



noaa week

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Waterspout Description May Advance Tornado Research

The birth, life, and death of one of the atmosphere's most interesting and unusual offspring--the waterspout--are receiving their first full, systematic description from a scientist with the Environmental Research Laboratories. Joseph H. Golden, a research meteorologist at the Norman, Okla.-based National Severe Storms Laboratory, is developing a detailed view of the stages which lead from a line of cumulus clouds to the ropelike whirlwind of a mature waterspout, and to its subsequent decay.

The five stages identified by Mr. Golden--stages which overlap, interact, and occur in varying combinations--include: the dark spot, a relatively dark area on the ocean surface; the spiral pattern, a series of alternating dark and light bands which form a spiral pattern around the dark spot; the spray ring, which grows out of the spiral pattern as sea spray is carried into the air; the mature waterspout, the familiar "twister" linking the sea surface and parent cloud; and the decay stage, which generally occurs abruptly as an advancing rainshower begins to overtake the waterspout from the rear.

Besides illuminating waterspouts, the study has important implications for understanding tornadoes, which may be the waterspout's not-too-distant cousin.

Not necessarily accompanied by the severe weather or poor visibility usually associated with tornadoes, waterspouts contain only wind and water, can be

(Continued on page 4)

New Weather Data Exchange To Link Washington and Europe

On April 30, the Washington, D. C. - Offenbach, Germany, weather data exchange circuit will be discontinued and replaced by the new Washington-Bracknell, England-Paris, France-Offenbach circuit.

This date was agreed upon at a recent meeting in Paris of representatives of the four centers. John C. Straiton, Chief of the National Weather Service Communications Division, who represented the United States, agreed that the U.S. will, prior to that time, make both software and hardware changes at the National Meteorological Center in Suitland, Md., necessary to make U.S. transmissions conform to standards agreed upon previously.

The new circuit will be the first full-fledged link under the complete standards agreed upon for the World Meteorological Organization's Global Telecommunications System. In addition to providing linkage between the four centers, the new system also will increase the rate of data exchange from 1,050 words per minute to 3,000 words per minute.

A 48-hour, non-stop test was conducted this week to check the performance of the new exchange.

Discontinuance of the older exchange will represent a monthly saving of \$4,700 to the NWS.



Weather Bulletin Corrections Said To Save a Million Dollars

Sometime around April 24, the Tech Control Section of the National Weather Service's Communications Division expects to make its one millionth correction on bulletins rejected by the telecommunications computer at the National Meteorological Center since the Section was established in 1969. Although it is difficult to put a dollar value on each forecast, observation, and weather warning bulletin, it is estimated that at least one million dollars will have been saved. For example, a single incoming ship report costs the NWS at least \$2.50.

When the bulletins were used only by the computer in Suitland a lost bulletin was not serious because of duplication (for example, the computer reads all six Service C circuits). However, when the communications system became automated, and the bulletins were automatically transmitted further, it became imperative to "rescue" as many bulletins as possible. At that time, the Control Section was established, and Winford M. Bogle was named chief.

He designed the facility for computer rejection and line monitoring, procured the equipment, supervised its installation, and trained the seven men who now comprise the Section.

In 1969, as at present, the major cause of rejected bulletins was improper bulletin preparation by originators. Since data are received from other government agencies and many foreign countries, a problem of standardization has always existed. An effort was undertaken, and is continuing today, to have all originators of meteorological information prepare their bulletins in conformity with World Meteorological Organization standards and procedures. In the meantime, as much data as possible will be rescued by Mr. Bogle and Tech Controllers Allen Driscoll, Charles Powell, John Lanzaro, Joseph Foti, Patrick Barge, Tracy Wright, and Alvin Wildeman.

They receive from the computer any information it rejects for any reason, correct the mistakes, and feed the information back to the computer.

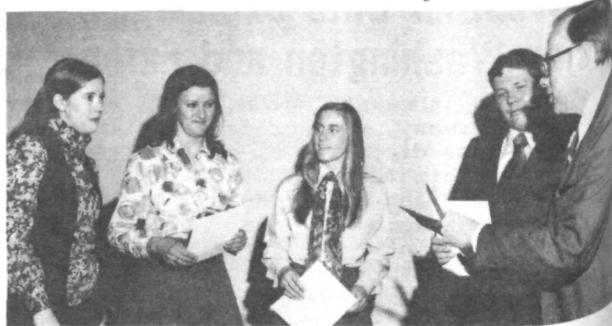
Another function of the Section is to monitor the quality of all circuits to and from the computer.



