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Oceanographic Experiment Begins in Atlantic Ocean

An intensive four-month study involving approximately 50 scientists from 15 oceanographic institutions in the U. S., Britain, Sweden, and West Germany, has been launched in a 40,000-square-mile area of the Atlantic. The program is sponsored primarily by the National Science Foundation International Decade of Ocean Exploration program and the Office of Naval Research.

Dr. Donald Hansen of the Atlantic Oceanographic and Meteorological Laboratories in Miami, Fla., project manager for NOAA's participation, describes the study as "the most elaborate oceanographic field experiment ever attempted in the western world and, in terms of diversity of observation, anywhere."

The project is centered in an area about midway between Bermuda and the Bahamas. It is being conducted under the name Mid-Ocean Dynamics Experiment (MODE), and its chief objective is to define the movements of medium-range ocean currents in a 200-mile area.

The study is being conducted from six research vessels, the NOAA Ship RESEARCHER of Miami, Fla.; the CHAIN of Woods Hole (Mass.) Oceanographic Institution; the DISCOVERY of the National Institute of Oceanography, Wormley, England; the EASTWARD of Duke University Marine Laboratory, Beaufort, N. C.; the TRIDENT of the University of Rhode Island, Kingston; and a chartered vessel, the R. V. HUNT, operated by MAS/TRACOR of Fort Lauderdale, Fla.

Rising Consumer Price Index May Dictate Annuity Boost

The Consumer Price Index for the month of March hit 129.8, again exceeding the necessary three percent factor. This translates into at least a 5.4 percent annuity boost that would be effective July 1, 1973, if the index does not drop for April. Should the Index for April, which will be announced in late May, go above the 129.8 level, the annuity bonus will be even more.

1973 Sets New Records For Storms and Floods

The past few weeks of severe weather have been an extraordinary challenge to personnel of the National Weather Service.

With record-breaking floods on the Mississippi and its tributaries, a continuing series of family outbreaks of tornadoes, record cold spells nipping fruit trees, record snows in the Plains states, and record heat in the Northeast--even the hardiest weather forecasters were beginning to show signs of strain.

Backup personnel were moved in on an emergency basis to assist in flood forecasting at the River Forecast Center in Slidell, La., and in a number of other weather offices where pressure was greatest.

As of April 25, the worst seemed yet to come. The official flood forecast for the Mississippi at St. Louis called for a crest on April 28 of 43.5 feet--18 inches higher than the previous record set 188 years ago in 1785. This was to be the third crest at St. Louis this year--the latest one caused by a seven-to-ten-inch downpour that fell early April 21 over portions of the Missouri River Basin west of St. Louis. There was widespread concern about whether the dikes could contain the advancing wall of water.

According to wire-service accounts, an estimated 5,000 persons were driven from their homes by the flood waters and about 1,000 miles of shoreline affected from Iowa to New Orleans. Newspapers reported a score of flood-related deaths, a number of them motorists who risked fording flooded roads and were swept into the current. Estimates of farmland under water ranged from six to 10 million acres, damage more than 40 million dollars. Army engineers opened spillways at several spots on the lower Mississippi near New Orleans for the first time in almost 20 years in an effort to relieve pressure on water-soaked levees. National Guardsmen and local volunteers worked round the clock adding dirt, sand, and gravel to reinforce levees.

"Recurring rains generated flash-flood warnings in 50 to 60 different localities in the Mississippi Basin in the past 40 days," according to Herbert Groper, of the Office of Hydrology. "Large sections of eight or nine states were involved," he said--"not just isolated localities."

He added:

"This is very unusual. We've had flash-

(Continued on page 6)

NOAA Plans Cloud Seeding And Tropical Weather Research

The atmosphere over southern Florida and nearby ocean areas will be the laboratory this summer for a series of experiments aimed at improving man's ability to comprehend, predict, and modify tropical weather.

