

Phillips Is New Director Of The NGS

NOAA has announced the appointment of Capt. John O. Phillips as Director of the National Geodetic Survey.

The National Geodetic Survey, with headquarters in Rockville and component of NOAA's National Ocean Survey establishes and maintains the national geodetic control networks—the National Reference



Capt. John O. Phillips

System for all local, regional, and national surveys and maps. The networks also serve as the reference for crustal movement surveys in earthquake-prone areas, and for subsidence monitoring in the coastal zone and other areas where underground resources are being removed. It conducts satellite geodesy operations, gravimetric and astronomical surveys and investigations of the movements of the earth's crust.

Since 1942, Phillips has served as an officer in the NOAA Corps. His past assignments include the command of NOAA research ships Hodgson, Pathfinder, and Oceanographer; Chief, Geodesy Division; and Associate Director, Geodesy and Photogrammetry; as well as Di-

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NOAA Would Go To DNR Under President's Reorganization Plan

A Department of Natural Resources consolidating many of the Government's oceanic and atmospheric programs as well as public lands, will be proposed to the Congress by President Carter.

The new Department would include NOAA, the Department of the Interior, and the Forest Service of the Department of Agriculture, and would be based on the existing Department of the Interior.

NOAA Administrator Richard A. Frank stated that the creation of the new Department and NOAA's move would occur about October 1, if Congress does not disapprove the reorganization plan. Frank has asked Deputy Administrator James Walsh to head a NOAA Task Force to assist with the planning and transition.

The President has stated that

Lab Created For Marine Mammal Study

A research laboratory designed to serve as the center for national study of marine mammals has been established in Seattle by NOAA.

The new facility was created in response to growing national and international concern for the welfare of marine mammals, and to permit research necessary for their conservation.

The National Marine Mammal Laboratory will take the lead in addressing marine mammal problems of national significance, as well as fulfilling America's commitments under international marine mammal agreements.

NOAA scientists there will provide a pool of technical

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no government employee will lose a job because of the reorganization, which is expected to save taxpayers an estimated \$100 million and reduce duplication of activities, such as the overlap between NOAA and Interior in fish hatchery operations, environmental studies, and studies of fish which migrate

between fresh and salt water.

The President's proposal states that Government institutions have failed to keep pace with the need to make important and complex natural resources policy decisions, and lack the ability to make the comprehensive natural resources decisions that are needed now.

U.S./U.S.S.R. Continue Joint Oceanic Research

A three year extension of the U.S./U.S.S.R. agreement for joint oceanic research was announced in Moscow last month by Richard A. Frank, NOAA Administrator. Soviet and U.S. scientists at the same time agreed upon a series of joint future ocean research projects to be undertaken through 1981.

U.S. and U.S.S.R. cooperative science activities take place under the terms of the Agreement on Cooperation in Studies of the World Ocean, originally concluded in 1973. The Soviet delegation was headed by Academician A. V. Sidorenko, Vice President of the U.S.S.R. Acad-

emy of Sciences. Frank emphasized that, as we better understand the influence of the oceans on climate, oxygen, and carbon dioxide cycles, and on the global environment, ocean research becomes of ever greater importance to all mankind. He concluded that further advances in ocean sciences are now even more critical to wise ocean use. Frank noted that the results of U.S./U.S.S.R. joint research projects have been made available to other countries and therefore benefit the world at large.

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Academician A. V. Sidorenko, Vice President of the U.S.S.R. Academy of Sciences (seated, left) and NOAA Administrator Richard A. Frank (seated, right) sign an agreement for a three-year extension of joint oceanic research as Dr. Donald P. Martineau, NOAA, stands by Sidorenko and Dr. Alexander P. Metalnikov, U.S.S.R., stands by Frank.

Southern Hemisphere Hurricanes Subject Of Joint Study

Southern hemisphere hurricanes, called tropical cyclones, will be probed for the first time ever by NOAA scientists and their Australian colleagues during a month-long cooperative experiment Down Under.

