

noaa week

National Climatic Center

September 13, 1974

LIBRARY

Volume 5 Number 38

U.S., Poland Agree Upon Plankton Sorting Center

The United States and Poland have agreed to establish the world's only known center specifically designed for advanced plankton sorting techniques. (Plankton is the microscopic animal and plant life found drifting or floating in the ocean or fresh water which makes up the primary food source for many fish.)

The Center will be located at Szczecin on the northeast coast of Poland and will be a joint venture between NOAA and Poland's Sea Fisheries Institute. A building has already been constructed on the campus of the College of Agriculture and Fisheries at Szczecin to house the Center. It includes a lecture hall, three scientific laboratories, and a large sorting room capable of handling up to 3,000 plankton samples a year.

During the coming six months

(Continued on page 4)

Awards Luncheon Planned

This year's recipients of NOAA Awards and Unit Citations will be honored at a luncheon on Friday, October 11, at the Officers' Club at Bolling Air Force Base in Washington, D.C.

All NOAA employees and their spouses are invited. Although prices everywhere are going up, the price of this Award Luncheon will be \$4.00 (\$2.50 less than last year), and drinks from the cash bar will cost \$.85.

A list of key persons designated to coordinate ticket sales and reservations

Seal Skin Import Request Denied; Substandard Harvest Methods Cited

Secretary of Commerce Frederick B. Dent said this week that he would not waive the prohibition against importation of seal skins from South Africa and South West Africa to the United States.

Under the terms of the Marine Mammal Protection Act of 1972, importation is unlawful if the Secretary deems the harvest to be inhumane. Secretary Dent dispatched a team of independent veterinary consultants to view the harvest in August, and their report indicated that it was not humanely conducted, he said.

The decision effectively denies an application by the Fouke Company of Greenville, S.C., for the right to import such skins from the South African and South West African harvest.

The Secretary issued the following statement:

"In November of 1973, the Fouke Company sought a waiver of a moratorium on fur seal importation provided under the terms of the Marine Mammal Protection Act of 1972, to import South African and South West African fur seal skins in unspecified numbers for the ensuing ten years.

"In December of 1973, the Company sought a waiver to allow importation of 5600 skins left over from the 1973 harvest.

"The waiver of the moratorium, if granted, would precede an application by Fouke for permits to import the skins.

"The Marine Mammal Protection Act states that importation is unlawful if



Noctilucent Clouds Studied; Model May Explain Phenomenon

Clouds are visible water in the atmosphere. But one of the rarest and most beautiful—the brilliant, silver-blue noctilucent cloud—occurs in an almost waterless region 50 miles or more high. The bright, sheet-like clouds are seen only in high latitude regions of the world. How

they form has baffled scientists since they were first reported nearly a century ago.

Dr. George C. Reid, a physicist with the Environmental Research Laboratories' Aeronomy Laboratory in Boulder, Colo., may have an explanation. He has mathematically modelled cloud particles that could exist in the mesopause—the coldest region of the atmosphere.

"Scientists have assumed that individual particles in the noctilucent clouds were spheres, implying either that there is much more water vapor in the mesosphere than current estimates suggest, or that a persistent upwelling of air exists over the summer polar regions," he says. "A more likely possibility is that the particles are non-spherical."

Results of his study show

(Continued on page 6)

in the various NOAA organizations will appear in NOAA WEEK at an early date. When making reservations with the key person, attendees must indicate a choice of entree (Broiled Sirloin Tip Steak or Filet of Haddock with Shrimp Sauce). The menu also will include green beans almandine, parsley new potato, tossed salad, roll and butter, ice cream and a beverage.

Carpooling is encouraged, and parking is available at the Base.

(Continued on page 4)

Maryland's Oldest Boundary, Dating Back to 1751, Remeasured

Maryland's oldest boundary, the dividing line between southern Delaware and the Free State, has been remeasured by the National Geodetic Survey, and all but one of the original 1751 permanent boundary markers have been found. The 35-mile boundary was established by colonial surveyors.

The primary purpose of the Delaware-Maryland east-west boundary resurvey was to locate the original five-mile boundary markers and to determine the locations for monuments to be placed along the boundary at one-mile intervals. Once these markers are established and their geographic positions computed, the boundary will be better defined. In 1751, posts were set at similar one-mile intervals, but they

were apparently temporary, and were not found.

The colonial surveyors marked the border with eight monuments spaced about five miles apart on a line extending from the Atlantic Ocean at Fenwick Island (on the border) to a point almost midway between the coast and Chesapeake Bay. This midway point, known as Middle Point, is the terminus of the north-south leg of the Mason-Dixon Line, which it antedates. Of the original markers, only the 30-mile marker could not be found.

