

Appointments Announced for Seafood Marketing Council

Commerce Secretary C. William Verity has appointed 13 members to the National Fish and Seafood Promotional Council. The Council helps market fishery products and foster their sales nationwide. Established in the closing days of the last Congress, it consists of 15 voting members serving 4-year terms. Two other members were soon to be appointed. Harvesters, processors, and marketers are equally represented with regional groups. The new members are:

Northeast Region: James A. McCauley, president and chief executive officer, Point Judith Fishermen's Cooperative Association, Inc., Narragansett,

R.I.; William J. Dowd, president and chief executive officer, Mrs. Paul's Kitchens, Inc., Philadelphia, Pa.; and Kenelm W. Coons, executive director, New England Fisheries Development Foundation, Boston, Mass.

Southeast Region: Phyllis S. Shaffer, co-owner, shrimp business, Isle of Palms, S.C., and John G. Petalozzi, president, Tampa Main Sea Products, Inc., Tampa, Fla.

Pacific Region: Katheryn K. Vanderpool, owner/operator, Billingsgate Fish, Honolulu, Hawaii; Terry Baker, president and chief executive officer, Arctic Alaska Seafoods, Inc., Seattle, Wash.;

and Dixie A. Blake, marketing manager, Ocean Garden Products, San Diego, CA.

Alaska Region: Roseleen L. Moore, co-owner, Northern Enterprises, Homer, Alaska; Terry Gardiner, founder and partner, Silver Lining Seafoods, Ketchikan, Alaska; and Gregory M. Carr, vice-president for merchandising, Carr's Quality Centers, Anchorage. Member-At-Large (Inland Fisheries): Nancy L. Abrams, marketing and culinary consultant, Chicago Fish House, Chicago, Ill. And, Member-At-Large (Nutrition Education): Mary D. Stiedemann, manager, Nutritional Marketing Services (General Mills, Inc.) Minneapolis, Minn.

The Council, which is made up of experts who have general fishery knowledge as well as other specialized experience such as familiarity with marketing, product development, public relations, or consumer education, will hold its first meeting in early December in Washington, D.C. Members receive no salary.

Top U.S. and Mexican Fishery Officials Meet

The schools of northern anchovy and Pacific sardine that feed and spawn off the coasts of Baja California, Mex., and the State of California recognize no international borders in their travels. Called "transboundary fish stocks" by scientists, the silvery swarms are a valuable resource shared by both the United States and Mexico. According to Izadore Barrett, Director of the National Marine Fisheries Service's Southwest Fisheries Center at La Jolla, Calif., these are the essential facts which underlie the first formal MEXUS-PACIFICO meeting held at the Center on 10 and 11 August 1987.

The idea of conducting cooperative fisheries research on projects of mutual interest on the western coast of the states of Baja California, Mex., and the U.S. Pacific Coast had its beginnings in the Pacific Coast Memorandum of Agreement in the fall of 1986 when the Mexican Instituto Nacional de la Pesca and the

Southwest Fisheries Center of the National Marine Fisheries Service, an agency in the National Oceanic and Atmospheric Administration, agreed that such a program was in the best interests of both countries. Further groundwork was laid at the preparatory meeting in La Paz where scientific committees were formed on fisheries monitoring and analysis of fisheries resources.

The U.S. delegation was to be headed by Anthony J. Calio, Under Secretary of Commerce and Administrator of the National Oceanic and Atmospheric Administration, and included William E. Evans, NOAA Assistant Administrator for Fisheries, Fishery Attache for Latin America Howard O. Ness, E. Charles Fullerton, Director of the National Marine Fisheries Service Southwest Region, Izadore Barrett, Director of the Southwest Fisheries Center, and Robert Fletcher, Deputy Director, California Department of Fish and Game. Mexico was represented by Secretary of Fisheries Pedro Ojeda Paullada, Ambassador Fernando Castro y Castro, Alfredo La-

guarda, Director of the Instituto Nacional de la Pesca, and others.

