



## Extra Leave Granted for Holidays

President Nixon has granted most Federal employees paid holidays on the Mondays preceding Christmas Day and New Year's Day. All but essential workers will be given extra days off on December 24 and December 31. If there is any question as to whether you should report to work on these two days, check with your supervisor.

## Ocean Remote Sensing Laboratory Is Created at AOML in Miami

A laboratory dedicated to studying the oceans from satellites, aircraft, and other remote platforms has been created in Miami, Fla. The new Ocean Remote Sensing Laboratory will be one of the Environmental Research Laboratories' Atlantic Oceanographic and Meteorological Laboratories.

According to Dr. John A. Apel, Director, research emphasis will be on studying such physical and chemical aspects of the oceans, estuaries, and oceanic boundary layer as can be determined via remote sensing from spacecraft, aircraft, buoys, and ships; and to develop new instruments and techniques with which to do this.

"We have barely crossed the threshold of knowing how to use satellite sensors to observe the oceans," he says, "and technology in this area is progressing at an extremely rapid rate. We expect that 'ocean-tuned' satellites will eventually give oceanographers a flow of information and a breadth of vision comparable to that which meteorologists have had from weather satellites.

"At present we are conducting research that uses oceanic data from existing satellites--for example, the high-resolution images from NOAA spacecraft and NASA's first Earth Resources Technology Satellite, ERTS-1, which were not designed primarily to gather oceanic data. And we are helping guide programs in new ocean-looking satellites and sensors, now in their early development stages.

"The other side of our effort is to apply the remote-sensing tools of the trade to ocean research conducted from ships and aircraft. Some of these are microwave radiometers, laser and lidar (the laser equivalent of radar) sensors, acoustic sounders, infrared and visible sensors, precise radar altimeters, and microwave scatterometers."

(Continued on page 5)

## Dr. Norman A. Phillips Named Principal Scientist in NWS

Dr. Norman A. Phillips, Chairman of the Meteorology Department at the Massachusetts Institute of Technology, has accepted the position of Principal Scientist in the National Weather Service. He was officially sworn in to his newly created post at a ceremony December 18 at the World Weather Center, with NWS Director Dr. George P. Cressman officiating.

Dr. Phillips has held the top position in meteorology at M.I.T. since 1970, and been a meteorology Professor there since 1956.

In his new post, he will explore new avenues of research in weather prediction at the National Meteorological Center. He is one of the world's foremost authorities on the dynamics of atmospheric motions and the application of electronic computers to numerical weather prediction.

He will not serve full time until next summer. In the interim he will be doing consulting work for the NWS on an intermittent basis.

Born July 9, 1923, in Chicago, Ill., Dr. Phillips attended public schools there and enrolled at the University of Chicago in 1940. During World War II, he entered the Army Air Corps meteorological program, receiving training at the University of Michigan and Chanute Field, Ill. He served as a Weather Officer with the 8th Weather Squadron from July 1944 until September 1946--most of this time as a

(Continued on page 5)



Dr. Cressman (right) administered the Oath of Office to Dr. Phillips, and Andrew Husser, Chief, NWS Personnel Section of NOAA Personnel Division, held the Bible.

# recipe of the week



## HURRY-SCURRY SEAFOOD DINNER

2 pounds heat 'n' serve breaded fish fillets, portions, sticks, shrimp, or scallops

Easy-Do Mustard Sauce

Heat fish as directed on package labels, approximately 12 to 20 minutes depending on fish and shellfish varieties chosen. Prepare Easy-Do Mustard Sauce and serve.

### Easy-Do Mustard Sauce

3/4 cup salad dressing

1/4 cup prepared mustard

2 tablespoons drained sweet pickle relish

1 teaspoon instant minced onion

Combine all ingredients; stir. Heat slowly to serving temperature, stirring often. Makes approximately 1 cup sauce.

## Northerly Current Off Oregon, Washington Coast Is Documented

A 30-mile-wide current, flowing northward off the coasts of Washington and Vancouver Island, has been documented by scientists with the Environmental Research Laboratories as part of a project to define offshore currents in the Northwest--a study of particular interest to fishermen, shipping interests, and environmentalists.

Ronald K. Reed, an oceanographer with the Seattle-based Pacific Marine Environmental Laboratory, says the northerly flow appears to be continuous from the mouth of the Columbia River to north of the Strait of Juan de Fuca. Usually beginning 20 to 30 miles from shore, the broad ribbon of water occurs seaward from a point where the water depth is about 1,000 meters (3,280 feet).

