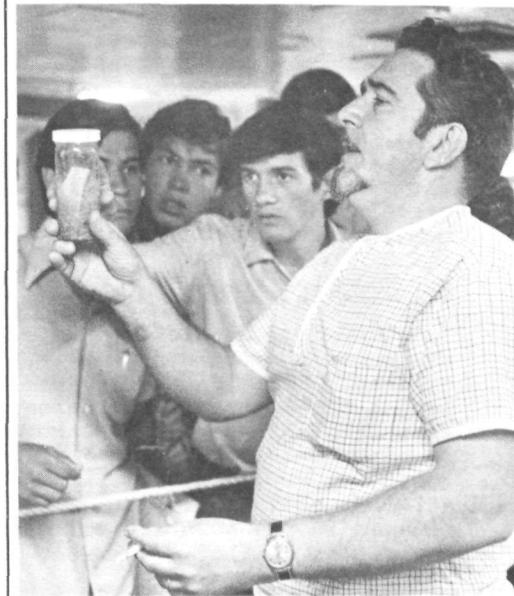
. . . the meteorological program . . . .



Students from Mexico City's University presented Capt. Floyd Tucker, Jr. (left) and Cdr. Donald Florwick with a pinata in appreciation for their two-day scientific cruise.



Mexican Navy cadets had a demonstration of new methods of position location.



. . . and plankton sampling.

## Albany, N.Y., Weather Office Arranges Flood Discussion



From left, Mr. Drewes, Gen. Townend, Kenneth Dormer of the Geological Survey's Albany office, Mr. Kachic, Richard Konsella of New York State Water Resources, Mr. Hopkins, and Bernard Lawski, U.S. Army Corps of Engineers.

The National Weather Service Forecast Office at Albany, N.Y., held a flood preparedness meeting November 29, attended by about 100 persons from industry, Federal, state, and local government agencies, and interested citizens. William Drewes, Albany MIC, moderated a discussion of Tropical Storm Agnes and the disaster that might have ensued if Agnes had hit the Mohawk-Hudson River basins. Speakers were Albert Kachic, Assistant Regional Hydrologist; General Frank Townend, Civil Defense Director for Luzerne County, Pa., and his assistant Nick Souchik; Charles Hopkins, Hydrologist in Charge of the Hartford River Forecast Center; and Ray Wrightson, Principal Assistant at Albany.

## British Fishery Official Speaks at University

Dr. David Cushing, Senior Principal Scientific Officer of the United Kingdom's Ministry of Agriculture, Fisheries, and Food, presented a series of lectures dealing with stock and recruitment in fishes at the University of Washington during October and November. The lectures, supported in part by Sea Grant funds from NOAA, were open to the public, and covered such subjects as mechanisms of recruitment, the stabilization of numbers, recruitment overfishing, the age structure of a fish population, and climate and recruitment.

## Dr. Nickerson Joins Air Resources Laboratory

Dr. Everett C. Nickerson, formerly a member of the Fluid Mechanics Staff at Colorado State University, has recently joined the Environmental Research Laboratories' Air Resources Laboratory and is on permanent loan to the Environmental Protection Agency's Division of Meteorology at Research Triangle Park, N.C. He is engaged in the numerical simulation of environmental fluid dynamics.

## Sept.-Oct. Erie Water Levels Break Hundred-Year Record

The Lake Survey Center reports that Lake Erie has broken previous record high water levels for September and October and will probably set a new record for November.

Lake Erie's monthly mean level of 572.11 feet for September 1972 broke the previous high for that month of 572.04 feet, which occurred in September 1861. The October level of 571.95 feet replaced the previous 571.81-foot record set in 1861. And, while complete records are not yet available for November, indications are that the lake may also top the record high set for that month in 1861. The Lake Survey Monthly Bulletin of Lake Levels six-month forecast (furnished by the Detroit District, U.S. Army Corps of Engineers) indicates that Lake Erie should start to fall toward the end of November, but that it will remain above both its long-term and its 10-year average levels during the next six months.

The current high levels reflect the general above-normal precipitation conditions and other contributing factors in the area of late. When either high or low water supplies occur for an extended period, corresponding high or low water levels develop in the lakes. In addition, these tend to remain after the factors causing them have returned to normal, primarily because of the vast size and physical characteristics of the Great Lakes system.

## Proposed Marine Mammal Regulations

(Continued from page 1)

exemption to Indians, Aleuts, and Eskimos is subject to restrictions necessary to protect depleted stocks of marine mammals. In addition, the Pribilof Island fur seal program is not subject to the moratorium, but the program will be studied for possible modification.