A cooperative undertaking of NOAA elements in the Miami, Fla., area--the Environmental Research Laboratories' Experimental Meteorology Laboratory, National Hurricane Research Laboratory, Research Flight Facility, and Atlantic Oceanographic and Meteorological Laboratories, and the National Weather Service's National Hurricane Center--and the Universities of Miami and Virginia, the project will run from June through November.

Project scientists hope to end the season with a significantly improved understanding of the cause-and-effect quantities involved in seeding cumulus clouds to increase cloud size and precipitation, the energy distributions and sea-air interactions associated with tropical storms and hurricanes, and new ways of observing these and other processes in the tropical atmosphere.

The experiments will also test--and provide additional data for--numerical models developed to simulate and predict the behavior of seeded and unseeded cumulus clouds, processes in and around tropical cyclones, and wave action beneath active hurricanes.

The experimenters will use data from virtually the entire family of earth-orbiting environmental satellites, including the National Aeronautics and Space Administration's manned Skylab, to be launched in May. They will also use heavily instrumented research aircraft, sophisticated new radar systems, and a dense network of surface wind-and rain-measuring devices in the project area south of Lake Okeechobee.

According to Dr. Joanne Simpson, director of the Experimental Meteorology Laboratory, the dense surface network operated this year by the Department of Environmental Sciences of the University of Virginia, the dual-Doppler-radar system from the University of Miami's Division of Atmospheric Science, digitized radar at the National Hurricane Center, and the aircraft should give an extremely detailed picture of the atmospheric processes in, around, and under seeded and non-seeded cumulus clouds.

Dr. James D. McFadden, acting director of the Research Flight Facility, said that NOAA's C-130 will be the seeder aircraft, and its DC-6 will obtain meteorological data around the base of the experimental clouds and make flux measurements with the turbulence system developed jointly by the RFF and ERL's Wave Propagation Laboratory in Boulder.

A Navy S2D aircraft from the Naval Research Laboratory will also participate.

Dr. R. Cecil Gentry explained that the National Hurricane Research Laboratory, which he directs, will participate with EML in an extensive cloud physics program which should give new insights into a hurricane's supply of water and energy. NHRL will also cooperate in cumulus studies, investigate the interactions between the ocean and hurricanes, and study the natural variability of hurricanes.

A related experiment mounted by the Sea-Air Interaction Laboratory of the Atlantic Oceanographic and Meteorological Laboratories will use advanced aircraft instrumentation to look at wind-wave and other ocean-atmosphere processes related to tropical cyclones. Oceanographer Duncan B. Ross is leading this project.

Ronald E. Drummond Is Named To Head Beckley, W. Va., WSO

Ronald E. Drummond, a Weather Service Specialist at Elkins, W. Va., has been appointed to head the Weather Service Office at Beckley, W. Va. He succeeds Ralph Simpson, who has retired after 34 years' service.

Mr. Drummond entered the NWS at the National Meteorological Center in Washington, D. C., in 1959, and served at Alpena, Mich.; Huntington, W. Va.; and Wilmington, N.C., before moving to Elkins. He had served five years in the U. S. Air Force earlier. He attended Marshall University, the University of North Carolina, the University of Miami, and received his meteorological training at Penn State University.



Mr. Drummond

NOAA Employees Association Opens 1973 Membership Drive



Dr. Robert M. White, NOAA Administrator, and Dr. John W. Townsend, Jr., Associate Administrator, demonstrate their support for the NOAA Employees' Association membership drive by accepting membership cards numbers 1 and 2 from the membership chairman, Gregory Richter, as the other Association officers watch. From left are: Helen Hagemeyer, Treasurer; Jeri Anderson, Secretary; Dr. Townsend; Mr. Richter; Dr. White; and Curtis Moore, President.

First NWS Radar in North Dakota To Begin Operation at Bismarck

The first National Weather Service Surveillance Radar in North Dakota is scheduled to begin operation at the newly designated Weather Service Forecast Office in Bismarck on May 1.