Knowledge of the ocean's currents here is particularly important to commercial fishermen, because their catches feed upon current-borne fish larvae and minute drifting organisms called plankton. If the current is strong enough, it could also affect the drift and motion of fishing vessels in the vicinity, which often depend on the currents to carry them when engines are shut down.

Moreover, environmentalists as well as oceanographers stress the importance of knowing the offshore current structure in preparation for the two million barrels of North Slope oil which will be shipped daily from Alaska's Port Valdez aboard tankers bound for west coast ports--principally Seattle, San Francisco, Los Angeles, and San Diego.

"Prior to our recent research project, there had been indications of a northerly flow along the Northwest coast, but it was never well defined," Mr. Reed says.

"Our research was undertaken specifically to determine the effect of internal waves which cause errors in computed currents by disturbing the density field," he explains. "For this reason, the computed values of the currents were not reliable. By determining the magnitude of the oscillations caused by the internal waves, we are now better able to compute the true currents in the area."

## EDS Publishes IDOE Progress Report

The second of a series of progress reports on the International Decade of Ocean Exploration has been published by the Environmental Data Service. IDOE is a long-term, international cooperative program to enhance utilization of the ocean and its resources. The report, prepared under contract for the IDOE Office of the National Science Foundation, provides the scientific community, data users, and the public with information, data inventories, and lists of scientific reports pertinent to IDOE. In addition to production of reports, EDS manages IDOE scientific data. EDS either has the data, information, or papers described in the reports in one of its data center archives or knows where the data may be obtained. Queries for data or copies of both reports should be addressed to the National Oceanographic Data Center, NOAA, Rockville, Md. 20852.

## David E. Brunk Dies

David E. Brunk, Meteorologist at the National Weather Service Forecast Office in Sioux Falls, S. Dak., died on December 17. He had served the NWS for 13 years. He is survived by his wife, Jo Ann, and three children, of 4208 South Cliff, Sioux Falls, S. Dak. 57103.

# New Acoustical Scanner of Seafloor Tested for Fishery Application

The latest thing in seafloor surveyors has been tested in the Gulf of Mexico by NMFS scientists. Called the "Shadowgraph System," the acoustical device looks like a torpedo with wings and is towed behind a ship. Its purpose is to convey information to the tow ship concerning configuration of the seafloor detected by electronics systems.

In the recent series of tests to determine the Shadowgraph System's capability as a fisheries research tool, NMFS personnel deployed the instrument from the research vessel Oregon II jointly with the underwater photography sled called RUFAS (Remote Underwater Fisheries Assessment System), towed by the research vessel George M. Bowers. The two were used together so that the engineers could evaluate the merits of an acoustical image as opposed to an optical image of portions of the seafloor.

Participants in the experiment were the NMFS Southeast Fisheries Center (Miami, Fla.), the NMFS Fisheries Engineering Laboratory (Bay St. Louis, Miss.), Navy's Naval Coastal Systems Laboratory (Panama City, Fla.), the National Ocean Survey, and the U.S. Coast Guard. A committee consisting of representatives of the U.S. Geological Survey, the Louisiana Shrimp Association Offshore Oil Operator's Committee, the Bureau of Land Management, and the Corps of Engineers provided assistance and direction during planning phases.

The Shadowgraph System, whose full name is the "Reconnaissance and Surveillance System C Mark 1 Mod C (Shadowgraph)" was developed by the Navy Department. Spearheading the two-week-long project were U.S. Representative John B. Breaux of Louisiana, and the Gulf States Marine Commission, in response to requests by Louisiana commercial fishermen for Government assistance in locating and marking underwater sites containing debris that fouled and snagged their fishing nets.