The U.S. and Mexican scientists met for several days before the formal meeting to outline specific action for exchange of scientific data and research to be undertaken by both countries on such fish species as anchovy, sardine, jack mackerel, and Pacific mackerel in 1988. In addition to the scientific meetings, Dr. Calio was to meet Secretary Ojeda Paullada for government to government discussions on fisheries cooperation between the two countries.

"I believe that the MEXUS-PACIFICO Agreement will provide significant scientific and economic benefits to both countries since it provides, for the first time, a formal arrangement for the coordination of joint fisheries research," SWFC Director Barrett explained. He added, "Although the present focus is only on four fish species, our hope is that eventually it will include collaborative work between Mexico and the United States on a much broader range of living marine resources of mutual interest."

NOAA Ship Completes Deepwater Shrimp Survey

The NOAA ship *Townsend Cromwell* completed a 31-day survey of the deep-water Hawaiian "ono" shrimp, *Heterocarpus laevigatus*, in October, according to Richard S. Shomura, Director of the NMFS Southwest Fisheries Center's Honolulu Laboratory. This bright red shrimp, which is harvested by traps set in waters as deep as 2,500 feet, is of considerable interest to the local fishing industry for its development potential.

To determine the shrimp's spatial distribution and overall abundance, 212 sets were made of large pyramid-shaped shrimp traps at depths of 1,200-3,000 feet around Kauai and Niihau, according to Darryl T. Tagami, Chief Scientist on the survey. The shrimp caught were generally large, averaging 1.2 ounces each. A typical catch for a trap set overnight was 15 pounds at Niihau and 8 pounds at Kauai. Peak abundance of shrimp was between depths of 1,500 and 1,800 feet. A deepwater camera with strobe was also deployed on the bottom at the trapping sites to gain a better understanding of shrimp density, behavior, and habitat. The survey is part of a stock assessment program at the Honolulu Laboratory to determine the resource potential of the deepwater shrimp fishery in Hawaii. The information collected will prove useful to local shrimp fishermen and for management of the fishery as it develops.

Silver Hake Stocks Are Slowly Growing

The NMFS Northeast Fisheries Center has reassessed the stocks of Northwest Atlantic silver hake: The Gulf of Maine-Northern Georges Bank stock and the Southern Georges Bank-Middle Atlantic stock. Biomass of both stocks is increasing slowly. Consequently, the catch from the Gulf of Maine-Northern Georges Bank stock could increase to 23.6 million pounds in 1987 from 18.7 million pounds in 1986 without affecting (i.e., no increase in) stock biomass for next year (1988), "assuming that the level of recruitment is equal to the average of the last five years". The catch from the

Southern Georges Bank-Middle Atlantic stock could increase to 27.8 million pounds in 1987 from 22.3 million pounds in 1986 without affecting stock biomass for next year, "again assuming average recruitment."

NMFS Laboratories Will Be Jointly Used

The National Oceanic and Atmospheric Administration (NOAA) has accepted a proposal from the State of New Jersey that it will build a joint-use laboratory at Sandy Hook, N.J., to replace a National Marine Fisheries Service (NMFS) laboratory which burned there in September 1985. In addition to NMFS, the facility would be used by the 28 schools of the New Jersey Marine Consortium, Rutgers University's Institute of Marine, Coastal, and Estuarine Sciences, the New Jersey Department of Environmental Protection, and others.

Total cost will be about \$11.2 million, of which \$7.2 million would be attributable to the NOAA portion. NOAA would lease its part of the facility from the state. NOAA, the state, and National Park Service representatives were scheduled to meet to discuss needed agreements, possible legislation, and scheduling.

One of numerous NMFS facilities along U.S. coasts, the Sandy Hook installation has been in existence since the 1960's. It specializes in the study of mid-Atlantic fishes and their habitats, with emphasis on recreational species. Much of the laboratory's work in recent years has been focused on the New York Bight. Since the loss of the facility to an arsonist, scientists and technicians of the Commerce Department agency have been functioning in makeshift quarters.

