

National Registry of Marine Pathology Opens, Seeks Fish Disease Information

A depository for information on diseases and abnormalities of marine and estuarine organisms and animals, the first of its kind in the United States, has been established by the National Oceanic and Atmospheric Administration (NOAA) at the Middle Atlantic Coastal Fisheries Center laboratory, Oxford, Md.

The National Registry of Marine Pathology makes available to marine and estuarine biologists and pathologists a central reference collection of clinical, illustrative, and published material related to diseases of marine and estuarine vertebrate and inverte-

brate life. The Registry is maintained by NOAA's National Marine Fisheries Service. Its curator is Haskel S. Tubiash.

"We are soliciting, cataloging, and maintaining information on fish diseases obtained from many sources and will have pertinent references to published literature in a safe, permanent repository where the scientific community can deposit, retrieve, and study these materials," Tubiash said.

At present the Commerce Department facility consists of slide collections illustrating pathology, parasitism, or anomalies in species of bivalve mol-

lusks; fishes; and decapod crustaceans. The collections represent domestic and exotic diseases of bivalve mollusks encountered during more than 10 years of surveys and diagnostic services of parasites in fishes from Raritan Bay, N.J.

The Oxford Laboratory specializes in diseases of marine and estuarine organisms and animals and has ample facilities for histological preparation, light and electron microscopy, and photomicrography. In addition, the laboratory has a library and reference collection including about 150 serial publications oriented toward marine biology and pathology. These facilities are available to the Registry and to users of the Registry by special arrangements. Qualified investigators are invited to donate suitable material to the Registry and to use the facilities.

Fish Protein Concentrate Data Package Published

A reference package providing easy access to 12 years of research which resulted in a high-quality, low-cost protein concentrate from fish has been published for public use by the National Oceanic and Atmospheric Administration's National Marine Fisheries Service.

Fish Protein Concentrate is produced by removing from fish essentially all of their fat and moisture. This yields a high-protein concentrate that possesses unique nutritional value as a food supplement.

From 1961 to 1973 the Commerce Department agency engaged in and sponsored research which developed information on the production and use of FPC. The FPC Information Package will provide the user, whether scientist, commercial investigator, or layman, with documentation of that research.

To simplify finding information in the package, it has been divided into four parts, the first three of which are in print, and the fourth on microfilm. The printed and microfilm portions of the package are available separately, or may be ordered together.

Part 1 provides a summary statement for each of six categories: General, Product Characteristics, Product Uses, Industrial/Economic

Aspects, Laboratory Processes, and Production Processes. The summary statement for each category includes an overview of the data and information available in that category, the work pursued by NMFS, significant successes and failures, and, where appropriate, recommended future investigations and follow-up work.

Part 2 is the selected NMFS FPC Bibliography, listed by title, author, type of document, and call number. Included are published and unpublished articles and manuscripts; contractor final reports and, if significant, interim reports; internal NMFS reports and memoranda; and, miscellaneous titles from speeches, papers presented at various conferences, and other materials.

Part 3 of the report contains abstracts of selected documents considered to be of particular significance in the FPC Program.

The microfilm portion of the FPC Information Package represents Part 4: Selected Documentation. Documents determined to be of prime importance, particularly with regard to their detailed contents, have been microfilmed in their entirety.

The Fish Protein Concentrate Information Package may be ordered from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161. The paper copy of

Parts 1, 2, and 3, Order No. PB245-345, is \$8.75, with a foreign rate of \$11.25 (microfiche is \$2.25, foreign rate is \$3.75). The microfilm portion Part 4 may be obtained on a 16mm plain reel for \$6.00 (Order No. PB245-346) or a cartridge for \$8.00 (Order No. PB245-347). Recordak, 3M, or Threadeasy should be specified.

Hawaiian Firm Joins Quality Fish Program

A voluntary inspection program conducted by the National Oceanic and Atmospheric Administration (NOAA) to assure high quality in fisheries products has been adopted by a Hawaiian food processor. Under the program, Red and White Foods, Inc., of Honolulu will be permitted to place a "Packed Under Federal Inspection" (PUFI) mark on its products. The mark attests that the product has been statistically sampled at the time of processing and found to be safe, wholesome, and of good quality.

To meet the high standards required to display the PUFI symbol, a processor of fish products must agree to inspection by a Department of Commerce representative who insures that the conditions under which the products are processed meet high sanitary requirements. All costs of the inspection program are carried by the

participating firm. A growing number of processors throughout the United States are joining the program, NOAA officials said.

Red and White Foods is the first Hawaiian processor to enter the pro-

gram. The firm produces nine products which are distributed in Hawaii, the U.S. mainland, and Canada. The inspection program is managed by NOAA's National Marine Fisheries Service.

Satellite Monitors Great Lakes Chlorophyll

Chlorophyll, the substance which makes plants green and is used in deodorants, has the potential for an even greater contribution to mankind. Alan E. Strong of the National Oceanic and Atmospheric Administration (NOAA) reports that for the first time chlorophyll distributions in surface waters have been determined by satellite observation. This, he concluded, could lead to helping pinpoint productive fishing grounds with instruments aboard satellites. He presented a paper on his observations at the fall (1975) meeting of the American Geophysical Union in San Francisco.

During the past summer and fall, according to the Commerce Department agency's scientist, he was able to identify chlorophyll concentrations in algae in the Great Lakes by using reflected infrared data from NASA's LANDSAT satellite. Chlorophyll in the algae reflected solar radiation which was picked up by sensors aboard LANDSAT, Strong said.

Where living algae exists in water, the NOAA researcher said, chlorophyll will be found. More importantly, many kinds of fish tend to congregate in algae-rich waters, feeding on the algae.

If areas of high algae concentration in fresh and salt water can be monitored, and that information made available to commercial fishermen, the benefits are obvious according to Strong, who is assigned to NOAA's National Environmental Satellite Service. He stressed that at the present time satellite measurements of chlorophyll are only possible where high levels of algae exist in near surface waters.

Strong's research substantiates that of other NOAA scientists who have observed that successful fishing will not generally be found in areas where cold, subsurface waters rise to the surface, but in regions where this upwelling mixes with warmer, surface

waters. Chlorophyll concentrations, and hence algae, identified by Strong were low in upwelling areas, but increased quickly as the colder water mixed with surface waters.

Within several years, he said, NOAA expects to have access to data from the National Aeronautics and Space Administration environmental research satellite, NIMBUS-G. This spacecraft will permit more quantitative measurements of chlorophyll in addition to measurements at much lower concentrations than is now possible with LANDSAT.

U.S. Food Fish Demand Up, Catch Down In 1975

The demand for food fish commodities in the United States increased during the third quarter of 1975, according to an economic analysis released in mid-January by the National Oceanic and Atmospheric Administration. However, consumption was reduced because of decreased supply and increased prices during the quarter.

The Commerce Department's National Marine Fisheries Service indicated that during 1975 the domestic fisher's catch of cod, flounder, ocean perch, tuna, and salmon dropped while haddock catches rose. Although catches have been low overseas, U.S. imports of most frozen products—including fish blocks, fish fillets, and halibut—increased during the period January to September 1975. This caused a substantial reduction of foreign inventories.

Imports of canned fishery products, on the other hand, were fewer than a year ago. