A UNITED STATES DEPARTMENT OF COMMERCE PUBLICATION

NOAA WEEK

November 12, 1971
Volume 2
Number 45

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

ERL Resumes Test Seeding Of Lake Erie Snowstorms

NOAA scientists have scheduled a feasibility study of a cloud seeding technique developed over the past four years with the objective of moderating the intensity of Lake Erie snowstorms in the Buffalo, N.Y., metropolitan region.

Headed by Dr. Helmut K. Weickmann, director of NOAA's Atmospheric Physics and Chemistry Laboratory, the scientists will attempt to seed four or five storms (if that many occur during the term of the study -- November 12 through December 15) over the lake.

They hope to redistribute the snowfall in such a way that less snow drops on the metropolitan region and the rest is spread farther inland. It is expected that the snowfall pattern, not the amount of snow, will be altered as a result of seeding. Another aspect of the study is to induce precipitation over the lake in cloud bands that would not naturally release snow.

A DC-6 aircraft from NOAA's Research Flight Facility will serve as both the seeder and the airborne meteorological observing platform. Seeding will be done either by dropping dry ice directly into the storm or by dropping pyrotechnic flare units into the cloud tops and allowing them to fall through the cloud, leaving a trail of silver iodide smoke. For observations, the DC-6 will be equipped with a Doppler navigation system to measure air flow into the storms; infrared radiometers to determine reflection of sunlight from the clouds, radiation balance or budget, and cloud temperatures; nuclei counters; and cloud physics instrumentation.

Seeding effects also will be monitored by radar, instrumented mobile vans and a NOAA network of 50 recording snow gages.

A numerical computer model of lake storms, developed as part of NOAA's continuing

(Continued on page 2)

Freeze Constraints To Remain In Effect

In August the Department of Commerce placed a temporary freeze (90 days) on employment and promotions. This resulted from the President's economic message of August 15, 1971, in which he called for a five percent reduction in Federal employment and OMB Bulletin 72-4, Control of Grade Escalation in the General Schedule, which required the Department of Commerce to effect a grade reduction of .15 by June 30, 1972.

Though some progress has been made, the required reduction in employment and grade rollback has not been reached. On November 14, Phase II of the President's Economic Stabilization Program will begin. Many planning and transitional operations are presently underway, and it is expected that these activities will delay any immediate significant changes in the freeze. In view of this, present restrictions will remain in effect for the time being.

NOAA has requested broad exemptions from the hiring and promotion freeze, particularly for positions concerned with public safety missions. At this time only a limited number of the requests have been approved. NOAA plans to continue its efforts to alleviate the adverse impact of these constraints on our most critical programs.

Awards Night Dinner Dance

More than 350 reservations have been received to date for the NOAA Awards Night Dinner Dance, to be held Friday, December 3, at the Indian Spring Country Club, Silver Spring, Md. Don't miss out on this opportunity to join in honoring those who receive the $1000 NOAA Awards and the NOAA Unit Citations. Tickets are available, at $12.50 each, from the representatives listed in the October 29 NOAA Week. To make table reservations, call Mary Gearhart, 496-8134, or Mary Moore, 496-8347.

Dr. Gossard Named To Head Wave Propagation Laboratory

Dr. Gossard

Dr. Earl E. Gossard has been appointed Chief of the Environmental Research Laboratories' Wave Propagation Laboratory. From his office in Boulder, Colo., he will lead both the Boulder and the Washington, D.C., components of the Geoacoustics group.

Since receiving his Ph.D. in physical oceanography from the University of California at San Diego in 1956, he has been with the Naval Electronics Laboratory at San Diego, where he was head of the Propagation Technology Division. He has authored numerous scientific papers and reports, the major emphasis in recent years being on acoustic-gravity wave propagation in the atmosphere.

Dr. Gossard is a member of the International Consulting Committee for Radio, of Commissions 2 and 3 of the International Union of Radio Sciences, and of the International Union of Geodesy and Geophysics.

Interagency Group Discusses Plans For Comparing Rocket-Sounding Systems

A group of scientists from DOD, NASA, and NOAA, serving in an advisory capacity to the Interdepartmental Committee for Applied Meteorological Research, met recently at Patrick Air Force Base to discuss plans for comparisons of rocket-sounding systems from various countries. Such comparisons would probably be made in March of 1972 at Wallops Island, under the general supervision of the World Meteorological Organization. Participants at the meeting from NOAA (NWS) were A. J. Miller of the Upper Air Branch, NMC, and Frank Schmidlin of Wallops Station.