Commissioned at Bismarck just in time for the spring severe weather season in that locality, the C-Band radar had, only six weeks earlier, been moved from a site near Oswego, N.Y., where it had been operated in conjunction with the International Field Year for the Great Lakes. During the year-long joint U.S.-Canadian study, the radar was used to measure, at ten-minute intervals, the amounts of rainfall over the eastern part of Lake Ontario and its basin.

To keep down-time to a minimum, the initial antenna installation at the Bismarck airport is temporary, as it was at Oswego. The antenna will be relocated on a permanent 75-foot tower during the "off" season later this year.

The present staff of Weather Service Specialists and Upper-Air Specialists at the WSO will operate the new radar. They are: Donald Klein, Helen Renwick, Michael Ryba, Craig Cannon, Larry Holien, Clarence Pruitt, and Dale Voss.

In addition to the radar, the new WSFO also has new quarters--in its own new building at the airport.

Members of Congress To Address July Ocean Conference in Seattle

Members of Congress prominent in oceanographic activity will participate in the NOAA-sponsored conference on "The Oceans and National Economic Development," to be held July 17-19 in Seattle, Wash. The three-day meeting is aimed at planning the future of the nation's oceanographic effort during the balance of the 20th century.

United States Senators who will appear at the conference are Sen. Warren G. Magnuson and Sen. Henry Jackson of Washington, Sen. Ernest F. Hollings of South Carolina, Sen. Ted Stevens of Alaska, and Sen. Mark O. Hatfield of Oregon. Sen. Magnuson is chairman of the Senate Commerce Committee, and Sen. Jackson heads the Senate Interior and Insular Affairs Committee. Sen. Hollings is chairman of the Senate Subcommittee on Oceans and Atmosphere, and Sen. Stevens is ranking minority member of that group. Sen. Hatfield is a member of the Senate Appropriations and Interior Committees.

Others from Capitol Hill who will address the conference are Congressman Charles A. Mosher of Ohio, ranking minority member of the House Subcommittee on Oceanography, and Cong. Joel Pritchard of Washington, a member of that subcommittee. Dr. Robert M. White, NOAA Administrator, will outline the purpose of the conference after welcoming speeches by Governor Daniel J. Evans of Washington and Mayor Wesley C. Uhlman of Seattle.

Dr. Miller Leads Team Testing Undersea Laboratory at 100 Feet

Dr. James W. Miller, Deputy Director of NOAA's Manned Undersea Science and Technology program, is leading a team of aquanauts operating for the first time an undersea laboratory at a depth of 100 feet and using a breathing gas mixture of 95 percent nitrogen and five percent oxygen inside the laboratory. This 14-day program will validate the earlier use of this breathing mixture at this depth in a dry-land-based high pressure chamber which was developed for Tektite II, but was never actually tested in open ocean.

The four aquanauts, in the Puerto Rico Inter-National Undersea Laboratory, sponsored by the Economic Development Administration of Puerto Rico, will be submerged in the Mona Passage, about 10 miles off the west coast of Puerto Rico.

Also an oceanographic first will be their actual open ocean use of new vertical excursion diving tables, developed for the Union Carbide Corporation of Tarrytown, N. Y., and supported by NOAA. These new diving tables will add greatly to the economic feasibility and flexibility of using ocean floor laboratories by allowing aquanauts to work for long periods of time, at depths down to 200 feet, using air instead of requiring the use of expensive gases such as helium.

The other aquanauts will be Ian Koblick, Prinul Manager and President of the Marine Resources Development Foundation; Dr. Allan Waterfield, Assistant Professor of Exercise Physiology at the University of New Hampshire; and Michael Sheen, Assistant Science Program Coordinator of the Marine Resources Development Foundation. They will complete their mission on May 9.



From left are Dr. Waterfield, Dr. Miller, Mr. Sheen, and Mr. Koblick.