(Front row, from left) Mr. Lanzaro and Mr. Powell.
(Back row, from left) Mr. Bogle, Mr. Foti, Mr. Wright, Mr. Wildeman, and Mr. Driscoll.

Boulder EDS Group Is Honored For Improved Data Systems

Members of the Automatic Data Processing Group of the Solar-Terrestrial Data Services Division of the Environmental Data Service's Boulder, Colo.,-based National Geophysical and Solar Terrestrial Data Center have each received a Special Achievement Award for increasing the division's effectiveness in automatic data processing. They are Ronald W. Buhmann, group chief, Deborah A. Dunham, Deborah A. Harris, Brenda A. Cooke, Leonard C. Broline, and Philip R. Vulliet.



(from left) Ms. Harris, Ms. Cooke, Ms. Dunham, and Mr. Buhmann receive their awards from Alan H. Shapley, Acting Director of EDS's National Geophysical and Solar Terrestrial Data Center.

Train to Speak at Neptune Night Banquet

Russell E. Train, Chairman of the President's Council on Environmental Quality, will be the speaker at the American Oceanic Organization's fourth Neptune Night Banquet at the Washington Hilton Hotel, on April 25.

The highlight of the black-tie event will be presentation of the fourth Neptune Award to Dr. Robert A. Frosch for his "outstanding, broadly based contributions to the national oceanic program." Dr. Frosch was Assistant Secretary of the Navy for Research and Development, 1966-1972. In January he became Assistant Executive Director of the United Nations Environment Secretariat and Assistant Secretary General of the U.N., with headquarters in Geneva.

Great Lakes Pilot Now on Sale

The Lake Survey Center's 1973 edition of the Great Lakes Pilot, often considered the "mariner's bible" by Great Lakes boaters, went on sale April 1. The over 600-page book contains information not conveniently shown on the Center's nautical charts, such as descriptions of shorelines and harbors; signals for opening locks and bridges; clearances under bridges and other structures; underwater hazards; and danger zones.

The purchase price of \$5.25 includes supplements from May through October, to keep the Pilot up-to-date throughout the boating season. Copies may be obtained direct from the LSC or from one of its many sales agents.

Ice Forecasting Techniques Outlined at U.S.-Canada Workshop

NOAA personnel were among the 25 persons representing Canadian and U.S. agencies concerned with operations on the St. Lawrence Seaway who attended a recent workshop on ice forecasting for the Seaway. They were Dr. Frank H. Quinn, Chief, and Research Physical Scientists Charles Adams and Diann Matz, of the Lake Hydrology Branch of the Lake Survey Center; Dr. Arthur P. Pinsak, Chief of the LSC Water Characteristics Branch; Daron Boyce, National Weather Service Ice Forecaster at the U.S. Coast Guard Ice Navigation Center in Cleveland, Ohio; and Max W. Mull, Marine Weather Services, NWS Headquarters, Silver Spring, Md.

Held at Massena, N.Y., on March 27, the workshop was sponsored by the Ice Information Working Group of the Demonstration Program to Extend the Navigation Season on the Great Lakes and the Seaway, and hosted by the St. Lawrence Seaway Development Corporation.

A Seaway ice forecasting technique, which will be used for a freeze-up forecast next winter, is being developed at the LSC. Ms. Matz., who is working on the project under the supervision of Mr. Adams, described the technique under development. It is based on a mathematical model of the heat budget of the International Section of the St. Lawrence River.



Ms. Matz

Dr. Edward F. Klima Becomes a Member Of NMFS Plans, Policy Development Staff

Dr. Edward F. Klima, former Officer-in-Charge of the Pascagoula Fisheries Laboratory, Southeast Fisheries Center of the National Marine Fisheries Service, has accepted an appointment as Program Analyst for the Plans and Policy Development Staff of the NMFS Washington Office.

With the NMFS since 1961, Dr. Klima has been involved with resource assessment, MARMAP II and III, and gear research projects in the Southeast Region. He has specialized in marine electrical fishing and applied behavior. Through this research, he has helped develop new types of fishing gear and remote sensors such as RUFAS, an underwater-towed, unmanned vehicle, which is presently being employed in assessing scallop resources.