Water Resources Association Honors NMFS

The National Marine Fisheries Service was honored for its part in "A Century of Fish Conservation" by the American Water Resources Association at its recent Seventh Annual Conference.

NMFS Director Philip M. Roedel accepted a plaque citing the fisheries agency.

Movie Made by Dr. Robert F. Dill Wins Industrial Film Award

Dr. Dill

A movie made by Dr. Robert F. Dill, Science Coordinator in NOAA's Office of Undersea Science & Technology, while he was in his previous position with the U.S. Naval Undersea Research and Development Center, has won an award for outstanding achievement in industrial motion picture production in the Research and Development category of the 13th Annual Industrial Film Awards. The film, "Deeply Submerged Terraces," shows a deep-diving vehicle documenting the existence of a unique geologic feature which, if it is what it appears to be--an old beach located 700 feet down--is evidence of a reduced ocean surface level within comparatively recent times.

Cable TV To Carry Radar Information To FAA Flight Service Station

The National Weather Service and the Federal Aviation Administration have agreed to an arrangement by which weather radar information from the WSR 57 radar at Galveston, Texas, will be carried to the FAA Flight Service Station at Galveston airport.

This arrangement, made possible by an existing community cable TV service, permits the FSS to install a pre-tuned TV set on which its personnel will be able to monitor the WSR 57 scope picture for use in pilot briefing.

The arrangement is a very inexpensive solution to the problem of getting radar information remoted to the FSS.

Test Seeding (Continued from page 1)

joint government-industry-university project, provides realistic predictions of storm development and the expected rate of precipitation from each storm.

The lake storm is a localized meteorological phenomenon that produces heavy, wet snow accumulations in a relatively small coastal area. Such storms are typical of the Great Lakes region, especially Lakes Erie, Ontario, and Michigan; the Adriatic Sea; the Sea of Japan; and other regions where cold air flows over relatively warm water.

Oceanic Institute of Hawaii Receives $38,400 Sea Grant

The Oceanic Institute of Hawaii has been awarded a $38,400 Sea Grant to conduct a feasibility analysis of the potential for open sea mariculture.

Research and development of marine food and industrial organisms, called mariculture or aquaculture, generally have been limited to the coastal zone, and particularly to estuaries, embayments, ponds, or tanks. The Oceanic Institute will consider the potentials for similar culture in the open sea, with particular reference to the use of offshore fixed and mobile platforms, barges, and special structures, for the mass culture of high value fish and shellfish.

1972 International Geophysical Calendar Available from EDS' World Data Center A

The International Geophysical Calendar for 1972 has been published and distributed by the International Ursigram and World Days Service to the worldwide scientific community. This Calendar continues the series begun for the International Geophysical Year 1957-58, and is issued annually to recommend dates for solar and geophysical observations which cannot be carried out continuously. Thus, the amount of observational data in existence tends to be larger on Calendar days. Additional copies of the Calendar may be obtained from J. Virginia Lincoln, EDS' World Data Center A, Upper Atmosphere Geophysics, NOAA, Boulder, Colo. 80302.

Shoreline Property Owners Deluge LSC With Requests for Publications

Responding to an inquiry from the Detroit Free Press "Action Line," a column which responds to and solves its reader's problems, the Lake Survey Center furnished an Army Corps of Engineers pamphlet, "Great Lakes Shoreline Damage Causes and Protective Measures," and a Lake Survey publication, "Monthly Bulletin of Lake Levels." Within two weeks after their being mentioned in "Action Line," the Center received over 700 requests for these items from worried Great Lakes shoreline property owners.

Automated 72-Hour Forecasts For 131 Cities To Aid Shippers

The Techniques Development Laboratory of the National Weather Service Systems Development Office has extended its automated forecasts of surface temperature at 131 cities by an additional twelve hours on an operational basis, once a day. The existing morning teletypewriter bulletin (FMUS-1) now contains a 72-hour forecast of the maximum temperature expected the day after tomorrow, in addition to the customary 24-60-hour projections. The new forecast product is based on extended runs of the NMC primitive equation model and should be helpful in satisfying a long-standing requirement for temperature forecasts for shippers.