In reporting the results, B.K. Meade, Chief of the NGS Control Network Division, said it was found that the average distance between mileposts at the five-

mile and 35-mile positions is 11 feet greater than our standard 5280 feet. This was similar to the results of a 1961-62 survey of the north-south boundary which showed the average distance between markers was 10 to 12 feet greater than the accepted 5280 feet to the mile.

Mr. Meade recommended to Maryland and Delaware state authorities that unless there is evidence that the boundary monuments were moved from their original locations, they should be accepted as accurately defining the boundary between the two states.

However, in doing so, he noted there may be some question about the location of the monument at the 25-mile position. This boundary marker was found to be in fair condition, but apparently had been moved when a road was widened: The surveyors found an iron pin set in concrete about 18 inches below the ground and protected by a manhole about 13 feet north of the marker and Mr. Meade said he believed this was the original location of the boundary marker. He said highway department records should show whether the iron pin marks the original location of the 1751 boundary monument.

In view of the increase in land values along the boundary during the intervening more than two centuries since the colonial survey was made, the two states reached an agreement last year to define the boundary more closely. The \$120,000 cost was divided equally among the two states and NOAA.

Little attempt was made over the past 223 years to maintain or restore the line. A check in 1950 by the Coast and Geodetic Survey, predecessor of the NGS, revealed that most of the monuments had suffered from nearly two centuries of neglect. The first marker, on the coast, was located on federal property around the Fenwick Island Light and

had been protected against vandalism and, to some extent, against the elements. The fifth marker was in an isolated area where it was protected by trees and was the best preserved of all the monuments. A monument at Middle Point, the westernmost end of the boundary, had been broken off at ground level and later repaired with an iron bar. Two other stones were in fair condition except for weathering. The remaining two stones on the boundary located along a highway were insecure in the earth and so badly broken they were barely recognizable as boundary markers.

The east-west line was established by colonial surveyors to settle a boundary dispute between the Calvert family of Maryland and the Penns of Pennsylvania in its three lower counties, now the state of Delaware.

The 1974 survey is designed to prevent modern day disputes over such things as offshore oil drilling rights in the Atlantic, coastal developments, and possible litigation over land title and auto accident liability law enforcement jurisdiction.

Weather Service Forecast Office At Reno, Nevada, Is Dedicated



Dedication ceremonies for the Reno, Nev., Weather Service Forecast Office were held recently. Attending the dedication were the mayors of Reno and Sparks and representatives from the senators and congressmen of Nevada, plus other Federal and state dignitaries. Attending from Western Region Headquarters were Hazen Bedke, Director, and Phil Williams, Chief, Meteorological Services Division. MIC Art Hull officiated at the ceremonies and conducted a tour of the facilities. Pictured are Hazen Bedke (center) and Dr. Hull cutting a ceremonial cake, while MSD Chief Phil Williams (left) looks on.

noaa week

Published weekly at Rockville, Md., by the Office of Public Affairs for the information of employees of the National 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 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
Anna V. Felter, Art Director

ERL Men Head Space Shuttle Working Groups

Two NOAA scientists at the Environmental Research Laboratories in Boulder, Colo., have been selected to direct working groups planning atmospheric and magnetospheric studies for the National Aeronautics and Space Administration's Space Shuttle program.

They were also selected by NASA as members of the steering committees established to direct the overall planning for the Space Shuttle endeavor.

Dr. Donald J. Williams, Director of the Space Environment Laboratory, and William Bernstein, a physical scientist in the same laboratory, are involved in planning experiments for the Atmospheric, Magneto-

spheric, and Plasmas in Space (AMPS), a spacelab module which will fly on the Space Shuttle during orbit.

Mr. Bernstein, vice-chairman of the Particle Interaction section, and Dr. Williams, chairman of the Tracer and Chemistry section, will be working with their respective groups frequently during the next two years at NASA's Marshall Space Flight Center in Huntsville, Ala.

The AMPS is the product of an agreement reached last year between NASA and the nine-nation European Space Research Organization (ESRO), who will design and build the spacelab modules. Capable of holding up to four persons, the AMPS is

designed to operate for periods varying from seven to 30 days.

According to the ERL scientists, the AMPS is intended to permit the performance of new space experiments with particular emphasis on techniques for increasing the understanding of the basic physical processes active in the near-earth space environment.

Scheduled for operation in the 1980's, the Space Shuttle will be a large, earth-orbiting craft which will fly to altitudes of at least 62 miles (100 kilometers). The delta-winged airplane-like craft has a wing span of 78 feet, and measures 122 feet long by 57 feet high, the height of a five-story building.