LSC Readies Research Tower in Lake Michigan

Ronald W. Dana and Edward J. Cavanaugh of the Lake Survey Center's Facilities Division have recently reinstalled the 70-foot steel research tower in Lake Michigan near Muskegon in preparation for the coming season's activities. The tower is used jointly by the LSC and the Argonne (Atomic Energy Commission) Laboratories. It is instrumented with hydrographic and meteorological equipment, both above and below the water. The data collected will be used in numerous studies of vertical and horizontal wind currents, water and air temperatures, and wave generation.

ERL Scientist To Study Fault Movement in Taiwan

Scientists at the Environmental Research Laboratories and Taiwan's Chinese Earthquake Research Center are cooperating on a study of possible fault creep on the Pacific island.



Dr. King

Dr. Chi-Yu King, a research geophysicist with the San Francisco-based Earthquake Mechanism Laboratory, part of ERL's Earth Sciences Laboratories, will visit Taiwan for a four-month period beginning in May. He plans to develop a fault-movement study there, based

upon a recent fault-mapping project of the Republic of China.

"Taiwan is situated in an active earthquake area of the world," Dr. King says. "The island is located along a segment of the most active earthquake zone on the earth, the Circum-Pacific Seismic Belt."

Dr. King and his colleagues on Taiwan plan to install four creepmeters across some active fault zones in Taiwan. Compression and elongation of the instruments' rods will indicate the amount and direction of creep, which will be recorded electronically near the installations.

Dr. King's colleagues at the Earthquake Mechanism Laboratory have set up a similar network of continuously recording creepmeters to measure fault creep on the San Andreas, Calaveras, and Hayward Faults in California. The NOAA scientist has been using data from this network to construct mathematical models of fault behavior. Using the experience in California as a guide, he and seismologists on Taiwan will determine where to place the creepmeters there.

Seasonally Abundant Fishery Items Expected To Be Moderately Priced

The National Marine Fisheries Service is conducting special surveys in ten cities, checking comparative prices of fishery products against the cost of certain meats. Cities surveyed include Atlanta, Ga.; Chicago, Ill.; Dallas, Tex.; Gloucester, Mass.; Los Angeles, Calif.; St. Paul, Minn.; Seattle, Wash.; San Francisco, Calif.; St. Petersburg, Fla.; and Washington, D. C.

Several fishery items are expected to be seasonally abundant and moderately priced during the remainder of April and to continue so through May. These include: fish sticks and portions, particularly when made from pollock and turbot; cod fillets; Spanish and King Mackerel fillets in the Southeast; croaker in the gulf region; fillet of sole, snapper (rockfish) fillets, and fillet of cod (true cod) on the west coast; Great Lakes smelt; turbot and pollock fillets in the Northeast; and shad in eastern retail markets.

Marine Mammal Permits Limited By NMFS to Eventual Users

The National Marine Fisheries Service has ruled that applications for economic hardship exemptions involving the taking of marine mammals for the purposes of scientific research or public display will not be granted to persons or organizations engaged solely in the capture of marine mammals for sale. Such exemptions, when granted, will be issued only to the person or persons intending to display or conduct research with the animals such as zoos, oceanaria, or scientists.

NMFS said the policy is based on the overall spirit and intent of the Marine Mammal Protection Act of 1972 with respect to public benefit and interest, the need for proper care and maintenance of marine mammals taken, and the need for control of all facilities where mammals may be maintained during taking, transport, and display or research.

The Fisheries Service added that it seems clear that exemptions from the provisions of the Act should be related to the person ultimately responsible for the care or use of the mammal away from its natural habitat rather than persons engaged solely in the capture of marine mammals for sale to others.

NMFS is responsible for that part of the Act dealing with seals, sea lions, porpoises, and whales.

Sale of Old Charts Brings \$12,000

The sale of old, surplus nautical charts, some dating back to the mid-19th Century, brought in \$12,000, according to William Stanley, Chief of the National Ocean Survey's Physical Science Services Branch. Approximately 14,000 inquiries were received for the obsolete charts. The windfall to the government was especially noteworthy in that some charts sold for more than the current charts, \$3.50 in comparison to the \$1.75 to \$2.20 now charged for nautical charts.