Enforcement of the Act will be the joint responsibility of the Commerce and Interior Departments.

The proposed Interior Department regulations were published in the Federal Register on December 1, and by the Commerce Department on December 2. Comments from interested parties are requested by December 15, 1972. It is anticipated that the interim regulations will be promulgated by December 21, effective on that date.

After the effective date, the record will remain open for additional comments for a 60-day period expiring February 21, 1973. Written comments, views or objections to the proposed regulations, or, after December 15, 1972, to the interim regulations, should be made to the Director, National Marine Fisheries Service, NOAA, U.S. Department of Commerce, Washington, D. C. 20235, or to the Director, Bureau of Sport Fisheries and Wildlife, U.S. Department of the Interior, Washington, D.C. 20240.

## Lewis A. Pitt Is Appointed To EDS Special Projects Staff

Lewis A. Pitt has been appointed to the Special Projects Staff of the Environmental Data Service. In his new position, Mr. Pitt will serve as an expert advisor to the Associate Director for Climatology on observing and instrumental practices and on the network design of the National Weather Service. His last assignment was at the Weather Service's Lower Mississippi River Forecast Center in Slidell, La. Mr. Pitt holds a master's degree in earth sciences from the City University of New York.



## NMFS Man Aids British Herring Study

Frank Wittmann, of the NMFS Fisheries Engineering Laboratory at the Mississippi Test Facility, recently spent three weeks in England as an adviser to members of a British Government fisheries unit during testing of new photographic technology for tracking herring schools at night from aircraft. Experiments were conducted under the auspices of the British White Fish Authority's industrial development unit on behalf of the Herring Industry Board.

Testing took place during flights over the northern coast of Scotland and the Outer Hebrides, using the low light-level television camera whose capabilities as a fish-finder have been under investigation for some time by NMFS researchers.

Excellent results were achieved with the camera system, which was able to detect the presence of herring schools by the bioluminescent "trail" created as the fish swam through the water. The airborne observers notified fishing vessels in the area of the location of the herring, enabling fishermen to move rapidly to the scene and make their catches.

Afterward the British sponsors of the surveys expressed unanimously favorable opinions pertaining to the potential usefulness of the light-sensitive camera system and satisfaction with the demonstrations. They invited NMFS advisers to return next year for a second round of trials of the innovative equipment.

## Mini Computers To Process Upper Air Data

A contract to supply the National Weather Service with mini-computer systems for the upper-air observation program has been awarded to Daconics Corporation of Sunnyvale, Calif. The contract is renewable over a three-year period and is expected eventually to provide all NWS rawinsonde stations with the capability for semi-automated reduction of upper-air data. Delivery of the first six systems is expected about July 1, 1973.

## Boulder Wind-Sensing Network Records Season's First Storm

Strong, gusty northwest winds struck the Boulder area on Nov. 25 and 26, reaching peak velocities exceeding 70 miles per hour in some parts of the city in the early morning hours on the 26th. The region of strongest winds moved slowly eastward as the winds diminished in intensity later in the morning.

This is the general picture provided by a network of wind-sensing sites set up last summer in the Boulder area. The windstorm was the first of the season, and the first to be recorded by the full network.

Instruments in the network are maintained by volunteer observers, who relay wind data to NOAA's Environmental Research Laboratories. In addition to 14 NOAA stations, six wind stations are operated by other government laboratories, two by local industries, and one by the Boulder Daily Camera.

The highest wind recorded in the network occurred at Rocky Flats, southwest of Boulder, where one gust to 104 miles per hour was recorded. Other high winds were recorded at an exposed location on the southern end of Davidson Mesa and in the Eldorado Springs Drive area. Within the Boulder city limits, the winds ranged between 60 and 80 miles per hour.

## W.R. Krumm, Fire Weather Expert, Dies

W.R. (Bill) Krumm, National Weather Service Regional Fire Weather Meteorologist at Salt Lake City, died November 25. Mr. Krumm entered the Weather Service at St. Joseph, Mo., in 1928 and served at Medford, Oreg., and Washington, D. C., before his first fire-weather assignment at Mt. Shasta, Calif., in 1938. He subsequently worked at fire-weather offices in San Francisco, Boise, Idaho, and Missoula, Mont., and had directed the fire-weather program in the western United States since 1960. For his outstanding achievements, Mr. Krumm was awarded the Commerce Department Silver Medal in 1967.

