

Regional Fishery Management Council Members Named

Twenty-three new members and nine incumbents have been appointed to vacancies on the nation's eight Regional Fishery Management Councils, John V. Byrne, Administrator of the National Oceanic and Atmospheric Administration, has announced. The appointments will run for 3 years, except as noted.

The Councils, established by the Fishery Conservation and Management Act of 1976, prepare management plans for fish stocks within their geographical areas. Council members are selected from lists of individuals submitted by the Governors of the constituent States of the Councils. The newly appointed members, listed by Council, are as follows.

New England Council: Lawrence P. Greenlaw, Jr., Manager, Stonington Lobster Cooperative, Stonington, Me.; James Costakes, General Manager, Seafood Producers Association, New Bedford, Mass.; Robert D. Smith, Liaison for Regulatory Affairs, Point Judith Fishermen's Cooperative, Narragansett, R.I.; and Lester B. Smith, former Director, National Wildlife Federation, Natick, Mass.

Mid-Atlantic Council: Barry T. Parker, Attorney, Mount Holly, N.J.; William J. Hargis, Jr., Professor of Marine Science, College of William and Mary, Virginia Institute of Marine Science, Gloucester Point, Va.; Raymond T. Richardson, Director of Public Relations, Seacoast Products, Inc., Port Monmouth, N.J.; and Robert L. Martin (2-year term), Attorney, Litkey, Lee, Martin, Grine & Green, Bellefonte, Pa.

South Atlantic Council: Marilyn M. Moreira, Co-owner, Paul Moreira

Shrimp Company, Inc., Brunswick, Ga.; Gregory S. McIntosh, Jr., President, MACENT, Inc., Ft. Lauderdale, Fla.

Gulf of Mexico Council: LeRoy E. Demarest, Seafood Industry Consultant, Kenner, La.; Alex M. Jernigan, Consulting Engineer, Post, Buckley, Schub, and Jernigan, Miami, Fla.; Walter M. Fondren, III, Investments, Houston, Tex.; and Sherman L. Muths, Jr., Attorney, Gulfport, Miss.

Caribbean Council: Roberto Moreno-Carreras, Attorney, Hato Rey, Puerto Rico; and John D. Woods (1-year term), Project Coordinator, Virgin Islands Port Authority, St. Thomas, Virgin Islands.

Pacific Council: Otto H. Teller, Retired Banker, Glen Ellen, Calif.; Alan L. Kelly, Manager, Kelly-Rudd Insurance, Inc., Portland, Oreg.; and Abel C. Galletti, Partner, Galletti Brothers Foods, Los Angeles, Calif.

North Pacific Council: Jeffrey R. Stephan, Manager United Fishermen's Marketing Association, Inc., Kodiak, Alaska; and Rudy A. Petersen, commercial fisherman, Seattle, Wash.

Western Pacific Council: Louis K. Agard, Jr., Owner, Marine Supply & Exchange, Honolulu, Hawaii; and Robert D. Smith, recreational fisherman, Tamuning, Guam.

Incumbents reappointed are as follows. New England Council: Patrick L. Carroll, III, Carroll Associates, Fairfield, Conn.

Mid-Atlantic Council: Barbara D. Stevenson, Commercial Fishing, Otanka, Inc., Dagsboro, Del.

South Atlantic Council: Allen F. Branch, recreational fisherman, Midway, Ga., and Melvin R. Daniels, Jr.,

State Senator, Elizabeth City, N.C.

Gulf of Mexico Council: Dayton M. Graham, President, Deep Sea Foods, Inc., Bayou La Batre, Ala.

Caribbean Council: Samuel E. Espinosa, President, Espinosa Fishing, Inc., St. Croix, Virgin Islands.

Pacific Council: Guy R. McMinds, Director, Quinalt Indian Office, Department of Natural Resources and Economic Development, Taholah, Wash.

North Pacific Council: James O. Campbell, President, Alaska Division, Spenard Builders Supply, Inc., Anchorage, Alaska.

Western Pacific Council: Peter E. Reid, Jr., Manager, G.H.C. Reid & Company, Inc., Pago Pago, American Samoa.

Acid Rain Detected In Isolated Areas Globally

Acidity — some occurring naturally, some from manmade causes — has been found in rain in five isolated, widely separated areas, the National Oceanic and Atmospheric Administration (NOAA) has announced.

The Commerce Department agency said acid rain from manmade causes was found in St. Georges, Bermuda; and Poker Flat, Alaska, and from a mixture of natural and manmade causes, at San Carlos, Venezuela; Katherine, Australia; and Amsterdam Island in the Indian Ocean. James Galloway of the University of Virginia and Gene Likens of Cornell University are carrying out the project for NOAA.

These findings show that acid rain may be nearly worldwide in distribution. Previously, it was thought to occur primarily downwind of heavy industry where it is more acid than in remote areas. "If we are going to monitor and perhaps combat acid rain," said John Miller, deputy director of NOAA's Air Resources Laboratories, "we need to know its natural distribution over the earth."