Dr. Schaake Named To NWS Hydrologic Research Lab Post



Dr. John C. Schaake, Jr., has joined the National Weather Service's Office of Hydrology as Assistant Director of the Hydrologic Research Laboratory. For the past six years he was a professor of Civil Engineering at Massachusetts Institute of Technology, where his teaching and research interests were in hydrology and water resource system analysis.

Prior to his position at M.I.T., Dr. Schaake was a professor of Environmental and Systems Engineering at the University of Florida for two years and a post-doctoral fellow at Harvard University. His graduate and undergraduate studies were at The John Hopkins University.

In addition to his other responsibilities he engaged in engineering consulting work for the past 16 years. Together with three M.I.T. colleagues, he founded the Consulting Firm Resource Analysis, Inc., of Cambridge (Mass.) as a means of introducing into professional practice new research developments.

Finger, Ronald M. Nagatani, Roderick S. Quiroz, and Alvin J. Miller.

Visitors from Spain, the Federal Republic of Germany, and the United Kingdom contributed to the proceedings, as well as personnel from various other groups engaged in rocket-sonde-satellite experimentation.

NGS Completes Louisiana Survey

The 26-man National Geodetic Survey field party headed by Harry R. Romine has completed a nine-month geodetic survey of southwestern Louisiana.

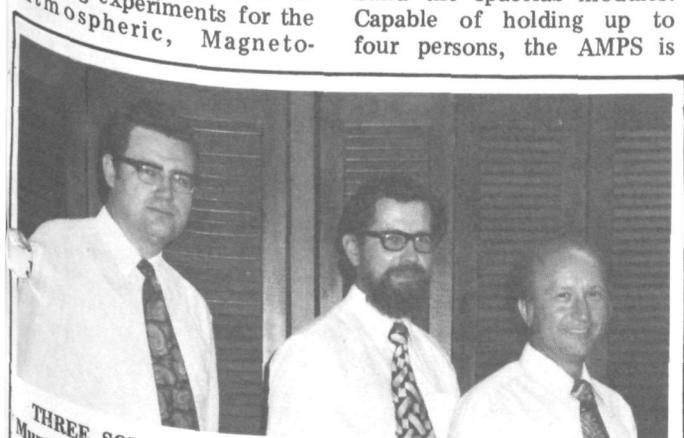
The survey covered 1850 square miles and will help provide a network of control points (positions of latitude and longitude) for the state. It was part of a long-range cooperative program carried out in Louisiana since 1968 by the NGS and the state in which state surveyors work with the federal party in establishing control points. To date, over 17,250 square miles have been surveyed in Louisiana. The extensive survey is needed because of rapidly rising land values.

NOAA Personnel Participate In NASA-Sponsored Conferences

NOAA personnel were involved in two NASA-sponsored conferences held at Wallops Flight Center, Va., August 26-29. The first two days were taken up with comparisons between data obtained from meteorological rockets and those derived from Nimbus 5 radiation measurements. The NOAA participants were

Francis J. Schmidlin of Wallops Flight Center and Melvyn E. Gelman of the National Meteorological Center's Upper Air Branch.

The last two days were devoted to a review of stratospheric warming events. The entire Upper Air Branch of NMC was involved in this effort, with presentations given by Frederick G.



THREE SOVIET SCIENTISTS, (from left) Dr. I.B. Tokin of the Murmansk Marine Biological Laboratory, Dr. V.N. Maximov of Moscow State University, and Dr. G.G. Polikarpov of the Institute of Biology of the South Seas in Sevastopol, visited the National Marine Fisheries Service Atlantic Estuarine Fisheries Center in Beaufort, N.C., on August 25. They are touring marine laboratories in the United States as part of a cooperative program for a U.S.-U.S.S.R. Environmental Protection Agreement. This is the exchange program that Dr. T.R. Rice, Director of the Beaufort facility, participated in when he visited the U.S.S.R. in June. Michael Wade and Eva Hoffman of the Environmental Protection Agency National Marine Water Quality Laboratory, Narragansett, and three interpreters accompanied the scientists.

Lady Lt. Makes History

Aviation history was made at 7:23 p.m. EDT on September 1, 1974, when a woman pilot was at the controls of a hurricane hunter aircraft during penetration of a hurricane eye. United States Navy Lieutenant Judith Neuffer performed the feat into hurricane center, piloting a WP3 aircraft of Navy Weather Reconnaissance Squadron Four.

Cyclesonde Systems Constructed Under ERL Contract

A \$49,000 contract for construction of instruments used to make data profiles of the upper ocean has been given to two scientists at the University of Miami by the Environmental Research Laboratories in cooperation with research underway with Dr. Ants Leetmaa of the Atlantic Oceanographic and Meteorological Laboratories in Miami.

