



noaa week

Volume 6 Number 32

August 8, 1975

U. S. Department of Commerce
National Oceanic and Atmospheric Administration
National Climatic Data Center
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Shellfish Poison Can Be Detected Accurately, Fast

A procedure for detecting the presence in shellfish of saxitoxin—the paralytic shellfish poison sometimes associated with the so-called “red tide” blooms on the west coast—one hundred times more sensitive than any previous method has been devised by Sea Grant chemists at the Berkeley campus of the University of California.

“We are hopeful,” said Dr. Robert B. Abel, Director of the Office of Sea Grant, “that this new technique may be used to prevent the unnecessary closing of shellfish areas. It should allow the specific, rapid, and reliable inspection of shellfish for toxicity and be a much more desirable substitute for the present method of closing areas by calendar.”

The new technique involves a chemical analysis of the shellfish that could provide a more scientific approach to the problem of paralytic shellfish poison than seasonal closings. Meat from the suspected animals is ground up and subjected to a series of rela-

(Continued on page 4)

Seminar Scheduled On Instrumentation In Coastal Zone

The National Ocean Survey's National Oceanographic Instrumentation Center and Charles County Community College have scheduled a Seminar on Marine Instrumentation and Applications in the Coastal Zone, to be held October 1-3.

The seminar is designed to cover basic principles, theory of operation and recent developments in the field of in situ marine instrumentation. Engineers and physicists who are experts in their respective fields will lecture on the latest state-of-the-art marine measurement techniques and instrumentation, including information and data on current and wave measuring instruments, water quality systems and underwater optical and acoustic devices. Emphasis will be on

(Continued on page 3)

Gravity Force In 59 Cities To Be Measured

Two men with four small metal boxes will visit 59 cities in 39 states, this summer and next, to measure changes in the earth's gravity.

Charles H. Bergmann and Lewis M. Johnson are re-measuring the U.S. Gravity Base Network, installed in 1966 by the Army and Air Force and now maintained by the National Ocean Survey. They expect to cover more than 40,000 miles before completing their task, measuring gravity changes at about 200 points.

The small boxes are gravity meters, with which the force of gravity at any position can be determined within a matter of minutes. A constant temperature, varying by not more than about

(Continued on page 3)

Atlantic Bluefin Tuna Fishing Survey Underway

Thousands of recreational fishermen in New York and New Jersey are being asked to furnish statistical and biological data on the Atlantic bluefin tuna to the National Marine Fisheries Service.

Dr. Grant Beardsley of the NMFS Southeast Fisheries Center in Miami, Fla., program leader for the survey said, “We just don't have enough catch data on the numbers of bluefin taken off the New York and New Jersey coast by recreational fishermen. The annual catch estimate is, at best, poor because the catch is diverse and has not been adequately sampled before.”

The survey objectives are to estimate the total number of Atlantic bluefin tuna caught and landed by recreational fishermen in 1975; obtain a representative sample of length, weight, sex, age, and stock characteristics of tuna landed in the area; estimate the Atlantic bluefin tuna recreational fishing effort; and establish a data and sampling base for future monitoring of bluefin tuna recreational fishing catches.

Results of the survey are expected to be available late in the fall.

Acoustic Sounder Being Used For First Time in Antarctic

Hearing Scheduled On Seal Skin Import Request

A public hearing to receive comments from the public on a request to waive the moratorium on importing seal skins from the Republic of South Africa is scheduled to be held on September 18 in Washington, D.C.

The moratorium was imposed by the Marine Mammal Protection Act of 1972; however, the Act provides for a waiver of the moratorium under certain circumstances.

The Fouke Company, Greenville, S.C., a leading fur processor, has requested that the Director of the National Marine Fisheries Service waive the moratorium so that it may import skins from the 1975 and subsequent harvests of South African Cape fur seals.

The hearing, and a prehearing conference scheduled for August 28, will be held at Page Building 1, 2001 Wisconsin Avenue, N.W.

Parties wishing to participate in the hearing must notify the NMFS Director by certified mail,

(Continued on page 3)

Every few seconds a high-pitched pulse of sound probes the atmosphere around South Pole Station, as Environmental Research Laboratories scientists investigate the heat-exchange processes between ice and atmosphere with a new type of remote sensor—an acoustic sounder.