Begun in 1979, the Global Precipitation Chemistry Project is trying to de-

termine how naturally acid the rain is in remote areas of the globe, and how much it is affected by long-range transport of sulfur and nitrogen from fossil fuel combustion. The preliminary results came from rain collected at sites

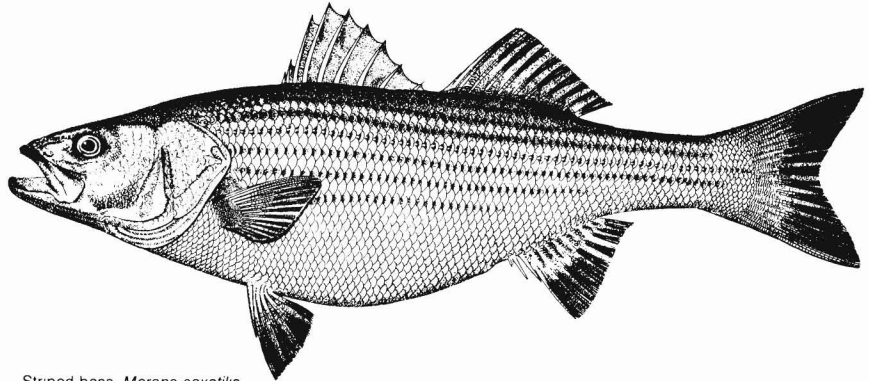
removed from volcanic influences (which increase acidity), at least 600 miles from any large industrial or urban area, and with annual precipitation of more than 20 inches.

The greatest acidity was found at the

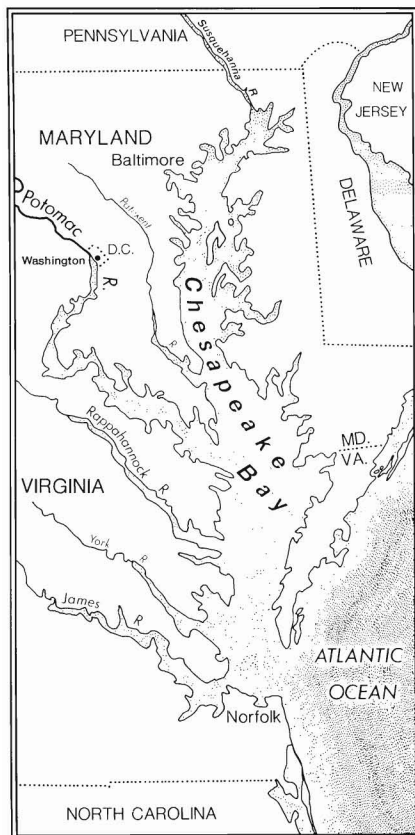
sites in Bermuda, Australia, and Venezuela, where the average pH value was 4.8. Amsterdam Island rain averaged a pH of 4.9, Poker Flat rain and snow, pH 5. A pH of 7 is neutral, and a pH of 5.6 or less is considered acid rain.

Striped Bass Population Rising in Chesapeake Bay

Striped bass production in the Chesapeake Bay may be recovering dramatically from its all-time low in 1981, the National Oceanic and Atmospheric Administration has announced. Densities of inch-long fry in the Potomac and Rappahannock rivers, major striped bass nurseries for the Bay, are from 100 to 1,000 times greater than last year, according to F. Douglas Martin of the University of



Striped bass, *Morone saxatilis*



Maryland and John Olney of the Virginia Institute of Marine Sciences.

Periodic large increases of fish produced in a single year—dominant year classes—have been a mainstay of the coastal striper fishery since the 1930's. The last such year-class, largest in 30 years, occurred in 1970 and brought record catches in 1973. Early indications are that 1982 may be another period which will generate large catches in 2-3 years, but scientists will know more accurately when juvenile striper surveys are completed.

Martin and Olney believe the increase may have been caused by ideal water temperatures, stable freshwater flows into the Bay, and an abundant food supply. The decline in the striper population may be a result of overfishing, habitat deterioration, pollutants, or industrial development, scientists say.

The researchers are associated with the Emergency Striped Bass Study, jointly sponsored by NOAA's National Marine Fisheries Service and the Interior Department's U.S. Fish and Wildlife Service. The study has moni-

tored striped bass production in North Carolina, Virginia, Maryland, New Jersey, and New York, since 1980. Waters in these states are major sources of migratory coastal populations of stripers caught from Maine to North Carolina. Findings of the study were presented at a public meeting of the Striped Bass Planning and Coordination Group in Washington last summer.

Volcanic Dust Blocks Sea Surface Temperature Data

A thin cloud of dust from a Mexican volcano has prevented satellite measurement of sea surface temperatures in a wide, globe-girdling band but has not reduced weather forecasting capability, the National Oceanic and Atmospheric Administration (NOAA) reports. Dust from El Chichon extends from lat. 10° to 30° N, roughly from the Panama Canal to Charleston, S.C., or from Cebu, in the Philippines, to Yokohama, Japan.