He holds a B.A. degree in zoology and an M.S. in fisheries biology from the University of Miami, Fla., and received his Ph.D. in wildlife management from Utah State University.

Survey Measures Earth Movement Along the San Andreas Fault

A three-month survey is underway in California to measure earth movements along the San Andreas Fault near Los Angeles and San Francisco. Estimated to cost \$30,000, the survey is being conducted by the National Ocean Survey's National Geodetic Survey in cooperation with the California Department of Water Resources. It is part of a program to provide information on movement of the earth's crust for use in the engineering design and maintenance of structures and for geophysical studies of the buildup of strain within the earth's crust. It is being made in seismically active areas at three sites along the fault line--one near Littlerock, Calif., about 35 miles northeast of Los Angeles, and the others near Hayward, Calif., about 25 miles southeast of San Francisco.

The field party headed by Robert W. Safford, which is conducting the survey, will determine if any movement has occurred at the sites since a similar survey was made over two years ago.

In 1964-65, on a cooperative basis with the California Department of Water Resources, the Coast and Geodetic Survey, predecessor of the NGS, established about 18 fault crossing figures at various places along the San Andreas fault system. These figures, consisting of one or two quadrilaterals involving six to eight stations, were established in areas where the proposed California aqueduct would cross major fault zones. Repeat surveys accomplished at one- or two-year intervals have provided information on crustal movements along the fault system, which is used for monitoring and in the construction of the aqueduct.

Marseilles WSMO Begins Operation; Radar Is Relocated from Chicago

Full-time operation of the National Weather Service's long range weather radar at the new Weather Service Meteorological Office in Marseilles, Ill., began on April 1.

Relocation of this WSR-57 approximately 60 miles southwest of the previous location on the campus of the University of Chicago will help eliminate the ground clutter problem and provide better information on the configuration of storms over the Chicago metropolitan area.

Warren E. Sunkel is Meteorologist in Charge of the new WSMO. Other members of the staff are: Radar Observers David G. Brandon, Robert N. Larson, Kenneth E. Modlin, and Gerald R. Turner; Electronic Technicians Clyde R. Welch and Blaine W. Flesher; and Area Facilities Man DeLane F. LaFollette. The radar operators also manned the leased C-band radar operated at the Weather Service Forecast Office in Chicago since the WSR-57 was removed from the University site last November.



notes about people...

Lois Wescott and Huntley Ingalls, of the Environmental Data Service's National Geophysical and Solar-Terrestrial Data Center, Boulder, Colo., have received awards for unusually competent and dedicated service in producing vertical profiles of electron density in the ionosphere from ionograms.

Ceel Van Den Brink, Meteorologist in Charge of the Weather Service Office/Agriculture, East Lansing, Mich., has been invited to serve as a member of the American Meteorological Society Committee on Agricultural Meteorology. He is presently serving as vice-chairman of the American Society of Horticultural Science's Committee on Meteorology and Climatology.

Biologist Charles A. Mayo, a full-time employee of the National Marine Fisheries Service Southeast Fisheries Center, Miami, Fla., successfully passed his defense for Doctor of Philosophy in biology. The degree was won at the University of Miami's Rosenstiel School of Marine and Atmospheric Science. Dr. Mayo has been working at the fisheries center since mid-1972 on a program devoted to life studies of tropical fishes.

Dr. Thomas S. Austin, Director of the Environmental Data Service, was an invited speaker at an all-day seminar held at Grove City College, Pa., during March. Dr. Austin, an alumnus of the college, met with interested faculty and students, and with members of the campus' Committee on the Environment to discuss current environmental issues and job opportunities in the environmental sciences.

Ray Hoxit, of the Environmental Data Service's National Climatic Center, Asheville, N.C., has returned to his duties in the Science Advisory Group, after completing the requirements for a Ph.D. in atmospheric sciences at Colorado State University, Fort Collins, Colo.

Jimmie L. Curtis, of the National Weather Service River District Office, Raleigh, N.C., has been appointed a member of the Raleigh Flood Plain Zoning Task Force. The purpose of this task force is to provide expertise in preparation of laws to control development in the flood plains to minimize damage and avoid disastrous floods.