The research flights by one of NOAA's heavily instrumented research aircraft are scheduled to continue through late March, in cooperation with Australia's Department of Science and Bureau of Meteorology, according to Dr. Robert C. Sheets, of NOAA's National Hurricane and Experimental Meteorology Laboratory in Miami.

The project's effort, Sheets

said, is to work more closely with the Australian scientists and aircrews in further developing techniques of airborne hurricane research, and to obtain data on the structure of the southern storms for comparison with that already available for Atlantic and North Pacific hurricanes.

"The Australians don't have an equivalent of our hurricane reconnaissance flights by Air Force and NOAA aircraft, and depend mainly on satellite information to warn them of approaching storms. This will be an opportunity for Australian meteorologists to use data collected in these storms for real-

time forecasts and warnings as well as demonstrating the potential for research," Sheets said.

Although most Australian cyclones come ashore in sparsely populated coastal areas, Sheets noted that there have been destructive exceptions like Tropical Cyclone Tracy, which caused heavy damage to Darwin in 1975.

The current mission, in which no seeding of the big storms will be attempted, could also be a precursor to a cooperative U.S.-Australia effort involving Project Stormfury, NOAA's experimental attempt to reduce hurricane winds through cloud seed-

ing.

"A joint experiment with Australia has been under discussion," Sheets said, "and could be beneficial to both sides. For it would mean the opportunity to continue our experiments during the northern winter, which coincides with the Australian summer and hurricane season. For the Australians, it would mean a greatly improved understanding of storms in this region, and the possibility of developing the techniques to reduce their destructive power."

Given the possibility of an eventual joint Stormfury experiment, Sheets explained, a further objective of the mission will be to quantify the similarities and differences between Australian tropical cyclones and Atlantic hurricanes.

"The obvious difference, of course, is that these southern hemisphere storms have clockwise circulations," he said, "while the northern storms have counterclockwise circulation at the surface. But there may be subtle differences that affect our operations in the storms. I don't know that much about the vertical structure and other dynamic features of these storms, or whether they're similar to those of Atlantic hurricanes."

Agreement Continues Joint Research

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Plans for continued scientific cooperation were agreed upon in five areas - studies of the southern ocean (the waters surrounding Antarctica), ocean currents and dynamics (POLYMODE), the Deep Sea Drilling Project, instrumentation intercalibration, and biological productivity and biochemistry.

Southern ocean studies will be continued with investigations of the Antarctic Circumpolar Current by both the United States and the Soviet Union during the austral summers (which are winter months in the northern hemisphere) of 1978-79 and 1979-80. The U.S. National Science Foundation provides overall support for the U.S. portion of the program, which will include deployment of current moorings and extensive water column measurements with expendable bathythermographs and conductivity-temperature-depth instrumentation.

The 1977-78 POLYMODE field investigation of eddy-like ocean circulation features in the western North Atlantic, one of the largest physical oceanographic experiments ever undertaken, has now been completed, leading to the highly important data analysis and interpretation phase. A series of joint workshops, theoretical symposia and scientific assemblies will be held during the next three years, and a joint U.S./U.S.S.R. POLY-

MODE Atlas will be published in 1981.

The Deep Sea Drilling Program, which is carried out under a separate Memorandum of Agreement between the U.S. National Science Foundation and the U.S.S.R. Academy of Sciences, will focus on three specific problems of Atlantic paleo-oceanography, using the drilling vessel *Glomar Challenger*. Both Soviet and American delegates to the meeting noted the success to date of the International Phase of Ocean Drilling.

Intercalibration and standardization work will be continued with exchange and comparative measurements on sea water standards, and intercalibration of oceanographic instruments.

Biological productivity and biochemistry cooperative efforts will continue to be carried out through joint workshops and symposia, as has been accomplished so successfully in the past, with the publication in both languages of the proceedings of two workshops.

