

noaa week

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U.S. Navy Photo

resting her 14,000 lbs. comfortably in a specially constructed sling, Gigi II, a California Gray Whale begins a trip to freedom. Before her release, however, she provided an unprecedented amount of data to researchers. The story begins on page 3.

Satellite Providing Ice, Snow, Ocean Data

Timely satellite information on ice in the Great Lakes and Alaskan waters, on the location of the Gulf Stream, and on snow cover in several major river basins is now available from NOAA's National Environmental Satellite Service.

Up-to-date ice observations help make maritime operations safer and more efficient, while information on the Gulf Stream can aid both commercial shipping and fishermen. Snow cover is an important factor in forecasting floods and estimating water supplies.

The experimental services are based on detailed, half-mile resolution images obtained by very high resolution radiometer systems aboard polar-orbiting NOAA spacecraft.

To forecast future river flow and flooding, and to estimate potential water supplies, hydrologists in many areas must take into account the amount of water stored in the form of snow.

Using high-resolution images from NOAA satellites, the extent of snow cover in river basins as small as 2500 square miles can be mapped to an accuracy of about five percent. NESS sends the snow cover calculations to the National Weather Service River Forecast Center responsible for predicting river flow, flooding, and potential water supply in the basin.

From the high-resolution images, the Environmental Products Group is currently calculating snow cover percentages for the American River Basin in California, the

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NWS Data Chief Retires March 29



Dr. Sidney Teweles, Jr., Chief of the National Weather Service's Data Acquisition Division from 1966 to 1973 retired March 29. For the past three months,

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Global Monitoring System Authorized

The Governing Council of the United Nations Environment Program (UNEP)—meeting in Nairobi, Kenya, March 11-22—authorized the UNEP Executive Director to design, develop, and begin to implement the Global Environmental Monitoring System, a keystone of the EARTHWATCH environmental assessment program.

The Executive Director was asked to study the report of the February 1974 Intergovernmental Meeting on Monitoring (see NOAA WEEK, March 22, 1974) and present a progress report at the next session of the Governing Council.

Dr. Clayton E. Jensen, NOAA Deputy Associate Administrator for Environ-

mental Monitoring and Prediction, was a member of the U.S. delegation to the Council meeting. Christian A. Herter, Jr., Special Assistant to the Secretary of State for Environmental Affairs, headed the delegation.

The Governing Council voted to make early warning and preparedness for natural disasters one of the seven major thrusts of the United Nations Environment Program, authorizing the Executive Director to prepare an action program in cooperation with the U.N. Disaster Relief Coordinator, UNESCO, and the World Meteorological Organization.

Another Council resolution called upon the Executive Director to consult with WMO and other scientific

and legal experts on the desirability of developing general guidelines for man-induced weather modification.

Council recommendations on the oceans included the development of regional agreements on control of marine pollution; initiation, through the U.N. Food and Agriculture Organization, of a survey of living marine resources; a constructive UNEP contribution to the Law-of-the-Sea Conference; promotion of the study, conservation, and wise management of living marine resources; and encouragement of research into the effects of climate on the oceans, the effects of pollution on marine life, and ocean dynamics as a factor in pollution transport.

Satellite Providing Data

(Continued from page 1)

Willamette River Basin in Oregon, the Genesee River Basin in New York and Pennsylvania, and the Red River of the North in the Dakotas and Minnesota. Seven additional basins are scheduled to be added soon to the operational test program: Arizona's Verde, Salt, and Upper Gila river basins, and four on the upper Columbia River.

Each winter, sea, lake and river ice closes ports and shipping lanes in high latitudes, forcing commercial vessels to remain idle and hampering military ship operations. To plan sea transport in these areas, marine interests need to know where ice exists in ports and along sea routes, and whether the ice is forming or breaking up.

Infrared sensing systems on the NOAA satellites allow major ice features to be observed throughout the year over the entire earth. Ice charts based on NOAA high-resolution images are prepared and disseminated through NWS facsimile circuits on a regular schedule.

Great Lakes ice analyses are issued twice weekly. Experimental ice analyses covering the Bering, Chukchi, and Beaufort seas and the Gulf of Alaska are issued weekly.

Each week, the Satellite Service prepares and transmits an experimental Gulf Stream analysis chart, showing the surface location and extent of shelf water, slope water, the Gulf Stream itself, and associated cold and warm eddies, as revealed by surface temperature contrasts depicted in the high-resolution infrared images.

