

NOAA WEEK

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

Officials Inspect Artificial Reef Construction Off Virginia

Hydro-Lab Projects Begin; Series To Take Nine Months

A nine-month series of underwater investigations, supported by NOAA's Manned Undersea Science and Technology program (MUS&T), began October 1 off Grand Bahama Island.

Teams of scientists representing five universities and two research institutions will spend periods of up to seven days each in the habitat Hydro-Lab, emplaced in 50 feet of water. They will be carrying out a variety of coral reef studies designed to provide better understanding of these fragile but important oceanic features and of the life that inhabits them.

Because the reef populations react markedly to environmental change, scientists believe that eventual prediction of their environmental health will be possible through studies of photosynthesis and respiration rates related to the total energy reaching the reef.

To obtain environmental data for correlation with the biological and oceanographic studies, an underwater environmental monitoring system will be housed in NOAA's undersea instrument chamber (USIC) and kept operating during the Hydro-Lab investigations. Light, temperature, and a variety of chemical parameters will be measured by sensors in the water, and the data recorded within USIC.

Hydro-Lab is 16 feet long and eight feet in diameter, and can house up to four persons for a week. It is supported on a non-profit basis by the Perry Foundation, Inc., and the Bahamas Undersea Research Foundation. Sited at a sand and coral bottom, it is adjacent to the outer coral reef and about 800 feet inshore of a steep drop-off into the deep Tongue of the Ocean, thus affording a variety of close-by undersea environments for scientific study.

NOAA-supported research projects to be carried out during the current series of Hydro-Lab investigations are:

Construction operations for an artificial reef system--which includes the largest manmade reef in the world--were inspected October 24 by a party headed by Dr. Robert M. White, NOAA Administrator.

Dr. White observed the sinking of four surplus Navy landing craft off Virginia Beach, Va., and received briefings from representatives of the National Marine Fisheries Service, the Navy, and the Tidewater Artificial Reef Association of Virginia.

Purpose of the reefs is to provide habitats for marine fish, with beneficiaries expected to be both sportfishermen and commercial fishermen.

The inspection team, which also included Rear Admiral Joseph E. Snyder, Oceanographer of the Navy, and John Gottschalk, Assistant to the Director, National Marine Fisheries Service, for Sportfisheries, observed the operations from the Navy ship USS PLYMOUTH ROCK, after inspecting the site and stockpiled vessels from a helicopter. NOAA acquired 166 surplus LCM's from the Navy several months ago for use in its artificial reef program, under the manage-

(Continued on page 2)



(From left) Dr. White; Mrs. White; Vice Admiral Edgar Bell, Commander-in-Chief of the Amphibious Forces, Atlantic Fleet; and David Stormont, President of the Tidewater Artificial Reef Association, inaugurate the Artificial Reef Program.

(Continued on page 5)

Officials Inspect Artificial Reef Construction (Continued from page 1)

ment of the National Marine Fisheries Service.

Two reefs will be constructed. The first, about 15 miles offshore at Tower Reef, will consist of 39 craft and is expected to attract bottom and pelagic fish such as mackerel and bluefish. Its location should prove accessible to small boat fishermen. The second reef, about 15 miles further out, will be the largest in the world, consisting of 127 craft and designed to attract big game fish such as dolphin, tuna, and various species of billfish.

The project came about through a cooperative effort involving Federal, State, and local agencies, made possible by the passage of the Dingell-Johnson Federal Aid in Fish Restoration Act of 1957. Involved were the State of Virginia, which gave permission and support for the venture; the Tidewater Artificial Reef Association of Virginia, which instigated and coordinated all planning for the planting of the reefs; the U. S. Navy, which assumed the responsibility for cleaning and transporting the surplus vessels to their destinations after the craft had been transferred to NOAA; the Corps of Engineers, which issued permits for use of the underwater sites; and NOAA, whose scientists provided data on reefs collected over a decade by NMFS.