In addition to Co-Chairman Frank, the other U.S. members of the Joint Committee attending the recent meeting were Dr. Richard F. Hoglund, Deputy Assistant Secretary of the Navy for Research and Advanced Technology; Dr. Dirk Frankenberg, Director, Division of Ocean Sciences, National Science Foundation; M. James Wilkin-

son, Deputy Director for Exchanges, Office of Soviet Ocean Affairs, Department of State; Dr. Ned A. Ostenso, Director, National Sea Grant College Program, NOAA; Dr. Warren S. Wooster, Institute of Marine Studies, University of Washington; Dr. Arthur E. Maxwell, Provost, Woods Hole Oceanographic Institution; and Dr. Allan R. Robinson, Gordon McKay Professor of Geophysical Fluid Dynamics, Harvard University.

Center

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expertise to help in planning and carrying out research on local or regional marine mammal problems.

Establishment of the laboratory in Seattle recognizes the city's longstanding role as a center of Federal marine mammal research in the U.S. With the passage of the Marine Mammal Protection Act of 1972, the Marine Mammal Division of NOAA's Northwest and Alaska Fisheries Center in Seattle assumed responsibility for most of the Department of Commerce's research programs on whales, seals, and sea lions.

The new laboratory will continue to be administered by the Northwest and Alaska Fisheries Center and will participate in the Center's Bering Sea Ecosystem Project, evaluating interactions among marine mammals, fish, and other major elements.

NOAA NEWS

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

Norma V. Reyes, Editor
Warren W. Buck, Jr., Art Director

Senior Citizens Volunteer To Watch Weather For NWS

A group of senior citizens in Lee County, Miss. recently launched into a new area of voluntarism. They became weather watchers for the National Weather Service, serving both as daily weather observers and as tornado spotters during times of severe weather.

These volunteers are members of the Lee County Retired Senior Volunteer Program — one of thirteen programs in Mississippi which are funded by ACTION, the Federal volunteer agency — and are sponsored by the County Cooperative Extension Service. The weather watcher project grew out of a community need which was dramatically demonstrated by a May 1978 tornado which struck Lee County with little warning.

Investigations following this storm revealed that Northeast Mississippi is without adequate

radar protection from tornadoes and also suffers from a lack of trained tornado spotters. Because of this situation, the Lee County RSVP began coordinating the Lee County Tornado Preparedness Project with the twofold purpose of bringing about a solution to the radar problem and to develop ways in which senior citizens could help immediately as tornado spotters.

Working with the Lee County Civil Defense and the Jackson office of the NOAA National Weather Service, thirty senior citizens received training as tornado spotters and on January 1, began keeping a daily Weather Diary on data from their particular sections of the County. Their reports will be compiled at the end of each month into a composite form by a 15-year old

Illinois Loses OCSZ Funds For Failing To Pass Legislation

NOAA has cut off financial support of the Illinois coastal zone management program because the State has failed to pass necessary legislation to implement the program, Robert W. Knecht, head of NOAA's Office of Coastal Zone Management, has announced.

Illinois, which has received a total of \$1,709,000 in Federal grants since 1974 to help plan its coastal management program, is the only state to have its program discontinued in this manner by NOAA.

Phillips

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Director, National Geodetic Survey (1971-72). He received the Commerce Department's gold medal award for exceptional service in 1960.

A civil engineer, Captain Phillips graduated from Carnegie Institute of Technology, in 1941. He also received training in electronics at Bowdoin College and Massachusetts Institute of Technology, and in oceanography at the University of Washington.



NOAA's Arva Jackson and Mississippi Governor Cliff Finch pose with RSVP Volunteer Dave Young at a luncheon at the Governor's Mansion honoring Young and his RSVP colleagues for their help as weather watchers in Lee County, Miss.

student from Tupelo who is planning a career in meteorology. These reports are sent to the National Weather Service Office in Jackson monthly.

In January, ten of the fifteen weather watchers traveled to Jackson where they were honored at a luncheon in the Governor's Mansion by Governor Cliff Finch and were presented with certificates for significant service to their com-

munity by Arva Jackson NOAA's Director of the Office for Civil Rights.

The long range benefits of the Weather Watcher project are still to be determined, but several are already apparent. Within Lee County, RSVP has been the catalyst which has stirred community involvement in the tornado problem causing other groups to become involved in volunteering their time to help with the local situation.