Information on the Gulf Stream is of special interest to the shipping and fishing industries. Ships plying east coast routes make use of this large current to speed northbound runs and save fuel.

Commercial fishermen can use the data on water-mass boundaries from these charts to increase the efficiency of their operations. The nutrients on which fish feed accumulate on the boundaries between shelf and slope water and between slope water and the Gulf Stream, and large concentrations of fish are usually found in such areas.



Great Lakes ice cover in early February, as mapped from NOAA-2 very high resolution images.

\$34,885 Contract Awarded For Nitric Oxide Monitoring

A \$34,885 contract to develop a system for monitoring an atmospheric pollutant in the troposphere has been awarded to York University in Downsview, Ontario, Canada, by the Boulder, Colo.-based Environmental Research Laboratories. The contract is funded by the National Aeronautics and Space Administration's Lewis Flight Center in conjunction with its Global Atmosphere Sampling Program.

Under the contract agreement, York University scientists will continue development of a nitric oxide detector system to operate on commercial 747 aircraft for routine monitoring.

Specifically, the Canadian research team will provide a nitric oxide monitor having the unique capability of measuring ambient nitric oxide to less than hundredths of a part per million. The measurement system, developed by the University scientists, monitors the light given off by the chemiluminescent nitric oxide-ozone reaction.

Nitric oxide, a colorless toxic gas, is formed by oxidation of nitrogen ammonia and ozone, a bluish irritating gas with pungent odor—which is formed naturally in the upper atmosphere by a photochemical reaction initiated by solar ultraviolet radiation.

NWS Data Chief

(Continued from page 1)

he had been acting as a special consultant to the NWS.

During his 36 years of federal service, he has written and coauthored over 50 papers and was a co-editor of the American Meteorological Society's (AMS) Monograph on Meteorological Observations and Instrumentation. He has served on three World Meteorological Organization Commissions (Atmospheric Sciences, Synoptic Meteorology, and Instruments and Methods of Observation), and three AMS committees, the last being the Committee on Atmospheric Measurements, of which he was chairman.

Dr. Sidney Teweles entered the Weather Bureau in 1937 at Cleveland as a junior observer and was promoted to an airways forecaster in 1940. During WW II, he taught meteorology to Air Force Cadets at the University of Chicago. His work at the Analysis Center began in 1943. He served in the Short Range Forecast Development Section from 1951 to 1954. Dr. Teweles spent three years as an advisor to the Turkish Meteorological Service in Istanbul and Ankara. He became Chief of the Stratospheric Analysis Center in 1957 and specialized in the energetics of the stratosphere. This group became the core of the Atmospheric Analysis Laboratory which he directed from 1964 to 1966.

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Knowledge Of Gray Whales Advanced By Year's Study

A year-long study of a young female California gray whale revealed that she grew from approximately 4,300 pounds (nearly 2 metric tons) at capture to about 12,600 pounds (close to 6 metric tons). At capture the animal measured a little over 19 feet (nearly 6 meters) and when released had grown to more than 27 feet (about 8 meters).

The whale, named Gigi II, was studied while at Sea World, Inc., of San Diego, Calif. Sea World, Inc., captured the whale in March 1971 with scientific support from the University of California, San Diego. Another immature gray whale, Gigi I, had been captured in 1965 but lived in captivity for only two months.

The adaptability of Gigi II to living in captivity afforded scientists an unparalleled opportunity for studies of the species husbandry, behavior and physiology including metabolism, cardiovascular physiology, respiration, and blood. She was released at sea on March 13, 1972, carrying a harmless transmitting device which provided an additional opportunity to monitor her movements and interactions for a limited time because the device was designed to be detached when holding wires corroded.

Data on Gigi II was made available at a Workshop on California Gray Whales, held at Scripps Institution of Oceanography in La Jolla, Calif., in August 1972 at which 15 scientific papers were presented. The papers constitute a unique contribution to the literature on the whale in captivity. The workshop was sponsored jointly by NOAA's National Marine Fisheries Service, Southwest Fisheries Center, La Jolla, Calif., and the U.S. Navy's Naval Undersea Center, San Diego. Workshop Chairman was Carl L. Hubbs

of Scripps Institution, and editor of the proceedings was W.E. Evans of the Naval Undersea Center.