Robert J. Alario To Speak at MTS Meeting

Robert J. Alario, Chairman of the Offshore Marine Services Association, will speak at a luncheon meeting of the Marine Technology Society at 11:45 a.m. on May 8 at Marriott Twin Bridges, Arlington, Va. Further information available from Alfred W. Anderson, 146-8787.

Charles Ray Lewis Dies

Charles Ray Lewis, Chief of the Site Operation and Maintenance Section at the National Weather Service Systems Development Office's Test and Evaluation Laboratory at the Sterling Research and Development Center, Va., died on April 20. He had served the Government for 25 years. He is survived by three daughters and a son.

James F. Richardson Receives Commerce Bronze Medal



James F. Richardson, Marine Chart Programmer in the National Ocean Survey's Marine Chart Division, received a Commerce Bronze Medal upon his recent retirement after 39 years of Federal service.

He was cited for "almost four decades of dedicated service toward improving the Nation's nautical charting program."

Outdoor Writers and NMFS Join Forces To Improve Communication With Public

The National Marine Fisheries Service and the Outdoor Writers Association of America this week announced formation of an ad hoc group to coordinate communication with the OWAA and in turn with the general public on matters relating to the Marine Mammal Protection Act of 1972.

The Outdoor Writers Association includes nearly 1,500 members from Canada, the United States, and Mexico who work in the newspaper and magazine field, motion pictures, radio and television, state and federal information functions, lecturing, and other related activities.

OWAA members who will work with NMFS are Hans Paller, Massena, N. Y., Chairman of the OWAA Environmental Action Committee; Charles Cadieux, Bethesda, Md., Vice President of OWAA; and George W. Reiger, Washington, D. C., Washington editor for both National Wildlife and International Wildlife magazines and associate editor of Field and Stream.

Seven EDS Employees Receive Special Achievement Awards

Seven members of the Boulder-based National Geophysical and Solar-Terrestrial Data Center of the Environmental Data Service have received individual Special Achievement Awards for their roles in deriving the Auroral Electrojet Indices for 1970. They were Joe Haskell Allen, group leader, Les. D. Morris, Reuben Machado, Carol Staley, Doreen Ardourel, Sherrill Martin, and Betsy Sadler. Carl Abston, an eighth member in immediate charge of the detailed work, was recognized separately for his participation in the project and other accomplishments.

Under Mr. Abston's direction, the group digitized 4,000 magnetograms, deriving 2 1/2 million data points. Mr. Abston and Mr. Allen developed numerous computer programs for calculating the indices and the quality control of the data and results. The basic data used in the project came from 11 different geomagnetic observatories in six countries.



(From left) Joe Haskell Allen, Sherrill Martin, and Betsy Sadler received awards from Alan H. Shapley, Acting Director of the National Geophysical and Solar Terrestrial Data Center.

10th Weather Radar Class Is Held at NWS Technical Training Center in Kansas City, Mo.



Participants of the 10th Weather Radar Class held April 3-19 at the National Weather Service Technical Training Center in Kansas City, Mo., were: (front row, from left) Lawrence Z. Cedotal, Apalachicola, Fla.; Robert G. Erhart, Jr., Charleston, S. C.; Joseph A. Pecille, Oklahoma City, Okla.; Troy V. Goodwin, Midland, Tex.; Richard L. Barrett, Palmdale, Calif.; Harold D.

Miller, Wilmington, N. C.; Donald W. Eland, Wichita, Kans.; (back row, from left) Larry Burns, Instructor; Dr. Richard Myers, Superintendent NWSTTC; Edgar L. Long, Neenah, Wis.; Carl N. Hollis, Cape Hatteras, N. C.; Curt Doran, Fairbanks, Alaska; Warren E. Brown, Victoria, Tex.; Ernest E. Block, Evansville, Ind.; Paul J. Ogden, Bristol, Tenn.; and Bill Winkert, Instructor.