The NWS' system of forecasting maximum and minimum surface temperatures is described in an article just published in the Journal of Applied Meteorology (Vol. 10, No. 5, Oct. 1971, pp. 916-920). The article, entitled "Recent Developments in Automated Max/Min Temperature Forecasting," is co-authored by William H. Klein, Frank Lewis, and Gordon A. Hammons of the Techniques Development Laboratory. It describes recent modification in the automated forecast system including use of the primitive equation model, later surface reports, computer-analyzed isotherms, and climatologically-determined forecast limits. In addition, verification figures are presented to show the improvement of the new system over an older one and to justify the replacement of centralized subjective temperature forecasts by completely objective ones.

Tour Program Results From Open House

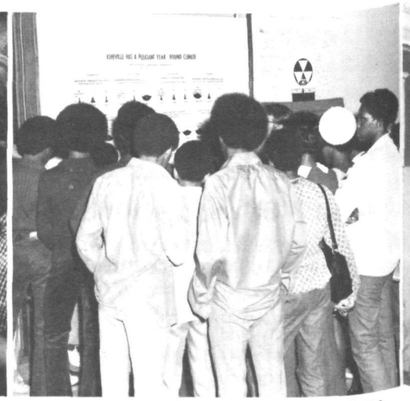
The National Weather Service's Sterling (Va.) Research and Development Center has established a tour program designed to appeal particularly to school groups in the local and Washington, D. C., metropolitan areas. The Center is located near Dulles Airport and is operated by the Systems Development Office's Test and Evaluation Laboratory.

The tour program was started because of the many inquiries from the relatively large number of visitors who arrived for the Center's weekday open house, and is being coordinated with the Systems Development Office's EEO action plan.

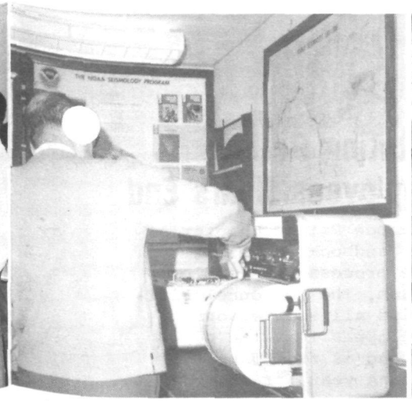
Tours of the center can be arranged by contacting Matthew Lefkowitz at (703) 471-5302.

Air pollution mobile van at Suitland, Md.

Data processing equipment at the NMFS Southeast Fishery Center, Miami, Fla.



A display of home town weather statistics, National Climatic Center, Asheville, N. C.



Albuquerque Seismological Laboratory, Albuquerque, N.M.

Automated map plotting at the National Meteorological Center, Suitland, Md.

NMFS Fish Protein Concentrate Pilot Plant, Beltsville, Md.

Preserved specimen at NMFS, Auke Bay, Alaska

At the Satellite Service, Suitland, Md., a peek through the optical pyrometer, which measures temperatures remotely

Open Houses Reveal to Public Many Facets of NOAA

Thousands of people have attended the more than 50 open houses held thus far in celebration of NOAA's first anniversary. Others are scheduled for later dates.

The National Marine Fisheries Service units also celebrated the centennial of the establishment of a Federal fisheries service.

In several locations, including Kewala Basin, Honolulu, Hawaii, NOAA units were joined in the celebration by other state and Federal agencies nearby or with whom they share space.

Cooperation of NOAA employees and their families was outstanding. In some places exhibits were manned more than one day. These included the NMFS North Pacific Fisheries Research Center in Seattle, Wash.; Middle Atlantic Fisheries Center in Beaufort, N.C.; and the Auke Bay (Alaska) Coastal Fisheries Research Center.

In many places, open houses were held on other than workdays. These included the NWS offices in Portland,(Oreg.),Anchorage, Evansville (Ind.), and Boston; the National Ocean Survey Office, the NWS Point Campbell Observatory and River Forecast Center at Anchorage and ERL's High Latitude Space Environment Monitoring Station at Elmendorf Air Force Base, Alaska; the units in Suitland, Md.; the NMFS Hawaii Area Fishery Research Center, the Southeast Fishery Center in Miami (Fla.), and the St. Petersburg Beach (Fla.) Biological Laboratory.