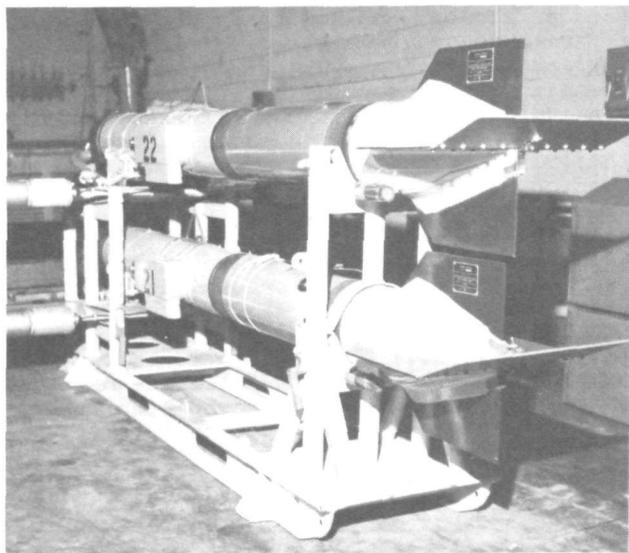
## NOAA's Energy Conservation Project Manager Offers New Suggestions for Saving Energy

Rear Admiral Harley D. Nygren, NOAA's Energy Conservation Project Manager, offers these energy conservation ideas this week:

- NOAA employees are encouraged to use restaurant facilities within walking distance of their offices or to carry their lunches. Either will reduce fuel consumption.
- Wherever feasible, the use of bicycles to travel to and from work is suggested. NOAA elements should investigate the provision of bicycle racks for the convenience of employees who use this method of transportation.
- The Suitland area of the National Environmental Satellite Service has adopted an idea that might well be employed by other organizations. The employee roster has been modified to include town and zip code (not street and number) and circulated to employees. Those interested in forming car pools use the roster to locate fellow employees in their neighborhoods.

During a one-week feasibility test off Panama City, Fla., participants reported that they had been able to take acoustical "pictures" of objects such as 55-gallon drums. These and other targets were placed on predetermined spots on the ocean floor to test the resolution capability of the electronic system and the clarity of the images received aboard ship on an electric image scope and on strip charts. The latter provide a permanent record of data thus collected. The ships and their towed underwater vehicles ranged over waters off the Louisiana and Mississippi coasts. The Shadowgraph located and marked numerous bottom obstructions, and on several occasions scanned fish schools. The RUFAS system was rendered ineffective, however, because of high turbidity of the water during the study.

Detailed findings have been presented before a meeting of the Gulf States Marine Fisheries Commission.



NASA photo.

## NOS Seeking Information From Nation's Surveyors

The Nation's 36,000 registered land surveyors are being contacted by the National Ocean Survey in an effort to improve the government services available to them. The surveyors will receive a questionnaire which NOS will use to analyze the essential requirements of the surveying and mapping community.

Along with the questionnaire, surveyors will receive an information packet designed to familiarize them with the types of data and other information available from the NOS and the proper procedures for obtaining them. An explanation of the Survey's mark preservation program is also included.

## State Tax Deductions for Wisconsin To Change

Employees who are subject to state tax withholdings for the State of Wisconsin may notice a minor change in their state tax for the salary checks dated on or after January 2, 1974.

## ERL Scientists Study Fundamental Particles in Precipitation Process

The microscopic particles that are both literally and figuratively at the core of natural rainforming processes, hail generation, and weather modification are being monitored systematically for the first time by scientists with the Environmental Research Laboratories.

Called ice nuclei, the tiny particles provide solid, crystalline "platforms" around which supercooled water--water cooled below freezing but still in liquid form--can freeze. (In the absence of ice nuclei, water can be cooled to about minus forty degrees Celsius before freezing spontaneously.) This still incompletely understood process of nucleation is the keystone of ice formation in clouds, precipitation mechanisms, and cloud-seeding experiments.

The present investigation, conducted by the Boulder, Colo.-based Atmospheric Physics and Chemistry Laboratory, is the first systematic effort to monitor the natural populations of these important but poorly understood particles, and how these populations vary with season, weather conditions, and geographic location. The study is also attempting to improve scientific understanding of the invisibly small processes at work in the nucleating process itself.

According to Dr. Helmut K. Weickmann, Director of the Atmospheric Physics and Chemistry Laboratory, an improved understanding of ice nuclei populations and nucleation processes is a prerequisite to comprehension of natural precipitation mechanisms as well as to weather modification research.

Although it will be many months before a thorough analysis of the data can be made, Paul A. Allee, the physicist who leads the ice nuclei project, has reported several interesting results based on the first three months of operations:

-Ice nuclei concentrations appear to increase in direct proportion to the distance from the coast.

