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

noaa week

Volume 4 Number 46 November 2, 1973

Winter Fuel Demands Could Increase 1.1%, NOAA Group Says

Fuel demand in the United States this winter will be 1.1 percent higher than last season--even without allowing for economic growth--if this season's temperatures equal the average for the past decade, according to NOAA scientists.

In view of the potentially critical shortage of heating fuels during the coming winter, a task group headed by Dr. J. Murray Mitchell, Jr., of the Environmental Data Service conducted a special analysis of the effects of weather on total national demand for heating fuels.

The results show, Dr. Mitchell says, that, "with few exceptions, the heating seasons since 1957-58 have been colder than those from 1931-32 through 1956-57.

"Whether or not this is a persistent, long-term trend," he notes, "cannot yet be established with certainty."

The NOAA study used monthly mean temperatures for the period from July 1931 through June 1973, reported by thousands of cooperative weather observers throughout the United States (excluding Alaska and Hawaii). These monthly means were converted into monthly and seasonal total heating degree days for each state, weighted to reflect population distribution within the state as shown by the 1970 census. The population weighting procedure ensures that the degree-day averages are biased toward weather conditions in the more populous sections of the states.

The figures were additionally weighted according to the proportional contribution of each state to total national demand for all heating fuels and for gas, oil, electricity, and propane gas individually.

The statistical data compiled by the study group can be summarized to indicate the most probably heating fuel demand for the 1973-74 season. Using the 42-year average and assuming no climatic change, fuel demand for the coming winter could be expected to be 1.8 percent less than last year. Using the 10-year average, which is one way of hedging against climatic change, 1973-74 heating fuel demand can be expected to be 1.1 percent greater than last winter.

Members of the NOAA special task group, in addition to Dr. Mitchell, were Dr. Richard E. Felch of the National Weather Service's Agricultural Meteorology Support Service Program; Dr. Donald L. Gilman of the Weather Service Extended Forecast Division; Frank T. Quinlan, of the Environmental Data Service's National Climatic Center in

(Continued on page 2)

Launch of New NOAA Satellite Is Scheduled for November 6

The day-and-night watch on the earth's atmosphere and oceans will be continued by a new NOAA satellite, scheduled for launch November 6.

Designed and developed for NOAA by the National Aeronautics and Space Administration, the ITOS-F spacecraft will be launched by NASA from the Western Test Range, Lompoc, Calif.

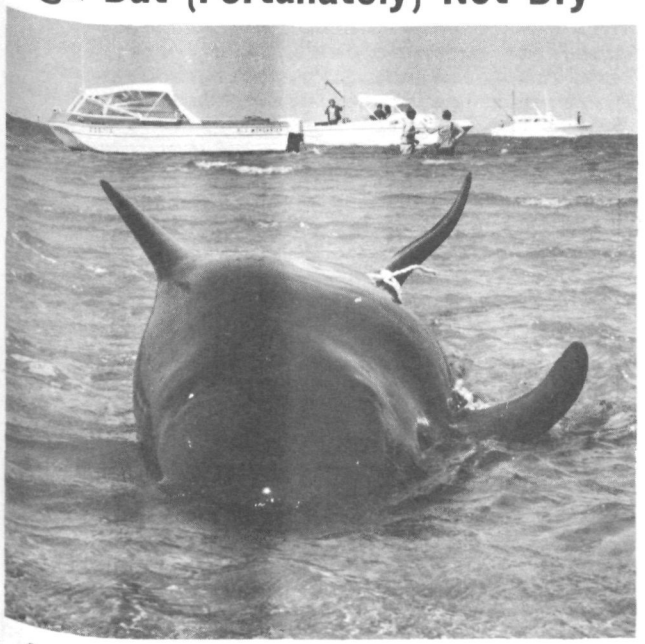
The satellite will be designated NOAA-3 after it successfully enters the 942-mile-high orbit.

Radiometers on board the spacecraft will provide visible and infrared images of cloud cover, snow and ice, and the sea surface, and gather information on temperatures and moisture in the atmosphere. Another sensor will provide data on the solar proton count and distribution in polar regions.