Some open houses lasted far beyond the regular working day--as at the Gulf Coast Fisheries Center in Galveston, Tex., and the Pascagoula (Miss.) Fishery Laboratory and Fishery Products Technology Laboratory.

Other units, the Geophysical Fluid Dynamics Laboratory in Princeton, N.J., for example, held their open houses after dinner on workdays.

Many NOAA wives baked cookies, and some cooked shrimp and other delicacies for the guests.

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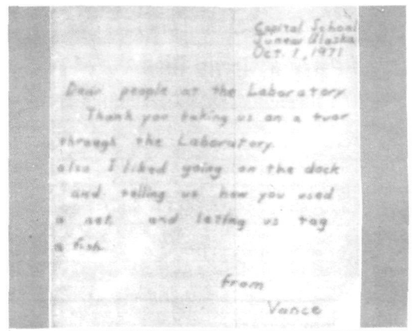

Coastal School
Juneau Alaska
Oct. 1, 1971

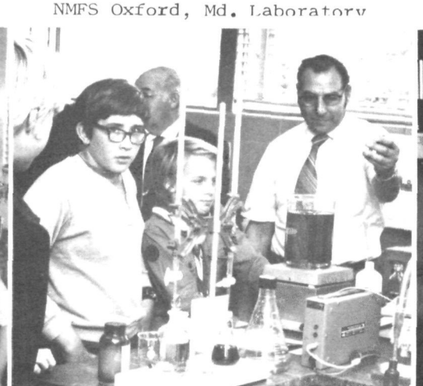
Dear people at the Laboratory
Thank you taking us on a tour
through the Laboratory
also I liked going on the dock
and telling us how you used
a net and letting us tag
a fish.

from
Vance

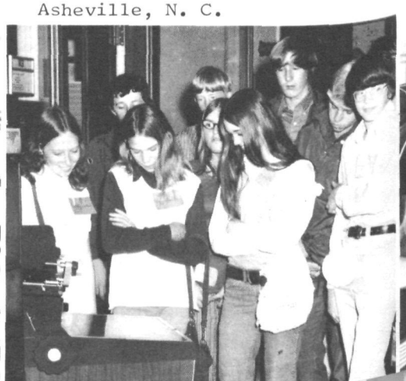
A note of thanks to NMFS, Auke Bay, Alaska

Lobby display at Akron, Ohio, Weather Service Office

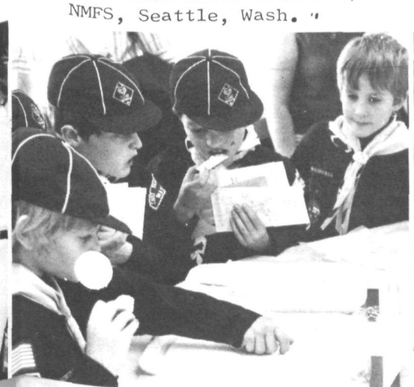
Columbus, Ohio, Weather Service Office



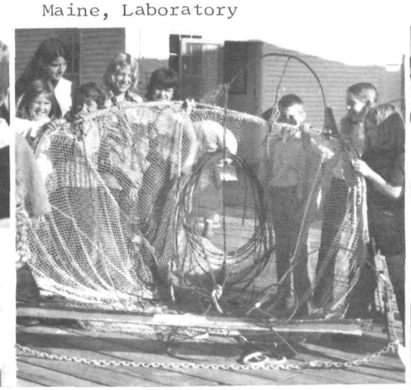
NMFS Oxford, Md. Laboratory



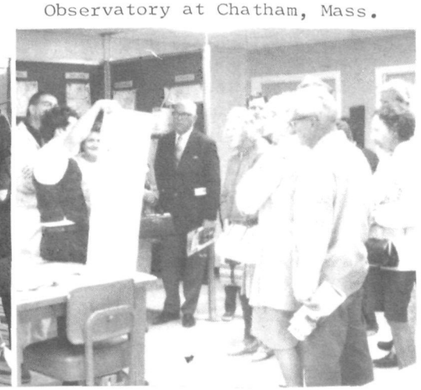
Microfilm viewing equipment, EDS National Climatic Center, Asheville, N. C.



Sampling flavored spreads made from black rockfish, NMFS, Seattle, Wash.