RESEARCHER and Lake Survey Are Commended

The NOAA Ship RESEARCHER and the Lake Survey Center have been congratulated by Dr. R. E. Hallgren, former Associate Administrator for Environmental Monitoring and Prediction, for an "outstanding performance" in support of the International Field Year for the Great Lakes. Both participated, in cooperation with Canada, in an intensive study of Lake Ontario during an eight-month period last year.

Francis V. Kohl Receives Commerce Bronze Medal

Francis V. Kohl, Electronic Engineer in the Equipment Development Laboratory of the National Weather Service's Systems Development Office, has received a Commerce Bronze Medal. Mr. Kohl, who retired at the end of March after 35 years' Federal service, was cited for "major contributions to the introduction of new and improved technology in the design of meteorological instruments and equipment."



(From left) Mr. Kohl; Merritt N. Techter, Director of SDO; and David G. Fordham, Executive Assistant to Director, SDO.

Artificial Reef Increases Fish Population

A preliminary assessment by biologist Richard B. Stone, National Marine Fisheries Service, Beaufort, N.C., of the FLARE (Florida Aquanaut Research Expedition, 1972) artificial reef site emplaced in the upper Florida Keys, indicates that the fish population around the reef has increased steadily. Mr. Stone believes that the artificial reef has reached a carrying capacity similar to a nearby natural reef in its seven months of existence, and has effectively doubled the standing crop of fishes in the area.

Waterspout Description (Continued from page 1)

studied closely from light aircraft, and are frequent summer visitors to the lower Florida Keys. These differences make them more amenable to close-range field observations.

Mr. Golden deduced his waterspout life cycle from observing, during the summers of 1969 and 1970, a total of 128 waterspouts in some stage of their development, and subsequent photogrammetric and meteorological analysis of films and other data obtained during those periods. Smoke bombs, free balloons, and other tracer techniques permitted him to analyze waterspouts for wind velocities, structural dimensions, composition, and the like. The 1970 field work, conducted with Purdue University's Tornado Research Group, also used an instrument pod towed by a light aircraft to measure temperatures in and around the waterspout funnel core.

Extensive Survey of 11 States Is Begun by NGS Field Party

An extensive geodetic survey has been launched in 11 southeastern states by the National Geodetic Survey as part of a long-range program to upgrade the national horizontal control network in the United States. The survey will eventually be extended to all states but Alaska and Hawaii.

It is being carried out by a field party headed by Woodrow M. Johnson. The party will first measure distances and observe azimuths at 13 sites in Alabama, and then proceed to Florida, South Carolina, North Carolina, Virginia, Maryland, West Virginia, Ohio, Indiana, Kentucky and Tennessee. The purpose of the survey is to obtain data for a new adjustment of the horizontal control network to meet increasing requirements for greater accuracy. These are needed for a multiplicity of purposes, including boundary surveys and other engineering and scientific requirements, the location of urban underground utility lines, the tracking of satellites and missiles, and the detection and evaluation of long-term crustal movements.

The national network provides the basis for coordinating all types of surveying. The network's control stations (geographic positions of latitude and longitude) provide accurate starting points for measurements. In the survey now underway, precise distance measurements and azimuth observations (observations on the North Star) will be made at approximately 600 sites in the network. These data will provide greater accuracies in distance and direction which will serve as additional control in a new adjustment of the network.

Dr. Hudlow Is Assigned to EDS' CEDDA

Dr. Michael D. Hudlow has been permanently assigned to the Environmental Data Service's Center for Experiment Design and Data Analysis. As a hydrometeorological task area leader, he conducts experimental design studies and research required to measure, evaluate, and synthesize the quantity, distribution, and transport of water due to atmospheric processes and circulations--an integral part of the hydrologic cycle.



He first joined the National Weather Service's Office of Hydrology in 1969 following participation in the Barbados Oceanographic Meteorological Experiment. A former U.S. Army Captain, he earned his doctorate degree in meteorology from Texas A&M University, College Station, Tex., in 1967.

Ocean Weather Station Is Site Of Social and Cultural Exchange

National Weather Service employees serving aboard the Coast Guard Cutter GRESHAM, stationed on Atlantic Ocean Weather Station Hotel--about 200 miles east of the South Jersey Coast--have reported a busy March.

According to Official in Charge Raymond W. Mosher, one highlight was a social and cultural exchange between the GRESHAM and the Soviet scientific vessel ERNST KRENKEL, which was the result of a radioed invitation to the KRENKEL to send a team to the GRESHAM to play volleyball. Within an hour the game was in progress. In the subsequent exchange of scientists and crews of the two ships, language differences were gradually dissolved, and group spokesmen were able to explain their roles in the ships' programs and to show facilities and equipment.