The NMFS will publish the proceedings of the workshop in the April edition of its monthly publication, *Marine Fisheries Review*. Single copies are available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, for \$1.25 each, or \$12.50 for a one-year subscription.

AOML's Dr. Dietz Named AGU Fellow



Dr. Robert S. Dietz, a research oceanographer with the Miami-based Atlantic Oceanographic and Meteorological Laboratories, has been elected a fellow of the American Geophysical Union in recognition of his contributions to geophysics.

The ERL scientist, together with six other elected fellows, will be honored at the annual spring meeting of the American Geophysical Union, the week of April 9-13 in Washington, D.C.

A prolific author, Dr. Dietz has published more than 200 papers and one book in the fields of geology, marine geology, and oceanography. His contributions to scientific research have been on the morphology and structure of the deep-sea floor, the history of ocean basins, sea-floor spreading, continental drift, deep-sea research vehicles, and astroblemes (meteorite impact structures).



The experimental RAMOS tower on Tilghman Island on the Chesapeake Bay is interrogated at National Weather Service Headquarters by Karl Johannessen, Associate NWS Director for Meteorological Operations (left) and Dr. Sidney Teweles, recently retired chief of the NWS Data Acquisition Division.

Tower-mounted Weather Sensors Tested Via VHF Radio Link With NWS Headquarters

The National Weather Service has installed its first experimental RAMOS tower on Tilghman Island in the Chesapeake Bay.

RAMOS (for Remote Automatic Meteorological Observing System) is an outgrowth of work being done by the Equipment Development Laboratory of the NWS Systems Development Office.

A RAMOS tower has on it

a number of different weather sensors which can be interrogated by radio or telephone from a distant weather office. The Tilghman Island installation is being interrogated by VHF radio at Weather Service Central Headquarters in Silver Spring, Md.—65 kilometers (40 miles) away. The RAMOS unit measures temperature, wind speed, wind direction, wind gusts, accumulative precipitation, yes/no precipitation, and barometric pressure.

Ultimately, RAMOS units may have as many as 23 sensors.

Tests are being made to spot and eliminate problems before RAMOS towers are deployed to remote and/or environmentally harsh sites in the field. Studies are also being made of the best ways to link RAMOS units with the Weather Service's planned new AFOS system of computerized data-handling coupled with TV-type displays.

Dan Foster of the NWS Headquarters Data Acquisition Division is project manager for the Tilghman Island effort. Harvey Hoppe and William Kuning of Engineering Division performed technical aspects of installation. Edward Lopez and Carl Caterino of the Eastern Region Engineering Division installed the tower, power lines and hardware.

Great Lakes Pilot On Sale April 1

The 1974 edition of the Great Lakes Pilot went on sale for \$5.25 April 1 at the Lake Survey Center in Detroit. This annual publication contains over 600 pages filled with vital nautical data which cannot be conveniently shown on the Center's detailed Great Lakes charts. Included are signals for opening locks and bridges; clearances for bridges and other structures; outstanding landmarks; U.S. laws and local ordinances; and dimensions and capacity of dry docks and marine railways.

The purchase price includes six monthly supplements, printed from May to October, so the Pilot can be kept updated during the boating season. Copies of the Pilot can be obtained direct from the Lake Survey Center or from one of its many sales agents.

Employment Of The Handicapped

On September 26, 1973, President Nixon signed Public Law 93-112, "The Rehabilitation Act of 1973," which places certain requirements on each Federal department and agency regarding the employment of handicapped individuals. Although Federal programs for the employment of the handicapped have existed with considerable success for many years, the effect of the Rehabilitation Act of 1973 is to expand the responsibilities of agencies by requiring the development of comprehensive affirmative action plans for employment of the handicapped and annual reports on program activities.

NOAA's Affirmative Action Plan for Employment of the Handicapped is presently being developed. It will state policy matters, describe planned action items to implement the policy, and allocate resources for program management.

NOAA has already begun to implement its Selective Placement Program for the Handicapped, a special emphasis program designed to assist qualified applicants and employees who are handicapped with their employment problems. Assisting the handicapped includes obtaining and retaining their employment consistent with their levels of skills and abilities and their capacity for safe and efficient job performance. Emphasis is placed on the person's ability, rather than disability; the person's potential for rehabilitation; and his or her present job readiness.

