NMFS, NOAA Employees Earn Distinguished Awards

Six NMFS staff members were presented with awards for excellence and distinguished service from the U.S. Department of Commerce (Gold and Silver Medals) and NOAA (NOAA Administrator's Awards) in separate ceremonies late last year. In addition, 19 other NOAA employees were honored by the agencies.

Earning the Commerce Department's Gold Medal, the agency's highest honorary award for rare and distinguished contributions of major significance to the Department, the Nation, or the world, was Melvin W. Eklund, Supervisory Microbiologist with the NMFS Northwest and Alaska Fisheries Center's Utilization Research Division, Seattle, Wash. Eklund was honored for his 22 years of outstanding botulism research which have increased safety of fishery products, helped protect public health, and improved scientific knowledge of *Clostridium botulinum* (the bacteria responsible for botulism) and fish diseases.

His research team has discovered new types of *C. botulinum* and identified mechanisms controlling their toxin production, developed processes to increase the safety of smoked fishery products, and discovered liquid-smoke components that increase salt's inhibitory effects on *C. botulinum*. This work has saved millions of dollars in the salmonid industry. The research team's accomplishments are respected worldwide and have reflected positively on the NMFS.

Also earning the Gold Medal was Richard A. Severtson, Senior Special Agent with the NMFS Northwest Region's Law Enforcement Division. Reports the Commerce Department, "Agent Severtson contributed significantly to the protection of the U.S. fishery resources and to the fulfillment of U.S. Indian treaty obligations by exposing an entrenched cadre of professional poachers who were actively engaged in the theft and sale of thousands of Columbia River salmon and steelhead.

"For years these thieves had successfully avoided local detection and prosecution through an insidious scheme which disguised their criminal activity as a legitimate treaty-protected tribal fishing right. During the critical stages of the investigation, Agent Severtson, at great personal risk, directed and actively participated in the collection of numerous recorded conversations with armed criminal suspects. He also covertly photographed and documented these same individuals actively engaged in criminal conduct. Discovery of his law enforcement activities at any time, would have resulted in a life-threatening confrontation. In carrying out his assignment, Agent Severtson displayed uncommon courage and initiative which significantly benefitted the Pacific salmon resource and the law enforcement mission of the Department of Commerce."

Other NOAA Gold Medalists included Charles K. Townsend, Director, Pacific Marine Center, NOS, Seattle, Wash.; Ray E. Jensen, Director NWS Southern Region; and Steven W. Clark and James R. Smith, National Weather Service.

Receiving the Silver Medal, the Department's second highest honorary award for meritorious contributions of unusual value to the Department or the Nation, was Vaughn C. Anthony, Supervisory Fishery Biologist with the NMFS Northeast Fisheries Center. For almost a decade, Anthony has significantly improved the way scientists determine the abundance and productivity of fish populations. These assessments are critical to managing fish stocks important to the American fishing industry. Anthony improved communication with industry, led the work of many international committees and working groups, and published major scientific papers recognized as key references in his field. His contributions have significantly improved the management of fishery resources worth millions of dollars to the national economy.

Also receiving the Commerce Department's Silver Medal was Wilber R. Seidel and John W. Watson, Jr., for their significant contributions to conservation programs for threatened and endangered sea turtles. Seidel is Chief, Harvesting Systems and Surveys Division, and Watson is Chief, Branch of Harvesting Technology, NMFS Southeast Fisheries Center, Miami, Fla.

Seidel and Watson developed the Turtle Excluder Device (TED) which reduces the incidental capture of sea turtles in shrimp trawls by almost 100 percent. The device was developed through a 4-year research program involving major segments of the shrimp industry, environmental groups, and State and Federal fishery management agencies. It is the NMFS technical option to other management measures (i.e., area closures) to reduce the incidental mortality of sea turtles by commercial shrimp trawlers. The mortality of these animals is considered one of the two most serious environmental problems faced by the Service in the last decade.