1973 Sets New Records For Storms and Floods (Continued from page 1)

flooding over extensive portions of Texas, eastern Oklahoma, Arkansas, very heavy in Mississippi, on up through Kentucky, Tennessee and southern Illinois--the whole lower Mississippi valley. In the past 40 days there have been 10 to 15 days of extensive flash-flooding. Some areas in the lower Mississippi valley are so saturated that about one inch of heavy rain in a short period causes flash-flooding."

Severe lakeshore flooding and beach erosion occurred around Great Lakes Erie and Michigan. Green Bay, Wis., was inundated by the worst flooding on record, and over 10,000 persons were evacuated from the western shores of Lake Erie. Property damage was in the millions.

Tornadoes, too, were responsible for long hours and constant vigilance by Weather Service personnel. Preliminary reports showed at least 175 twisters occurred between March 31 and April 23. Death toll on the 23rd had reached 26--only one fatality shy of the total for all of 1972.

Allen Pearson, Director of the National Severe Storms Forecast Center in Kansas City, said, "More than half of these tornadoes occurred in areas for which watches had been issued. Warnings were issued in several instances, too, with particularly good teamwork involved in the Athens, Ga., tornado of March 31 and a tornado that hit Osceola, Mo., April 20--among others."

During a 24-hour period ending April 20, the Severe Storms Center tallied 41 tornadoes--25 of them in tornado watch areas, and one in a severe-thunderstorm-watch area.

A real rarity was a tornado that struck April 1 in Fairfax County, Va., near the Nation's capital--causing 13.75 million dollars in damage, and 34 injuries--but no deaths. A total of 226 homes was affected; also a high school, two shopping centers, and an apartment complex.

Hardest hit by the twisters were communities in Georgia and South Carolina on March 31, with nine deaths, and near Pearsall, Tex., with 5, on April 15. Fatalities

near Pearsall occurred as the twister--described as half a mile wide--travelled across a highway, striking automobiles and killing the occupants.

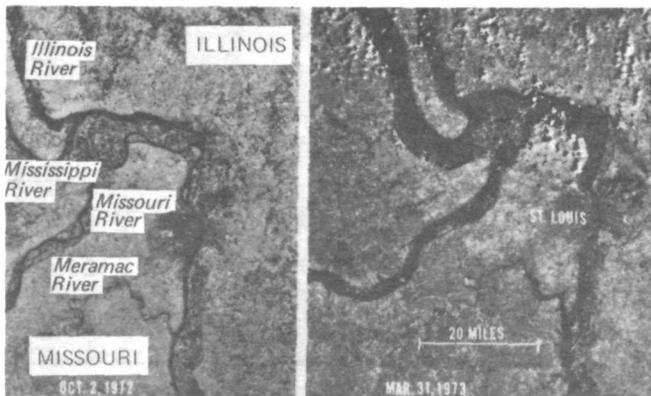
An intense (late spring) winter storm caused heavy snow with blizzard conditions over a large area of the Plains and Mississippi Valley regions. Generally, snowfall amounts of four to 20 inches (36 inches over the mountains), temperatures in the 20's, and winds of 35-50 mph and higher in the blizzard produced drifts of 10 feet. Dubuque, Iowa, measured 19 inches, a record for a single storm. Portions of Montana and Wyoming experienced a paralyzing blizzard--the worst spring blizzard (April 19-21) on record for so late in the winter storm season.

Major highways were closed, some for several days, numerous telephone lines were down and many buildings were without power. Livestock losses and property damage were estimated in the millions.

Mr. Pearson stated, "The cattle industry has been reeling all through the midwest as cattle have been dying in record numbers, first in feedlots from the prolonged exposure to wind, rain, snow and mud, and just recently, thousands of baby calves died from exposure to the spring snowstorms, especially in southeast Colorado and in parts of Nebraska and Iowa."