Ms. Eleanor T. Shannon has been designated as NOAA's Coordinator for the Handicapped Employee Program. As such, Ms. Shannon is responsible for administering the program, NOAA-wide, developing NOAA's Affirmative Action Plan for Employment of the Handicapped, and developing and implementing programs and procedures designed to promote the employment and placement of the handicapped. Ms. Shannon's telephone number is (301) 496-8093.

To assist Ms. Shannon in the implementation of the Handicapped Employee Program, the following field coordinators have been designated:

COORDINATOR	MAJOR LINE COMPONENT	TELEPHONE
Daniel M. Foley	NWS Eastern Region	212-995-8670
Aliene Beckham	NWS Southern Region	817-334-2663
Joseph C. Ofenloph	NWS Central Region	816-374-3196
Melvin W. Graham	NWS Western Region	801-524-4010
Lawrence E. Wise	NWS Alaska Region	907-265-4723
John G. Norris	NWS Pacific Region	808-546-5678
Edmund F. Wright	NMFS Northeast Region	617-283-6554
William E. Pennie	NMFS Southeast Region	813-893-3157
T.R. Farrelly	NOS Atlantic Marine Center	804-441-6276
Robert L.R. Knox	NOS U.S. Lake Survey Center	313-226-0855
Gilbert W. Ehrsam	EDS National Climatic Center	704-254-0267
Ted N. Beegle	Environmental Research Laboratories	303-499-6305
George M. Johnson	Northwest Administrative Services Office (NASO) and all areas serviced by NASO	206-442-5790

Through the efforts of Ms. Shannon and the designated field coordinators for the handicapped together with the assistance and understanding of NOAA managers, full and meaningful employment of the handicapped will be realized within NOAA.

PLANNING YOUR VACATION

The warm, sunny days of spring tend to sprout vacation thoughts in all our minds. Consequently, many of us have already begun to plan for our vacation. Since the work year at NOAA must continue, don't forget that your plans should include a discussion of your vacation leave plans with your supervisor. By doing so, you'll avoid conflict with other employees' leave plans and, hopefully, not have to worry about last-minute leave changes.

It is also important for employees who have leave accumulations close to the 240-hour ceiling to schedule leave so that no leave will be forfeited at the end of the year. The year-end forfeiture applies, as in the past, when: (1) the urgency of the work situation was such that leave which had not been scheduled, cancelled, and not be rescheduled, could not be used or, (2) the employee's absence on sick leave disrupted his or her plans for vacation leave and such leave could not be rescheduled.

Employees who plan to retire or resign from the Federal Service during this leave year may receive a lump-sum payment for all leave to their credit at the time of their separation. Therefore, such employees may not wish to schedule leave. It is important, however, to remember that an employee's subsequent change of plans with regard to leaving the Federal Service, will not be a sufficient basis for restoring annual leave forfeited because of being at the ceiling at the end of the leave year.

When scheduling leave at the end of the year, unforeseen circumstances such as closing offices because of weather conditions or unscheduled holiday based on Presidential Proclamations should be considered. Annual leave forfeited on these bases alone may not be restored.

NOAA employees are urged to set aside at least one consecutive work day so that they can relax and enjoy their vacation and come back to work refreshed. Employees in higher leave-earnings categories should plan two such days each year.

Prospective Retirees May Elect Income Tax Deduction Option

Employees planning to retire may request a straight 20 percent Federal income tax deduction on lump sum payments. Use of the regular percentage withholding method may cause a larger than normal amount of tax to be withheld on final salary payments, especially if the annual leave balance is 240 hours or higher.

Employees desiring to use the 20 percent tax deduction option must forward a memorandum requesting this option to the Finance Division, Payroll and Labor Cost Branch, Payroll Section: AD562. To assure timely processing, the memo should include name and employee number and be received by Payroll at least two weeks before the last day of employment.

An employee who requests the 20 percent tax deduction option will receive a final salary check followed in two weeks by a lump sum leave check. An employee not electing to use the 20 percent factor will normally receive a lump sum leave payment in the same check as the final salary payment. For those who do not choose the 20 percent option on lump sum, adjustments will not be made on final salary payments.

Performance Awards - A Managerial Tool

The Federal Government's Incentive Awards Program is an excellent tool available to managers for recognition of employee achievements. Through this program managers can encourage employee participation in improving the efficiency of Government operations and recognize and reward employees for high performance levels or special contributions.