Currently, over 200 devices are in voluntary use in the south Atlantic shrimp fishery, primarily because of ancillary benefits developed and demonstrated by the investigators, including increased shrimp catches and reduced bottom trash and marine organism bycatch. The device is being used by Indonesia to reduce a finfish bycatch problem in their shrimp fishery, and other countries are considering its adoption.

Other NOAA Silver Medal recipients include William J. Alder, NWS

Meterologist in Charge; John J. Carey, Director, NOAA Office of Budget and Finance; Malcolm Reid, NESDIS; Richard A. Snay, Michael W. Cline, and Edward L. Timmerman, NOS Geodesists; and Stanley A. Spivey, NWS Program Leader.

Earning the NOAA Administrator's Award was John G. Boreman, Jr., Fisheries Research Biologist with the NMFS Northeast Fisheries Center, Woods Hole, Mass. Boreman was cited for developing scientific information and serving as NOAA spokesman for conservation of east coast striped bass. Also honored by the NOAA Administrator was Frank I. Gonzalez, Oceanographer at the Pacific Marine Environmental Laboratory, Seattle, Wash., for outstanding research in coastal wave forecasting; and F. Lorraine Bodi, Attorney-Advisor with the Northwest Region's Office of the General Counsel, Seattle, for superior legal accomplishments in the area of fishery conservation and improvement. Others receiving the Award were Fernando Caracena, Jr., ERL; Richard C. Pryzwarty, NWS; Diana F. Lewis, NOS; Dennis K. Clark, NESDIS; and William E. Carter, NOS. And, receiving NOAA's Equal Employment Opportunity Award was Edward H. Young, Jr., with the Southern Region, NWS.

Awarded the NOAA 1983-1984 Unit Citation were the NMFS Northwest and Alaska Fisheries Center's Unaccountable Loss Program and the Staff of the Fishery Division, Beaufort Laboratory, NMFS Southeast Fisheries Center. Also receiving these citations were the NOAA Office of Policy and Planning; NOAA Officer Training Center Staff, Kings Point, N.Y.; NOS NOAA Ship *Peirce*—Atlantic Marine Center; NESDIS NGDC's Data Mapping Group and its Office of Research and Applications; and the following NWS units: Alaska Region Communications Computer System; Anchorage River Forecast Center, Alaska Region; California-Nevada RFC, Sacramento, Calif.; Cooperative Program Management Staff, NWS Headquarters; Marine Forecast Unit, WSFO San Francisco, Calif.; National Public Service Unit, National Severe Storms Forecast Center; Northeast River Forecast Center, Bloomfield, Conn.; Seattle Ocean Services Unit, January 1981 to June 1983; WSFO Albuquerque, N.M.; WSFO Topeka, Kan.; WSO Astoria, Oreg.; WSO Caribou, Maine; and WSO San Angelo, Tex.

Tagged Striped Marlin Recaptured Near Hawaii

A striped marlin, tagged by a sport fisherman off California in September 1983, was recaptured near Maui by a Hawaiian commercial longline fishing boat on 3 June 1984, according to Richard S. Shomura, Director of the NMFS Southwest Fisheries Center's Honolulu Laboratory.

The marlin, which weighed an estimated 130 pounds when it was tagged, was caught about 12 miles southeast of Santa Rosa Island off the coast of California by sport angler Richard E. Barrett, a member of the Balboa Angling Club of Newport Beach, California, on a sport fishing vessel operated by Captain Craig Oliver. It was recaptured on longline gear set less than 60 miles east of Maui by the local longline vessel *Typhoon* owned by Keith Colburn and operated by Captain Jim Carson. The marlin was at liberty about 9 months after release and traveled a straight-line distance of about 1,980 n.mi., or about 7 n.mi. per day, to the capture area. The fish weighed 135 pounds when it was recaptured.