The contract recipients are Drs. John C. Van Leer and Henry Perkins, assistant professors at the University's Rosenstiel School of Marine and Atmospheric Science on Virginia Key, Miami, Fla., whose work has been supported principally by the National Science Foundation.

The NOAA contract provides funds for construction of three complete Cyclesonde systems—instruments which have been developed by Dr. Van Leer at the University of Miami—for use

during the international Global Atmospheric Research Program's Atlantic Tropical Experiment (GATE) off the coast of West Africa this summer.

The new instrument, which looks like a white plastic fish with a ball on its nose, rides up and down a cable attached between an unattended buoy and the ocean bottom. The 75-pound (34-kilogram) Cyclesonde is able to make its journey up and down the plastic-coated steel cable by changing its buoyancy, taking data samples every few meters. Both the depth limit and number of samples per trip can be adjusted on the instrument.

Powered by compressed helium, the five-foot (one-and-one-half meter) "fish" is capable of making up to 500 round trips to a depth of 666 feet (200 meters) unattended during a two-week

period. Information is stored on magnetic tape inside the instrument's belly. The Cyclesonde is efficient, using about the same amount of helium for 500 round trips as for a single radiosonde ascent.

"GATE offers a unique opportunity to study the upper ocean's response to forcing from the atmosphere," Dr. Van Leer explains. "In other words, the ocean is being driven by the changes in wind stress, evaporation, or precipitation. The compelling reason for our participation in GATE is that rarely do oceanographers have the opportunity to observe the upper ocean's response in the presence of complete synoptic meteorological observation in mid-ocean.

"Cyclesondes have been developed to record information about the upper layers of the ocean corresponding

to that which balloon-borne radiosondes provide for the lower atmosphere," Dr. Van Leer explains, "giving us high resolution vertical profiles of temperature, electrical conductivity of sea water, and current speed and direction as a function of depth and time. Dr. Perkins has been actively involved in developing techniques for data processing of Cyclesonde information."

Prior to the GATE project, an earlier version of Van Leer's Cyclesonde has been used in research on response and exchange processes between the Gulf of Mexico and Florida's Continental Shelf; studying frontal dynamics as part of the Coastal Upwelling Experiment off the Oregon Coast; and monitoring water movement in the New York Bight as part of NOAA's Marine Ecosystems Analysis (MESA) project there.

U.S., Poland Establish Plankton Sorting Center on Baltic

months a plankton sorting and taxonomy training program will be started involving an exchange of scientists between the two countries. Drs. Steffan Grimm and Idzi Drzycimski will be visiting the NMFS' Northeast Fisheries Center facilities at Woods Hole, Mass., and Narragansett, R.I., for training in plankton sorting and taxonomy for three weeks in September.

In October, Dr. Elbert

Ahlstrom of the NMFS Fisheries Center at La Jolla, Calif., will visit the Polish facility for several weeks to train Polish fisheries scientists in larval taxonomy.

The Polish Center will provide sorting services for plankton samples collected in joint surveys conducted by the International Commission for the Northwest Atlantic Fisheries (ICNAF), of which both Poland and

the United States are members. The work will be especially helpful in ICNAF assessment studies now taking place in the northwest Atlantic.

Plankton sorting is a time-consuming and expensive operation when done by hand, as is now the general practice, but in addition to routine sorting operations, the staff at the new Center will test and employ autom-

atic systems including separation devices utilizing the specific gravity of different sorts of plankton. The new Center is expected to cost about \$350,000 with \$200,000 from the Polish Government and the remainder from counterpart funds allocated to NOAA. Counterpart funds are those held in foreign countries as a result of trade agreements for use only in that country by the United States.

Secretary Dent Denies Seal Skin Import Request

(Continued from page 1)

the animals are taken in a manner deemed inhumane by the Secretary.'

"Accordingly, I sought the expert opinions of two distinguished veterinary consultants, Dr. Wallace M. Wass, head of the Department of Veterinary Clinical Sciences at Iowa State University, and Dr. Leslie E. McDonald, Assistant Dean, Department of Physiology and Pharmacology, College of Veterinary Medicine,

University of Georgia, on the way in which the South African harvest is conducted.

"Accompanied by Joseph Blum, marine mammal program coordinator in the National Oceanic and Atmospheric Administration's National Marine Fisheries Service, they spent a part of August in South Africa and South West Africa observing the practices involved in the taking of the seals.

"It was established that

the killing methods were inadequately carried out in many instances, and that the procedures failed to meet the standards required by our Marine Mammal Protection Act.

"Many workers were untrained or inadequately trained.