The instrument is being used for the first time in the Antarctic, to detect very fine temperature differences in the lowest layers of the atmosphere (the planetary boundary layer) in a cooperative project begun earlier this year by NOAA and the National Science Foundation.

“Antarctica is an ideal meteorological site for studying temperature inversion layers in the first 2,000 feet (600 meters) of the atmosphere. Inversions are nearly always present and there is no environmental noise interference from birds, mountainous terrain, and other sources,” says Dr. Freeman F. Hall, chief of the Atmospheric Acoustics Program at ERL's Wave Propagation Laboratory. “During the Austral summer in Antarctica, the sun never sets, so we can study wave patterns without the daily temperature fluctuations caused by sunrises and sunsets.”

(Continued on page 4)

Been Bothered by the Heat Lately?



The NOAA Ship Discoverer lies at anchor among ice floes in the Bering Sea as two scientists drill for ice cores. The 303-foot, 3900-ton vessel, commanded by Capt. Clinton D. Upham, penetrated the ice pack as far as 50 nautical miles on her environmental study mission to Alaskan waters. She was based in Miami, Fla., before being assigned to Seattle, Wash.

Current Vacancies in NOAA

To insure that NOAA employees are aware of job possibilities throughout the agency, a list of current NOAA-wide vacancies is published below. Employees interested in any of the listed vacancies

should contact their servicing personnel office for information or where to apply.

Announcement Number	Position Title	Grade	MLC	Location	Issue Date	Closing Date
76-5	Working Asst. to Foreman	WP-19	HDQS	Rockville, Md.	7/30/75	8/6/75
29-76	Electronics Tech.	GS-11	NWS	Tampa Bay Area, Fla.	7/25/75	8/8/75
30-76	Operations Research Analyst	GS-12	NMFS	Seattle, Wash.	7/25/75	8/8/75
31-76	Supv. Meteorologist	GS-13	NWS	Evansville, Ind.	7/25/75	8/8/75
32-76	Physical Scientist	GS-13	EDS	Washington, D.C.	7/25/75	8/8/75
76-6	Financial Asst. Spec.	GS-7	NMFS	Washington, D.C.	8/1/75	8/8/75
36-76	Supv. Meteorologist	GS-11	NWS	Patuxent River, Md.	7/30/75	8/13/75
37-76	Meteorological Tech.	GS-10	NWS	Louisville, Ky.	7/30/75	8/13/75
38-76	Meteorological Tech.	GS-10	NWS	Fargo, N. Dak.	7/30/75	8/13/75
39-76	Meteorological Tech.	GS-10	NWS	Detroit, Mich.	7/30/75	8/13/75
40-76	Hydrologist	GS-12	NWS	Kansas City, Mo.	7/30/75	8/13/75
28-76	Physical Scientist	GS-15	HDQS	Rockville, Md.	7/25/75	8/15/75
33-76	Supv. Hydrologist	GS-15	NWS	Silver Spring, Md.	7/25/75	8/15/75
43-76	Marine Resources Mgmt. Spec.	GS-12	NMFS	Washington, D.C.	8/1/75	8/15/75
44-76	Supv. Fishery Biologist	GS-11	NMFS	Juneau, Alaska	8/1/75	8/15/75
45-76	Fishery Biologist	GS-9	NMFS	Anchorage, Alaska	8/1/75	8/15/75
48-76	Supv. Meteorological Tech.	GS-12	NWS	Greensboro, N.C.	8/1/75	8/15/75
757-75	General Engineer	GS-12	NOS	Miami, Fla.	7/25/75	8/15/75
42-76	Financial Management Analyst	GS-11	NMFS	Washington, D.C.	8/4/75	8/18/75
50-76	Supv. Management Analyst	GS-12	HDQS	Rockville, Md.	8/4/75	8/18/75
53-76	Industry Economist	GS-9	NMFS	Terminal Island, Calif.	8/4/75	8/18/75
54-76	Meteorologist	GS-12	NWS	Tampa Bay Area, Fla.	8/4/75	8/18/75
34-76	Supv. Meteorologist	GS-14	ERL	Norman, Okla.	7/30/75	8/20/75
35-76	Construction Representative	GS-11	NWS	St. Louis, Mo.	7/30/75	8/20/75
41-76	Supv. Geophysicist	GS-15	EDS	Boulder, Colo.	7/30/75	8/20/75
49-76	Program Analyst	GS-15	HDQS	Washington, D.C.	7/30/75	8/20/75
47-76	Director	GS-16	NESS	Suitland, Md.	8/1/75	8/22/75
46-76	Staff Director-Data Management	GS-14	EDS	Boulder, Colo.	8/1/75	8/22/75
479-75						
Reissue	Fishery Biologist	GS-13	NMFS	Washington, D.C.	8/1/75	8/22/75
51-76	Regional Director	GS-16	NMFS	Gloucester, Mass.	8/4/75	8/25/75