Because it is not possible to determine the exact route a fish takes in traveling from point to point, fishery biologists consider the movement or migration of fish to be the shortest distance between the point of release and recapture. Shomura speculates that this striped marlin traveled more than the 1,980 total and 7 miles per day indicated by the incomplete information. The marlins are undoubtedly powerful swimmers like the tunas, and tunas are known to have covered sustained, longer daily distances in their migrations. For example, based again on a straight-line distance, a tagged bluefin tuna swam a distance of 4,830 miles across the Atlantic Ocean in 119 days, a sustained trip of 40 miles per day. Several other striped marlin have been recorded to make long-distance migrations. A fish tagged off the west coast of Mexico traveled 3,450 miles west (to the west of Hawaii), and several fish tagged off Mexico traveled south as far as 2,230 miles away.

The recently recaptured striped marlin was tagged as part of a cooperative Marine Game Fish Tagging Program and the Pacific Billfish Angler Survey supported by the NMFS Southwest Fisheries Center in La Jolla, Calif. Assistance is provided by organizations such as the International Game Fish Association, Ft. Lauderdale, Fla; National Coalition of Marine Conservation, San Deigo, Calif.; The Gardiner Foundation, Oakland, Calif.; and the Pacific Gamefish Foundation, Honolulu, Hawaii. Program Coordinator at the Center is Fishery Biologist Jim Squire.

In 1982, 776 striped marlin were tagged and released, mostly by sport fisherman, off southern California and Mexico. Striped marlin and other billfishes have also been tagged in other areas such as New Zealand, Hawaii, Australia, and in the central Pacific (by Japanese longline vessels).

Temporary Sea Scallop Management Standard Adjustment Extended

The National Marine Fisheries Service extended a temporary adjustment of sea scallop management standards on 1 October 1984 to allow fishermen to harvest scallops at a 35 average meat count (meat per pound), Richard H. Schaefer, Acting Director of the NMFS Northeast Region, announced. The extension may continue in effect through 30 September 1985. Fishermen who land sea scallops in the shell will be required to meet a 3 3/8-inch minimum shell height during the effective period of the adjustment.

Schaefer noted that he reached his decision to extend the temporary ad-

justment of the management standards following a review of available information about the condition of the resource and the status of management. Additionally, the extension will allow sufficient time to review and implement an amendment to the management program which was proposed by the New England Fishery Management Council. The amendment will eliminate the average meat count requirement and instead establish a minimum meat weight of 0.4 ounces (11.3 g), require shellstockers to comply with the meat weight standard, and make possession of sublegal scallop meats unlawful. The Council endorsed this extension at its August meeting. The extension was made under the authority of the fishery regulations, which allow adjustments and extensions of those adjustments if specified criteria are met. Schaefer's recommendation was predicated on the potential for inconsistencies between Canadian and U.S. sea scallop management standards which could have already adversely affected the U.S. fishery. In the absence of the extension, regulations implementing the U.S. sea scallop management program would, on 1 October 1984, have required fishermen to meet a 30 average meat count standard.

A Look at U.S. Seafood Users

The typical American fish eater is better educated, more urban, and better off financially than the average consumer. These are some of findings of marketing studies done by the National Marine Fisheries Service and the Canadian Department of Fisheries and Oceans.

Researchers recorded the eating habits of 7,500 American households throughout the country over a year, including when they served seafood, what kind they served, how they prepared it, and when they ordered seafood away from home. According to the study, those most likely to be big seafood eaters—the "high-use" consumers who make up 23 percent of the total population but account for 62 percent of all seafood consumption—are likely to be:

1) Big-City dwellers. Most of the heavy seafood users live in cities of over 500,000 population in California and the Mid-Atlantic, Great Lakes, and New England regions of the country.

2) Affluent and middled aged. The big fish eaters are overrepresented in professional and managerial occupations, are better educated, and tend to have fewer children than their counterparts who aren't such fish enthusiasts.