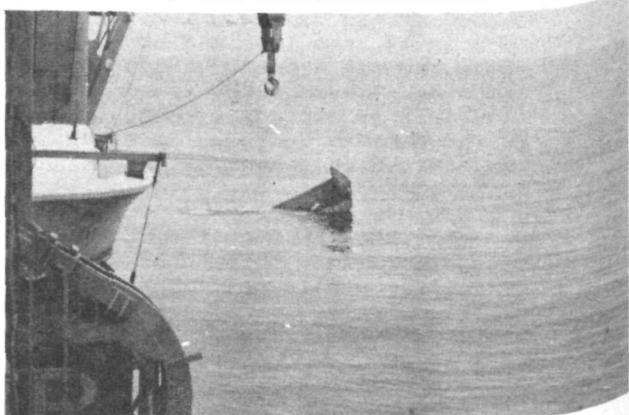
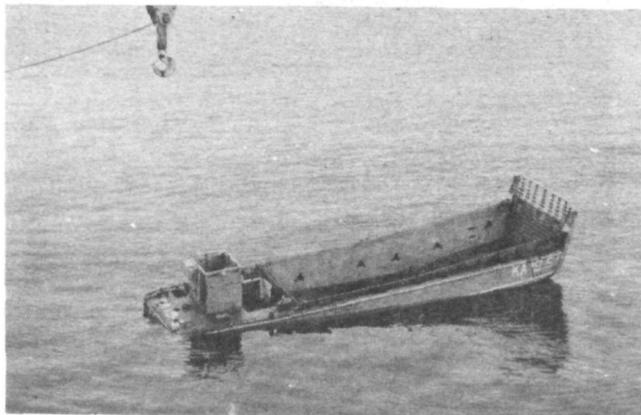
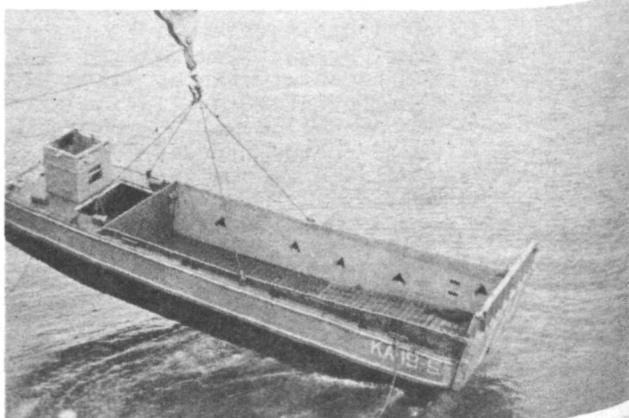
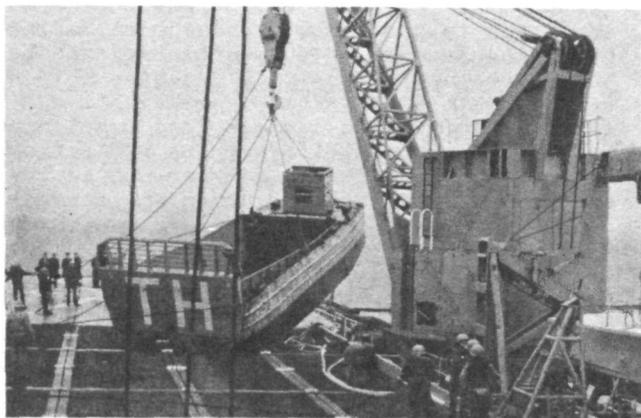
The Virginia enterprise is the latest in a continuing series of artificial reef

emplacements in almost all the coastal states and is a part of a broader NMFS program to both develop and conserve living fishery resources of the United States.

"So far," Dr. White said, "artificial reef experimentation in this country has been almost a hundred percent successful. Sportfishermen all over the country have expressed their enthusiasm over the increased catches at manmade reefs, and the establishment of fishing grounds in many places that were almost devoid of fish populations. Not only do the underwater structures--which rapidly assume all the characteristics of nature's own--dramatically increase catches of many kinds of fish, but they represent a 'recycling process' in which great masses of man's discards can be re-used safely and profitably."

Dr. White added that NOAA scientists--headquartered at the NMFS Atlantic Estuarine Fisheries Center at Beaufort, N. C.--continually monitor the effects on the marine environment of sunken tires, automobiles, watercraft, surplus building materials, and other selected manmade wastes.

"Their data have not revealed any untoward effects whatever," he said. "What they have found are healthy schools of fish--many of them valued game fish--settling down in new communities provided by man."