Earlier this year, via separate agreement, the State of Maryland agreed to share the facilities of another NMFS fisheries research laboratory in Oxford, Md. The 13,000 square-foot laboratory, owned by the Commerce Department's National Oceanic and Atmospheric Administration and located on the Tred Avon River, houses 22 biologists and other Federal workers with NOAA's Na-

tional Marine Fisheries Service. It has long been considered one of the U.S. East Coast's preeminent research centers for work on fish and shellfish diseases.

According to the agreement, signed 24 April 1987 by Anthony J. Calio, undersecretary for NOAA, and Torrey Brown, secretary of Maryland's Department of Natural Resources, the state will assume the day-to-day costs of running the facility, although NOAA will retain ownership of the laboratory. Research at the laboratory will stay centered around shellfish diseases, NOAA said. State researchers will concentrate on work in the Chesapeake Bay, especially threats to the area's valuable oyster population, and NMFS scientists are continuing their research on diseases in fish and shellfish in the United States and throughout the world. Calio characterized the cooperative agreement as a formalization of an already effective relationship between NOAA and the state, saying that the Federal government will be able to maintain its important research activities and Maryland will be able to use valuable "wet lab" facilities.

Bluefin Tuna Aging to Become More Reliable

NMFS Northeast Fisheries Center (NEFC) scientists have been assisting their counterparts at the Southeast Fisheries Center (SEFC) this year by meeting tuna purse seining vessels as they unload their catches and by collecting otoliths (ear stones) from three tagged Atlantic bluefin tuna in the vessels' catches. These are the first otoliths collected from tagged tuna in the Federal government's 33-year-old tuna tagging program which began at the NEFC's Woods Hole Laboratory and is currently administered by the SEFC's Miami Laboratory.

Bluefin tuna are easy to age up to about age 4 because of size differences, but after age 4 the sizes at different ages can overlap, forcing scientists to rely on otoliths or other similarly hard body parts to decipher age. Tuna otoliths should portray tuna age and growth much the way rings on tree trunks portray tree age and growth, but there has never been ver-

ification that the light-dark bands in tuna otolith cross-sections are reliable annular marks. These recent collections by NEFC scientists of otoliths from three tuna that had been tagged many years ago at a small (i.e., known-age) size, should establish the degree of reliability of present and future tuna age-and-growth data, and thus the degree of reliability of present and future management regulations which are based on such data.

Helicopter Used to Help Count Dolphins

The National Oceanic and Atmospheric Administration (NOAA) dispatched a dozen scientific observers, two research ships and a helicopter to the eastern tropical Pacific in August to survey populations of dolphins. The 4-month expedition is part of a 5-year dolphin study by the Commerce Department agency's National Marine Fisheries Service (NMFS) that began in 1986. The NMFS Southwest Fisheries Center (SWFC), located in La Jolla, Calif., is the agency responsible for the dolphin study.

The NOAA Ships *McArthur* and *David Starr Jordan* made the voyage: the *McArthur* left San Diego 30 July and the *Jordan* followed on 5 August 1987. Each ship carried a team of observers for estimating the number of dolphins in a school, and the *Jordan* was equipped with a helicopter pad and a Hughes 500-D helicopter from which observers photographed schools of dolphins.

Last year at this time, the same two NOAA ships left San Diego and covered the same area of the 5 million square miles of the eastern tropical Pacific that will be covered in this year's cruise. This 5-year program to monitor the abundance of stocks of dolphins in the eastern tropical Pacific was begun as a result of an amendment in 1984 to the Marine Mammal Protection Act. After reviewing the Bill for reauthorization in 1984, Congress mandated the NMFS to design and implement a program to monitor the relative abundance of dolphin stocks in the eastern tropical Pacific.

The eastern tropical Pacific is the only

area in the world where some schools of yellowfin tuna swim beneath dolphin herds. Tuna fishermen search for schools of dolphins as an indication of tuna. They round up the dolphins with speedboats and encircle dolphins and tuna with huge seine nets. Although most of the dolphins escape or are released by fishermen over the nets, some become entangled and drown. Last year more than 126,000 dolphins were accidentally killed in the eastern tropical Pacific by yellowfin tuna fishermen from Ecuador, Mexico, Panama, the United States, Vanuatu, and Venezuela. Under Federal law, U.S. fishermen are limited to the accidental take of 20,500 of the mammals annually. Last October, NOAA banned U.S. tuna fishermen from setting their nets on dolphins 2 months before the end of the fishing season because, for the first time, the U.S. quota had been reached.

