Gold, Silver Medals Given to Highest DOC Achievers

Gold medals were awarded by Commerce Department Deputy Secretary Wright to 17 Commerce employees—including two NMFS employees—in appropriate ceremonies in the Commerce Auditorium recently. Silver medals were awarded to 70 others.

Gold medals, the highest award given by the Department, are granted by the Secretary for rare and distinguished contributions of major significance to the Department, the nation, or the world. Silver medals are awarded for meritorious contributions of unusual value to the Department.

Gold medalists included:

Geoffrey C. Laurence, Supervisory Fishery Biologist, National Marine Fisheries Service, NOAA, who "has found some of the missing links of knowledge in the understanding of fish production in the ocean, the survival and growth of larval fishes."

John B. Pearce, Supervisory Fishery Biologist, National Marine Fisheries Service, NOAA, who "has planned, implemented, and/or directed two major programs in ocean monitoring—the Ocean Pulse Program for the Northeast Fisheries Center, and the Northeast Monitoring Program for NOAA."

Robert E. Joseph, Assistant Division Chief, and Paul R. Friday, Computer Systems Analyst, Technical Services Division, Census, "for their imaginative and innovative approach to the overall design" in creating a computer/peripheral network system "more sophisticated than that of similar systems throughout the world."

S. Thomas Romeo, Chief, Division of National Cargo, MarAd, "for his continued outstanding accomplishments in advancing and expanding the equitable implementation of the cargo preference laws of the United States."

Burton H. Colvin, Director, Center for Applied Mathematics, NBS, "for his consistently outstanding management of the mathematics program at NBS."

Robert D. Cutkosky, Physicist, National Measurement Laboratory, NBS, "for providing leadership in research in the fields of electrical and temperature metrology."

J. William Gadzuk, Physicist, National Measurement Laboratory, NBS, "for his outstanding research in theoretical surface science" . . . and his "contributions to theories of surface properties and of the interaction of radiation with surfaces."

Ernest E. Hughes, Research Chemist, National Measurement Laboratory, NBS, "for his world leadership in the standardization of gas measurements."

Harry H. Ku, Chief, Statistical Engineering Division, NBS, "for his outstanding contributions in developing and applying statistical methods for maintaining international comparability of precision measurement experiments."

Theodore E. Madey, Physicist, National Measurement Laboratory, NBS, "for his forefront research and scientific leadership in extending the range and quality of surface-characterization methods."

William C. Martin, Physicist, Center for Radiation Research, NBS, "for his outstanding technical leadership of the NBS spectroscopy group, especially his accomplishment in directing an efficient transformation of this group into fundamentally new research areas to respond to changing needs."

John T. Yates, Jr., Research Chemist, National Measurement Laboratory, NBS, "for his outstanding research and leadership in experimental surface science."

Donal G. Davis, Meteorologist, National Weather Service, NOAA, who was "directly responsible for and personally involved in issuing and disseminating tornado warnings and coordinating with local government safety officials" during a tornado emergency in Grand Island, Nebraska, 3 June 1980.

Diana H. Josephson, Acting Deputy Assistant Administrator for Satellites, NOAA, for "extraordinary contributions to the planning of the U.S. civil operational land remote sensing satellite activities."

Joseph Sela, Meteorologist, National Weather Service, NOAA, for his "major contribution to the operational forecasting capability of the National Meteorological Center by developing the recently implemented global forecast model."

Neal B. Seitz, Supervisory Electronics Engineer, NTIA, "for his research accomplishments in data communications performance requirements for users of communications systems."

Silver medals were awarded to 70 other individuals, including Andrew E. Dizon, Fishery Biologist, National Marine Fisheries Service, NOAA.

U.S. Seafood Exhibit Popular in Europe

The U.S. Seafood Exhibit at the 1981 ANUGA World Food Market Show held in Cologne, West Germany, in October, has been labeled a success by both industry and government participants. Seven United States fishery firms sold more than $10 million in products participating in a Commerce Department seafood exhibition there, the Department reports. The food show alternates annually between Cologne and Paris where, last year, 22 U.S. companies sold only $1 million in products, according to Commerce officials.

The 1981 exhibit was well organized and included an iced display of fresh fish and shellfish from across the United States. Industry participants reported a strong interest by foreign buyers and the sale of large quantities of their product.

A total of 918 sales leads were developed; 39 agreements were reached with agents to represent various firms and their products in Europe; and four joint venture agreements were signed in Cologne.