Surplus Navy landing craft being submerged for artificial reef.

International Film Council Honors NOAA's "Take Two From The Sea"

The new NOAA film "Take Two From The Sea" has received its first motion picture award. The Council on International Non-theatrical Events (CINE) has selected it to receive the CINE Golden Eagle Award as evidence of its suitability for international festival use. (The Golden Eagle Award is to the nontheatrical film what the Academy Award is to the theatrical film.)

Elliot A. Macklow, Chief of NOAA's Motion Picture Service, was executive producer of the 16 mm sound, color 28-minute documentary on oysters and clams produced by the National Marine Fisheries Service for the Shellfish Institute of North America.

The film depicts the adventures of two young hopefuls who are surprised to learn that their "big break" as Hollywood film makers is to make a documentary on oysters and clams--about which they know nothing.

As they travel to the West, Gulf, and East Coast oyster-clam shellfishing sites, the audience sees methods of harvesting, aquaculture, processing, cooking, and serving shellfish.

NOS Resumes Survey Along Florida Coast

The National Ocean Survey has resumed its investigation of numerous reported navigational hazards along Florida's west coast. The survey, in its second year, is being carried out north of Charlotte Harbor, by a six-man field party headed by Lt. Richard K. Muller. The program is part of a long-range investigation being conducted between Fort Myers and the Suwannee River.

Open House at AMC Includes Tour of NOAA Ship MT MITCHELL



Approximately 1,000 people visited the Atlantic Marine Center when Open House was held there on October 11. The National Weather Service participated, the NOAA Ship MT MITCHELL was open to the

Frederick P. Ostby, Jr., Is Named To Fill New Position at NSSFC

Frederick P. Ostby, Jr., Procedures Development Program Leader in the Technical Procedures Branch of the Weather Analysis and Prediction Division at the NWS Headquarters, has been named to fill the new position of Deputy Director of the National Severe Storms Forecast Center and Chief of the Severe Storms Service Improvement Program in Kansas City. He previously served for almost ten years as Meteorological Research Scientist with Travelers Research Corporation, and about ten more years as a Meteorologist with Travelers Insurance Company, Trans-World Airlines, and the United States Air Force. He has a Master of Science Degree in Meteorology from New York University plus additional post-graduate credits, has authored 22 scientific publications on meteorology and is the holder of the AMS Seal of Approval for Radio/TV Weathercasting.

Agricultural Weather on Educational Radio

South Carolina's first publicly owned educational radio station began broadcasting from WEPR-FM, Greenville, in September. One of the daily features is a 10-minute agricultural weather program called "Carolina Weathervane." Agricultural weather information used on this program is compiled from NOAA Weather Wire. In addition to the agricultural weather advisory given by National Weather Service meteorologist Alex Kish, crop reports and crop recommendations are provided by county agents and Extension Service specialists, thus furnishing a valuable service to farmers and home gardeners.



public, and displays depicted the activities of the AMC Personnel, Geodesy, Photogrammetry, Data Processing, Hydrographic Verification, and Tides Divisions and Branches.

Certificates Issued to Ships In Cooperative Weather Program



NOAA is now issuing certificates of membership in the cooperative ship weather observing program to all National Weather Service cooperating vessels. A sample certificate is shown above.

Certificates will be personally distributed to the 1800 ships participating in the program as of July 1, 1972, by the Port Meteorological Officers during the next three months. As new ships join the program, they will be presented with certificates of membership.

Robert Schoner of the Surface Systems Branch, Data Acquisition Division, is in charge of this new program.

Fire Damages Personnel Offices In NOAA's Rockville Headquarters

Late Friday, October 20, 1972, a fire in NBOC #2, which houses the Personnel Division, NOAA, caused extensive structural damage to a portion of the third floor. Although no vital personnel records were lost, loose papers on some desks in the damaged area may have been temporarily misplaced or lost, which means that some pending personnel actions may be delayed.

Offices occupying the damaged area were: Office of the Chief, Personnel Operations Branch; the Headquarters/EDS/NESS Section of Personnel Operations Branch; and the Employee Relations Section of the Personnel Relations Branch. These offices have been evacuated and relocated in other areas of the NBOC complex.

New locations are as follows:

Roy Brown, Chief, Personnel Operations Branch, Room 202 NBOC #2, 496-8603.