Science Seminars Are Scheduled By R&D In Rockville

The Office of Research and Development has been conducting open seminars on a variety of scientific topics by NOAA scientists in WSC-5, Rm 926, Rockville, from 10:30 to 11:45 a.m. The remaining schedule is:

March 23, "A Method for the Routine Measurement of Directional Wave Spectra From Large Discus Buoys," Kenneth E. Steele, Data Buoy Office;

April 13, "Center for Environmental Assessment Services (CEAS) Program," Dr. Joshua Z. Holland, EDS;

April 27, "Ground-based Remote Profiling of Winds, Temperature and Humidity," Dr. C. Gordon Little, Wave Propagation Laboratory;

May 11, "Measurements of Upwelling and Wave Motions in the Ocean During and After Hurricane Passage," Peter G. Black,

Golfers, Plan Ahead

The 9th annual NWS golf tournament will take place Oct. 17-20, at Myrtle Beach, S.C. For more information contact Bob Carpenter, WSFO, Columbia, S.C.

NHEML;

May 25, "Evaluation of Man's Impact on Global Climate—Sensitivity Studies with Mathematical Climate Model," Dr. Syukuro Manabe, GFDL/ERL;

June 8, "Effects of Coal Combustion on the Atmosphere," Dr. Rudolf F. Pueschel, APCL/ERL;

June 22, "Severe Environmental Storms and Mesoscale Experiment (SESAME) 1979," Dr. Ronnie Alberty, NSSL/ERL

June 29, (two short seminars by Data Buoy Office) "Capsizing Behavior of Discus Buoys," Dr. G. D. Hamilton; and "Drifting Buoy Development," E. G. Kerut.

For more information contact R. E. Alderman, 443-8845.

Administering NOAA and keeping us on the straight and narrow are the Office of the Administrator, the Office of the Deputy Administrator,

the Office of the Associate Administrator, the Special Counsel for Administration of Law of the Sea, and the Executive Secretariat. To acquaint employees

with the people who work in these offices, we present this gallery of

Who's Who.

Administrator Richard A. Frank



Office Of The Administrator

Don Fowler and Christine Hessler
Special Assistants



James P. Walsh
Deputy Administrator

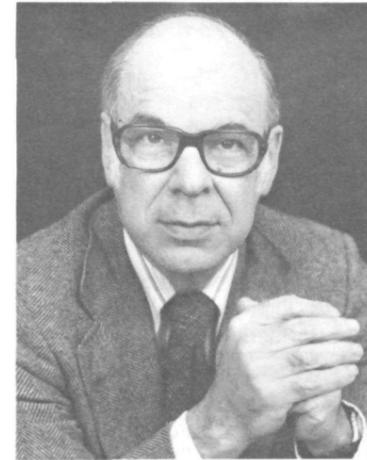


Office Of The Deputy Administrator

Juuth Roales, Special Assistant

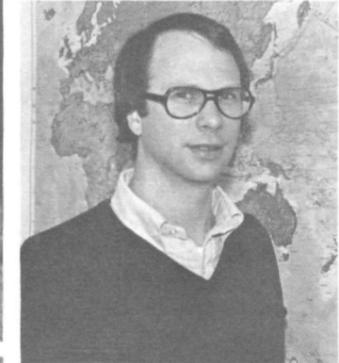


George S. Benton
Associate Administrator



Office Of The Associate Administrator

Larry Denton
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Mary Louise Mannix
Administrative Assistant



Phyllis Fox, Secretary



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Ann Davis
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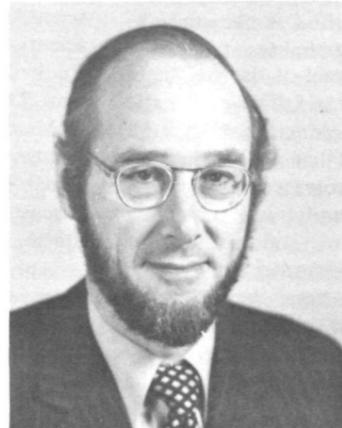
Helen Crowley
Confidential Assistant

Brian J. Hoyle
Assistant General Counsel



Special Counsel For Administration Of Law Of The Sea

William C. Brewer, Jr.