-If the source of ice nuclei is the earth's surface, preliminary calculations indicate that about two ice nuclei per square meter are generated per minute. (Atmospheric concentrations at a temperature of -20° Celsius are of the order of one nucleus per liter of air.)

-Human activity has a critical effect in some locations. For example, high ice-nuclei levels for Lander, Wyo., probably resulted from the dust kicked up by a July rodeo.

-Monthly average values for several consecutive months from spring to summer indicate that ice nuclei concentrations have been increasing at all stations except Lihue, Hawaii, possibly a seasonal phenomenon.

Mr. Allee's assistants in the study include Mary Jane Foley, John J. Kelly, and Charles C. Van Valin.

To produce the necessary body of data, the Atmospheric Physics and Chemistry Laboratory has established a 19-station ice-nuclei concentration benchmark network at facilities of the National Weather Service across the western United States, at these locations chosen for the comparative absence of man-generated ice nuclei: Aberdeen, S.Dak.; Albuquerque, N.Mex.; Boulder, Colo.; Cold Bay, Alaska; Concordia, Kans.; Del Rio, Tex.; Elko, Nev.; Flagstaff, Ariz.; Havre, Mont.; Lander, Wyo.; Lihue, Hawaii; North Platte, Nebr.; Milford, Utah; Pendleton, Oreg.; Quillayute, Wash.; Sandberg, Calif.; Sexton Summit, Oreg.; Wichita Falls, Tex.; and Williston, N.Dak. The instruments at the field sites pump about 300 liters per day of air through thin membrane filters, which are removed daily and mailed in groups to a central analysis facility in Boulder.

## New England Marine Advisory Service Formed

A marine advisory service organization, called the New England Marine Advisory Service (NEMAS), has been formed to carry out marine advisory activities of interest to the New England region. It will explore ways by which existing Federal, state and university marine information services can be coordinated, how talent can be shared and how broader academic community support and participation can be obtained in the solution of marine problems. Membership in NEMAS will be from Sea Grant programs in the states of Maine south through Connecticut, from the National Marine Fisheries Service and state fishery management agencies in Massachusetts and Maine.

The New England Center for Continuing Education at the University of New Hampshire will provide a secretariat and an organizational focal point for NEMAS. Walter Gray, head of the Sea Grant Marine Advisory Program at the University of Rhode Island, is the first Chairman of the NEMAS Board of Directors.

## Geodetic Survey in Washington Is Completed

A 12-month geodetic survey of Seattle, Wash., and the surrounding area, a cooperative project of King County and NOAA, was completed this month by the National Geodetic Survey.

A 15-man field party headed by James L. Cooke determined the geographic positions (latitude and longitude) of numerous sites in Seattle, Bothell, Auburn, Renton, Issaquah, Enumclaw and North Bend.

The sites, one to five miles apart, were selected in 1971 and 1972 by surveying technicians Charles R. Lesley and Byron W. Miller. The survey began in November 1972.

The cooperative agreement provided on-the-job training for county employees in geodetic surveying, enabling them in the future to establish additional geographic points, as well as train other county employees. During the survey, the NGS established the primary geographic points, while the county surveyors established many additional points to meet the county's surveying needs.

# Advanced Prediction Techniques Course Held at NWS Headquarters



Participants in the Second FY-74 Advanced Prediction Techniques Course held at National Weather Service Headquarters in Silver Spring, Md., from November 27 to December 13 were (seated, from left) Edward Lazar, Milwaukee, Wis.; Jimmie Burleson, Topeka, Kans.; Barry Nielsen, Salt Lake City, Utah; Benjamin Hablutzel, Anchorage, Alaska; Richard Ogden, Little Rock, Ark.; Wallace Donaldson, Seattle, Wash.; Brian Smith, Washington, D.C.; (standing from left) Dr. Duane Cooley, NWSH; James McDonell, Instructor, NMC; Erwin Varns, Indianapolis, Ind.; Gordon Hammons, Techniques Development Laboratory, NMC; Jeffrey Bowman, Albany, N.Y.; Melvin Dunne, Boston, Mass.; A. Bruce Candra, Atlanta, Ga.; Burton Sylvern; Phila-