Raymond Lumpkin (and staff), Chief, Headquarters/EDS/NESS Section, Personnel Operations Branch, Room 316 NBOC #7, 770-4861.

Constance M. Johnson (and staff), Chief, Employee Relations Section, Personnel Relations Branch, Room 312 NBOC #7, 770-0983.

Harold E. Mackel, Personnel Management Specialist, Room 308 NBOC #7, 770-0983.

Frank Christhlf (and staff), Special Programs Section, Personnel Relations Branch, Room 306 NBOC #7, 770-2278.

Dr. W.D. Bonner Named To Head New NMC Data Assimilation Branch

A Data Assimilation Branch has been formed within the Development Division of the National Meteorological Center under a reimbursable contract with NASA's Goddard Space Flight Center.

Chief of the branch is Dr. William D. Bonner, formerly with the National Weather Service Techniques Development Laboratory. Dr. Ronald D. McPherson, Development Division, and Hugh M. O'Neil, formerly with Air Force Global Weather Central, also have joined the unit.

Initially, the main functions of this branch will be to determine the impact of new data systems on the NMC numerical analysis-prediction systems, and to develop four-dimensional data assimilation methods for operational use.

Frederick F. Ceely, Jr., Now Heads NOS Electronics Computing Division

Frederick F. Ceely, Jr., has been named Chief of the National Ocean Survey's Electronics Computing Division. He succeeds Rex Finley, who retired. Andrew J. Kennedy has been appointed Chief of the Division's Programming Branch.

The Electronics Computing Division provides professional guidance and support in the areas of information systems technology and electronic computer applications within the NOS.

Mr. Ceely is a 25-year career employee of the National Ocean Survey and was previously Assistant Chief of the Division and Chief of the Planning Branch. A native of Kittery, Maine, he received an engineering degree from the University of New Hampshire in 1949.

Mr. Kennedy, a mathematician, has been with the Survey since 1962.

Researchers Fortify Wheat Breads With FPC

University of Rhode Island Sea Grant researchers have developed a way of fortifying native (Arabian and Indian) wheat breads with high-quality, low-cost fish protein concentrate (FPC) without altering its taste, smell, texture, or appearance. FPC is a tasteless, odorless powder made from "trash fish" -- bony or poor-tasting fish normally discarded by the fishing industry. According to URI scientists Dr. Spiros Constantinides and Eva M. Nikkila, a fortification of just five percent FPC would give the average Arab or Indian all the protein he needs without having to eat any meat product. The cost of fortifying the bread would be about two cents a pound, making the process economically feasible on a national level.

Rupert J. Keefe Dies

Rupert J. Keefe, Supervisor Voucher Examiner in the Weather Bureau Washington Fiscal Section when he retired in 1958, died October 11 in St. Petersburg, Fla. His widow resides at 5825 18th St., N., Town Apartments, Gulf 9, St. Petersburg, Fla. 33714.

NMFS Buildings in Alaska Burgled by Brown Bears

Marauding brown bears, hungrier than usual because of a shortage of spawning salmon, caused at least \$6,000 damage to seven National Marine Fisheries Service buildings in the Bristol Bay area of Alaska last month. Heaviest damage was at Brooks Lake, where they broke down heavily bolted wooden doors, tore off sturdy shutters, and smashed picture windows of two residences and a field laboratory, and broke up refrigerators, freezers, small appliances, and glassware, and shredded furniture and bedding.

The only NMFS employee who had not vacated the premises after spending from April through September there was trapped in an inner room when one of the bears smashed open the kitchen door, emptied the garbage can, and departed without venturing beyond the kitchen--to the extreme relief of the biologist. Emergency repairs were made on the NOAA installations, and the buildings will be renovated when the field stations are opened next spring.

Brown bears, which can weigh up to 1,400 pounds, and are the largest land carnivores on earth--larger than grizzlies and polar bears--consume enormous amounts of salmon, particularly during spawning periods. Because of increasing reports of bear intrusions into housing on the Katmai National Monument grounds this year, U.S. Park Service administrators injected tranquilizers into several of the creatures near the Brooks Lake site, and transferred the bears to other habitats some distance away.