"In the light of my responsibilities, under the law, I must refuse the present application by the Fouke Company to allow importation of the skins, and I am so doing."

obituary

Rosalie J. Baldwin

Rosalie J. Baldwin, Personnel Clerk at the National Weather Service Central Region Headquarters in Kansas City, Mo., died August 9. She had spent more than four of her 50 years of Federal service with the NWS.

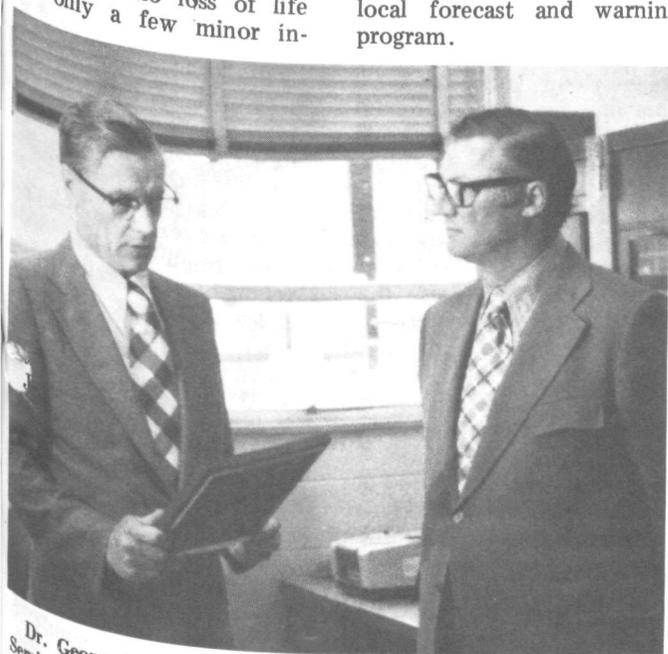
She is survived by her husband, William, of 21 North Home St., Independence, Mo. 64050, and three sons and a daughter.

Unit Citation Is Awarded To WSFO in Oklahoma City

A NOAA Unit Citation has been awarded to the staff of the National Weather Service Forecast Office in Oklahoma City, Okla., for their individual and collective efforts in effecting an outstanding severe weather warning service. The exceptionally timely tornado and flash flood warning services provided to the residents of Oklahoma City and other portions of the WSFO county warning area on June 8, 1974, were credited for there being no loss of life and only a few minor in-

juries in Oklahoma City. During the severe storm outbreak that day, tornado warnings were provided for most of Oklahoma City with lead times of one-half hour, and special calls to the Oklahoma City Emergency Operations Center enabled the sirens to be blown 20-25 minutes before the storms struck.

The WSFO also provided significant help to the Weather Service Office in Tulsa in carrying out its local forecast and warning program.



Dr. George P. Cressman (left), Director of the National Weather Service, presented the Unit Citation to the Meteorologist in Charge at Oklahoma City, Raymond C. Crooks.

Marine Sanctuary Public Meeting Scheduled To Be Held October 2,3

A public meeting to solicit local reaction to the concept of a marine sanctuary in waters adjacent to natural seashores and wildlife preserves will be held October 2 and 3 on the Eastern Shore. The Wednesday session will begin at 9:30 a.m. in the Chincoteague Refuge Auditorium in Chincoteague, Va., and reconvene at 9:30 a.m. Thursday in the Headquarters of the Assateague National Seashore in Berlin, Md.

Sponsored by NOAA's Of-

fice of Coastal Zone Management, the meeting will be conducted by staff members of the Virginia Institute of Marine Science (VIMS), Gloucester Point, Va.

These public meetings are the culmination of a policy study of the Marine and Estuarine Sanctuaries conducted by VIMS under a contract from NOAA. According to Dr. Maurice P. Lynch, head of the Office of Special Programs at VIMS, support for the concept of establishing marine sanc-

Atmospheric Scientists Meet At ERL to Plan Project SESAME

Over one hundred of the nation's leading atmospheric scientists met at the Environmental Research Laboratories in Boulder, Colo., last week to exchange information and plan a major program of research on severe convective storms—the tornado-spawning weather systems which periodically cause destruction throughout the United States.

The meeting was convened to define scientific issues and goals of the Severe Environmental Storms and Mesoscale Experiment (SESAME), a NOAA-initiated project scheduled to begin in 1977 and continue for about five years.

"NOAA is encouraging outstanding scientists from universities and other national agencies and laboratories to join and contribute ideas and resources, as the accelerated development of greatly improved methods of monitoring and predicting dangerous and destructive storms should be of broad national interest," said Dr. Douglas K. Lilly, a senior scientist at the National Center for Atmospheric Research and NOAA's consultant for Project SESAME.