Barbara Head, Secretary



Heidi Hein, Secretary



Doris Bomgardner, Secretary

Diane Smith
Administrative Assistant



Helen Gibson
Correspondence Analyst



Stetson Tinkham
Acting Deputy Director



David E. Biltchik, Director



(NOAA will periodically feature who in the various offices.)



Kitty Clark
Administrative Support Assistant



Glinda Allen, Support Staff

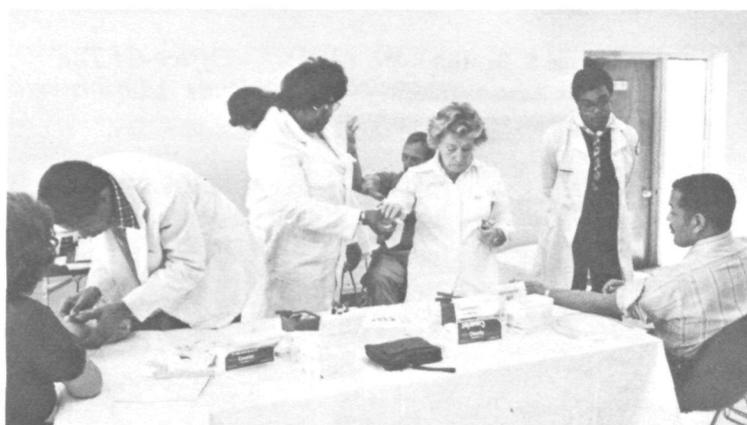


June Specht, Support Staff

Health Fairs Educate In Health Upkeep

NOAA, in cooperation with the National Health Screening Council (NHSC) and several Washington, D.C. area organizations, sponsored health fairs in several of the NOAA metropolitan area locations as a service to employees to educate them about preventive health maintenance and provide free or low-cost screening programs.

Employees were invited to participate in several free screening programs including: visual acuity, blood pressure, anemia, TB tyne, hearing, counseling, and referral services. Also available for a small fee was a battery of blood tests covering glucose (diabetes), cholesterol, triglycerides (a blood fat), gout, kidney function, liver function, thyroid, and many others.



Participation in the health fairs was high and employees generally felt satisfied with the services and information.



Increase For Retiree Annuity Is 3.9 Percent

Federal retirees will get a 3.9 percent increase in their annuities effective March 1.

The increases are based on changes in the consumer price index from July through December of last year. The labor Department reported the index up 0.5 percent in December to 202.9. That brings the six-month increase to 3.9 percent.

Retirees last September got a 4.9 percent raise which reflected the cost-of-living changes from January through June of last year. The new raise will bring their yearly increases to nearly nine percent.

BLOOD MOBILE WILL BE IN ROCKVILLE

There will be a bloodmobile at St. Mark United Presbyterian Church, 10701 Old Georgetown Road (at 270 intersection), from 9 a.m. to 2 p.m. on Friday, March 16. The Personnel Division will provide shuttle service to donors if a need is indicated.

Donors are asked to call 443-8105 for appointments as scheduled donors will continue to receive preferential treatment during their appointed time. Those who are more than five minutes late for their appointments may be admitted on a "walk-in basis" as time permits. Appointments should be made not later than March 14. Any cancellations should be reported promptly.

Anyone desiring transportation to and from the Bloodmobile should call Ext. 38105 as soon as possible to express their interest in this service. There is ample parking for those who will be driving their own cars.

The donor may be excused from duty for a period not to exceed four hours on the actual day of giving blood. The excused period shall be exclusive of the lunch period.