According to Izadore Barrett, SWFC Director, the helicopter carrying a pilot and two observers was to fly over dolphin schools and photograph them with a special Navy camera, designed for filming from high-speed, low-flying aircraft. "This method," he said, "will give us a much more accurate idea of the porpoise population, including the size of the schools of dolphins and the species involved. And at the same time, observers on deck will also be making estimates of dolphin schools. Then we'll use the estimates of schools size from the photographs taken from the helicopter to calibrate the accuracy of the observers' estimates from the deck of the ship."

"Headstarted" Ridley Caught and Released

A sea turtle caught accidentally in a shrimp trawl at Matagorda Bay, Tex., in August was an endangered Kemp's ridley reared in a Federal restoration program for the species, according to the Texas Parks and Wildlife Department. The turtle was caught by Tom Price of Port Lavaca, who noticed the 15-pounder had a National Marine Fisheries Service (NMFS) tag on its right front flipper. He recorded the tag number before returning the animal to the water.

NMFS officials subsequently identified the turtle as one of a group of ridleys produced from eggs collected at Rancho Nuevo, Mex., in 1984. The eggs were incubated at the NMFS laboratory in Galveston, Tex., and the young turtles were released into the Gulf of Mexico off Padre Island on 21 May 1985. The turtle traveled about 76 miles, gained about 14 pounds, and increased its carapace (shell) width by 7.5 inches in the 15 months, according to TPWD fishery technician Randy Kelley. The Federal/state restoration is aimed at reestablishing a breeding population of the sea turtles in Texas. Persons catching tagged sea turtles, or encountering stranded or dead individuals, are asked to contact an office of the TPWD, NMFS, U.S. Fish & Wildlife Service, or the Texas Marine Science Institute at Port Aransas. Kelley said that about half of all turtles caught that appear to be dead actually are still alive. A live turtle often can be resuscitated by elevating its posterior above the level of its head and keeping its shell and skin moist for 24 hours. In all cases, a permitted authority should be notified of any actions taken, said Kelley.

Fish Oil Health Studies Aided by NMFS Research

NMFS research on fish oil extraction and purification has cleared the way for a greatly-expanded national program of research into the value of eating fish to human health. The Commerce Department agency's Northwest and Alaska Fisheries Center in Seattle, Wash., has announced the development of a system for refining inexpensively highly purified omega-3 fatty acids in fish oils, previously manufactured at extremely high cost.

These fatty acids in the human diet are widely believed to reduce rates of cardiovascular disease, arthritis, and other inflammatory ailments, as well as certain neurological and metabolic disorders. Using products made possible in quantity by the work of John Spinelli, the Center's Utilization Research Division director, the National Institutes of Health will coordinate a national program of research to

investigate this theory.

The manufacture of omega-3 compounds previously cost up to \$2,000 per gram; the new method ultimately may bring the cost down to \$5 a gram or less, Spinelli said. Heart of the system is a 6-foot stainless steel column in which "supercritical" carbon dioxide is introduced to fish oils containing the desired fatty acids. By varying the temperatures—up to 250°F—and the pressure—up to 2,500 p.s.i.—inside the column, scientists can dissolve and isolate the components of fish oils, including eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA), the two believed most beneficial to human health. The system, which presently can produce 70 grams per day of over 90 percent-pure EPA, and 40 grams of DHA, will be installed in the National Marine Fisheries Service's Charleston, S.C., laboratory, while research continued in Seattle on a larger unit, designed to produce up to 4.5 kilograms (10 pounds) per day.