The new spacecraft will be the first to transmit local-area atmospheric radiance data--from which temperature soundings can

(Continued on page 2)

High But (Fortunately) Not Dry



A whale of a tale from the Beaufort (N.C.) Fisheries Center as a beached behemoth is towed back to sea during a remarkable cooperative rescue effort. Turn to page 7 for the story.

ERL Research Grant Of $17,646 Awarded for Water Vapor Study

A $17,646 grant to support research on atmospheric water vapor content has been given to Dr. Russell J. Donnelly of the University of Oregon's Department of Physics by the Environmental Research Laboratories.

Dr. Donnelly and co-principal investigators Dr. Ira G. Nolt and James V. Radostitz, also of the University of Oregon, are attempting to refine methods of measuring water vapor changes in the stratosphere as part of the highly complex chemical reaction studies involving it with ozone, nitrogen oxides, and water vapor products. Water vapor changes occurring in the atmosphere are caused both by man's activities--for example, high-altitude jet aircract--and nature's--for example, thunderstorms.

Scientists are concerned that an excess of water vapor in the atmosphere might upset the atmosphere's thermal balance; or that water vapor, along with other substances, could act as a "sink" for ozone, which filters out much of the solar ultraviolet radiation which reaches earth. Drs. Donnelly, Nolt, and Radostitz are using spectroscopic far-infrared to measure sky radiation as a cross check of radiometer measurements aboard jet aircraft.

Martin T. Decker of the Environmental Research Laboratories' Wave Propagation Laboratory is also involved in remote sensing of the environment in this region of the spectrum. He will be monitoring the Oregon research project.

NOAA Satellite Launch (Continued from page 1)

be calculated--directly to properly equipped ground stations. Several foreign countries, including Norway and France, are planning to receive and process these atmospheric soundings for operational use in weather forecasting.

The launch of ITOS-F will maintain the operational satellite system that for more than 7 1/2 years, has provided regular global observations of cloud systems and other environmental features for the forecast and warning services of the United States and other nations.

Irish Visitor Meets Weathermen

Shown at a reception in New York City marking the week of a "Today Program" visit to the Irish Republic are (foreground, from left) James W. Allen, Meteorologist at the New York City National Weather Service Office; Dr. Garret Fitz Gerald, T.D., Minister for Foreign Affairs of the Republic of Ireland; Mrs. Thomas C. Morgan; and Thomas C. Morgan, Principal Assistant at the New York City NWS Office. The visit was sponsored by the Irish Government to foster trade and tourism and featured a daily joint U.S. and Irish weather report. The New York City NWS Office, which provides the weather information for the Today Program, relayed to it each day the Irish weather reports, which originated at the Dublin Center of the Irish Meteorological Office.

NOAA Ship Whiting Completes 1973 Field Season

The NOAA Ship Whiting, commanded by Commander Jeffrey G. Carlen, has completed her field season after marking up 4845 miles of ocean hydrography off the South Carolina and Georgia coasts. In the process, she located an uncharted wreck and a 100-foot deep trench on the ocean floor.

The Whiting, with a complement of eight officers and 31 crew, was deployed from May to October on the Southern Coastal Plains Expedition, a detailed survey of the southeast continental shelf of the United States. This year the ship and her launches surveyed 394 square miles of the ocean floor from Fripp Island, S.C., to the Savannah River entrance in Georgia. The ship received the Atlantic Marine Center "Well Done Award" in August for a record month production of over 1000 lineal miles of combined ship and launch hydrography. The vessel celebrated her tenth year in July as a commissioned vessel.

Winter Fuel Demands Could Increase 1.1%, NOAA Group Says (Continued from page1)

Asheville, N.C.; and Dr. Ralph M. Rotty, a National Academy of Sciences/National Research Council Senior Research Associate assigned to the Air Resources Laboratories of NOAA's Environmental Research Laboratories. (Dr. Rotty is on leave of absence from his post as Dean of Engineering at Old Dominion University in Norfolk, Va.)