"Project SESAME has been developed to provide a foundation upon which improved severe storm forecasts and warnings may be developed by increasing the understanding of the behavior of severe storm systems within their larger scale environment, and by exploring their feedback influences on

tuaries adjacent to federally-owned coastal preserves was proposed by several parties during the study.

The meetings will consist of an explanation of the sanctuary concept and presentation of data pertinent to the Assateague area. Individuals or organizations are invited to express their oral or written views by appearing at the meeting, or they may submit written comments for inclusion in the record of the hearings.

larger scale meteorological processes. The forecasts and warnings are needed by individuals and communities to prepare for severe local storms, some of which are disastrous," he added.

According to Dr. Lilly, in the seven-year period from July 1963 to June 1970, for example, severe local storms in the United States alone accounted for over 2300 deaths and 4 billion dollars' damage.

Project SESAME takes advantage of recent advances in technology of remote and direct atmospheric probing, in data processing and in numerical simulation in investigating mesoscale or middle-scale storm systems, those in the 1.5-mile (2.5 kilometer) to 150-mile (250 kilometer) length range.

The project will support two intensive field measurement periods using the most up-to-date instrumentation, including multiple Doppler radars, laser beam wind sensors, acoustic echo sounder antennas and transducers, microbarographs and microwave radiometers. Sophisticated instrumentation aboard jet aircraft, satellites and weather balloons will complement the data-gathering network of the stationary weather monitoring equipment.

Three-month observation programs are planned for the spring storm seasons of 1977 and 1979. The 21-month gap between observational periods will allow time for careful analysis of the 1977 data by the NOAA Environmental Data Service and by associated scientists from universities and other government agencies.

The project also includes numerical modeling, simulation, and experimental prediction of atmospheric circulation on the mesoscale, and severe storm scale, and will provide data for use in both the development and testing of such models. The results of the models will, in turn, focus the observational program into critical areas.

recipe of the week



FLOUNDER FILLETS A LA JANE

- 2 pounds fresh or frozen flounder or sole fillets
- 3 tablespoons melted butter or margarine
- 3 tablespoons lemon juice
- 1-1/2 teaspoons salt
- 1/2 teaspoon paprika
- 1/8 teaspoon white pepper
- 3 or 4 bananas, halved lengthwise
- Garnish: Lemon wedges, paprika, parsley clusters

Use fresh flounder or sole if possible. Defrost if frozen; wash, then dry with paper toweling. Place in well-greased 15 by 10 by 1 inch baking dish in one layer. Combine butter, lemon juice, salt, paprika, and pepper. Pour 1/4 cup mixture over fish; top with layer of bananas, cut side down. Pour remaining butter mixture over bananas. Place in preheated 350° F. oven and bake 25 minutes or until fish flakes when tested with a fork. Baste with pan drippings while baking. Remove carefully to platter and dust with paprika; place lemon wedges on parsley, at intervals around platter. Serves 6.

next week's best fish buys

According to the NMFS National Consumer Educational Services Office in Chicago, the best fish buys for the next week or so are likely to be fish sticks and breaded portions along the Northeast Seaboard; grey sea trout and croaker in the Middle Atlantic States, in-

cluding the D.C. area; King mackerel and breaded shrimp in the Southeast and along the Gulf Coast; fresh ocean perch fillets and frozen fish sticks in the Midwest; turbot fillets and canned tuna in the Northwest; and dressed whiting and frozen butterfish fillets in the Southwest.

Noctilucent Clouds Studied; Model May Explain Phenomenon

(Continued from page 1)

that either needle-shaped or disc-shaped ice particles of certain dimensions could grow within noctilucent clouds without violating mesospheric water-vapor content theories or assuming an upward movement of the atmospheric region as a whole.

Satellite measurements made in 1972 by a horizon-scanning, two-color photometer have substantiated the existence of a layer of light-scattering particles, giving Dr. Reid and other scientists a much better view of the high cloud layer than any previous research instrument.

According to Drs. T.M. Donahue and B. Guenther, two physicists at the University of Pittsburgh, the satellite observations have shown that the polar layer is thin—probably less than three miles thick—and located close to the top of the mesosphere.

“Dr. Donahue and his colleagues speculated that this layer represented a poleward extension of the particle layer that gives rise to noctilucent clouds when observed from the earth at twilight,” Dr. Reid explains. “And they suggest that noctilucent clouds are merely weak sporadic manifestations of these persistent polar layers, which presumably cannot themselves be easily detected because of unfavorable solar lighting conditions.

Dr. Reid has developed a simplified model of an ice cloud whose boundary conditions are similar to those estimated from satellite data. He developed the hypothetical ice cloud model assuming eddy diffusion—circulating currents of air—to be the only mechanism for transporting water vapor upward, and that cloud particles grow from initial sizes comparable with dimensions of electrically charged particles, or ions.