Ice Edge Study Begins in Arctic

A research team led by the National Oceanic and Atmospheric Administration (NOAA) left for the Arctic in August in an effort to understand better how the ice edge moves south in the fall, disrupting millions of dollars worth of industrial operations. Led by NOAA's Carol Pease of the Pacific Marine Environmental Laboratory in Seattle, Wash., the group of Federal, academic, and industrial researchers travelled to the Beaufort and Chukchi Seas off Alaska to study the ice edge as the freeze-up begins.

Within 3 months, ice will cover most of the Beaufort and Chukchi Seas, and will move south into the Bering Sea. As it advances, fishermen, oil drillers, and tug and barge operators must modify, and in some cases suspend, operations for the winter. Accurate prediction of ice conditions is crucial, according to Pease, because drilling rigs need 2-4 weeks' notice of anticipated conditions, and suppliers for North Slope oil operations, and northern Alaskan villages, must remove their barges before it closes in.

"We don't know whether the ice moves south as it does in the winter when the icepack grows in the north and is blown south, or whether the water along the leading edge freezes in place," she said. "If we don't know what mechanism causes the freezing, we can't predict its advance." The NOAA ship *Surveyor*, which will provide an operational base during most of the project left Nome on 16 August, to return in mid-September. On 10 October it will take the party back to the ice edge for another 2-week study.

Meters will be moored in all three seas to measure currents, water temperature, and conductivity. Automated weather stations will be installed at Icy Bay, Bearing Strait, and east of Nome. A helicopter crew will place instruments to record wind and air temperature and pressure along the icepack's leading edge. From the end of October until about Thanksgiving Day, researchers will work in Norton Sound, using a small boat and a helicopter. A long-term goal of the studies is to enable a joint NOAA-Navy Ice Center to predict accurately the extent of sea ice at any given time and how the ice edge advances over time. Participating are scientists from NOAA's Pacific Marine Environmental Laboratory, the University of Washington, the Naval Post Graduate School, and Science Applications International Corporation. The Office of Naval Research funds the project.

New Reporting Rules for Gulf Reef-Fish Fishermen

Final regulations implementing the mandatory reporting requirements outlined in the Fishery Management Plan for the Reef Fish Resources of the Gulf of Mexico became effective 23 October 1987, according to Craig R. O'Connor, Acting Director, Southeast Region, National Marine Fisheries Service (NMFS). The statistical reporting system, designed by NMFS and approved by the Gulf of Mexico Fishery Management Council, makes mandatory a previously voluntary reporting program for commercial fishermen, dealers and owners/operators of headboats and initiates a mandatory pro-

gram for persons fishing traps. All persons fishing reef-fish traps, selected commercial fishermen fishing for reef fish by other means and selected headboat owners and operators will be required to maintain and submit logbooks providing data on catch, effort and fishing location. Commercial dealers and processors selected by the Director, Southeast Fisheries Center, will continue to report the weight and value of reef fish handled each month. Commercial vessels, charter vessels and headboats will be inventoried by the Center Director on an annual basis. There are no mandatory reporting requirements for charter vessel owners and operators at this time.

"The information being requested is essential to improving our management efforts for reef fish resources in the Gulf," said O'Connor. "We seek industry's cooperation in obtaining this vital information." All information collected is confidential and may be released to the public only in aggregate form that does not disclose proprietary or confidential information. Copies of the final rule containing the mandatory reef fish reporting requirements may be obtained from Mark F. Godcharles, National Marine Fisheries Service, 9450 Koger Boulevard, St. Petersburg, FL 33702, telephone (813) 893-3722.

Method Okayed to Check Contents of Fish Blocks

The Association of Official Analytical Chemists has approved a method developed at the Northeast Fisheries Center's Gloucester Laboratory for determining the relative proportions of fish fillets and minced fish flesh in fish blocks containing both items. (A fish block is a large frozen block of fused fish flesh from which such products as fish sticks are obtained.) The newly approved method is the first step in allowing fish blocks which contain both items to be graded by U.S. Department of Commerce inspectors. Results of the method are also admissible in a court of law. For further information, contact Robert J. Learson, FTS 837-9313 or (617) 281-3600.