MOST PROBABLE 1973/74 NATIONAL TOTAL HEATING FUEL DEMAND AS PERCENT DEVIATION FROM 1972/73 DEMAND BASED ON TWO CRITERIA, FOR CONSTANT ECONOMY

CRITERION	DEVIATION FROM 1972/73 DEMAND (BY FUEL TYPE) ALL FUELS	GAS	OIL	ELECTRICITY	LPG
1973/74 weather equal to average of past 42 years (neglects climatic trend)	-1.8%	-1.9%	+0.6%	-2.6%	-3.5%
1973/74 weather equal to average of past 10 years (hedge against climatic trend)	+1.1%	+0.7%	+3.2%	+0.5%	-0.6%

ERL Scientists Have Unique Opportunity To Study Twin Tornado

On April 30, 1970 near Oklahoma City a band of thunderstorms and the tornadoes they spawned provided a rare scientific opportunity as they turned across a 44-station NOAA instrument network. For eight hours, the thunderstorms and tornadoes raged through this area on the southeast edge of the city, leaving behind enough data to give Environmental Research Laboratory scientists a unique closeup of one of nature's most elusive phenomena--the twin tornado.

Results of the analysis published by the National Severe Storms Laboratory suggest that multiple tornado funnels beneath the same rotating parent thundercloud occur often enough that they cannot be considered freaks of nature. And the mechanisms which cause them may be related to an outrush of cold air from larger-than-average or "supercell" thunderstorms.

"In other words, an intense, small-scale low pressure area beneath the updraft that feeds the supercell causes warm moist air to be sucked up from below the cloud," explains Dr. Stanley L. Barnes, a research meteorologist at the National Severe Storms Laboratory.

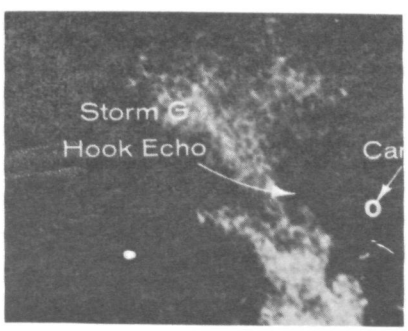
"At the same time, potentially cold mid-tropospheric air--colder than air at the earth's surface--is brought to ground level by evaporated cooling, providing the conditions to support wave-like motions of air along the gust front--the boundary between the cold air and the warm, moist air it is replacing."

The moist air's vorticity (or localized spinning) generated by this wave motion is stretched and concentrated vertically in thundercloud updrafts along the storm's flank. As the rotation is concentrated, the updrafts conserve their energy like a spinning iceskater, whose rate of spin increases as the arms are brought close to the body--the rising air currents spin more rapidly, eventually merge with the main supercell updraft, and impart their rotational properties to it.

"In time, the supercell updraft may attain significant rotation through this or some other mechanism so that subsequent smaller vortices, which I believe are funnel clouds, find themselves in an environment favoring their growth; that is, they become tornadoes," the NOAA scientist says.

According to Barnes, rotating updrafts and tornado funnels are two different scales of motion. At present, the National Severe Storms Laboratory's conventional radar cannot pick up the smaller-scale funnels and instrumented stations of the network are not close enough together. What the radar can detect is a hook echo--the image or pattern of raindrops spinning around with the cloud.

"We think that what is seen in the radar's hook echo is a signature of a tornado cyclone--a large circulation pattern which averages two to five miles across," Barnes says. "Our instrumented stations also sense the surface wind fields of a tornadic cyclone but generally not smaller-scale funnels which average only 100 to 1,000 yards wide. However, not all radar hook echoes have tornadoes nor do all tornadoes occur with a hook echo. Sometimes tornadoes are so short-lived that raindrops do not become involved in the circulation, and radar is unable to pick up an echo."



Telltale hook echo associated with April 30,1970, tornado as it appeared on NSSL radar.

NMFS Representatives Will Attend December 4-11 International Fisheries Meeting Slated for Tokyo

Several fisheries experts from the National Marine Fisheries Service will attend one of 1973's most important international fisheries meetings to be held in Tokyo, Japan, December 4 to 11, under the sponsorship of the Food and Agriculture Organization of the United Nations, at the invitation of the Government of Japan. Thirty or more representatives of the U.S. fishing industry and other Federal agencies also plan to attend the six-session Conference.

The Technical Conference on Fishery Products will bring together representatives of fisheries interests from all over the world, who will exchange opinions and information on more effective use of available fish resources and more intensive exploitation of all aquatic supplies.