Two types of performance awards may be granted. The first, a Quality Increase, is a special within-grade pay increase that may be granted to General Schedule employees for job performance above that ordinarily found in the type of position concerned and characterized by a high degree of effectiveness. The lump-sum Cash Performance Award is given to employees whose contributions exceed job requirements or for special service in the public interest.

When deciding whether to recognize employee achievements through awarding a Quality Increase or a Cash Performance Award, a manager should consider the difference in criteria for each award:

QUALITY INCREASE

Performance substantially exceeds normal requirements in the most important job functions.

Total performance highly effective.

Performance sustained for reasonable period; must give promise of continuing at the high level.

If the above criteria are met, a Quality Increase should be considered; unless the employee would receive benefits in too short a time, or a large cash award would be more fitting.

CASH PERFORMANCE AWARD

Performance substantially exceeds normal requirements in one or more important job elements.

Performance must be superior in one important element, but not necessarily in all.

Performance sustained for reasonable period. Award granted for past performance.

If the above criteria are met, a lump-sum Cash Performance Award is granted in accordance with the award scale for job performance.

For the Quality Increase, it is essential to keep in mind that performance must give promise of continuing at a high level. This point is important because the employee will continue to receive the benefit of the pay increase in the future. For example, even when the employee receives a future promotion, the pay of the new position is set at no less than two steps above his or her current pay, so the effect of a Quality Increase is often carried over in the pay rate of the new position and, subsequently, into retirement.

The justification for a Quality Increase must also be based on continuing high performance (including conduct and character) of not less than six months in the same grade and position. Cash Performance Awards may be given to an employee or a group of employees in recognition of performance exceeding job requirements as a one-time occurrence or over a sustained period of time, or for a special act or service in the public interest connected with or related to official employment.

Recommendations for Quality Step Increases should be submitted on NOAA Form 53-5, "Recommendation for Quality Increase." Recommendations for Cash Performance Awards are submitted in memorandum form through regular administrative channels for approval and must contain the following information:

(1) Name, position title, grade and salary, organizational location, project number, employee number, and organizational code of the employee (or employees) recommended;

(2) Type of award being recommended and amount of award;

(3) Except in cases where an "Outstanding" rating is attached as justification, a detailed but concise statement of facts in justification of the award including, as appropriate: (a) an explanation of how the contribution exceeds the normal requirements of the job; (b) a computation and explanation of the savings to be realized; and/or (c) an explanation of the nonmonetary benefits of the accomplishment.

An "Outstanding" performance rating may be used as a basis for either a Quality Step Increase or a Cash Award.

Possible Retirement Cost-Of-Living Increase

There is a possibility that a cost-of-living increase will be granted to retired Federal employees effective July 1, 1974.

The Consumer Price Index (CPI) exceeded the necessary three percent factor in February, 1974. If it remains at three percent or higher in March and April, conditions will be ripe for an annuity increase effective July 1, 1974. In such an event, all retirement checks for the month of July will be increased by at least 4.6 percent. The increase could be higher if the CPI for March or April exceeds February's CPI rise. Information on the final approval and the exact amount of the potential cost-of-living increase should be available on or about May 24, 1974.

Applications for retirement should be submitted to your personnel office at least four weeks before their effective dates. Employees who are considering retirement are encouraged to consult their personnel office.

RETROACTIVE SALARY PAYMENT DUE MOST NOAA EMPLOYEES

Through the efforts of the National Treasury Employees Union (NTEU), Federal white collar employees who were on duty between October 1, 1972, and January 1, 1973, will receive retroactive salary payments for the time they worked during that period.

The NTEU sued the President of the United States for failing to carry out a law that provides for industry comparability pay raises for Federal workers to become effective each October 1. The increase became certain in March 25, 1974, when the U.S. Justice Department decided not to ask the Supreme Court to review a U.S. Court of Appeals decision which held that President Nixon acted illegally in deferring a 5.14 percent civilian raise from October 1, 1972, until January 1, 1973.

We are now awaiting instructions from the Civil Service Commission on processing procedures. More detailed information on this subject will be published in a later edition of Personnel Perspective.