The study also shed some light on the dining habits of the average consumers, saying they eat seafood only 2.5 times a month, seldom plan a fish menu and preferring to serve seafood "just for a change," and hesitate to try new recipes when cooking fish or shellfish for their families. For further information contact B. G. Thompson, National Marine Fisheries Service, NOAA, Washington, DC 20235.

Monk Seals Moved to Johnston Atoll

The NOAA ship *Townsend Cromwell*, which completed the second leg on a four-leg research cruise in waters around the Northwestern Hawaiian Islands and Johnston Atoll in late 1984, met a NMFS Honolulu Laboratory field team on Laysan Island which, for 2 weeks, had been capturing adult male Hawaiian monk seals. The field team, led by Wildlife Biologist William G. Gilmartin, captured nine adult male seals which had been identified as participating in "mobbing," or collective attacks, on adult female and immature seals.

Such attacks have caused the death of several female seals the past 3 years, and the idea was to remove these male seals from the population so that one cause of female deaths would be reduced. This ploy has never been attempted before on the Hawaiian monk seal population, and is part of a major research effort to rehabilitate the endangered monk seals, said Gilmartin, who is leader of the monk seal research program at the Honolulu Laboratory.

The nine seals were loaded aboard the *Cromwell* and were transported 600 miles south to Johnston Island, where they were released and, it is hoped, will remain. Other Honolulu Laboratory personnel participating in the capture and transport of the seals were Wildlife Biologists Thea C. Johanos, Biological Technicians Alan K. H. Kam, Robert G. Forsyth, and Robert W. Morrow. Fishery Biologist Eugene T. Nitta of the Western Pacific Program Office, Southwest Region, NMFS, also participated in the operations, and Stan M. Minasian of the Marine Mammal Fund filmed the procedure.

Short-Finned Squid Resource Declines

The short-finned squid (*Illex*) is found in commercial quantities between Cape Hatteras and Newfoundland. This range represents the major distribution of a single stock. *Illex* undergo seasonal migrations onto the continental shelf during summer and off the edge of the shelf in winter to spawn. Results of recent larval and juvenile surveys indicate that spawning probably occurs south of Cape Hatteras in or near the Gulf Stream. Larvae and juveniles appear to be transported north and east by the Gulf Stream.

In some years, the spawning season is prolonged so that two broods (winter and late spring) are produced. These broods tend to vary in relative importance from year to year. *Illex* grow to a maximum length of about 114 inches (dorsal mantle length) and live about 12-24 months. Commercial catches off the United States are composed mainly of individuals from 4 to 11 inches which are probably from 8 to 24 months of age.

Catches and abundance of *Illex* have declined drastically in recent years throughout the Northwest Atlantic. The fishery in Canadian waters has virtually collapsed, with catches dropping from 153,000 metric tons (t) in 1979 to 408 t in 1983. Although the U.S. catch increased from about 300 t in 1980 to a record

9,900 t in 1983, the total international catch in U.S. waters was only 11,700 t in 1983, the lowest since 1971. The NMFS Northeast Fisheries Center autumn survey for *Illex* decreased 53 percent from 1982 to 1983 and was 85 percent below the 1967-1982 average. Prerecruit abundance in autumn 1983 was the lowest since 1970. Stock abundance off the U.S. coast declined from 21 million squid in 1982 to 10 million in 1983, the lowest level since 1974.

NE Party Boats Provide Valuable Fisheries Data

Voluntary data collection by party boat captains during their fishing trips provides fisheries scientists with valuable information, according to a report by the Northeast Fisheries Center (NEFC), Woods Hole, Mass. Party boats are vessels which provide anglers a day's fishing at offshore grounds for a nominal fee.

The report evaluates a pilot study conducted last September and October by the Interstate Party Boat Association of Gloucester, Mass., in cooperation with the NEFC. The captain of each party boat in the pilot study recorded data for each fishing trip on a one-page logbook form, then sent the logbook to the Center for statistical analysis. Data were provided on: 1) Area and time fished, 2) number of anglers aboard, 3) species, numbers, and sizes of fish caught; 4) presence or absence of gillnets in areas fished, 5) loss of fishing gear and time due to entanglement in gillnets, and 6) occurrence of gillnet marks observed on fish caught.