## Ens. Pamela Chelgren Assigned to Ship

Ensign Pamela Chelgren, the first woman commissioned officer to join the NOAA Corps, reported November 24 aboard the NOAA Ship OCEANOGRAPHER for her first assignment. Ensign Chelgren will serve aboard the Seattle-based vessel as a junior officer. She is the first of her sex to become part of a ship's complement in the 165-year history of the National Ocean Survey and its predecessor, the Coast and Geodetic Survey. The ship is now being prepared for her first mission next year in February, when she will conduct geological, geophysical and plate boundary studies off the west coast of South America. The ship will return to Seattle in June.

## Four New Storm-Evacuation Maps Published for Texas Coastal Area

Four storm-evacuation maps have been published for the Corpus Christi, Tex., area, including the communities of Corpus Christi, Robstown, Odem, Taft, Portland, Aransas Pass, Rockport, and Refugio.

The maps, issued for storm-endangered areas, show emergency evacuation routes, areas subject to flooding and elevations which might afford "safety islands" for storm evacuees. They are distributed to state and local officials and community emergency preparedness committees by the National Weather Service, and also may be purchased for \$2 each from the National Ocean Survey's Distribution Division.

Storms, particularly hurricanes, on the Atlantic Coast and the Gulf of Mexico at times cause extensive tidal flooding of low-lying regions. The National Weather Service maintains a close watch on the storms, predicting the height of the storm tide and issuing warnings for areas subject to flooding. The storm evacuation map program was instituted by NOAA to fill a need for small-scale, special-purpose maps to facilitate evacuation of people from endangered areas. Material for the maps is provided by field survey teams of the National Ocean Survey.

Contours on the maps provide a means of estimating areas of possible flooding. The maps also include delineations of the main evacuation roads and feeder roads; low points along the roads that might be engulfed; and high spots which are likely to remain above flood waters, thus affording some degree of refuge. These critical elevations are spaced on the maps at intervals of at least two miles.

## Texas A&M Has Record Shrimp Harvest

A record yield of pond-grown shrimp has been achieved by a Texas A&M University demonstration project, supported by NOAA. Conducted by the Texas Agricultural Extension Service, the demonstration project harvested more than 1,800 pounds per acre of white shrimp. The tails--the edible portion--weighed in at 1,200 pounds and measured 48 to the pound, for a crop worth \$1,400 per acre at current market prices.

The demonstration was sponsored by Brazoria County, private industry, and the Texas A&M Sea Grant program. Cooperating in the studies are the Brazoria County Commissioners Court and Mosquito Control District, Ralston Purina Co., Dow Chemical Co., Texaco, Inc., and the National Marine Fisheries Service.

## Southwest Fisheries Scientists Honored for Atlantic Tuna Study

Dr. William Fox, Dr. William Lenarz, and Dr. Gary Sakagawa, scientists at the National Marine Fisheries Service Southwest Fisheries Center in La Jolla, Calif., have each received a Special Achievement Award for authoring an important scientific paper on population dynamics of fishes. The three young men were called upon, following 1971 meetings of the International Commission for the Conservation of Atlantic Tunas, to produce documentation necessary to form the basis for discussions of ICCAT's proposed recommendations for a possible limit on the size of bluefin and yellowfin tunas caught in the Atlantic. The task involved the study of an almost infinite combination of population dynamics factors leading to manageable hypotheses on which discussions could be based, and extremely advanced techniques of quantitative methodology were required to produce the needed material.



(From left) Dr. Brian J. Rothschild, Director of the Center, presented the awards to Dr. Fox, Dr. Lenarz, and Dr. Sakagawa.

## SHENEHON Completes IFYGL Surveys

The Lake Survey Center's Research Vessel SHENEHON has returned from Lake Ontario to spend the winter in the Detroit area. Since April 24, 1972, when she left Detroit for Lake Ontario, the vessel has been a part of the International Field Year for the Great Lakes program. Her activities included buoy data assessments, Oswego Harbor studies, and mid-lake current and long-internal wave studies. The vessel's crew members now have begun routine maintenance which will be completed during the winter layover. Scientific personnel have returned to their respective home-office projects.

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**

## **ERRATA NOTICE**

One or more conditions of the original document may affect the quality of the image, such as:

Discolored pages

Faded or light ink

Binding intrudes into the text

This has been a co-operative project between the NOAA Central Library and the Climate Database Modernization Program, National Climate Data Center (NCDC). To view the original document, please contact the NOAA Central Library in Silver Spring, MD at (301) 713-2607 x124 or [Library.Reference@noaa.gov](mailto:Library.Reference@noaa.gov)

HOV Services  
Imaging Contractor  
12200 Kiln Court  
Beltsville, MD 20704-1387  
July 23, 2010