delphia, Pa.; Lloyd Graybill, Boise, Idaho; Robert Backiel, Portland, Maine; William Kiffe, Great Falls, Mont.; Gregory Bussiere, Albuquerque, N.Mex.; Donald Northrop, Portland, Ore.; Arwin Hoge, Bismarck, N. Dak.; Carl Peabody, Lubbock, Tex.; Arthur Myers, Naval Weather Service, Jacksonville, Fla.; Captain Peter Havanac, 6th Weather Wing, Andrews AFB, Washington, D.C.; Charles Cook, Fort Worth, Tex.; Allan Lee, Public Weather Branch, NWSH; Larry Wilson, Kansas City, Mo.; Richard Parker, NMC; Robert Derouin, Instructor, NWSH; John Mukai, Honolulu, Hawaii; Alexander Sadowski, Instructor, NWSH; Dr. Charles Chow, Training, NWSH; and Maury Pautz, Course Supervisor, Training, NWSH.

## Dr. Norman Phillips (Continued from page 1)

forecaster in the Azores and six months as Communications Officer for the Squadron at Westover Field, Mass. Resuming his academic career at the University of Chicago in 1946, he earned a bachelor's degree in meteorology in 1947, a masters in 1948, and a doctorate in 1951.

From September 1951 until July 1956, Dr. Phillips was a research meteorologist with the Institute for Advanced Study at Princeton, N. J. During this time he spent one year--1953-54--at the University of Stockholm, Sweden, where he organized the first numerical model for weather prediction by computer in Scandinavia.

While at M.I.T., Dr. Phillips has done occasional consulting work for the NMC and has been a member of the advisory panel for NOAA's Project Stormfury.

Among honors he has received are the Napier Shaw Prize from the Royal Meteorological Society in 1956 and, from the American Meteorological Society, the Meisinger Award in 1960, the Editor's Award in 1969, and the Rossby Medal in 1971. The Rossby Medal is the AMS' highest honor.

Dr. Phillips and his wife, the former Martha Nissen, have three daughters.

## Ocean Remote Sensing Lab (Continued from page 1)

Among the Ocean Remote Sensing Laboratory's planned projects are studies of major current systems and hurricane-ocean interactions using data from GEOS-C, the geodetic satellite planned for a 1974 launch; Gulf Stream dynamics and internal waves using data from the second Earth Resources Technology Satellite (ERTS); and various studies of surface and internal wave dynamics in the sea, using available satellite data and acoustic remote sensing from ships.

## Opportunities for U.S. Fishery Exports Growing

Economic growth and rising personal income in many countries have sent foreign buyers in search of new sources of fisheries products, and the United States is one of the sources, according to the National Marine Fisheries Service. A number of species found off the U.S. coasts are not fully utilized by U.S. consumers, yet the demand for these products is growing in foreign markets.

Robert W. Schoning, NMFS Director, said much of the export opportunity lies in fish resources currently underutilized by this country. For example, some of the major species consumed in Japan, including eel, squid, sea urchin, and croaker, are listed as underutilized in the U.S. The approximate annual per capita consumption of edible fish and shellfish in the U.S. in 1972 was 12.2 pounds, the highest in 45 years. The latest available data (1970) showed Japan had a per capita consumption of 70.8 pounds.

Mr. Schoning added that the growing world demand for fisheries products, the upward revaluation of foreign currencies, plus the devaluation of the U.S. dollar, have combined to enhance U.S. export opportunities.

In addition to those named earlier, species with potential for expanded U.S. export opportunities are mussels, Pacific herring, Atlantic mackerel, and Alaska pollock.

Mr. Schoning pointed out that the fact that the foreign market exists does not mean that the U.S. fishing fleet is prepared to meet the demand immediately. He said that while the demand exists, there are possible problems of gear conversion, harvesting and processing that must be overcome. The price that foreign buyers will pay for certain products also will help determine whether U.S. fishermen will expand their present fisheries to seek the currently underutilized species.

# notes about people

Dr. Joanne Simpson, Director of the Environmental Research Laboratories' Experimental Meteorology Laboratory in Miami, Fla., has been nominated by the editors of the Ladies Home Journal as a candidate for its 1974 Woman of the Year Award in the category of Science and Research.

Details of the balloting are on page 46 of the magazine's January issue. Final selections will be based on the ballots of readers, plus the evaluation of a distinguished board of judges. Ballots must be mailed by January 21.

Dr. Simpson has headed the EML since 1965, and also has served as Adjunct Professor of Atmospheric Sciences at the University of Miami since 1967. Her many honors have included receiving the American Meteorological Society's Meisinger Award in 1962; the Los Angeles Times Woman of the Year Award in 1963; and a Department of Commerce Silver Medal in 1967.