PERCH-ONION BAKE, ITALIAN STYLE

- 2 pounds ocean perch or other fish fillets, fresh or frozen
- 3 cups sliced onion
- 2 tablespoons margarine or cooking oil
- 1 teaspoon salt
- 1/2 cup mayonnaise or salad dressing
- 1/4 cup grated or shredded Parmesan cheese
- 2 tablespoons lemon juice
- 1 teaspoon Worcestershire sauce
- 1/2 teaspoon paprika
- Oregano or chopped parsley

Thaw frozen fish. Cook onion slowly in margarine or cooking oil until limp, not brown. Spread onions over bottom of shallow, 2-quart baking dish. Cover with fish fillets. Combine mayonnaise or salad dressing, cheese, lemon juice, Worcestershire sauce, and paprika; mix well. Spread evenly over fish. Bake in moderate oven, 350° F., for about 25 minutes or until fish flakes easily when tested with a fork. Sprinkle with oregano or chopped parsley as desired, just before serving. Makes 6 servings.

Next Week's Best Fish Buys

According to the NMFS National Consumer Educational Services Office in Chicago, the best buys for the next week or so are likely to be small shrimp and whiting along the Northeast Seaboard; Spanish mackerel

and shrimp in the Southeast and along the Gulf Coast; fillets of ocean perch and breaded shrimp in the Midwest; whiting and kippered halibut in the Northwest; and fresh squid and small shrimp in the Southwest.

ERL Scientists Use Lasers To Probe The Atmosphere

Using a unique and versatile remote-sensing system, Environmental Research Laboratories scientists have begun probing clouds, mountain waves and winds, urban air pollution, and a host of weather systems with powerful beams of laser light.

The new system, developed by ERL's Wave Propagation Laboratory, is a product of a continuing program in atmospheric spectroscopy—the science of measuring atmospheric phenomena indirectly, by measuring their effects on optical and other electromagnetic waves.

Lidar, the laser equivalent of radar, is already used by researchers in NOAA and other organizations to obtain certain types of atmospheric data. But the new system is unique in the way it combines unusually versatile multi-wavelength lidar with a short-wave radar and infrared radiometer. This permits simultaneous measurements over a broad range of phenomena.

"It is widely believed," Dr. Vernon E. Derr, who directs the atmospheric spectroscopy program in Boulder, Colo., says, "that lidar is one of the really promising remote-sensing instruments because it behaves something like a highly sensitized human eye. But there is less certainty about how that promise is to be realized in an operational sense. Our present system lets us apply a lidar, using any one of several types of laser, to determining what can be read this way from both the natural and man-altered atmosphere.

"It will also let us begin scrutinizing things like atmospheric aerosols, water vapor, smog, high-level waves, in real time—that is, as their properties evolve. In many instances this will give us our first set of baseline data—data against which any future changes must be measured.

"Our coming field season will concentrate mainly on cloud-studies—formation and growth of orographic (mountain-effect) clouds, cloud densities, water and ice content and temperatures, and the like.

"Over the longer term, we expect to be studying atmospheric turbulence, precipitation, mountain lee waves, attempting to relate our observations to such things as cloud precipitation particle sizes and other factors."

Data-acquisition units, including the transmitting lasers, are housed in a temperature-controlled enclosure on a trailer, with only the scope exposed. System controls are located in a van which will eventually include a minicomputer to handle the rapid, on-the-spot handling of the large amounts of data generated by the instruments.

Easing The Crunch Energy-Saving Tips

What goes in and out of the window? Or an open door? A lot more than meets the eye.

Open windows and doors let warm air out and cold air in, to be warmed by your heating system.

When outside doors must be opened, shut them again as quickly as possible.

If you like a window open while you sleep, keep the bedroom door closed.

Turn down the heat in a room used, or little used, and close the doors. don't allow the temperature to drop below freezing.

Cover any cracks around attic doors to prevent loss of heat. A 1/4-inch crack, 10 feet wide, under an attic door can waste \$5.00 worth of fuel in one winter. A scrap of carpet tacked to the door to cover the cracks can stop this heat loss.

Close the door on the waste.