He based his mathematical model on the assumption

that positive ions rather than meteoric dust would provide nuclei for particle growth since no dust particles have been detected by rocket sampling experiments in noctilucent clouds. Previously, scientists had speculated that volcanic and cosmic dust particles might have supplied the nuclei for ice particle growth.

“Since cloud particles grow as they fall, the numerical computations start at an altitude well above the cloud—56 miles (90 kilometers)—where no water vapor exists,” Dr. Reid explains. “When the simulated water-vapor pressure value reached the saturation value causing condensation to occur, the hypothesis that the cloud was formed.”

However, the particles then begin to lose water vapor by evaporation at 50 miles altitude until they reach the bottom of the cloud at 50 miles. At this point, the particles have lost enough water vapor to begin their upward climb again by eddy diffusion, initiating the cycle all over again within the “cold trap” effect of the cloud.

Thus, Dr. Reid’s hypothetical model gives a plausible explanation for the existence of noctilucent clouds by demonstrating that spherical ice particles can grow near the mesopause to form a layer 2 to 20 miles thick—a measurement which agrees with the polar cloud layer observed by the satellite during the summer months.

OPEN HOUSE REMINDER

Rain or shine—the NOAA Ship Mt Mitchell will be open to the public on Saturday, September 14, from 9 a.m. to 3 p.m. at the Washington Navy Yard.

Use the Navy Yard entrance at Ninth and Streets, S.E. Ample parking is available.

Davidson Completes Survey of Proposed Alaska Tanker Route

The NOAA Ship *Davidson* has completed a nautical charting survey of a corridor through Prince William Sound leading to Valdez, terminus of the Alaska oil pipeline. The survey was conducted along the proposed oil tanker route to the southern Alaskan community.

The high priority project was started during the 1973 season and completed this year ahead of schedule.

The Seattle-based *Davidson* is now conducting hydrographic surveys of Tracy and Endicott Arms, two fjords south of Juneau which conduct tours to view the active glaciers there.

The *Davidson* is commanded by Commander Michael H. Fleming.

Howard and Harrell Receive Bronze Medals

Don Howard, Communications Analyst at the National Weather Service Western Region Headquarters in Salt Lake City, Utah, and Wayne Harrell, Lead Forecaster at the Weather Service Forecast Office in Salt Lake City, have received Commerce Bronze Medals.

Mr. Howard, who has been at WRH for nine years, has been responsible for

Fish Name, Product Standardization Nearer

A contract authorizing studies that will eventually help consumers of fish and fishery products identify various species and products has been awarded to the Brand Group, Inc., of Chicago by NOAA. The \$63,000 contract calls for

the Chicago concern to analyze, plan, and recommend methods of developing an effective identification system to clarify and standardize market names of certain fish species and products.

The National Marine Fish-

eries Service will work with the contractor in reviewing and evaluating the current criteria and principles now used in establishing food product names, and seek to identify inconsistent and obsolete names that may now be in use. A new set of principles particularly applicable to fish and fisheries products is also being sought.

Freeman Receives Special Achievement Award For Designing, Developing, Implementing OASIS

Robert R. Freeman, Deputy Director of the Environmental Data Service's Environmental Science Information Center, recently received a Special Achievement award in recognition of his outstanding work in designing, developing, and implementing the Oceanic

and Atmospheric Scientific Information System (OASIS), an environmental science referral system which provides access to more than 30 computer-searchable bibliographic data bases. After planning and designing the OASIS system, he initiated a pilot project to prove the feasibility of the concept, and following its successful completion, he brought OASIS to a full operational status in approximately 1 1/2 years.

The development of OASIS required the implementation of an on-line computer system, and the merging of many environmental information sources both within and external to NOAA, so that EDS could provide the most comprehensive referral service possible to published literature in the environmental sciences and marine resources. Two of the most valuable bibliographic data bases incorporated, "Oceanic Abstracts" and "Meteorological and Geostrophysical Abstracts," were thus made available for on-line searching for the very first time anywhere.

An immediate benefit of OASIS is the savings of many man hours (and dollars) previously spent by hundreds of NOAA and other users manually searching for technical literature in the environmental sciences. Searches that once required months to complete can now be completed in a matter of minutes at an OASIS terminal.

The need for such a program became apparent a few months ago when more than 500 responses were received to an NMFS request for suggestions and opinions as to the desirability of efforts to standardize the names of certain fish and fisheries products. The announcement pointed out that thousands of species are known throughout the world by scientifically accurate names, but differing and sometimes confusing common names used in labeling products from some species cause problems in marketing and market development, and could disrupt attempts to write uniform labeling regulations. NMFS also said there is increasing interest in using fish and shellfish that, to date, have not been marketed generally, and for which no common names exist that are familiar to consumers. A spokesman said that new food processing techniques, such as the use of minced fish blocks, present opportunities to develop new products that have no recognized market names.