Discussion topics will include the present status of world fisheries; projected changes in both supplies and demand for fish products during the next two decades; more practical and more profitable usage of presently accepted fish products, as well as development of acceptable food products from plentiful but ignored species; processing and marketing methods and customs; international cooperation; and different national approaches to fishery problems.

Particular emphasis will be placed on the present and future needs of developing countries. The Tokyo location of the meeting will afford delegates an opportunity to acquaint themselves with the highly advanced methods developed by the Japanese fishing industry, from the most sophisticated to those at the cottage industry level.

Some 80 scientific and technical papers will be presented. Conference sessions will be conducted in English, French, and Spanish.

Conference participation is open to those with experience and expertise in the area of fish products and processing. In the U.S., inquiries and applications may be addressed to: Joseph W. Slavin, Associate Director for Resource Utilization, National Marine Fisheries Service, National Oceanic and Atmospheric Administration, Department of Commerce, Washington, D.C. 20235.

personnel perspective

Training Opportunities Under 1973 NOAA EEO Affirmative Action Plan

Part IV of the NOAA National EEO Affirmative Action Plan requires that NOAA provide opportunities for its employees and applicants for employment to enhance their skills and increase their promotion potential through participation in various special programs. Examples of these special programs and the number of participants in each for Calendar Year 1973 follow:

1. Administrative Fellowship - 1
2. Administrative Trainee - 15
3. Adult Basic Education - 23
4. After-Hours College Training - 68
5. Alaskan Native - 9
6. American Indian - 2
7. Cooperative Education - 82
8. Federal Junior Fellowship - 47
9. College Work Study - 63
10. Work Incentive - 4
11. Public Service Careers - 13
12. Resident University Training - 58
13. Secretarial Training - 43
14. Veterans Readjustment Appointments - 53
15. Micronesian Intern - 3

The preceding list is indicative of the broad range of programs available to NOAA employees for the purpose of increasing their advancement potential. Information concerning these programs as well as others that are available may be obtained from servicing personnel offices or the Special Programs Section of the Personnel Division on 301-496-8093.

NOAA has increased its career counseling staff to more effectively assist employees with their career goals and plans for advancement. Two career counselors, located in the Washington area, are primarily responsible for conducting NOAA-wide training courses for supervisors and managers in career counseling techniques. Supervisors and managers can become effective agents of change when their personnel skills are sharpened, thereby allowing them to give increased attention to the basic needs of their subordinates especially in the crucial area of career mobility. NOAA has also added, under the expanded EEO Program, three upward mobility counselors to the staff of the Personnel Division. One counselor will be located in the Washington area with the remaining two in the field: one at the National Weather Service's Central Region Personnel Office in Kansas City, and the other at the Northwest Administrative Services Office in Seattle, Washington. These new counselors will provide professional counseling assistance to supervisors, managers and employees and will also assist in the career counseling training at field locations. Other areas in which these counselors will provide leadership and assistance include the initiation of studies concerning the underutilization of employees in their present positions, the placement of employees into programs to help their career mobility and the development of individualized career management plans for employees in relatively low-level clerical and quasi-administrative positions. Servicing personnel offices as well as the Special Programs Section of the Personnel Division are also available to assist with career progression plans and problems.

NOAA has also developed additional career opportunity plans in the scientific area (Graduate Scientist, Scientific Technician, Science Intern and 20/20 Work Study) to facilitate the entry of minorities and women into the major NOAA scientific and professional disciplines. These four new programs will involve some 90 participants in Fiscal Year 1974 and mark a beginning effort by NOAA to fulfill its EEO commitments in those occupations we utilize most - meteorology, the physical and earth sciences.

NOAA is also increasing the publication and dissemination of information which describes upward mobility and other career advancement opportunities for its employees. This will be accomplished by including additional information in NOAA WEEK on career progression opportunities, distributing more training flash announcements on available programs, and publishing additional upward mobility brochures. Hopefully, these efforts will help to ensure that NOAA employees understand and fully utilize the available programs designed to increase their career movement.

Retirement Bonus News

President Nixon has signed into law a bill giving annuity increase "bonuses" to Federal employees who retire after such raises go into effect. The legislation is aimed at ending the massive, last-minute retirements that have occurred each time a cost-of-living increase has gone into effect. Before the new law, Federal employees had to retire before a new pension bonus went into effect to qualify for it.