NOAA Personnel Division Lists Current Vacancies

Announcement Number	Position Title	Grade	Organization	Location	Issue Date	Closing Date
WMO/10	Project Manager	\$26,931 or \$29,245 per yr.		Baghdad, Iraq	3/2	3/15
INS/WMO/13	Agricultural Meteorologist	\$20,209.10 or \$21,755.80 per yr.		Jakarta, Indonesia	3/2	3/15
WR-79-21(DD)	Electronics Technician (Senior)	GS-11 (potential to GS-12)	NWS	Seattle, Wash.	3/8	3/22
ER-79-12(SB)	Meteorologist (Forecaster)	GS-12	NWS	Buffalo, N.Y.	3/8	3/22
ER-79-11(SB)	Meteorologist (Leading Forecaster)	GS-13	NWS	Buffalo, N.Y.	3/8	3/22
ER-79-9(SB)	Meteorological Technician (Weather Service Specialist)	GS-7/8/9/10	NWS	Rochester, N.Y.	3/8	3/22
79-12WL	Meteorologist (3 positions)	GS-13	NESS	Camp Springs, Md.	3/8	3/22
NWS-79-17(BJJ)	Meteorologist	GS-12 (promotion potential to GS-13)	NWS	Owings Mill, Md.	3/8	3/22
NWS-79-15(BJJ)	Meteorologist	GS-12	NWS	Silver Spring, Md.	3/8	3/22
EDIS-79-13MJH	Secretary (Steno)	GS-6	EDIS	Washington, D.C.	3/8	3/22
EDIS-79-20EAF	Physical Scientist	GS-13	EDIS	Washington, D.C.	3/15	3/29
EDIS-79-19EAF	Physical Scientist	GS-13 (may be filled at GS-12)	EDIS	Seattle, Wash.	3/15	3/29
EDIS-79-18CJ	Computer Specialist	GS-12	EDIS	Washington, D.C.	3/15	3/29
CR-79-14(MK)	Supervisory Meteorologist (Supervisory Forecaster)	GS-12 (may be filled at GS-11)	NWS	Louisville, Ky.	3/15	3/29
HQS-79-34(RW)	Supervisory Operating Accountant (Chief)	GS-13	ADMIN	Rockville, Md.	3/8	3/29
924	Director, Technical Co-operation Dept.	\$29,245 or \$26,931 per yr.		Geneva, Switzerland	3/17	3/31
NOS-79-17-SJM	Geodesist	GS-14	NOS	Rockville, Md.	3/15	4/5
NOS-79-16SJM	Supervisory Geodesist	GS-13	NOS	Rockville, Md.	3/15	4/5
NMFS-79-10MM	Secretary (Steno)	GS-6	NMFS	Washington, D.C.	3/15	4/5
PR-79-1(DN)	Meteorological Technician (Observations Specialist S/U)	GS-8 (may be filled at GS-6/7)	WSO	Johnston Island, Pacific Ocean	3/15	8/17

NOTES ABOUT PEOPLE

Dr. Gary T. Sakagawa has been named the new Chief of the Oceanic Fisheries Resources Division at the NMFS Southwest Fisheries Center.

As Chief of the Oceanic Division, Sakagawa, who is a



Dr. Gary T. Sakagawa

fishery biologist, will have major responsibilities for the direction and conduct of the Center's research programs on tunas, billfishes, and tuna/porpoise interactions in the purse seine fishery in the eastern tropical Pacific, and for advice on the development of U.S. tuna fishery policy.

Sakagawa, whose principal research interest is the popula-

tion dynamics of tunas and tuna-like fishes, came to the Southwest Fisheries Center in 1971 and has occupied the position of Leader of the Tuna Resources Program at the La Jolla Laboratory since 1977. He serves as scientific advisor to the U.S. delegation to the annual meetings of the International Commission for the Conservation of Atlantic Tunas and of the Inter-American Tropical Tuna Commission and his advice is frequently sought by outside agencies on population dynamics of fishes.

Dr. Mikhail A. Alaka, OA, was elected a Fellow of the American Meteorological Society at its recent Annual Business Meeting in Reno, Nev.

Alaka, deputy director and chief of the Special Projects



Dr. Mikhail A. Alaka

Branch of the Techniques Development Laboratory where he has worked since 1964, has worked as a meteorologist in Iraq, England, and Switzerland (with WMO) before coming to NOAA. He received his M.S. and Ph.D. degrees in meteorology from the University of Chicago.