Hydro-Lab Projects Begin (Continued from page 1)

Dr. John Bunt, chairman, Division of Functional Biology, Rosenstiel School of Marine and Atmospheric Science, University of Miami, will study the ecosystem of the ocean bottom in the reef area.

Richard Curry, also of the Rosenstiel School, will study certain chemical elements that are strongly affected by biological activity or rapidly changing physical conditions on the reef. This is a continuation of a program that began during Tektite II and continued during NOAA's FLARE project earlier this year.

Dr. William Schroeder of the Center for Marine Resources, Texas A&M University, will investigate the role of zooplankton (microscopic animal life) in the coral reef ecosystem.

Dr. Thomas J. Bright of the Department of Oceanography, Texas A&M University, will carry out studies of the acoustical behavior of reef fishes.

Dr. C. Lavett Smith of the American Museum of Natural History will continue a study of the community structure and space-sharing mechanisms of coral reef fishes, emphasizing in particular the

Erichsen and Kerut Receive Special Achievement Awards



In a recent awards ceremony at the National Data Buoy Center in Bay St. Louis, Miss., Center Director James W. Winchester (left) presented Special Achievement Awards to Robert L. Erichsen (center) and Edmund G. Kerut (right).

NMFS Directors Attend Policy Meeting

NMFS regional directors from throughout the country gathered in Washington, D.C., on October 16 for a three-day policy meeting at the Page Building. Discussed at the meetings were: the sport fish program; MARMAP; the NMFS extension program; the marine mammal program; the State-Federal program; the water resources program; and manpower utilization councils.

competition for courtship and nesting space.

William P. Muellenhoff of Oregon State University will carry out a project supported by the Environmental Protection Agency investigating the degradation and exchange characteristics of digested domestic wastes now being dumped into marine waters.

Alan A. Allen of Marine Consultants, Inc., will lead a team seeking information on what happens to oil pollutants in the underwater marine environment.

Ariel A. Roth of Loma Linda University will look into the reef-building process, determining how fast the local coral species are producing calcium carbonate--how fast the reef is building. He will compare rates at a depth of 60 feet with the rate near the surface.

Dr. Paul Cratin of Central Michigan University will lead a team making three chemical studies of the seawater. They are primarily interested in the concentrations of oxygen as a function of time, depth, and temperature, and the relationships of phytoplankton and oxygen under differing circumstances.

Length of Service Awards

Employees assigned to the National Ocean Survey's National Geodetic Survey Operations Center who received Length of Service Awards in June and July were: 30 years - John D. EARLY, Jr., Party G-20; 25 years - Woodrow LETCHWORTH, Party G-21; and Charles L. NOVAK, NGSOC Kansas City, Mo. 20 years - James E. FUCHS, NGSOC Kansas City, Mo.



Mr. Novak (left) was presented his pin by Capt. G.L. Short, former Director of NGSOC.

Mr. Fuchs (right) received his award from Leon Smith, Chief, Mark Preservation Branch, NGSOC.

Employees of the National Marine Fisheries Service Southwest Fisheries Center in LaJolla, Calif., who received Length of Service Awards in August and September were: 25 years - Robert C. COUNTS and Irene H. TOYOMURA. 20 years - Edwin K. W. LEE and Richard N. UCHIDA.

Morrison P. DUET, of the National Marine Fisheries Service Southeast Region, Statistics and Market News Division, Galliano, La., received a 20-year Length of Service Award in July.

Jeanne F. RITONEN, of the NMFS Southeast Region's Office of Administration, St. Petersburg, Fla., received a 20-year Length of Service Award in August.

Charles M. ROITHMAYER, of the Southeast Fisheries Center, NMFS, in Bay St. Louis, Miss., and Ruth W. YANCH, of the NMFS Gulf Coastal Fisheries Center in Galveston, Tex., received 20-year Length of Service Awards in September.

Winston E. FARR of the National Marine Fisheries Service Northwest Fisheries Center in Seattle, Wash., received a 20-year Length of Service Award in July.

Wallace W. BENTLEY and Richard B. THOMPSON of the National Marine Fisheries Service Northwest Fisheries Center in Seattle, Wash., received 20-year Length-of Service Awards in September.