Under the new act, employees can retire any time after a pension increase goes into effect and get the full benefit of it. The law guarantees that the employee will either get the full amount of the last pension increase, or the amount of additional annuity earned by regular service, whichever is greater.

The Consumer Price Index (CPI) has exceeded the necessary three percent factor for both August and September, 1973. If it remains at three percent or higher in October, an annuity increase of at least 4.7 percent will become effective January 1, 1974. Coupled with the new law, this would mean that Federal employees who retire by December 31, 1973, would receive a sizeable annuity bonus. Actual percentages will differ depending on individual annuity computations.

Scientific Upward Mobility Training Programs Described

NOAA employees may now submit applications for the four Scientific Upward Mobility Training Programs which were announced in the September 14, 1973, issue of NOAA WEEK: Scientific Technician, 20/20 Work Study, Science Intern, and Graduate Scientist. These programs are designed to provide opportunities for NOAA employees, as well as outside candidates, to enter NOAA's numerous scientific career fields at various levels by providing both on-and off-the-job training. Training can encompass a one, two or three year period depending upon an individual's skills and capabilities and the choice of program. Training and target positions are located in Washington, D.C. as well as other parts of the United States where NOAA's major organizational elements are located.

The Scientific Technician Program is an on-the-job training program designed to develop technicians in science or technology. The program was created for candidates at the GS-1 through 5 level, or equivalent, without specialized skills and experience in science or technology, who would be taught such skills on-the-job and in specialized courses. Such training will prepare them for non-degree technician positions at the GS-5 entrance level.

The 20/20 Work Study Program was created as a half-time study program for candidates at the GS-2 level and above who possess a minimum of one year of technical experience or one year of post high school education. Upon selection, trainees will work 20 hours weekly in a scientific or technician position and spend the remaining 20 hours of the work-week attending college or technical courses which are career oriented to one of NOAA's scientific professions. While in training status, NOAA will pay salary and tuition expenses of trainees.

The Science Intern Program is a full-time two year study program designed to develop professional scientists. It was created for candidates at the GS-4 level and above who possess an Associate Degree or have successfully completed two academic years of post high school education in an accredited college, junior college or technical institute which included or was supplemented by 24 semester hours of scientific or technical courses such as biology, chemistry, physics, mathematics, geology, geophysics, hydrology, meteorology, oceanography, engineering, etc. Upon selection, these interns will be placed in their target positions.

The Graduate Scientist Program is a one year full-time study program designed for candidates who possess a Bachelors or Masters Degree but lack scientific training in a specific NOAA discipline (e.g. a physics major who lacks hours in meteorology in order to qualify as a meteorologist). This program was created for any candidate meeting the criteria. Trainees will undergo full-time, NOAA-paid training to qualify for one of the specialized scientific occupations utilized by NOAA.

Candidates who have successfully completed one program may apply for consideration to another program after a twelve-month waiting period. More detailed information on eligibility requirements is contained in the Scientific Upward Mobility Training Programs Brochure scheduled for NOAA-wide distribution by November 5, 1973.

NOAA employees interested in applying for one of these programs should submit an Employee Interest Statement (NOAA Form CD 261), an up-to-date Personal Qualifications Statement (SF 171), and an Employee Appraisal (NOAA Form 52-6) through their immediate supervisor. Preference for a particular scientific field should be entered in the block entitled "Vacancy Announcement Number" on NOAA Form CD 261. Candidates outside of NOAA should submit only a Personal Qualifications Statement (SF 171). Send all information to: NOAA Personnel Division, AD422, 6001 Executive Boulevard, Rockville, Maryland 20852.

Applications for the four programs will be accepted until the dates specified below:

Scientific Technician	- December 14, 1973
20/20 Work Study	- December 14, 1973
Science Intern	- January 15, 1974
Graduate Scientist	- January 15, 1974

Open Season for Health Benefits Announced

The U.S. Civil Service Commission has scheduled an "open season" for health benefits during November 15-30, 1973. During this time eligible employees may newly enroll and employees and retirees already enrolled may change from one plan or option to another or from self-only to family coverage. Employees not wishing to make a change in enrollment need take no action during this open season.