The Soviet vessel, which had female as well as male scientists aboard, carries modern automatic devices which produce a complete scientific program in meteorology, oceanography, and communications. It conducts an airways forecast program from the U.S. east coast to Europe, using Soviet data and radioteletype information from the NWS system.

An exchange of radiosondes was the parting gesture between the two ships.

Later in the month, a severe winter storm generated winds in excess of 65 knots for a period of eight hours. Wind gusts were from 80 to 88 knots. Seas averaged 30 feet, with many 50-foot waves seen. The lowest pressure recorded aboard the GRESHAM during the storm was 985 millibars. The ship sustained structural and mechanical damage, including the loss of several lifeboats. Additionally, several crew members were injured and one was evacuated by helicopter.

Other NWS men aboard the ship, in addition to Mr. Mosher, are Meteorological Technicians Francis V. Perry, Henry A. Chapman, Christopher E. Horseman, and Electronic Technician Timothy J. Greenwell.

Flooding Survey in Florida Completed

A two-man National Ocean Survey team has completed a survey of coastal areas in the Florida counties of Martin and Indian River on flooding from hurricanes and other severe storms.

The survey was conducted at the request of the Federal Insurance Administration of the Department of Housing and Urban Development. The survey team was composed of Dale M. Fuller and Michael Sutphin.

The Federal Insurance Administration establishes insurance rates for private structures. Information furnished by the National Ocean Survey and other cooperating agencies is used to determine suitable rates. In addition, the Federal Insurance Administration uses the data to prepare maps of special flood hazard areas.

Calabrese Is Named To Fill NWS Central Region Post

Philip A. Calabrese, Executive Assistant to the Associate Director for Meteorological Operations at



National Weather Service Headquarters in Silver Spring, Md., has been named Chief of the Meteorological Services Division at NWS Central Region Headquarters. He was appointed as a Meteorologist in Alaska early in 1959, and subsequently served in the Emergency Warnings Branch and as Program Officer for Forecaster Training in Weather Analysis and Prediction at NWSH.

He holds BS and MS degrees in meteorology from the University of Chicago and completed an additional year of postgraduate study at Florida State University under an NWS scholarship.

He expects to begin his new assignment about the end of April.

Retirements of NOAA Personnel Are Announced

Harvey T. Chan, 689 Irving Avenue, Astoria, Oreg. 97103, Weather Service Specialist at the Weather Service Office Astoria, Oreg., with 30 years' service.

Ralph E. Curtiss, Program and Legislative Policy Coordinator, Plans and Policy Development Staff, National Marine Fisheries Service, Washington, D.C., with 18 years' service.

Angelo Ferrara, Supervisory Electronic Engineer in the Engineering Division of the National Ocean Survey, Rockville, Md., with 32 years' service.

Irene B. Grigsby, 4316 McGee, Kansas City, Mo. 64111, Personnel clerk at the Central Region Headquarters, National Weather Service, Kansas City, Mo. with 26 years' service.

Leo F. Jeske, 48 West Marie Avenue, West St. Paul, Minn. 55118, Meteorological Technician at the Weather Service Office/SC in St. Paul, Minn., with 31 years' service.

Erwin E. John, 6450 Warren Avenue, Edina, Minn. 55435, Forecaster at the Weather Service Forecast Office in Minneapolis, Minn., with 30 years' service.

Philip Larch, 825 Chestnut, Central Point, Oreg. 97501, Observations Specialist at the Weather Service Office in Medford, Oreg., with 30 years' service.

Kalervo N. Maki, Civil Engineer and Reviewer, Coastal Mapping Division, Office of Marine Surveys and Maps, National Ocean

ACSM Commends NGS Employees For Contributions to Workshops

The American Congress of Surveying and Mapping has cited seven employees of the National Geodetic Survey for their outstanding contribution to the success of the Surveying Instrumentation and Coordinate Computation Workshops. They are Joseph F. Dracup, Raymond W. Tomlinson, Carl F. Kelley, Kenneth D. Barber, George B. Lesley, Floyd K. Stuart and Charles L. Novak. About a dozen workshops have been held throughout the country to explain to local surveyors various aspects of geodetic surveying.