National Weather Service Central Region employees who received Length of Service Awards in August and September were: 35 years - Richard M. COOK, WSO Cairo, Ill.; Charles M. WOFFINDEN, CRH Kansas City, Mo.; and W. Gordon WYLIE, WSFO Indianapolis, Ind. 30 years - E. Vernon HENDRICKSON, WSO Fargo, N. Dak.; George B. OVERGARD and Charles F. MERTENSOTTO, WSFO Denver, Colo.; Robert C. BASKIN, CRH Kansas City, Mo.; Edward M. BEHRENBRINKER, WSO International Falls, Minn.; Merle J. BROWN, WSO S/C Manhattan, Kans.; Albert J. COURTOIS and Walter W. PARKER, Jr., WSFO St. Louis, Mo.;

Harold EBEL, WSO Green Bay, Wisc.; Jesse L. HARRELL and Florence I. HOWARD, CLSC Kansas City, Mo.; Leslie R. HOUSER, WSO Dodge City, Kans.; John ROBERTSON, WSO Evansville, Ind.; William M. WILLARD, RFC Kansas City, Mo.; and Hugh D. WATSON, WSO Springfield, Ill. 25 years - Woodrow R. MCKEE, WSO Casper, Wyo.; Harry R. SPOHN, CRH Kansas City, Mo.; and Russell G. MANN, RFC Kansas City, Mo. 20 years - Mary M. DURNALL, WSFO Indianapolis, Ind.; John T. RAY and Raymond D. ERVEN, WSO Peoria, Ill.; Phillip E. SHIDELER, WSO Topeka, Kans.; Marvin L. GREEN, WSFO Detroit, Mich.; James B. MANSFIELD, NRC Joliet, Ill.; Harry C. MEYER, WSFO Chicago, Ill.; and Charles G. STEPHENS, WSO Grand Island, Nebr.

NOAA Headquarters employees who received Length of Service Awards during August were: 35 years - Paul E. LEHR.

30 years - George J. HANKEY, William H. SEAY, Naomi B. HAMILTON, Paul J. PHILLIPS, Jordan FISCHLER, Francis J. LACNY, Robert A. CUMMINGS, Howard D. WOLFE, Glenn BALL, Frances P. SCHARF, Simon ALTZ, George E. CLIPPER, and Julia W. FOOTMON. 25 years - Edward M. CRUME, Jr., William G. DODDS, Salvatore BENTE, Leonard F. VAN SCOY, Morton KELLER, and Margaret A. STURGEON. 20 years - Jeanette M. O'CONNOR, Ruth Morrison FAIN, Rodney Christopher SPEIDEL, J. Murray MITCHELL, Richard B. OSMON, and Alma E. GREENE.



Dr. Shuman (left) received his pin from NWS Director Dr. George P. Cressman at a recent staff meeting.

NOAA Headquarters employees who received Length of Service Awards during September were: 35 years - Fred E. WELLS. 30 years - Mary P. SAMET, Ralph F. KRESGE, Frederick G. SHUMAN, Norris C. WETTERS, Maxwell M. ROGERS, George A. ROZEMCZAK, Donald R. ENGLE, John C. RICHTER, Joseph SAMSON, Ernest A. NAGY, Garland SATTERFIELD, Mary Jane PUGH, and Annie E. GRIMES. 25 years - James E. VAWTER, Rose K. SEGAL, and Sol HIRSCH. 20 years - Robert D. FULTON, Mirco P. SNIDERO, Billy Joe SPENCER, Valentine M. NOWAK, Gene V. COSTELLO, Joanna J. PRICE, Joseph M. MARSDEN, Robert A. JACOBS, William E. MILLER, and Louis E. REEVES.

National Weather Service Southern Region employees who received Length of Service Awards in August were: 35 years - William M. ROWE, WSFO Memphis, Tenn.; and William E. ZIMMERMAN, WSFO Albuquerque, N. Mex. 30 years - Earl B. CLARK, WSRH Fort Worth, Tex.; Wayne R. BROWN, WSO Orlando, Fla.; Robert M. HOBSON, WSO Macon, Ga.; S. Lamar WOODWARD, Jr., WSFO Jackson, Miss.; Glenn

Ocean Currents Being Observed by Satellite-Tracked Buoys

Ocean scientists with the Environmental Research Laboratories' Physical Oceanography Laboratory (PhOL) under the direction of Donald V. Hansen have embarked on a program for the experimental observation of ocean currents by means of drifting buoys tracked by satellite. The project, designed to investigate large-scale properties of mean surface flows in the Western Atlantic Ocean, is a cooperative venture with the French space agency CNES, and was coordinated by the National Aeronautics and Space Administration. CNES supplied the instrument package for the buoys, the satellite, and tracking facilities; and PhOL designed the experiment, deployed the buoys, and will attempt recovery at the experiment's end. The deep-draft spar buoys equipped with sensors for temperature and pressure were built for PhOL by NOAA's Engineering Development Lab in Miami.