Changes made by employees and annuitants during the open season will take effect the first pay period in January 1974, the same time that new premium rates for the 40 existing plans in the 1974 Federal Employees Health Benefits Program become effective.

Prior to November 15, 1973, each employee will receive an open season instruction pamphlet, a list of premium rates for all plans, and brochures for the Government-wide Service and any group-or individual-practice which is available locally.

Employees wishing to enroll or make a change in coverage must complete a Standard Form 2809, "Health Benefits Registration Form." These forms are available from servicing personnel offices and must be submitted to those offices prior to the close of business, November 30. To facilitate the processing of changes, please make desired changes as early as possible in the open season.

notes about people

Fred A. Davis, Jr., Baltimore, Md.

Fred A. Davis, Jr., has been appointed Meteorologist in Charge at the Baltimore Weather Service Office. Mr. Davis, the former Principal Assistant at the Baltimore Office, succeeds Clarence Reynolds who recently retired after 31 years of Federal service.

Mr. Davis, a graduate of Florida State University, joined the Weather Service as a student trainee in 1961 at Boston, Mass. In 1962 he was assigned the duties of a Briefer-Observer at the Weather Service Office in Richmond, Va., and four years later, he was selected to supervise the weather office at Toledo, Ohio. In 1969, he was promoted to Principal Assistant at Baltimore. Prior to entering the NWS, he served three years in the U.S. Army Ballistics Meteorology program.

Thomas A. Rush, Tallahassee, Fla.

Thomas A. Rush, Aviation Services Quality Control Officer at the National Hurricane Center at Miami, has been selected to head the National Weather Service Office at Tallahassee, Fla. He succeeds Mr. D.R. Davis, who has transferred to the Weather Service's Environmental Study Center at Auburn, Alabama. A pilot during World War II, Mr. Rush was in the aviation business for 10 years before entering the Weather Service at Jackson, Miss., in 1955. Mr. Rush was head of the weather station at West Palm Beach, Fla., from 1965 to 1967. Mr. Rush expects to enter on duty in his new post around November 1.

Mary E. Pratt, Washington, D.C.

Mary E. Pratt recently received a Certificate of Accomplishment for Library Technicians from the Graduate School, U.S. Department of Agriculture. Dr. John Holden, Director of the Graduate School, presented certificates to Ms. Pratt and others in a special awards ceremony.

These certificates are presented to those individuals who complete a well-rounded program in their chosen field of study. The library technicians are generally involved in work requiring a practical knowledge of library functions and services and the ability to apply standard library tools, methods, and procedures to the service needs of a particular library.

Clyde L. MacKenzie, Jr., Highlands, N.J.

Clyde L. MacKenzie, Jr., Fishery Biologist has joined the NMFS's Middle Atlantic Coastal Fisheries Center, MACFC, after completing a one year special duty assignment in Canada, where he served as Oyster Consultant to the Department of Fisheries, Province of Prince Edward Island. The Province is attempting to improve all phases of its economy, including the oyster industry, under a comprehensive development plan.

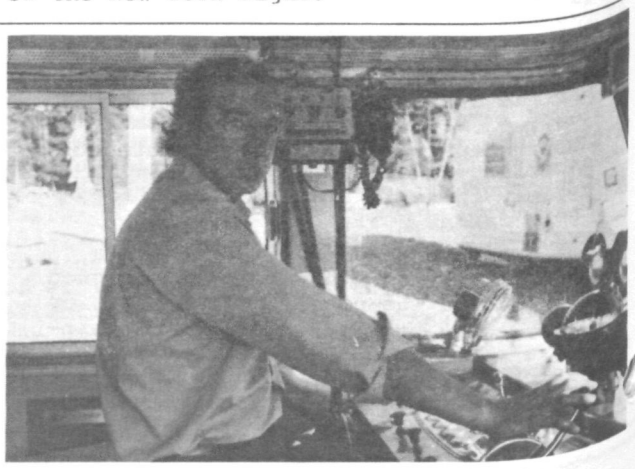
During his stay in Canada, Mr. MacKenzie devised and implemented a new plan of management that will lead to significant increases in earnings of fishermen and production of oysters. He also supervised the construction of the Province's first large oyster boat that will transplant oysters and shells on public grounds.