UMTP Reminder

NOAA employees interested in applying for any of the Upward Mobility Training Programs announced in the April 25, 1975, edition of NOAA WEEK, should submit a CD-261, "Merit Promotion Interest Statement," a SF-171, "Personnel Qualifications Statement," and NOAA Form 52-18, "Employee Appraisal," to: NOAA Personnel Division, 6001 Executive Boulevard, Rockville, Maryland, 20852, ATTN: AD422. Candidates should send an application for each program for which they wish to apply. Candidates who have successfully completed one program may apply for consideration in another program after a 12-month waiting period. Candidates are encouraged to discuss program content with their supervisor and/or servicing personnel office. Closing dates for acceptance of applications are as follows:

	Application Closing Dates	Program Starting Dates
Administrative Fellowship	Aug. 31	Nov.
Administrative Trainee	Aug. 31	Nov.
Administrative 20/20 Work Study	Oct. 31	Jan.

Pay Raise For Government Executives Passed by Congress

Congress has passed and sent to President Ford a bill that would provide annual cost-of-living pay raises for Congress and all other top-level government officials. The bill will give them their first pay raise since 1969.

President Ford is expected to sign the new law which provides that top Government executives receive the same percentage increase each year as the President recommends under the pay comparability statutes for lower-level employees.

The first increase would come in October when the next inflation-pay adjustment is due Federal workers. The bill does nothing to end the "compression" in the top classified pay grades of GS-16 to GS-18, wherein civil servants now all receive the same pay because of the \$36,000 ceiling on civil service employees. Reestablishing gaps between these grades would require separate legislation.

Further information concerning the exact percentage of the pay raise will be published in a later edition of Personnel Perspective when it becomes available.

NOAA EEO Committee Holds Election

The NOAA EEO Committee was formed to serve as an advisory body to Dr. Robert M. White, NOAA Administrator on matters concerning Equal Employment Opportunity within NOAA. The NOAA Committee is made up of the Chairpersons and Vice-Chairpersons of the EEO Committees in NOAA's Major Line Components, the Office of Administration, and a representative of the NOAA Corps. Members are elected in January and serve for a year. Election of officers occurs each June. The following officers were elected for one year terms:

Chairperson	Celso Barrientos	NWS
Vice-Chairperson	Kenneth Burton	EDS
Secretary	Alice Hinson	Office of Administration

Regular Committee meetings are held on the second Wednesday of each month. Each quarter, the Committee meets with the Administrator, the Associate Administrator, and MLC Directors or their representatives. Quarterly meetings with the Personnel Division are also held.



Celso Barrientos



Alice Hinson



Kenneth Burton



PARTICIPANTS IN THE ANNUAL NATIONAL OCEAN SURVEY DIRECTORS CONFERENCE held at the Lake Survey Center's Monroe, Mich., Marine Base, July 22-24, were (from left) Cdr. Darrell W. Crawford, Director, LSC; Capt. L. S. Baker, Director, National Geodetic Survey; William M. Nicholson, Associate Director, Marine Technology; Capt. Roger Lanier, Special Assistant to the NOS Director; Rear Admiral Eugene A. Taylor, Associate Director, Office of Fleet Operations; Robert Rollins, Associate Director, Program Development and Management; Capt. James Randall, Associate Director, Aeronautical Charting and Cartography; Rear Admiral Allen L. Powell, Director, NOS; Dr. Gordon Lill, Deputy Director, NOS; D. H. Hunt, Chief, Charting Automation Project Office; Rear Admiral Alfred C. Holmes, Director, Atlantic Marine Center; Capt. Robert C. Munson, Associate Director, Marine Surveys and Maps; Dr. Hyman Orlin, Chief Scientist, NOS; James W. Winchester, Chief, NOAA Data Buoy Office. Not visible are Rear Adm. H. R. Lippold, Jr., Director, Pacific Marine Center; and Cdr. Donald R. Tibbit, Deputy Associate Director, Marine Surveys and Maps.