Trawl used in sampling larval herring, NMFS Boothbay Harbor, Maine, Laboratory



Weather Service Meteorological Observatory at Chatham, Mass.

Special Phone Number Listed For Official-Use Chart Requests

The new number for requesting nautical and aeronautical charts and related publications for official use is (202)282-7201, (IDS Code 154-27201). Ask either to speak to someone in the Order Analysis Section or simply state that you wish to order NOS publications for official use.

The phone number of the over-the-counter salesroom remains the same, (202)282-7011, (IDS Code 154-27011), but the increased volume of walk-in business does not allow time for personnel there to handle official-use requests.

Perry R. Davis Dies

Perry R. Davis, Operations Manager of ERL's Marine Minerals Technology Center in Tiburon, Calif., died on September 25. He was honored for his 35 years of Federal service earlier this year. A native of Hodgen, Okla., he had been at the Tiburon installation for five years, making his home in nearby Novato.

Performance Rating Period For Vessel Employees Nears End

Since the Performance Rating Chapter of the NOAA Personnel Handbook for Vessel Employees is in the process of being prepared for publication, the Personnel Division wishes to remind all supervisors of civilian marine employees that the performance rating period is from January 1 to December 31 of each year (or from date of employment, transfer, promotion, etc., to December 31) except for employees who entered on duty after September 30, who will not be rated until the next performance rating year.

An employee must be given a 90-day notice prior to issuance of an "Unsatisfactory" rating. During this 90-day period he must be given help in his efforts to improve. Then, if the employee is still unsatisfactory, he may be so rated. In order to make certain that all such actions are properly taken, the proposed unsatisfactory rating and justification must be coordinated with the appropriate Personnel Office prior to being issued to the employee.

Open Houses (*Continued from page 5*)

Numerous letters of appreciation have been received from the guests, who included local and Federal officials, university personnel, former employees, NOAA families, and--no doubt--many potential future employees among the thousands of students of all ages, who, among other things:

--were shown how a radiosonde gathers information needed for making forecasts (at the Columbus, Ohio, Weather Service Office, among others);

--saw a photographic display of the foreign fishing off Alaska and the joint NMFS-Coast Guard Patrol effort (at the Gibson Cove Enforcement Surveillance Office in Kodiak, Alaska);

--saw how the weather facsimile machine works (at Burlington, Vt., Weather Service Office, among others);

--watched the NOAA slide show and film "Tornado!" (at ERL's Boulder Laboratories, for example);

--toured NOAA research vessels and saw a scale model of the ocean bottom near Hawaii (at the NMFS Fishery Research Center, Kewalo Basin, Honolulu);

--sampled cookies and other food items made from Fish Protein Concentrate (at the NMFS Fish Protein Concentrate Pilot Plant in Beltsville, Md., the Pacific Fishery Products Research Center, and at the Southeast Fishery Center, where they were also served shrimp and shown how to cook it);

--watched a five-minute computer-generated film depicting the onset of a southwest monsoon in the Indian Ocean (at ERL's Geophysical Fluid Dynamics Laboratory in Princeton, N.J.);

--after answering questions posed to them by a computer, received a personal letter written to them by it,and then watched it play tic-tac-toe and blackjack (at ERL's Boulder Computer Services);

--examined the Pribilof Diaries back to 1877 and learned how a fish's scales are "read" to determine its age (at Auke Bay);

--viewed live seals in a marine mammals exhibit, underwater TV , an exploratory fishing group's diving gear,and the automated techniques used for everything from tagging fish to analyzing sea water (at the Pacific Fishery Products Research Center).

NWS installations in the following locations are among the other units who reported successful open houses: Little Rock, Ark.;San Diego, Calif.; Alamosa, Colo.; Wilmington, Del.; Waterloo, Iowa; Garden City, Kans.; Baton Rouge, La.; Duluth, Minn.; Monett, Mo.; Lincoln, Nebr.; Las Vegas, Nev.; Albuquerque, N.M.; Raleigh, N.C.; Fargo, N.D.; Akron, Ohio; Oklahoma City and Tulsa, Okla.; Williamsport, Pa.; Columbia, S.C.; Huron, S.D.; Madison and Milwaukee, Wisc.; and Sheridan, Wyo.