James Lander, Deputy Director of the Environmental Data Service's National Geophysical and Solar-Terrestrial Data Center, and a team of earthquake experts, recently participated in the Emergency Energy Capacity Study of the National Academy of Sciences. The experts involved in the study are trying to determine the advisability of storing oil and gas for national emergency use. A 90-to 120-day supply is desired. A formal report will be made to the NAS Advisory Center for Emergency Planning in the next several months.

Kenneth L. Core, an Osage Indian with the Environmental Data Service's National Geophysical and Solar-Terrestrial Data Center in Boulder, Colo., recently accompanied a mobile exhibit to schools on the Navaho Indian Reservation in New Mexico and Arizona. The purpose of the U.S. Geological Survey exhibit was to interest minority students in scientific disciplines that will lead to employment with the Federal Government. Mr. Core, a seismologist, visited five schools in the two states, speaking to several thousand Navaho Indian students.

William I. Pogerman has been named Program Manager of Substation Management in the National Weather Service's Data Acquisition Division.



He formerly served as Chief of the Surface and Upper-Air Staff in the NWS Eastern Region Headquarters. He joined the NWS in 1947 as a Chartman in the Upper-Air Program, and in 1952 and 1953 was Executive Officer for the Eureka, NWT, Canada, station. He became Supervisor of the Upper-Air Program at J.F. Kennedy Airport in 1961, and in 1968 was named Upper-Air Specialist for the Eastern Region.

William J. Monteith, Chief of the Surveys Branch in the Lake Survey Center's Marine Mapping and Charting Division, represented the Center at the fall International Charting Advisors meeting held at the Canadian Hydrographic Service's Headquarters in Ottawa, Ontario. As a part of the joint U.S. and Canadian continuous endeavor to coordinate Great Lakes charts and charting policies, the recent progress in this endeavor and plans for future efforts were discussed at the meeting. Since 1,500 contiguous miles of international Great Lakes and other waters divide the countries, it is important for economy, as well as safety, that the similar missions and charting products be complementary.

Lieutenant Commander John P. Vandermeulen is the new Chief of the Electronic Engineering Division at the Pacific Marine Center of the National Ocean Survey in Seattle, Wash. He was previously assigned to the Pacific Marine Environmental Laboratory in Seattle. A NOAA commissioned officer since 1964, his assignments also have included those of Operations Officer on the NOAA Ships Rainier and Oceanographer.



## Dinner Dance To Mark Retirement Of Ambassador Donald L. McKernan

Ambassador Donald L. McKernan, Coordinator for Ocean Affairs and Special Assistant to the Secretary of State, who is retiring, will be honored by his many friends in government, industry, and private life at a dinner dance to be held January 11, 1974, at the International Club in Washington, D.C. Tickets are priced at \$10.00 per person, which includes cocktails before dinner, dinner, and the cost of an orchestra, in addition to a gift for the Ambassador.

NOAA friends of Ambassador McKernan who plan to attend should contact Kip Robinson or Ralph Curtiss at NMFS, telephone 183-38743.

Attendance will be limited because of space, so prompt action by those planning to help honor the Ambassador is recommended.

## Survey Underway From Caliente to Barstow, Calif.

An extensive geodetic survey is underway in Southern California between Caliente and Barstow, with a branch line from Mojave to Rosamond, to provide up-to-date measurements of elevations along a 132-mile route for use in large-scale engineering projects.

The six-week survey is being carried out by a 20-man National Geodetic Survey field party headed by James W. Taylor.

The route is part of the National Elevation Network. The survey will become a portion of the Southern California Cooperative Leveling Network of Elevations in the counties of Los Angeles, Orange, San Bernardino, Ventura, Riverside, and San Diego. The networks are surveyed periodically because of changes in elevation resulting from earth movements.

The party will determine changes in elevation along a route parts of which were last surveyed in 1953 and 1961.