Gravity Force in 59 Cities To Be Measured

(Continued from page 1)

one hundredth of a degree, is maintained in each of the eight-inch by eight-inch square boxes, to ensure accuracy of measurement.

As the force of gravity is measured at each point, the data are forwarded to NGS headquarters in Rockville, Md. A bronze marker is left behind to mark the spot. Most are imbedded in the floors of buildings, such as schools, universities and government structures, but many are outdoors. One marker is usually placed at an airport in each city.

Mr. Bergmann and Mr. Johnson will make measurements in Bangor, Maine; Boston, Mass.; New York, Syracuse and Buffalo, N.Y.; Pittsburgh, Pa.; Washington, D.C.; Green Bank, W. Va.; Raleigh and Charlotte, N.C.; Charleston, S.C.; Jacksonville, Orlando and Miami, Fla.; Knoxville and Memphis, Tenn.; Columbus, Ohio; Detroit, Mich.; Louisville, Ky.; Chicago, Ill.; St. Louis, Mo.; Little Rock, Ark.; New Orleans, La.; Dallas, San Antonio, Ft. Davis, Amarillo, El Paso and Houston, Tex.; Kansas City and Wichita, Kans.; Sioux City, Iowa; Rapid City and Sioux Falls, S. Dak.; Minneapolis

and Duluth, Minn.; Madison, Wis.; Grand Forks, Minot and Bismarck, N. Dak.; Casper and Cheyenne, Wyo.; Denver and Grand Junction, Colo.; Albuquerque and Alamogordo, N. Mex.; Phoenix, Ariz.; Reno and Las Vegas, Nev.; Ogden and Salt Lake City, Utah; Billings and Great Falls, Mont.; Boise, Idaho; Seattle and Spokane, Wash.; Portland and Medford, Oreg.; and San Francisco and Los Angeles, Calif.

1974 Lake Level Data Available from LSC

The Lake Survey Center has published "Great Lakes Water Levels-1974", the sixth report in its water level series. Like the other annual books—"Great Lakes Water Levels, 1970," "Great Lakes Water Levels, 1971," "Great Lakes Water Levels, 1972," and "Great Lakes Water Levels, 1973"—it shows daily and monthly water surface elevations. "Great Lakes Water Levels, 1860-1970" consists of monthly and annual water surface elevations. Books in this series will be published at appropriate intervals.

The books, which are obtainable from the LSC at \$2.50 each, provide data in a comprehensive form for easy reference by lake shippers, hydroelectric companies, builders, researchers, shoreline property owners, and others.

William E. Lockett Dies

William E. Lockett, a Weather Service and Radar Specialist at the National Weather Service Office in Evansville, Ind., died in Evansville on July 29. He had been assigned to Evansville since 1956, when he transferred there from Chicago, where he had begun his weather service career the previous year.

He is survived by his wife, Loyce, of 403 Lake Drive, Henderson, Ky. 42420, and five children.

Seminar

(Continued from page 1)

those marine instruments having applications in the coastal zone. Also covered will be marine instrument testing and calibration philosophies and information on instrument manufacturers and costs.

The seminar will be of interest to marine technicians, engineers, scientists and program managers who work in the estuaries and the coastal zone and are concerned with selecting instrumentation for this application, especially those with State and local governments, community colleges and universities, and private companies making measurements in the Middle Atlantic coastal zone.

Since participation will be limited to 80 registrants, parties interested in attending should contact either of the seminar Co-Chairmen: Eugene M. Russin, Chief of NOIC's Evaluation Branch, (C6311), and Thomas Poe, Chairman, Estuarine Resources Technology, Charles County Community College, La Plata, Md. 20646.