After the report and recommendations are made by the contractor in April 1975, NMFS will consult with appropriate organizations in the public and private sectors relative to plans and procedures. Considerable time will be required before the program can be completed. Actions will be coordinated with interested parties such as the Food and Drug Administration, the American Fisheries Society, consumer groups, and the fishing industry.



(From left) Mr. Howard; Mrs. Howard; Hazen H. Bedke, Western Region Director; Mrs. Harrell; and Mr. Harrell.

Developers of NOS Airway Fix File Awarded Unit Citation

Rear Admiral Allen L. Powell, Director of the National Ocean Survey, recently presented a Unit Citation to the NOS team re-

sponsible for developing the Airway Fix File.

Each member of the group, which comprised 31

employees in the NOS Aeronautical Chart Division, the Coastal Mapping Division, and the Electronic Computer Division, received a certifi-

cate in recognition of standing individual and collective contributions furthering NOAA's mission



The recipients were (from left) Nathan R. Dooley, Bertram Rothenberg, William C. Leffingwell, Donald T. Oliver, Robert N. Mecklenburg (back), Rose Cohan (front), Emil Homick, Dorothy E. Dubester, Edward P. Devine, Joyce Gilbert, William F. Langley (partly hidden), Deloris Hayes, Admiral Powell, Friason G. Travis, Patricia J. Jordan, Patricia B. Parker, Oliver F. Cooper, LaVerne A.

Barber, Frank M. Wilkins, Odessa S. Scales, Alexander A. Szabo, Nicholas C. Koka, Stephens A. Lucchesi, Walter J. Bienia, (and in photo) Granville K. Emminizer, Jr., Daniel M. Garnet, Robert Lee, Carl G. Nixon, Peggy J. Roberts, Robert H. Gunst, Frank Neidermair, and Ralph W. Shelton.

LSC Charts Exhibited

Lake Survey Center charts have a prominent spot in a month-long exhibit currently being presented in the lobby of the main office of the National Bank of Detroit. The display is entitled "Ships of the Great Lakes" and was put together under the auspices of Robert E. Lee, Curator of the Dossin Great Lakes Museum. The museum is renowned throughout the area for its extensive collection of memorabilia on Great Lakes ships and shipping, for both of which LSC's charts, water level information and other data have always filled an essential need. Among the museum's permanent features are a number of the Center's early, obsolete instruments, presented some time ago as a public service.

Jack Brawner Is Awarded Commerce Bronze Medal

Jack T. Brawner (left) was awarded a Department of Commerce Bronze Medal "in recognition of major contributions to the regional and national marketing programs of the National Marine Fisheries Service." The Medal was presented by NMFS Director Robert W. Schoning.

Mr. Brawner, who was formerly Chief of the Market Research and Services Division of the NMFS Southeast Region in St. Petersburg, Fla., recently was named National Coordinator for the Fisheries Development Program in the NMFS Office of Resource Utilization. Mr. Brawner has been with NMFS and its predecessor agencies for 17 years.



John P. Winner Receives Bronze Medal



John P. Winner (right), Lead Forecaster at the National Weather Service Forecast Office in Washington, D.C., for 17 years, recently received a Department of Commerce Bronze Medal. He was cited for "extremely competent performance of duties and exemplary public service over a period of 35 years."

Karl R. Johannessen, Acting Associate Director of the NWS Office of Meteorology and Oceanography, presented the Medal to Winner.

Employee Killed, Second Injured in Plane Crash

Harold Jacobson, National Weather Service employee stationed at Kodiak, Alaska, was killed in an aircraft accident 40 miles north of

Kodiak on September 1.

NWS employee Jack Endicott was injured in the crash. Mr. Endicott was reported to be in satisfactory condition in a hospital on Kodiak Island on September 5 by Stuart G. Bigler, Director of the NWS Alaska Region.



National Oceanic and Atmospheric Administration

ERRATA NOTICE

One or more conditions of the original document may affect the quality of the image, such as:

Discolored pages
Faded or light ink
Binding intrudes into the text

This has been a co-operative project between the NOAA Central Library and the Climate Database Modernization Program, National Climate Data Center (NCDC). To view the original document, please contact the NOAA Central Library in Silver Spring, MD at (301) 713-2607 x124 or Library.Reference@noaa.gov

HOV Services
Imaging Contractor
12200 Kiln Court
Beltsville, MD 20704-1387
July 23, 2010