During the week of September 20, five drifting buoys were deployed from the University of Miami's R/V GILLISS, approxi-

mately 60 miles apart along the meridian 67°W from 23.5°N to 28°N. They have been returning data on their position and water temperature several times daily to the tracking center at Bretigny Sur Orge, France. The data indicate the buoys are moving as fast as expected, although the PhOL scientists admit that direction of movement does not coincide as neatly with prediction. Except for one buoy, all are moving at about 12 miles per day; the northern drifters are heading generally to the northeast while the southern ones are moving west-southwest. The errant buoy moved less than 10 miles in two weeks. It is expected that all buoys eventually will drift west into the influence of the Gulf Stream and thence move to the northeast. Present predictions indicate furthest north drift to coincide with the latitude of Long Island.

The buoys will be tracked until early December, when an attempt will be made to recover them with the NOAA Ship RESEARCHER on its return from the Great Lakes.

Length of Service Awards (Continued from page 6)

E. DENNEY, WSFO San Antonio, Tex.; Hugh E. PRITCHARD, Jr., and M. Harold SMITH, WSO Chattanooga, Tenn.; Everett W. CARLSON, WSO Nashville, Tenn.; Lowell R. SEMANS, WSFO Memphis, Tenn.; and Leonard R. GILBERT, Jr., WSO, Columbus, Ga. 25 years - Edwin LITTLE, WSFO Jackson, Miss.; and Robert G. JAMES, WSO Victoria, Tex. 20 years - Melton D. BURLESON, WSRH Fort Worth, Tex.; Robert J. DIETLEIN, WSFO Birmingham, Ala.; Earl W. GASSON, WSFO Jackson, Miss.; Walter R. REESE, WSO Midland, Tex.; Ralph C. ARNETT, Jr., WSFO Fort Worth, Tex.; and Cyril J. DOIRON, WSO Brownsville, Tex.

A 30-year Length of Service Award was presented to Fructoso D. CABANELA, who serves aboard the NOAA Ship FAIRWEATHER, in September.



George RAMSEY, (left) received his 20-year Length of Service Award in September from Commander George M. Poor, commanding officer of the Mc ARTHUR.

WSO; Percy J. MATTSO, Great Falls WSFO; Howard A. KAPPES, Havre WSO; Oscar E. NICHOLS, Los Angeles WSFO; Lee WHITMIRE, Salt Lake City WSFO; and Walter E. BENKMAN, San Francisco WSFO. 25 years - George M. BOSTIC, Elko WSO; Henry F. MEYER, Los Angeles WSFO; and Robert C. HAYWOOD, Olympia WSO.

National Weather Service Western Region employees who received Length of Service Awards in September were: 30 years - Joseph W. NEWMYER, Bishop WSO; Earl M. BATES, Corvallis WSO; Robert N. WING, Lewiston WSO; Hugh D. WATSON, Missoula WSO; and Rex J. HESS, Sacramento WSO. 25 years - Peter GERTONSON, Lewiston WSO; Leonard C. JONES, Medford WSO; Thomas E. AUBIN, Sacramento WSO; and Leonard M. DALTON, Pocatello WSO. 20 years - Robert G. ADAMS, Sandberg WSO.

National Weather Service Pacific Region employees who received Length of Service awards in September were: 30 years - Dempster R. TREDWAY, WSFO Honolulu and Robert F. SHAW, DATAC. 20 years - William L. DENIS, Jr., PRH.