EDS Sponsors International Workshops

The Environmental Data Service recently sponsored a number of international environmental information workshops with Environment Canada and the Environmental Protection Agency in Washington, D.C. Environment Canada, of the Department of the Environment, is NOAA's Canadian counterpart. EPA's personnel participated primarily as observers and to share the results of previous U.S./Canadian workshops.

The objectives of the workshops were to become better acquainted with the persons in each agency responsible for specialized environmental data and information and library resources, and to learn more about the resources themselves in order to develop guidelines and procedures for more effective cooperation and exchange.

The workshops involved overviews of the primary functions of EDS and Environment Canada, as well as working group sessions in the fields of public information, library and documentation services, and specialized information and data services.

Definitive guidelines and administrative procedures for data and information exchange will be developed at subsequent meetings.

Seal Skin Hearing

(Continued from page 1)

on or before August 15. Also, any direct testimony on the proposed waiver and regulations must be received by him by August 15, in original and 10 copies.

Notice of the scheduled hearing and the proposed regulations appeared in the Federal Register on July 7, 1975.

A DEPARTMENT OF COMMERCE BRONZE MEDAL was recently presented to C. Hugh Snyder (center), former National Weather Service Training Coordinator at the Federal Aviation Administration



Academy in Oklahoma City, by NWS Director Dr. George P. Cressman. Mr. Snyder, who retired after 32 years of Federal service, was recognized for his outstanding work in revising and updating the joint NWS/FAA publication, *Aviation Weather*, for his work in revising and consolidating the Pilot Weather Briefer Course for NWS and FAA personnel, and for his performance as training coordinator at the FAA Academy for 11½ years prior to his retirement.

Mrs. Snyder is on the left.

noaa week

Published weekly at Rockville, Md., by the Office of Public Affairs for the information of employees of the Commerce Department's National Oceanic and Atmospheric Administration.

Articles to be considered for publication should be submitted at least a week in advance to NOAA Week, Room 221, WSC 5, Office of Public Affairs, National Oceanic and Atmospheric Administration, Rockville, Md. 20852.

NOAA Week reserves the right to make corrections, changes or deletions in submitted copy in conformity with the policies of the paper or the Administration.

Catherine S. Cawley, Editor
Warren W. Buck, Jr., Art Director

Buoy Data Now Is Published In Weather Log

Monthly marine meteorological data from U.S. ocean buoys are now being published in the Environmental Data Service's bi-monthly periodical, *Mariners Weather Log*. Two months' data are summarized in each issue for each buoy reporting a significant amount of data.

The data are collected, processed, and summarized by the EDS National Climatic Center in Asheville, N.C. The published summaries include buoy identification and location; means and extremes of air temperature, dew-point temperature, sea temperature, and air-sea temperature difference, and pressure, with hour and day of occurrence, number of observations, and number of days with observations; frequencies and means and extremes of wind direction versus speed (knots), including the hour, day, and direction of the maximum wind, plus the total number of observations; and the number of days and observations with precipitation. Percentage frequencies of wave heights and percent of observations with potential superstructure icing conditions are included where appropriate.

The *Mariners Weather Log* is available to persons or agencies with marine interests from the Environmental Data Service, D762, Washington, D.C. 20235. The data may be obtained from the National Climatic Center, Federal Building, Asheville, N.C. 28801.

Saxitoxin Can Be Detected Accurately, Fast

(Continued from page 1)

tively simple steps to extract any saxitoxin which may be present. The amount of saxitoxin, if any, can then be determined using a standard laboratory instrument called a fluorescence spectrophotometer.

"The procedure is so straightforward," claims Dr. Henry Rapoport, leader of the Berkeley Sea Grant group, "and the equipment needed so uncomplicated, that testing can be carried out on board a ship or in a small van on shore. The results are immediate and a decision can be made on the spot whether or not to harvest."

The team analyzed several samples of Alaska Butter clams and California mussels taken from 15 separate areas that had been closed to shellfishing. The scientists were able to detect saxitoxin in concentrations as low as four parts per billion, and found that shellfish from some of the closed beds would be considered safe for human consumption according to the compliance guidelines set by the Food and Drug Administration.

notes about people

Capt. Kelly E. Taggart has been named to succeed Capt. William D. Barbee as Commanding Officer of the NOAA Ship Oceanographer, flagship of the NOAA Fleet.