Along with the devastating water, wind, and snow, there was also record cold and record heat. Flowering fruit trees--peach and apple--were nipped by below-freezing temperatures April 12 in wide areas of the Ohio Valley, the Atlantic Coast states, and the South. Some 90 percent of growers estimated their peach crop was killed and 40 percent of the apple crop wiped out when frost nipped the buds.

Record highs were recorded throughout much of the Northeast on Easter Sunday, April 22--90 at Windsor Locks, Conn.; 86 at New York City; 85 at Albany, N.Y.; 84 at Boston and Worcester, Mass., and 83 at Providence, R.I.



ST. LOUIS AT FLOOD STAGE--Before and after photos of St. Louis area from NASA's 560-mile high Earth Resources Technology Satellite show extreme flooding along Illinois, Missouri, and Mississippi Rivers, as of March 31, 1973. Mississippi River at St. Louis was then at a stage of 38 feet, highest since 1903.



IN 25 DAYS -- 175 TORNADOES*
(March 31 through April 24, 1973)
(Many of these tornadoes occurred in clusters too close together to show separately.)
*Preliminary reports

1972 Colbert Medal and Karo Plaque Are Awarded to NOS Employees

Frederick O. Diercks, Associate Director of the National Ocean Survey's Office of Aeronautical Charting and Cartography, has been awarded the Colbert Medal of the Society of American Military Engineers for 1972.



Mr. Diercks

The Society's Karo Plaque for 1972 was awarded to NOS participants of the 1971 Estuarine Environmental Investigation of Boston Harbor.

Mr. Diercks was cited for "exceptional contributions to the safety of aviation" as a member of the Interagency Air Cartographic Committee

and for his "capable management" of his office during the changeover to joint civil/military charting of the National Airspace System and his promotion of civil/military cooperation. The Colbert Medal is awarded annually in memory of Rear Admiral Leo O. Colbert, former Director of the Coast and Geodetic Survey, predecessor of the NOS, to an NOS individual "for the most outstanding contribution to military engineering."

1972 award, "in recognition of their formulation and execution" of the Boston Harbor investigation "as a national prototype for future comprehensive, interdisciplinary estuarine investigations," are: from the Office of Marine Surveys and Maps, Commander R. Lawrence Swanson, Principal Investigator; I. Y. Fitzgerald, Co-Investigator; Lieuten-



Lt. Cdr. Simmons



Lt. Cdr. Noble



Lt. Cdr. Reinke



Cdr. Swanson



Mr. Fitzgerald



Cdr. Umbach



Mr. Smith



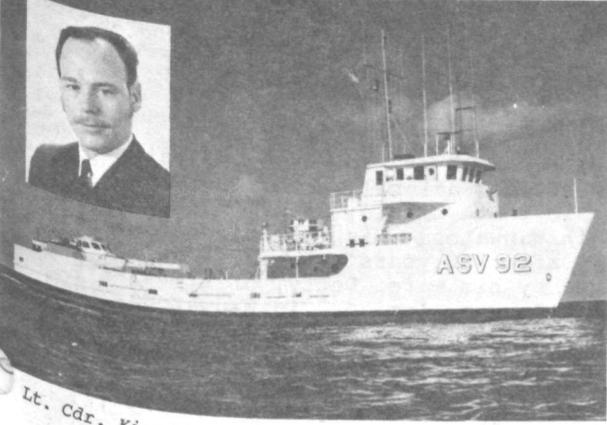
Mr. Muirhead



Mr. Moore

ant Commanders W. S. Simmons, William Noble, and Leland Reinke, Chiefs of the Flight Operations Group and Air Photo Missions I and II, respectively; John Smith, Charles R. Muirhead, and George Moore; from the Atlantic Marine Center: Commander M. J. Umbach, Chief, Photogrammetric Division; Joe Wilson, Chief, Photogrammetric Field Party 62; and Billy Barnes; the NOAA Ships FERREL, commanded by Lieutenant Commander Karl Kieninger, and PEIRCE, commanded by Commander Bruce Williams.