SCHOOL DAYS—A Potpourri Of NOAA Training Activities



This is the graduation picture of the Surface Equipment Service's Technical Training Class held March 6 through April 3 at the National Weather Service's Technical Training Center in Kansas City. (Seated, from left) Jerry Mintz, Engineering Division; Duane H. McEwen, Alaska Region; Carl W. Hill, Miami, Fla.; Larry Jackson, Red Bluff, California; (Standing, from left) George U. Luke, Yap Island; Michael Odekirk, Detroit, Mich.; Daniel M. Chadwick, Overseas Operations Division; Norman A. Wheeler, Anchorage, Alaska; and Clarence Sladek, Alaska Region.



This is the National Weather Service Operations Class Number 21 who attended courses at the Kansas City Technical Training Center March 5 through 28. They are (standing, from left) Jerome Buss, Rochester, Minn.; Ronald Drummond, Beckley, W.Va.; James Dill, Syracuse, N.Y.; Ernest Salas, Astoria, Ore.; Tracy Yamashiroya, Honolulu, Hawaii; Jim Wantz, Instructor; Connie Hedgpeth, Instructor; Stanley Corp, Havre, Mont.; Charles Klunder, Bethel, Alaska; Ted Lungwitz, Pueblo, Colo.; Larry McEwen, Instructor; and Bill Winkert, Instructor. (Seated, from left) Larry Barta, San Angelo, Tex.; Bob Curl, Harrisburg, Pa.; James Boudreaux, Anchorage, Alaska; Alene VanDeursen, Fort Myers, Fla.; Walda Kennedy, Bishop, Calif.; Bob Storey, Spokane, Wash.; Frank Dillenkoffer, New Orleans, La.; and Dick Calcaterra, Flint, Mich.



Here are the members of the fifteenth Weather Radar Class held at the NWS Technical Training Center in Kansas City, February 21 through March 14. (Standing, from left) Keith Adams, Concordia, Kans.; Larry Blanchard, Columbia, Mo.; Val Nowak, Atlantic City, N.J.; Connie Hedgpeth, Instructor; Jackie Reed, Slidell, La.; Frank O'Leary, Hondo, Tex.; Bill Weaver, Athens, Ga.; and Joel Wertman, Instructor. (Seated, from left) Larry Burns, Instructor; Robert Johnson, Sioux Falls, S.Dak.; Roger Geer, North Platte, Nebr.; Frank Morine, Medford, Ore.; Reeves Zabalaoui, Oklahoma City, Okla.; Peter Connors, Miami, Fla.; and Bill Crawford, Charleston, S.C.



A training course on Supervision and Group Performance sponsored by NOAA Headquarters Personnel Division was held March 18 through 22. Attendees were (seated, from left) Eugene Hoover, Washington, D.C.; David L. Williams, Jr., Philadelphia, Pa.; Edwin Heath, Akron, Ohio; Margaret Barnes, Instructor; Stanley Wasserman, Garden City, N.Y.; Edward H. Ison, Washington, D.C.; and Marie Fellechner, Patuxent River, Md.; (standing, from left) William J. Coffey, Jr., Atlantic City, N.J.; Ronald E. Kuhn, Wilmington, N.C.; Lucy A. Stowe, Cape Hatteras, N.C.; Joseph A. Leedom, Philadelphia, Pa.; Alfred Jones, Pittsburgh, Pa.; Jack Hummel, Burlington, Vt.; Anthony Tancreto, Boston, Mass.; David R. Coulter, Garden City, N.Y.; James R. Spillers, Greenville-Spartanburg, S.C.; William P. Hayes, Rochester, N.Y.; George H. Schielein, Albany, N.Y.; James P. Dillon, New York, N.Y.; Samuel Parrish, Charleston, S.C.; John L. DuPree, Concord, N.H.; and Anthony Previte, Garden City, N.Y.



At NOAA Headquarters, the Administrative Operations Division's eighth class of Administrative Trainees graduated on March 26. They are (front row, from left) Beverly Stevens, Barbara Jones, Dinora Johnson, Deloris Hayes, and Cardona. (Back row, from left) Sidney Smith, Warren Jacobs, outgoing Chairman of the NOAA EEO Committee who addressed the graduates, and William George, Chief of the Personnel Relations Branch.