At MACFC, Mr. MacKenzie will play an important role in ongoing resource studies of the New York Bight.

Amos Perry, Detroit, Mich.

Amos Perry is the new skipper of the Lake Survey Vessel Laidly. The 54-foot 20-ton hydrographic survey craft is used primarily in support of field survey operations. Based at Detroit, Mich., it was built especially for the Lake Survey to meet the agency's specialized needs as official chartmakers for the Great Lakes area.

The new skipper has a BA degree from Michigan State University and also attended the University of Michigan, Alpena (Mich.) Community College and the University of Florida. Perry holds a Coast Guard Operator's License for the Great Lakes and Florida's inland waters and is also an experienced commercial radio announcer.



Multi-agency Effort Mounted To Save Stranded Whales in N.C.

The North Carolina Fisheries Commission, students and faculty of the University of North Carolina, NMFS personnel, and other volunteers have been cited for their role in rescuing at least a dozen whales that had beached themselves near Beaufort, North Carolina, on October 10 and 11.

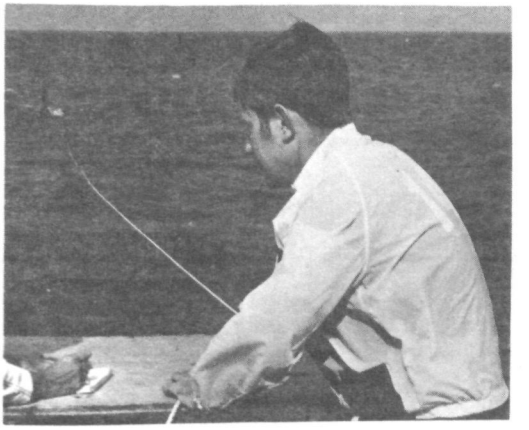
The rescue efforts became necessary when about 35 or 40 pilot whales--ranging in size from a four-foot new baby to specimens as long as 25 feet and weighing from 400 to 1,500 pounds--beached themselves near Cape Lookout Light, along several miles of marshland and sandy shore.

North Carolina Fisheries Commissioner Ed McCoy called on NMFS for assistance, and the director of the Atlantic Estuarine Fisheries Center at Beaufort, Dr. Theodore R. Rice, assigned a dozen members of his staff and three research boats to join the salvage operations. The State Fisheries Commission and the University of North Carolina also provided boats.

Rescue procedures were catch-as-catch-can, as few of the people involved had any previous experience in similar situations. A spotter plane flown by a North Carolina enforcement officer directed the boats equipped with radios to the locations of beached whales while the other boats criss-crossed the inlet seeking the animals.

If the animals were still alive (many were already dead or in death throes when located), rescuers had to push, pull, hoist, or drag the heavy bodies to deeper water, then tie thick nylon rope at the base of the tail (called the flukes). Once secured, the live whales were towed out to sea, with the boats slowing to a near stop every few minutes to allow the animals to surface and breathe. At the end of the second day when the boats returned to port, about a dozen of the whales were sighted by the spotter plane about four or five miles offshore moving toward open water.

"The entire rescue operation was handled extremely well," according to NMFS Director Robert W. Schoning. "This is a striking example of how voluntary cooperation within the spirit of the Marine Mammal Protection Act of 1972 has benefited both the ocean environment and marine mammals."



Roped, pushed, pulled, tugged, the lucky ones were returned to deep waters...and, hopefully, life.

Grant Will Support Study of Aerosol Particles

NOAA's Environmental Research Laboratories has awarded a $15,631 grant to support research on the world-wide distribution of maritime aerosol particles. The award was given to Austin W. Hogan of the State University of New York at Albany, who is attempting to make judgments about the strengths of sources and sinks of aerosol particles by continuing his measurement of maritime aerosol particles existing over the ocean and studying the basic transport and removal process for these particles. To accomplish this, the New York scientist has been frequently and systematically measuring aerosol concentrations in remote areas to determine whether concentrations of man-generated particulate pollutants are increasing with time as a result of fossil-fuel burning.

Donald H. Pack, of the Environmental Research Laboratories' Air Resources Laboratories, and director of NOAA's Geophysical Monitoring for Climatic Change Program, will monitor the State University of New York research project.