# calendar of events

- Jan. 7-9, 1974 Symposium on Beaufort Sea Coastal and Shelf Research, sponsored by the Arctic Institute of North America. (J.E. Sater, AINA, 1619 New Hampshire Ave., N.W., Washington, D.C. 20009. NO-7-1716.)  
San Francisco, Calif.
- Jan. 8-11, 1974 54th Annual Meeting of the American Meteorological Society. Program was published in October AMS Bulletin. (E. Mazur, AMS, 45 Beacon St., Boston, Mass. 02108. 617-227-2524.)  
Honolulu, Hawaii
- Jan. 14-25, 1974 International Association of Meteorology and Atmospheric Physics meeting. (Cynthia Beadling, AGU, 1707 L St., N.W., Washington, D.C. 20036. 202-293-1144.)  
Melbourne, Australia
- Feb. 4-5, 1974 Sixth Geodesy/Solid-Earth and Ocean Physics (GEOP) Research Conference, sponsored by the American Geophysical Union, Defense Mapping Agency, National Aeronautics and Space Administration, NOAA, Ohio State University Department of Geodetic Science, and U.S. Geological Survey. Applications for attendance must be received by Dec. 28, 1973. (Cynthia Beadling, AGU, 1707 L St., N.W., Washington, D.C. 20036. 202-293-1144.)  
La Jolla, Calif.
- Feb. 13-14, 1974 "Natural Resources and the New England Economy," sponsored by the New England River Basins Commission. (Bill Nothdurft, NERBC, 55 Court St., Boston, Mass. 02108. 617-223-6244.)  
Boston, Mass.

## Seven-Month Survey in Louisiana Is Begun

A 20-man National Ocean Survey field party headed by Harry R. Romine has begun an extensive geodetic survey of southwestern Louisiana.

The seven-month survey, covering 1850 square miles, will provide a network of control points (positions of latitude and longitude) for the state. It is part of a long-range cooperative program carried out in Louisiana since 1968 by the NGS and the state in which state surveyors work with the federal party in establishing control points. So far, over 15,400 square miles have been surveyed in northern, central and southern Louisiana. The extensive survey is needed because of rapidly rising land values.

Survey observations will be performed in two areas of the state. One 1225-square-mile area includes the parishes of Beauregard, Allen, Evangeline, Jefferson Davis and Acadia and the communities of Oberlin, Basile, Kinder and Oakdale. The other 625-square-mile area includes the parishes of Vermilion and Iberia and the communities of Abbeville, Kaplan and Weeks.

## Great Lakes Fish Poster Issued by Fishery Service

The fifth in a series of fish posters depicting aquatic inhabitants of U.S. waters has been issued by the National Marine Fisheries Service. NMFS Director Robert W. Schoning made the initial presentation earlier this month at a Chicago (Ill.) meeting of the Seafood Council of Illinois, the Midwest Federated Fisheries Council, and NMFS representatives.

The latest four-color poster displays 52 species of fish that inhabit bays and open waters of the Great Lakes. Each species is or has been important to food and recreational fisheries of the region, or has special regional significance to Great Lakes ecology. All species do not occur in every Lake--some have become rarities in particular locations. Among the several fisheries experts who assisted in the project was Dr. Reeve M. Bailey, Curator of Fishes, University of Michigan.

The first poster was devoted to fishes of the North Atlantic, the second to fishes of the North Pacific, the third to species found off southern California and Mexico, and the fourth to species of the South Atlantic and the Gulf of Mexico.

Developed by Bob E. Finley, Chief, Consumer Education Services Office of the NMFS, the 30-inch-wide by 48-inch-long charts are printed on washable non-glare plasticized paper that hangs flat against a surface without curling. A list of common and scientific names of the fishes is included, as well as artwork showing the natural habitat.

Copies may be ordered from Government bookstores and the Superintendent of Documents, Washington, D.C. 20402, for \$1.75 for the latest poster, \$2.00 for earlier ones.

## Special Chart To Aid in Search, Rescue Missions

The National Ocean Survey is preparing a special nautical chart for the Coast Guard as an aid in correlating more closely search and rescue missions in the Long Island Sound area of New York and Connecticut. The chart will incorporate three nautical charts of the area and a nautical-mile grid reduced to a common scale with the overall length not to exceed 40 inches. The reduction is approximately one-third of the original chart sizes.

### **Gas Siphoners Beware! ! !**

A dangerous offshoot of the current energy shortage is the practice of siphoning gasoline from automobile tanks. Persons who attempt to start the siphon flow by sucking the gas through a simple rubber tube are taking a dangerous and perhaps deadly risk. Even a small amount of gas swallowed can cause extreme illness. As little as four ounces may prove fatal. If emergency siphoning is necessary, use a mechanical pump or, if human suction is necessary, use plastic tubing or a length of glass tubing between two lengths of rubber tubing to warn you before the gas gets to your mouth.