Participants in the National Weather Service Eastern Region Area Electronics Supervisors' Conference at ERH were (from left) Donald G. Liddy, AES, WSFO Washington, D.C. (Suitland); Chet E. Twombly, AES, WSFO Portland, Maine; Roland Mansour, Radar & Communications Systems Specialist, ERH; Ronald Richardson, AES, WSO Binghamton, N.Y.; Ab E. Lay, AES, WSFO Columbia, S.C.; Ed W. Gill, AES, WSFO New York, N.Y.; E.J. Mallumian, Chief, Electronics Branch, ERH; Silvio G. Semplicio, Director, Eastern Region; B.H. Russler, Chief, Engineering Division, ERH; Allen Kerner, Chief, Facilities Branch, ERH; Ken Heaps, AES, WSO Columbus, Ohio; Scott Dye, Surface & Hydrologic Systems Specialist, ERH; William Fiocca, AES, WSO Greensboro, N.C.; and Arthur Simpkins, Computer and Upper Air Systems Specialist, ERH.

Lieutenant (junior grade) Robert E. Losey has joined the Environmental Research Laboratories' Boulder, Colo.-based Space Environment Laboratory for a six-to-eight-month training period. He will be learning solar observing techniques at the Space Environment Services Center in preparation for duty with the Culgoora Solar Observatory in Australia.

Lieutenant (j.g.) Losey joined the NOAA Commissioned Corps in 1972 after receiving a B.S. degree in mathematics from the Colorado School of Mines in Golden, and served aboard the NOAA ship *Ferrel*, based in Norfolk, Va., and took part in the Marine Ecosystems Analysis Project prior to his arrival in Boulder.

Carleton Coulter, III, has been appointed Chief, Facilities Engineering Group on the staff of the Administrative Operations Division at NOAA Headquarters. Dr.

Coulter received a B.S. degree from the United States Military Academy in 1956, an M.Egr. in Civil Engineering in 1961 and a Ph.D. in Systems Engineering in 1968 from Texas A&M. Previously, he was with the National Bureau of Standards on loan to other agencies for management consulting. In 1968 he was Technical Director of the newly established U.S. Army Construction Engineering Research Laboratory. As NOAA Facilities Engineer, Dr. Coulter will provide technical assistance to MLC's and staffs on engineering and facilities problems both for current and future buildings.

Richard A. Wood has been appointed Official in Charge of the Tucson, Ariz., Weather Service Office. Mr. Wood has been serving as Principal Assistant at the Tucson Office since last June when he transferred from Winnemucca, Nev., WSO where he was Official in Charge. Mr. Wood replaces Robert King who retired in December 1973. He has 22 years Federal service including 11 years in Washington, D.C. Other assignments were in Midland, Texas; Asheville, North Carolina; Fort Huachuca, California; and Denver, Colorado.

Arts and Sciences Feature Wire Drag Ships Rude/Heck



A Science Fair project on the activities of the NOAA Wire Drag Ships Rude and Heck was judged one of the best among hundreds entered at St. Jude School in Rockville, Md. It received an Honorable Mention award at the Maryland State Science Fair. The exhibit was the work of James Bradshaw, a Sixth Grader. Young Bradshaw is the son of NOAA employees Joseph and Gloria Bradshaw.



Rear Admiral A.C. Holmes, Director of the Atlantic Marine Command (right), recently accepted a drawing of the NOAA wire drag ships Rude and Heck for permanent display at the AMC. The drawing is the work of Seaman Surveyor Raymond S. White, Jr. (center). On the left is Commander Leonard E. Pickens, Commanding Officer of the Rude and Heck.

ICITA Atlas Now Available

Physical Oceanography, volume I of the International Cooperative Investigation of the Tropical Atlantic (ICITA) Atlas, was recently released by the United Nations Educational, Scientific and Cultural Organization (UNESCO). Publication climaxed several years of analysis by the U.S.S.R. and United States of data collected by eight nations during the 1963 survey of the Tropical Atlantic. Participating in the investigation were 18 ships from Argentina, Brazil, Nigeria, the Republic of Congo, the Republic of Ivory Coast, Spain, United States, and the U.S.S.R.

Volume I contains primarily charts of temperature, salinity, density, and dynamic depth anomaly along north-south profiles from Africa to South America.

Dr. Thomas S. Austin, Environmental Data Specialist, Director, is chairman of the Atlas Editorial Committee and the International Coordinator for ICITA. The National Oceanographic Center prepared the draft of the publication. The atlas is available through UNESCO Publications Center, 317 East 34th Street, New York, N.Y. 10016, or through UNESCO Country Offices in 100 other countries.



National Oceanic and Atmospheric Administration

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