The Karo Plaque, named for Vice Admiral H. Arnold Karo (Ret.), former C&GS Director and Society president in 1957, is offered annually to the NOS field unit which makes an outstanding contribution in the engineering and scientific field. Included in the



Lt. Cdr. Kieninger and the NOAA Ship FERREL



Cdr. Williams and the NOAA Ship PEIRCE

recipe of the week

TUNA TOSS

2 cans (6-1/2 or 7 ounces each) tuna
3 cups shredded raw carrot
1 can (13-1/2 ounces) pineapple chunks,
drained
1/2 cup sliced celery
1/2 cup mayonnaise or salad dressing
1/4 cup seedless raisins
Salad greens
Carrot curls

Drain tuna. Break tuna into large pieces. Combine carrot, pineapple, celery, mayonnaise, raisins, and tuna. Mix lightly. Serve on salad greens. Garnish with carrot curls. Makes 6 servings.



Pratas Island Rawinsonde Station Dedicated

The rawinsonde station on Pratas Island in the South China Sea, which was donated by the United States under the World Meteorological Organization's Voluntary Assistance Program, was formally dedicated recently. James L. Cobb, National Weather Service Observation Specialist from the Pacific Region, represented the United States at the ceremony. He was accompanied by a U. S. Air Force advisor.

Twenty-one high officials from Taiwan journeyed to the Island to participate in the dedication, including Vice Admiral Huang, Deputy Commander in Chief of the Nationalist Chinese Navy, and officials from the Air Force, Department of Communications, and Weather Bureau.

Mr. Cobb remained on Pratas for three weeks to conduct intensive training in upper-air observations for the observing staff at the station.

NOAA Film Wins Golden Camera Award

The NOAA motion picture "Take Two From The Sea" has been awarded the highest award, The Golden Camera Award, from the U.S. Industrial Film Festival in Chicago.

"Take Two From The Sea" was sponsored by the Shellfish Institute of North America. NOAA is producing another film for the Shellfish Institute.

length of service awards

Mary E. AMBROSE, of the National Marine Fisheries Service College Park Fishery Products Technology Laboratory, received a 20-year Length of Service Award in January.

Clarence R. LEHMAN, of the National Ocean Survey Pacific Marine Center, Seattle, Wash.; received a Length of Service Award for 25 years' service in January.

National Marine Fisheries Service Alaska Region employees who received Length of Service Awards in February were: 25 years - Jim H. BRANSON. 20 years - Milstead C. ZAHN.

Richard C. JOHNSEN, of the National Marine Fisheries Service Northwest Fisheries Center, received a Length of Service Award in February for 20 years' service.

National Marine Fisheries Service Northwest Fisheries Center employees who received Length of Service Awards in January were: 30 years - Harold A. GANGMARK. 25 years - Clement J. ZIPP. 20 years - Richard L. McNEELY and Roland N. McBRIDE.

National Weather Service Western Region employees who received Length of Service Awards in February were: 30 years - Victor C. BUNDY and Wallace R. Donaldson, WSFO Seattle, Wash.; and Arthur J. ROZETT, Jr., WSFO Great Falls, Mont. 25 years - Bruce W. FENSTAMAKER, WSO Winslow, Ariz., and Douglas SCOTT, WSO Oakland, Calif.



At the Northwest Administrative Service Office in Seattle, Wash., Frederick ERTEL (left) and Gladys V. HOWE (right) received 30-year Length of Service Awards, and Beatrice P. HOVIG (center) received a 20-year Length of Service Award.

Vernon K. Best Dies

Vernon K. Best, former Principal Assistant at the National Weather Service Office in Sault Ste. Marie, Mich., died on April 11 in Wauwatosa, Wis. He had retired in 1966 after 38 years' service. He is survived by his wife, Betty, of 11804 West North Avenue, Apt. 4., in Wauwatosa. (Zip code: 54226)

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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