(From left) Mr. Barber, Mr. Kelley, Mr. Dracup, Mr. Tomlinson, and Mr. Novak.

Survey, Rockville, Md., with 37 years' service.

William M. Martin, Chief of the Pacific Marine Center's Verification Branch, Seattle, Wash., with 36 years' service.

Toxey H. McMahan, 4819 - 15th St., Meridian, Miss., Weather Service Specialist at the Weather Service Office in Meridian, with 28 years' service.

Rebecca H. Moureau, Clerk Typist, College Park Fishery Products Technology Laboratory, National Marine Fisheries Service, College Park, Md., with 22 years' service.

Harold A. Pettit, 431 West Red Bridge Road, Kansas City, Mo. 64114, Leading Forecaster at the National Severe Storms Forecast Center, Kansas City, Mo., with 41 years' service.

Harold J. Rothrock, 14518 Kenwood Avenue, Dolton, Ill. 60419, Leading Forecaster at the Weather Service Forecast Office in Chicago, Ill., with 33 years' service.

Wendell P. Taylor, Cartographic Technician, Revision Survey Section, Coastal Mapping Division, Office of Marine Surveys and Maps, National Ocean Survey, Rockville, Md., with 30 years' service.

Howard H. Walrath, 107 New Street, Florence, S.C., Weather Service Specialist, at the Weather Service Office in Meridian, Miss., with 32 years' service.

Hydrologic Analysis and Forecasting Class Is Now In Session

The National Weather Service Office of Hydrology is conducting its Hydrologic Analysis and Forecasting Class during the period March 19 to June 15. The primary purpose of the course is to introduce foreign hydrologists to the methods of river

and flood forecasting as practiced in the United States. The course also serves to train new employees in the Hydrologic Program of the NWS. The students are given nine weeks of classroom training and four weeks of practice in a River Forecast Center.



Participating in the current class are (front row, from left) Cipriano Ferraris, Philippines; Neville Yearwood, Guyana; Thorant Hardware, Jamaica; Stanley Holbrook, Portland RFC; D.K. Randall, Canada; (back row, from left) Walter Sittner, Principal Instructor, Office of Hydrology; S.Y. Shiau, Canada; Joseph Brumbach, Hartford RFC; Hans-Eckard Deisenhofer, Germany; Joseph Slate, Canada; and Max Kohler, NWS Associate Director for Hydrology.

NOAA Career Day Program Is Held At Northwest Fisheries Center

National Marine Fisheries Service personnel at the Northwest Fisheries Center in Seattle, Wash., received local high school students during a "NOAA Career Day Program" recently. The project acquaints students with career opportunities in NOAA. Eight sponsors from the Center--William Gronlund, Jerry Larrance, Dr. Bruce McAlister, Rae Mitsuoka, Tim Newcomb, Ralph Silliman, Ronald Wickland, and Alan Wolman--showed students various activities in which they were interested, after which they attended a NOAA Career Orientation Presentation. The day-long visit ended with a tour of the research vessel MILLER FREEMAN.

Ben Webb Harlin Dies

Ben Webb Harlin, former Meteorologist at the National Weather Service Office in Fort Huachuca, Ariz., died on March 15. He had retired in 1970 after serving the NWS for 30 years. He is survived by his wife, Joie, whose address is Box 2, Tombstone, Ariz. 85638.

Rear Admiral Alfred C. Holmes Is Honored by Power Squadron

District 27, U. S. Power Squadrons, the recipient of the National Ocean Survey Cooperative Charting Award for 1972, presented a Certificate of Appreciation for Outstanding Service to Rear Admiral Alfred C. Holmes, Director of the Atlantic Marine Center, at their recent Annual Spring Conference in Wilmington, N.C. The certificate cites Admiral Holmes for having contributed substantially to the objectives and results obtained by District 27 in the charting program.

LSC Gaging Section To Open Field Season

The Lake Survey Center's Water Level Gaging Section will start 1973 field work April 23. A two-man crew will inspect and repair the Section's gage network on Lakes Superior, Huron, Michigan, and St. Clair, as well as the St. Marys, Detroit, and St. Clair Rivers. These gages are vital in monitoring the Great Lakes water levels, particularly now while the Great Lakes are high. The work, which will take about 40 days, will help to insure continuous operation and accurate water level records.