Sea surface temperatures are used by oceanographers and by meteorologists in weather forecasting, climatology, and research. NOAA's National Weather Service explained that sea surface temperatures are also measured by ships and buoys and there is no evidence thus far of loss of forecast accuracy.

The El Chichon dust cloud, although very thin, drifted upward into the stratosphere and became chilled by

the stratospheric temperature, said Alan E. Strong, an oceanographer with NOAA's National Earth Satellite Service. The NOAA satellite looking down on the earth measures radiation from the sea surface and translates the measurements into temperatures, which are sent back to NOAA land stations. Ordinary water vapor clouds prevent the satellite from "seeing" the sea surface, Strong explained, and the wispy El Chichon dust, at its high alti-

tude, was so cold that it also intercepted and contaminated the heat radiation measurements.

NOAA scientists are now working to separate the effects of the El Chichon dust, so that they can both monitor the cloud from El Chichon over the next few years as it gradually disperses, and also devise a correction factor that will enable them again to provide accurate sea surface temperature measurements from the affected latitudes.

Marianas Cruises Locate Fish Resources, New Bank

Two of three 40-day fisheries cruises in the Marianas Archipelago last summer have helped to identify and assess the fishery resources in areas of interest to the United States (including Guam and the Marianas Islands), according to Richard S. Shomura, Director of the Southwest Fisheries Center's Honolulu Laboratory.

Data were collected on snappers and groupers, deepwater shrimps, and akule at selected sites in the Marianas Archipelago to estimate the distribution, abundance, and sustainable yield of these fishery resources, reports Jeffrey J. Polovina, project leader and chief scientist on the first cruise. Bathymetric surveys south of Guam also documented a new bank just southwest of Santa Rosa Reef and about 35 n.mi. southwest of Guam. It is slightly larger than either Galvez Banks or Santa Rosa Reef, and its shallowest point is approximately 11 fathoms (66 feet).

During the biological portion of the cruise, bottom fishes, deepwater shrimps, and akule were sampled at Esmeralda Bank, Anatahan Island, Sarigan Island, Pagan Island, Tinian Island, Aguijan Island, Galvez Banks, Santa Rosa Reef, and the newly charted bank. The bottom fish catch rate for the entire cruise averaged 3.1 fish per line hour with the best daily catch rate of 6.4 fish per line hour obtained at Aguijan Island. The predominant species caught were gindai, yellow-

eyed opakapaka, and yellow-tailed kalekale. The catch rate for deepwater shrimps sampled at 350 fathoms (2,100 feet) for the entire cruise averaged 4.2 pounds per trap with the best catch rates of 7.6 pounds obtained at the Island of Anatahan. Akule were found at many of the islands and banks and samples were collected to estimate growth and mortality parameters.

In addition to NMFS scientists, three researchers from the University of Guam's Marine Laboratory and one staff member of the Department of Natural Resources, Commonwealth of the Northern Marianas, participated in the first cruise.

On the second 6-week cruise, scientists visited nine islands/banks, including stops at Guam, Farallon de Medinilla, Guguan, Alamagan, Pagan, and Agrihan Islands and Esmeralda, Arakane, and 38-Fathom Banks. Catches of bottom fish, including fishes of the deep-water snapper-grouper community, were best at Pagan and the other more northerly islands (Alamagan, Guguan, and Agrihan), all of which are volcanic and composed of basalt.

Catch rates around Guam were poor, amounting to only 15 percent of those farther north, according to Stephen Ralston, chief scientist. Overall, some 30 species of bottom fish were landed in 33 days of fishing, with an overall catch rate of 3.5 fish landed per line-hour of fishing. Catches were composed largely of snappers including gindai (50 percent of the total), yellow-tailed kalekale (18 percent), yellow-eyed opakapaka (7 percent), ehu (4 percent), and pink opakapaka

(3 percent). Another 5 percent of the catch was black ulua.

Catches of deepwater shrimp, composed mainly of the highly desirable *Heterocarpus laevigatus* and *H. longirostris*, were also very good. Four strings of five traps each were set overnight on 24 occasions and averaged 1.6 kg of shrimp per trap each day. Yields were best at Arakane Reef and Guguan Island which produced average daily catches as high as 5.73 and 5.17 kg per trap-night. As with bottomfish, the shrimp resources around Guam appeared to be substantially less than elsewhere.

Mackerel scad or akule was also sampled and over 1,600 were hand-lined during the cruise, mainly from Agrihan, Alamagan, Farallon de Medinilla, and Arakane Reef. Of these, 350 were tagged and released at Agrihan and 150 at Arakane Reef. Ralston reported that akule resources in the Marianas appeared to be substantial and could provide live bait for tuna fishing operations as well as excellent food for human consumption.

Bathymetric surveys of some of the lesser known fishing banks in the region, including Rota Bank and Farallon de Medinilla, were conducted and cooperative investigations with University of Guam researchers on zooplankton and mesopelagic fishes and shrimps were performed. In addition, an observer for the Commonwealth of the Northern Mariana Islands participated in the latter half of the trip. The vessel used in both cruises was the *Townsend Cromwell*, commanded by Robert C. Roush.