Center scientists find the data obtained from the logbooks helpful in a Center study of gillnetting along the Northeast coast. The Center began the study in response to a 1982 request by the New England Fishery Management Council for analysis of competition among trawlers, gillnetters, and party boaters for the same species in the same areas.

Fredric Serchuk, a senior assessment scientist for the Center, feels the voluntary logbooks "can provide the Center with—among other things—the types of data needed to document party boat/gillnet conflicts." He noted that the Center "cannot obtain such detailed data from its general surveys of marine recreational fisheries along the Northeast coast."

Allen E. Peterson, Jr., NEFC Director, lauded the cooperation of the party boat captains in the pilot study, and credited "much of the study's success to the close supervision and quality control performed by the Interstate Party Boat Association." Peterson added that the voluntary party boat logbook system is one of "a growing number of cooperative efforts between the Center and the region's recreational and commercial fishermen aimed at improving Center-fishermen relations and providing detailed data for better fisheries conservation and management." Anyone interested in receiving a copy of the report on the pilot study should write Fredric M. Serchuk, Northeast Fisheries Center, Woods Hole, MA 02543.

Lobster and Shrimp Tagging Programs

Year 2 of a planned 3-year joint Maine-NMFS Lobster Tagging Research Program began in July 1984. Operations, conducted from the NOAA Research Vessel *Gloria Michelle,* included the tagging and releasing of about 1,000 American lobsters in the Gulf of Maine.

Vinyl tubing back tags were used, the same as in 1983. Tag color is international orange and on the tag is imprinted the tag number B00001 (in consecutive order) and REWARD on one side and on the other side NMFS, WOODS HOLE, MA. The 1983 tags began with the letter A. Tagged lobsters should be returned to a National Marine Fisheries Service port agent as soon as possible for the reward.

Texas' sport and commercial shrimp fishermen have also been watching for black streamer tags attached to shrimp. Texas Parks and Wildlife Department officials reported tagging about 45,000 shrimp, and the National Marine Fisheries Service (NMFS) was to award up to $500 for certain tags randomly selected by computer. There were to be several contests for tag returns, each with a first-place award of $500, second-place $200, third-place $100, and fourth- through seventh-place, $50 each. The NMFS analyzed the data collected from tag returns and disbursed the awards.

U.S.-Japan Study Gulf Squid Resource

Japan and the United States cooperated in a research cruise in the northern Gulf of Mexico from 11 October to 16 November 1984 to survey squid resources in the Fishery Conservation zone, reports Richard J. Berry, Director of the NMFS Southeast Fisheries Center. The cruise was arranged through the office of Louisiana Congresman John Breaux with input from a large portion of the fisheries community in the Gulf.

Survey activities focused on assessing and mapping the distribution and abundance of offshore squid in the northern Gulf at depths of 240-1,800 feet. The research was conducted from the *Nisshin Maru No. 201,* a Japanese research trawler equipped with special squid trawling and jigging gear. Two scientists from the National Marine Fisheries Service and Louisiana State University were aboard the vessel during all survey operations.

Because commercial concentrations are less likely to be found in the fall months, subsequent cruises in the spring and fall have been encouraged. It is expected that this cooperative effort with Japan will provide valuable data for ultimately evaluating commercial fishing potentials for squid and biological and environmental data to support future scientific investigations. Full reports on the cooperative research effort will be provided through workshops and special news bulletins. For additional information contact either Andrew J. Kemmerer, Director, SEFC Mississippi Laboratories, NSTL Station, MS 39529 (601-688-3651) or John E. Greenfield, Assistant Director, NMFS Southeast Regional Office, 9450 Koger Boulevard, St. Petersburg, FL 33702 (813-893-3271).