Open House Is Held at Honolulu, Hawaii, by NOAA Ship FAIRWEATHER



(Left) Commander Charles A. Burroughs, Commanding Officer, welcomed visitors to the open house activities.

(Right) Ensign William Wert described to the visitors the reversing thermometer used to measure ocean temperatures at various depths.



Ceiling and Visibility Forecasts Are Automated by Weather Service

The National Weather Service's Techniques Development Laboratory has developed an automated system that produces four- to 16-hour probability forecasts for five operationally-significant categories of ceiling and visibility. Since April 5, the forecasts have been prepared once a day at the National Meteorological Center in Suitland, Md. They are stored in the Federal Aviation Administration's Kansas City Switch and are available on a request/reply basis for 22 stations in the Eastern U.S. The only input data needed are four consecutive hours of surface observations at the station for which the forecast is being made. These forecasts are expected to be useful as guidance to the aviation forecasters. The research for this development was supported by the FAA and the new product was derived by Richard Crisci and Frank Lewis of TDL.

More Than 4,000 Attend "Sportfishing '73"

More than 4,000 people attended the April 7 and 8 forum "Sportfishing '73," held at Ocean City, Md. The two-day show, sponsored by the National Marine Fisheries Service and the States of Delaware, Maryland, New Jersey, and Virginia, featured a number of NOAA speakers. One of the most extensive and lively discussions centered on the question of whether saltwater sport fishing licenses are needed. There is no support for a Federal license at the present time, but several states are seriously considering implementing legislation.

Laboratory for Environmental Data Research Participates in Acid Rain Survey Project

The Environmental Data Service's Laboratory for Environmental Data Research, in cooperation with the Environmental Protection Agency and the Xerox Corporation, is participating in a science-oriented project for high school teachers and students. The goal is to gather significant data that might shed light on the effects of acid rain on the environment. The student project--called the Acid Rain Survey--involved observations by thousands of students throughout North America whose findings will be analyzed to help scientists make the first detailed acid rain map of the United States and Canada.

The acid rain problem has only recently become a matter of concern. Evidence obtained from studies in Europe indicates that acid rain may have a harmful effect on aquatic ecosystems and in the reduction of timber harvests and other crops. Dale E. Phinney of LEDR will assist in collating and interpreting the data collected by the students.

Calendar of Forthcoming Events To Be Included in NOAA WEEK

From time to time--once a month to start--a calendar of forthcoming events of interest to NOAA personnel will be run in NOAA WEEK. Items to be considered for inclusion in the calendar should be submitted to the editor well in advance of the event and should include the name of a person, preferably in NOAA, who may be contacted by readers for further information.

April 25-27
Palm Beach
Shores,
Fla.

"The Ocean, Nuclear Energy, and Man," sponsored by the American Nuclear Society and the Marine Technology Society. (M.J. Ohanian, Dept. of Nuclear Engineering, University of Florida, Gainesville 32601)

May 7 - 9
Miami, Fla.

U. S. - French Meeting on Cooperation in Ocean Science and Technology. (Captain John O. Phillips, National Oceanic and Atmospheric Administration, Room 1017, 6010 Executive Boulevard, Rockville, Md. 20852. 301-496-8846.)

May 14 - 17
Miami, Fla.

Technical Conference on Hurricanes, American Meteorological Society. (Toby Carlson, National Hurricane Research Laboratory, ERL, NOAA, Box 8265, 1365 Memorial Drive, Coral Gables, Fla. 33124. 305-666-4614.)

June 20-
July 4
Mexico City,
Mexico

"Science and Man in the Americas," jointly planned by the American Association for the Advancement of Science and the Consejo Nacional de Ciencia y Tecnologia. (A.A.A.S., Dept. Mex., 1444 N St., N. W., Washington, D.C. 20005. 202-467-4488.)

July 17-19
Seattle, Wash.

"The Oceans and National Economic Development," sponsored by the National Oceanic and Atmospheric Administration. (Vice Admiral W. W. Behrens, Jr., Associate Administrator for Interagency Relations, Room 5807, Main Commerce Building, Washington, D. C. 20230. 202-967-5444, or Seattle-King County Economic Development Council, 1218 Third Ave., Suite 1900, Seattle, Wash. 98101. 206-622-2730.)

Items to be considered for publication in NOAA WEEK should be submitted to:
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National Oceanic and Atmospheric Administration

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