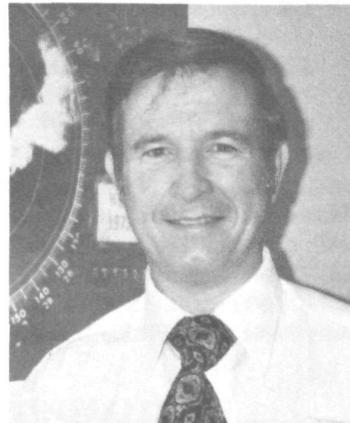
Richard R. Hagan of Savannah, Ga., is the new Meteorologist in Charge of the Weather Service Office located at Brownsville International Airport. He has been Meteorologist in Charge at Savannah since 1975 and prior to that time served as staff forecaster at the Weather Service Forecast Office at Memphis and Little Rock. He holds a Masters Degree in meteorology from the University of Oklahoma. Prior to joining the Weather Service in 1972 he



Richard R. Hagan

was employed in various capacities by the U.S. Air Force and also served in the U.S. Army.

William R. Hare has been selected to head the NWS Office located at Corpus Christi International Airport. He was the



William R. Hare

supervisor of the Radar Meteorological Observatory at Hondo, Tex. He received his initial weather observer training in the U.S. Air Force, entered the Weather Service at Austin in 1957, and earned his professional meteorological credentials at the University of Texas while working full time at the Austin station. He also served as supervisor of the radar station at Memphis before his post at Hondo in 1971.

NOAA has announced the appointment of Cdr. Carl W. Fisher as chief of the Operations Division of NOAA's Atlantic Marine Center, Norfolk, Va.

Commissioned in 1965 in the NOAA Corps, Fisher's first assignment was aboard the research ship Explorer conducting Gulf Stream research off the east coast. He has served on the NOAA vessels Ferrel and Mt.

Mitchell, and was assigned to both the President's Commission on Marine Science, Engineering and Resources, and the National Advisory Committee on Oceans and Atmosphere (NACOA). He was chief of the Oceanographic Division in the Office of Marine



Cdr. Carl W. Fisher

Surveys and Maps, Rockville, Md., for four years, and commanding officer of NOAA's hydrographic survey ship Peirce for the past two years.

As the chief of the Operations Division, he will provide supervision and technical guidance for the hydrographic and oceanographic operations performed by the Atlantic Marine Center. The Division also directs field programs, coordinates field operations, and conducts on-site field inspections of hydrographic and oceanographic field operations.

Fisher has a master's degree in physical oceanography from Oregon State University, and holds a Merchant Marine Third Mate's License - Oceans Unlimited, from the New York State Maritime College.

Dr. Dayton L. Alverson, director of NOAA's Northwest and Alaska Fisheries Center, was recently named "Man of the Year for 1979" by the Seiners Association of Seattle. Alverson was instrumental in providing liaison between the Association and the Federal Government.

Thomas C. Mack has been appointed recreation agent for the University of Minnesota Sea Grant Extension Program. The program, based at UM/Duluth, serves as the University's outreach to residents of the Lake Superior coastal regions.

OBITUARIES

Duaine J. Kline

Duaine J. Kline, specialist at the NWS office in Wilmington, Del., died Feb. 19. He served in the Wilmington office since 1947 when he began his NWS career. He is survived by his wife, Helen, of 403 Stahl Ave., New Castle, Del. 19720; four children and three grandchildren.

Floyd C. Pate

Floyd C. Pate, retired Meteorologist in Charge of the Greensboro, N.C. NWS office, died Dec. 28. Prior to his retirement in Greensboro in 1965, he had served NWS in Montgomery, Ala.; Shreveport, La.; Caribou, Me.; Lynchburg, Va.; and Eniwetok Island in the Pacific. He graduated from Guilford College in Greensboro in 1928. He is survived by his wife, Emma, P.O. Box 1215, Goldsboro, N.C. 27530; and two sons, Albert and Robert.