National Weather Service Southern Region employees who received Length of Service awards in September were: 35 years - William C. KNOPH, NHC, Miami, Fla., and Raymond H. KRAFT, NHC, Miami, Fla. 30 years - Rheinhart W. HARMS, WSFO, Atlanta, Ga.; Louis E. RICHARDS, Jr., WSFO, Fort Worth, Texas; and Francis E. FUERTSCH, WSFO, Albuquerque, N.M. 20 years - Robert B. GARDNER, WSO, Montgomery, Ala.; William D. MARSHALL, WSFO, Birmingham, Ala.; Albert C. BIANCHI, Jr., WSO, Port Arthur, Tex.; Lacy B. PADGETT, WSFO, Memphis, Tenn.; Donn W. ERICKSON, WSFO, Albuquerque, N.M.; and Orla G. LANG, WSFO, Fort Worth, Tex.

National Weather Service Western Region employees who received Length of Service Awards in August were: 30 years - Frank F. PRICE and Edgar G. JOHNSON, Seattle WSFO; David L. POWEL, Stockton WSO; R. Bruce MORROW, Tucson WSO; Horace L. LEWIS, WRH Engineering; Paul W. SORENSON, Flagstaff WSO; Clarence GARRISON, Jr., Fresno

Annual Computer and Operational River Forecasting Seminar Held



The Fourth Annual Computer and Operational River Forecasting Seminar met in Kansas City, Mo., from October 16 through 20. Participants were (from left, seated) Charles Knudsen, Central Region Director; Warren Silverzahn, Hartford, Conn.; O. D. White, Harrisburg, Pa.; Walter Sittner, Silver Spring, Md.; Robert Mitchell, Slidell, La.; (from left, standing) Elroy Balke, Kansas City, Mo.; David Westnedge, Salt Lake City, Utah; Ralph

Hatch, Sacramento, Calif.; Julius Moor, Anchorage, Alaska; Charles Orwig, Portland, Oreg.; John Cornish, Tulsa, Okla.; Joe Strahl, Silver Spring, Md.; Ralph Kresge, Silver Spring, Md.; Lawrence Longsdorf, Kansas City, Mo.; Aldo Angelo, Cincinnati, Ohio; Robert Craig, Kansas City, Mo.; Bobby Armstrong, Ft. Worth, Tex.; James Smith, Charleston, W. Va.; Ernest Smith, Atlanta, Ga.; Hermann Mondschein, Kansas City, Mo.

notes about people...

Dr. Emmanuel Antal, Director of the Agricultural Climatology Division in the Hungarian Meteorological Service, is currently in the United States as the holder of a World Meteorological Organization Fellowship to observe agricultural weather programs here. His itinerary includes visits to the National Weather Service's Agricultural Offices in New Brunswick, N. J.; Lexington, Ky.; Twin Falls, Idaho; and Corvallis, Oreg.



Dr. Antal (right) and Jerry Hill, the Advisory Agricultural Meteorologist for Kentucky, examine a numerical prognosis being transmitted on the National Facsimile Circuit.

Dr. Antal (right) and Jerry Hill, the Advisory Agricultural Meteorologist for Kentucky, examine a numerical prognosis being transmitted on the National Facsimile Circuit.

John S. Gottschalk, Assistant to NMFS Director Roedel, was elected a Vice-Chairman of the Ecology Commission of the International Union for the Conservation of Nature and Natural Resources (IUCN) at its 11th General Assembly in Banff, September 16. IUCN is a leading international organization concerned with resource management problems throughout the world. The Ecology Commission pro-

vides basic policy guidance for the Union in addition to carrying out specific projects. A current example of the latter is an inventory of marine sanctuaries or parks throughout the world, and the preparation of criteria for the establishment of such areas.

Dr. Robert C. Stephenson, former director of the Ohio State Research Foundation, has been named the new director of Texas A&M University's Center for Marine Resources and the Sea Grant College Program, beginning November 1. As director of the Center, he will be considered the University spokesman for marine resources, and will oversee activities and projects relating to the Sea Grant program across the state.

H. Dean Parry of the National Weather Service's Systems Development Office has authored a chapter entitled, "Meteorological Transducers" in Vol. III of the ISA Transducer Compendium. This is the second edition of the Compendium, a volume which provides complete performance specifications of transducers for the principal physical variables including pressure, motion, sound, temperature, heat flux and humidity and moisture. The publisher is the Instrument Society of America.

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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