Employees Receive Length of Service Awards

National Geodetic Survey Operations Center, NOS, employees who received length-of-service awards during October were: 30 years - Millard L. ROBERTS, Party G-37; 25 years - Jimmie N. BRADLEY, Party G-18 and Wallace J. INCE, Party G-20.

National Weather Service Central Region employees who received length-of-service awards in October were: 35 years - Ernest B. WILLIAMS, Houghton Lake, Mich. 30 years - Raymond M. LUMPKIN, Joseph C. OFENLOCH, and Victor E. STOLL, Kansas City, Mo.; Robert D. ROSS, Fargo, N.D.; John J. SULLIVAN, Chicago, Ill. 25 years - Bethel H. BUTLER, Minneapolis, Minn.; Harold J. EMERY, Columbia, Mo. 20 years -Oscar E. BURNETT, Grand Island, Nebr.; Bernard C. DETGEN, Springfield, Ill.; Elwood E. NORTON, Huron, S. D.; Donald A. SEMANCIK, Columbia, Mo.; Bernard A. UTIC, Green Bay, Wisc.

Environmental Data Service National Climatic Center employees in Asheville, N.C., who received length-of-service awards in October were: 40 years - Harry E. TORBITT.

30 years - Ellis G. SUMNER (not available for picture), and from left above, Rudolph N. ROSE, Clyde M. COLLIER and Vincent E. HAGARTY,being congratulated by Arnold R. Hull, Associate Director for Climatology. 25 years - Betty M. KANIPE, Edward E. EDSTROM. 20 years - Vernon MARLER and Carroll PATTON.

NOAA headquarters employees who received length-of-service awards during October were: 35 years - T. J. NORDENSON; 30 years - Grover D. HUGHES, William DUNN, D. Norwood FOREHAND, Alva W. PYLE, Francis E. THOMPSON, Howard W. MORITZ, Charles R. OSNER, Lunnie CURRY, Jane S. HALLETT, Catherine WILLIAMS. 25 years - Milton S. ARONSTAM, Frederick F. CEELY, Richard H. FINCH, Milton A. LIGHTFOOT. 20 years - James Lee COX, Nicolas A. MANILI, George STEPHENSON, Roy K. SWIGER, Chester E. COOKSEY, Lyle M. DENNY, Albert M. BARGESKI, Andrew TINCHALK, and Dorothy M. KELLER.

Length-of-service awards were presented aboard the NOAA Ship DISCOVERER to the following employees: 25 years - Maynard P. DANIELS. 20 years - Thomas H. Eads,Jr,; Captain Robert C. Munson, the Ship's Commanding Officer.

Walter Herrick (left), Officer in Charge of the Ely, Nev., Weather Service Office, is shown receiving his 40-year length-of service pin from LeGrande Lewis, Chief of the Engineering Division at Western Region Headquarters.

Employees of the National Weather Service Southern Region who received length-of-service awards in October were: 30 years - Hugh B. CARWILE, Fort Worth, Tex.; Thomas W. RUSS, Atlanta, Ga.; Michael S. SCOTT, Dallas, Tex.; Young T. SLOAN, Little Rock, Ark. 25 years - Wallace W. REED, Albuquerque, N.M.; Jack K. BROWN, Nashville, Tenn. 20 years - Tommy J. TREADWAY, Little Rock, Ark.; Dorothy A. KENNEDY, Montgomery, Ala.; and Jesse T. KICKLIGHTER, Waycross, Ga.

Employees of the National Weather Service Western Region employees who received length-of-service awards in October were: 30 years - Joseph T. CRAIG, Phoenix, Ariz.; Harold JACOBSON, Pocatello, Idaho; 25 years - Anita M. POOLE, San Francisco, Calif; 20 years - Lew A. HARNEY, Great Falls, Mont.