**CRUSTY OVEN-FRIED FISH FILLETS
WITH FRUITY BARBECUE SAUCE**

2 pounds fish fillets,
fresh or frozen
1 egg, beaten
2 tablespoons milk
1/2 teaspoon salt

1/8 teaspoon black pepper
3/4 cup cornflake crumbs
2 tablespoons melted margarine or butter
Fruity Barbecue Sauce

Thaw fish if frozen. Combine egg, milk, salt, and pepper; mix well. Dip fillets in egg mixture; drain and roll in crumbs until evenly coated. Place fish in a single layer, skin side down, on a well-greased baking pan, 15 by 10 by 1 inches. Drizzle melted margarine or butter over fillets. Bake at 500°F. for 10 to 15 minutes, or until fish flakes easily when tested with a fork. Serve with Fruity Barbecue Sauce. Makes 6 servings.

Fruity Barbecue Sauce

1 can (8 ounces) crushed
pineapple, undrained
3/4 cup catsup
1/2 cup chopped onion
1/4 cup water

2 tablespoons sugar
2 tablespoons vinegar
1 teaspoon cornstarch
2 to 4 dashes liquid hot pepper sauce or as desired

Combine ingredients, mix well. Simmer about 10 minutes to blend flavors. Spoon 1/2 of the sauce over fish fillets. Serve with remaining sauce. Makes 2 cups sauce.

**NODC Tries 24-Hour Telephone
Service For Six Month Period**

EDIS' National Oceanographic Data Center (NODC) has established a 24-hour telephone service (202-634-7500) on a six-month trial basis to make its services more readily available to ocean data users. The new service will provide a better opportunity for oceanographers in different time zones and other users to contact NODC outside its regular hours. The phone will

be answered by marine information specialists from 7 a.m. to 5 p.m., Eastern Time, and by a recording unit during other hours. If successful, the telephone service will be made permanent. Questions recorded after hours generally will be answered within two working days. For more extensive queries, an estimate of the time and resources required to fill the request will be given.

**Satellites Help
Planners Watch
U.S. Cities Grow**

Heat emitted from metropolitan areas and sensed by instruments aboard satellites operated by NOAA is letting city planners "see" population growth and industrial development as it occurs.

A team of satellite researchers from NOAA's National Environmental Satellite Service—Michael Matson, E. Paul McClain, David McGinnis, and John Pritchard—are studying urban "heat islands" on imagery received from NOAA's polar-orbiting satellites. By comparing greatly enlarged, computer-enhanced portions of the imagery with census urban maps, they are able to identify urban sprawl as it develops.

The NOAA scientists say the imagery is supplementing aerial photography as a tool of census officials and city planners in determining the direction of growth of a metropolitan area, and delineating boundaries for future, on-site, census surveys.

A sensor — an Advanced Very High Resolution Radiometer — on board the Satellite measures heat emanating from large cities as it passes over them at an altitude of about 540 miles (870 kilometers). The measurements,

BEST FISH BUYS

According to the NMFS National Fishery Education Center in Chicago, the best fish buys for the next week or so are likely to be frozen cod fillets and frozen pan-ready smelt along the Northeast Seaboard; fresh whole sea trout and fresh shucked oysters in the Middle Atlantic States, including the D.C. area; frozen bluefish fillets and Spanish mackerel fillets in the Southeast and along the Gulf Coast; frozen cod fillets and frozen pan-ready whiting in the Midwest; frozen Greenland turbot fillets and frozen small Pacific shrimp meats in the Northwest; and fresh catfish fillets and frozen turbot fillets in the Southwest.

radioed to earth and processed through computers, appear on the resulting infrared image as shades of gray; the denseness of the shade depending upon the amount of heat reaching the satellite.

"Prior to the satellite thermal scanners," NOAA Senior Research Hydrologist Donald P. Wiesnet said, "meteorologist and climatologists studied, and even mapped, heat islands from ground-based instruments. But now, the pattern of a city's heat can be quantified and monitored season by season, perhaps even week by week."



The National Climatic Center exhibit attracted some of the estimated 25,000 persons attending the recent annual Asheville Industrial Fair in North Carolina. The booth was developed, designed, and constructed by Center personnel.

National Oceanic and Atmospheric Administration

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