Aquaculture Training Program Proves Popular

"On-the-job training" in shrimp aquaculture is attracting an increasing number of scientists from this country and abroad to the National Marine Fisheries Service facility at Galveston, Texas. The program is another step in international cooperation on fisheries research particularly with scientists from Latin American nations.

The Gulf Coastal Fisheries Center at Galveston deals with the culture of shrimp native to the Gulf of Mexico. Specific areas of research include maturation, diseases, nutrition, and hatchery technology.

Progress in shrimp aquaculture is being followed closely in many parts of the world. Three Brazilian scientists recently concluded a two-month training period at Galveston and on August 1, three scientists from the Center for Scientific and Technological Research, Sonora, Mexico, began three- to six-month training sessions. Last year the Galveston Fisheries Center sponsored a series of lectures and laboratory sessions for 18 scientists from nine Latin American countries.

Sea Grant Organization Honors Texas A & M's Leatha F. Miloy

Texas A&M University's Leatha F. Miloy was elected president of the National Association of Sea Grant Program Institutions at its recent sixth annual meeting and will assume the presidency at the association's 1974 annual meeting in Seattle. This is the first time a woman has headed a major ocean-related association. Fifty universities and colleges across the nation are members of the association, which was organized to enhance the effectiveness of work on the wise development of marine and coastal resources.

Mrs. Miloy is director of information and special services for TAMU's Sea Grant College Program, and also heads a publications program in the office of the Vice-President for Academic Affairs.

Last July, she received the first award presented for service to the National Sea Grant Program for her work in designing a scenario for a slide series that tells the Sea Grant story.

TAMU President Jack K. Williams said, "Her outstanding talents and accomplishments in marine activities were instrumental in TAMU's designation in 1971 as one of the nation's first Sea Grant Colleges."

Mrs. Miloy earned a bachelor's degree with honors in 1957 from Sam Houston State University, a master's degree in 1966 from Texas A&M University, and is currently a TAMU doctoral candidate.

Lakes' Research Projects Directory Published

The Lake Survey Center's Great Lakes Research Project Forecasts Directory 1973 (NOAA TM NOS LSC D 5) is now available. This paper-back volume of more than 300 pages, compiled from volunteered information, contains a wealth of data not to be found elsewhere in one place. It describes over 270 proposed, continuing, and completed Great Lakes water-related research and development projects, technical reports, theses, and data surveys made during 1973. Copies may be purchased from the Center for $5.00 each, prepaid.

EDS Man Speaks on Data Centers and Services

Lewis Pitt, Environmental Data Service's Special Projects Officer, was an invited speaker at a joint conference of the New York Chapter of the Special Libraries Association and the Metropolitan New York Chapter of the American Society for Information Science held in New York City, Oct. 12. The theme of the conference was "Libraries, Information and the Environment." Mr. Pitt spoke on "The Environmental Data Service Data Centers and Services."

recipe of the week

BAKED COD WITH SHRIMP SAUCE

2 pounds cod or other thick fish fillets, fresh or frozen
1/4 cup margarine or cooking oil
1 teaspoon salt
1 cup sliced fresh mushrooms*
1 can (10-1/2 ounce) condensed cream of shrimp soup
1/4 cup half and half (half milk, half cream) or milk
2 tablespoons dry sherry (optional)
1/4 teaspoon rosemary
1/4 teaspoon paprika
Chopped parsley (optional)

Thaw frozen fish. Place in shallow 2-quart baking dish. Drizzle 2 tablespoons melted margarine or cooking oil over fish and sprinkle with salt. Bake in moderate oven, 350° F., for 25 to 30 minutes or until fish flakes easily when tested with a fork. Baste with pan juices several times during baking. While fish is baking cook mushrooms until tender in remaining 2 tablespoons melted margarine or cooking oil. Add soup, half and half or milk, sherry, rosemary, and paprika; stir and heat thoroughly. Spoon sauce over fish and sprinkle with parsley. Makes 6 servings.

*If desired, two 4-ounce cans sliced mushrooms may be drained and substituted for fresh ones.

Items to be considered for publication in NOAA WEEK should be submitted to:
Office of Public Affairs, NOAA, Room 221, Bldg. 5, Rockville, Md. 20852. Phone (301) 496-8243.

National Oceanic and Atmospheric Administration

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