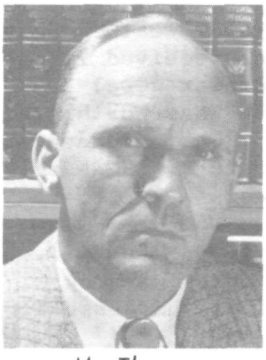
National Weather Service Eastern Region employees who received length-of-service awards in October were: 30 years - Eugene W. HOOVER, Suitland, Md.; Milton J. FAYNE, New York, N.Y.; Robert R. BROWN, Columbus, Ohio; Richard J. CARR, DATAC, Headquarters; Emerson G. DICKEY, Greensboro, N. C.: Phillip J. LUCID, Pittsburgh, Pa. 25 years- Robert P. GRIMES, Worcester, Mass.; Urbano C. GIOVANNIELLO, P&SM, Headquarters; John A. McALVIN, New York, N. Y.,; Neal W. HUGHES, Concord, N.H.; Robert E. BURWELL, Columbus, Ohio; Raymond W. MOSHER, Boston, Mass.; Fred E. PLOEGER and Andrew J. TREAT, Norfolk, Va. 20 years - Eugene E. O'REILLY, Dayton, Ohio; Robert P. GREEN, Jr., Charlotte, N.C.; Francis N. RAMELLA, Hartford, Conn.; Michael L. JOSEPH, Boston, Mass.; Richard SHEFFIELD, Buffalo, N.Y.; Robert FRAZIER, Suitland, Md.

NOTES ABOUT PEOPLE ....

Commander Richard Alderman has been assigned to the Office of Marine Resources as the Acting Executive Secretary for the Interagency Committee for Marine Science and Engineering. Dr. Robert M. White, NOAA Administrator, is Chairman of the Committee and David H. Wallace, Associate Administrator for Marine Resources, is the Commerce Department representative. Formed in June, the group held its third meeting this week.

Dr. Fred L. Olson, economist, represented the NMFS Extension Division at a recent meeting of the Northeast Extension Farm Management Committee for discussions of business management and record keeping in the fishing industry.

There is a possibility that NMFS will be able to use the electronic record project to provide business management information for the New England fishing industry.



Mr. Thomas

Billy D. Thomas, Chief of the Radar Meteorology Staff in NWS' Data Acquisition Division, is retiring today, after 29 years of Federal service. Before being assigned to DATAC in 1962, he was a radar specialist at Brownsville, Tex., served with the Gulf Weather Project, and was assigned to Jacksonville, West Palm Beach, and Tampa, Fla, Burrwood, La., and Augusta, Ga. He was a combat aircrewman with the Navy during World War II. He plans to travel and fly sail planes (gliders), but will maintain his home at 9507 Hemlockhill Avenue in College Park, Md.

Dr. Arthur P. Pinsak, Chief of the Lake Survey Center's Water Characteristics Branch, and Alan W. Hodson, Chief of the Center's Systems Branch, participated in the recent meeting of the International Great Lakes Study Group held at the Queen's University, Kingston, Ontario. The group evaluated the research work performed on the Great Lakes this year by U.S. and Canadian Federal, State, Provincial, private and university organizations. The group was established for the expeditious exchange and coordination of information concerning research activities in the Great Lakes area, and has also helped to minimize duplication of effort in the various fields of research.

Dr. Barger Dr. Noffsinger

Dr. Terrell L. Noffsinger, Chief of the NWS Special Weather Services Branch, and Dr. Gerald L. Barger, Director of EDS' Laboratory for Environmental Data Research, were among the four United States delegates to the Fifth Session of the World Meteorological Organization's Commission for Agricultural Meteorology in Geneva, Switzerland, last month.

One of the more important resolutions adopted called for some strengthening of cooperation between the World Meteorological Organization, Food and Agricultural Organization, United Nations Educational, Scientific and Cultural Organization, and the United Nations Development Programme, the organizations which comprise the Interagency Coordination Group on Biometeorology. The group suggested that a Global Biometeorological Program be developed to aid world food production. One of the aims of this research program is to support crop introduction projects involving the new high-yielding wheats in developing countries in North Africa.

J. Virginia Lincoln, Director of the Data Services Division at EDS' Aeronomy and Space Data Center in Boulder, Colo., was one of the two guest speakers at the GSA Federal Women's Week meeting held in Denver, Colo. The theme of the meeting was "Upward Mobility of Women."

Dr. Lester Machta, Director of ERL's Air Resources Laboratories, chaired the World Meteorological Organization Working Group on the Effects of Pollution on the Dynamics of the Atmosphere meeting in Washington, D.C., this week. Dr. S. Manabe, Dr. E. Erickson and Dr. I. Karol of the USSR are members of the Working Group. Dr. J. Murray Mitchell, Project Scientist for Climatic Change, EDS, and Donald. H. Pack, Deputy Director of the Air Resources Laboratories, were invited to observe the meeting.

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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