Capt. Taggart

During his 20 years' service, Capt. Taggart has served aboard five ships—he was Executive Officer of the Oceanographer in 1971-72—and on aerial photographic mapping, charting, and geodesy programs. During the past year, he has been with the NOAA Office of Congressional Liaison.

He received his degree in civil engineering from the University of Missouri.

Dr. Kenneth Davies, a physicist in the Ionospheric Physics Program at the Environmental Research Laboratories' Space Environment Laboratory in Boulder, Colo., has left for a year's sabbatical as full professor of physics at the University of Queensland in Australia.



Dr. Davies

Dr. Davies, who is also a professor-adjoint in the Astrogeo-

physics and Electrical Engineering Departments at the University of Colorado, will make research studies of the ionosphere and teach graduate courses as part of a Professor H. C. Webster fellowship sponsored by the Australian university.

He joined the Commerce Department in 1958 and—in collaboration with J. M. Watts—pioneered the high-frequency Doppler technique for studying transient ionospheric phenomena in the electrically charged portion of the atmosphere. Previously he had been with the Defense Research Telecommunications Establishment in Ottawa, Canada, and been an assistant professor of engineering at Brown University.

He received his Ph.D. in

physics from the University of Wales' College of Swansea.

Richard Meyer, a technical assistant with the Operations Division of the Pacific Marine Center, has been named to the staff of experts formed to assist the Washington State Board on Geographic Names. The board comprises seven members appointed by the governor who determine appropriate names for state geographic features. Others on the staff include representatives of the U.S. Geological Survey and state departments. Mr. Meyer is also Public Affairs Officer for PMC and serves as Chairman of the Washington State Section of the American Congress on Surveying and Mapping.



Participants in the National Weather Service's first Air Pollution Meteorology Class held recently at the NWS Technical Training Center in Kansas City, Mo., were (standing, from left) Dr. Myers, Instructor; Robert Fischer, WSFO Fairbanks, Alaska; James Ellis, NMC Suitland, Md.; Joel Schexnayder, WSFO New Orleans, La.; John Robinson, WSO Cincinnati, Ohio; Jim Henderson, WSFO Birmingham, Ala.; John Clithero, NMC Suitland, Md.; Rich Bailey, NMC Suitland, Md.; Paul Werth, WSO Medford, Oreg.; John Purvis, WSFO Columbia, S.C.; Bill Winkert, Instructor; Frank Dillenkoffer, Instructor; (seated, from left) Anthony Williams, WSFO Chicago, Ill.; Jack Cox, WSFO Memphis, Tenn.; Walter VanEtten, WSFO Indianapolis, Ind.; Melvin Bercroft, WSO Sacramento, Calif.; Edward Honodel, WSFO Denver, Colo.; Jan Price, WSFO Raleigh, N.C.; and David Goens, WSO Missoula, Mont.

Acoustic Sounder Used in Antarctic

(Continued from page 1)

A large proportion of the atmosphere's heat is deposited at the North and South Poles. The radiative heat loss from the ice coupled with the turbulent heat deposited into the ice determines the energy balance between the atmosphere and the surface. Understanding the heat transport mechanism is important to atmospheric scientists in formulating computer models of global circulation patterns.

"By comparing the turbulent and solar input to the ice with heat loss measured by spacecraft radiometers, we may be able to understand long term variations in ice temperatures, and study the effect of such variations on climatic dynamics," Dr. Hall explains.

"Radiation studies have been made of the amount of heat released by the ice, but until now no one has made detailed studies of the turbulent heat transport from the free atmosphere into the ice."

According to Dr. Hall, the ice is an enormous "heat sink." Warmer air is constantly trickling down through the boundary layer and depositing heat into the ice. Even though the sun does not shine in the winter, the turbulent heat input ensures that the boundary layer temperature does not continue plunging to lower and lower temperatures through the winter.

Dr. Hall and his colleagues found that the inversion layer of air hovering over Antarctica 97 percent of the time is much more stable than inversions in other parts of the world, but its makeup is similar to inversions in temperate regions.

"We hope to accumulate a one-year record of lower atmosphere temperature structure during 1975 for further evaluation of the boundary layer at the South Pole," Dr. Hall says.



National Oceanic and Atmospheric Administration

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July 23, 2010