## Notice Regarding Pay Checks Due on January 2, 1974

Because of the two-day holiday (December 24 and 25), the Finance Division Payroll Section will have insufficient time to completely process the bi-weekly time and attendance cards relative to pay period #1 for the pay day of January 2, 1974. Rather than run the risk of late pay checks, regular full time employees will receive a straight 80 hours of regular pay. Adjustments for leave or premium pay will be made on the next regular payroll. Overpayments, if any, will, likewise, be collected on the next regular payroll.

Pay for other than regular full time employees will be processed manually, or on a supplemental payroll, and employees should receive their actual pay on or near the scheduled pay day.

## ERL Grants Research Funds to Dr. Gollub

The Environmental Research Laboratories have given a \$32,000 grant for research on cloud droplet growth and cloud nuclei properties to Dr. Jerry P. Gollub, an assistant professor of physics at Haverford College's Department of Physics.

He is using light-scattering techniques to study cloud droplet growth. The nucleation and diffusional growth of water droplets in the atmosphere is an important natural process, and plays an important role in current discussions of inadvertent weather and climate modification. While there have been numerous measurements of droplet size distributions in actual clouds by direct collection techniques, there have been very few studies of growth process itself.

In addition to making quantitative tests of theories of droplet growth, Dr. Gollub will study the growth of droplets formed on different types of naturally occurring aerosols. As a result, it should then be possible to speculate more convincingly about the consequences of large-scale changes in the relative abundances of various types of cloud nuclei.

Dr. Gollub will also attempt to make a realistic evaluation of the potential usefulness of optical light-scattering techniques in laboratory studies of atmospheric problems. The research project will be monitored by Dr. Earl W. Barrett, a Research Meteorologist with the Atmospheric Physics and Chemistry Laboratory in Boulder, Colo.

## Survey of Oakland, Calif., Airport Being Made

A National Ocean Survey airport survey party, headed by Jacob C. Messing, is conducting a field survey of Metropolitan Oakland (Calif.) International Airport, as part of a joint program with the Federal Aviation Administration to advance air safety.

## Romanian Fishery Delegates Visit With NMFS Director

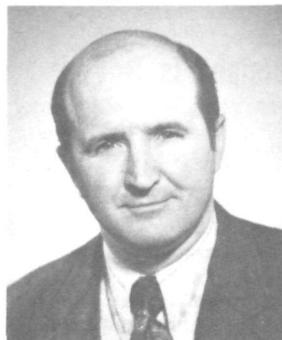
Gheorghe Balasoiu, Director, International Relations Department, Ministry of Transport and Telecommunications, Chairman of the Romanian Fishery Delegation, and Liviu Popescu, Merchant Marine Department, Ministry of Transport and Telecommunications, Member of the Romanian Fishery Delegation, visited with National Marine Fisheries Service Director Robert W. Schoning, following negotiations on a bi-lateral fisheries agreement between the two countries on fisheries in the Northwest Atlantic. The agreement was reached following meetings at which Ambassador Donald L. McKernan headed the U.S. delegation.



(From left) Mr. Schoning, Mr. Balasoiu, Mr. Popescu, and Milton M. Rose, Leader, Translation Program, NMFS.

## Carr is NMFS Great Lakes Area Liaison Officer

John Carr, a Fishery Biologist with the Interior Department's Bureau of Sport Fisheries and Wildlife at Ann Arbor, Mich., has been appointed the National Marine Fisheries Service's Liaison Officer at Ann Arbor, to serve as the principal contact point in the Great Lakes region. He will report Directly to the NMFS Northeast Regional Office (headquartered at Gloucester, Mass.), and, as the personal representative of Regional Director Russell T. Norris in eight Great Lakes States, he will be responsible for State-industry liaison for NOAA-NMFS on fisheries matters throughout the Great Lakes.



Mr. Carr

For the past 14 years, Mr. Carr has been employed at Interior's Great Lakes Fishery Laboratory at Ann Arbor, first as the investigative chief for environmental studies, and since 1971 as Assistant Laboratory Director. He studied at Milligan College, Tenn., before earning his Bachelor of Science and Master's degrees at Michigan State University.

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