Quality Change in Frozen Pacific Whiting and in Minced Flesh

A study of the dimethylamine (DMA) content of frozen H&G (headed and gutted) Pacific whiting and frozen minced flesh during 6 months of storage at the NMFS Northwest and Alaska Fisheries Center has shown that the quality of the minced flesh is better if prepared from the H&G whiting during storage. The DMA content is the measure of the chemical degradation of trimethylamine oxide, a nonprotein nitrogenous constituent of the gadoid species. Other work has shown that increased levels of DMA in frozen fish correlate with decreased acceptability and losses in functional properties of the flesh. Inasmuch as minced fish will be most useful for production of processed food products such as fish cakes, sausages, and reformed products, the retention of high quality and functionality is most important.

The current study showed that if the minced flesh were prepared initially from fresh H&G whiting and frozen, the quality deterioration as measured by DMA content was far greater during subsequent storage than that observed in frozen H&G whiting. Furthermore, tests in which the minced flesh was prepared from H&G whiting after 4 months of 0°F indicated that, even if refrozen and held an additional month, the quality of the minced flesh was better than that prepared from the fresh or 1-month frozen whiting. This simple means that to protect the quality, it is better to store the whiting in the H&G form until shortly before the minced flesh is needed for production of the end product. These are preliminary tests and will continue with Pacific whiting and Alaska pollock because the full utilization of these resources can best be accomplished by use of the mechanically recovered minced fish in various types of processed food products.

Jerry Babbitt and *Barbara Koury*

Alaska Pollock Nuggets Developed

Over 2,600 Alaska pollock nuggets were served by Jerry Babbitt and his research team at the Northwest and Alaska Fisheries Center's 1981 Open House on 23-24 October. The nuggets had been prepared and frozen ahead of time and were removed from the freezer and reheated to provide a hot fish snack for all visitors to the 4th floor exhibits of the Utilization Research Division. The recipe was adapted from the salmon nugget recipe of the Alaska Seafood Cookbook issued 30 years ago by the Ketchikan Fishery Products Laboratory. The 140 pounds of nuggets were prepared from frozen pollock fillets processed aboard the *Arctic Trawler* in western Alaska waters. Here is the recipe for those who missed the open house:

Alaska Pollock Nuggets

- 1 pound fish fillets or minced fish, precooked
- ½ cup mashed potatoes
- 1 tablespoon grated onion
- 1 tablespoon butter or other fat, melted
- ¼ teaspoon each of salt and celery salt
- 1 dash pepper
- 1 teaspoon Worcestershire sauce
- 1 egg, well beaten
- ¼ pound sharp cheese
- 1 cup dry bread crumbs
- ¼ teaspoon parsley flakes

A variety of white-fleshed fish can be used. If the fillets or minced fish are uncooked, wrap the fish in aluminum foil and bake at 375°F for 15 minutes, drain, and flake. Leftover fish can also be used. Combine all ingredients except cheese and crumbs and mix thoroughly. Shape into balls the size of walnuts. Cut cheese into ⅜-inch cubes. Insert a cheese cube into the center of each fishball and reshape. Roll in bread crumbs. Fry in deep fat at 375°F for 3 to 4 minutes or until golden brown. Garnish and serve hot, plain, or with a sauce. Serves 6.

Jerry Babbitt

Improving the Keeping Quality of Frozen Widow Rockfish Fillets

Initial tests on the keeping quality of frozen widow rockfish fillets by the Utilization Research Division, Northwest and Alaska Fisheries Center (Mar. Fish. Rev. 43(8):24), indicated that after 4 months at 0°F, the fillets were of unacceptable quality due primarily to moderate to severe rancidity of the exposed dark flesh. A second study of frozen widow rockfish (usually marketed fresh as Pacific snapper) is now in progress, in which the fillets were treated prior to freezing by dipping in a solution of 4 percent sodium tripolyphosphate and 2 percent hexametaphosphate with 2 percent sodium erythorbate and 2 percent sodium chloride. Treated and untreated (control) fillets were then packaged, frozen, and stored at 0° and −30°F.

After 6 months of storage, the treated rockfish fillets showed only moderate changes in quality compared with the severe quality deterioration shown by the untreated rockfish fillets. Sensory tests showed that rancidity of treated fillets was slight to not detectable, whereas untreated fillets were definitely rancid in surface dark flesh and therefore of unacceptable quality. Although some toughening of the flesh was noted during storage, the treated samples were rated at acceptable texture and juiciness after 6 months, compared with the controls in which moderate to excessive toughening and apparent after only 2 months at either 0° or −30°F. The tests will continue and should be confirmed by additional series studies of frozen widow rockfish. The unprecedented increase in widow rockfish landings in Oregon during the last 2 years has made it difficult to expand the fresh market rapidly. Our research will continue on methods of improving the keeping quality of both the fresh chilled and packaged frozen rockfish fillets.

Harold Barnett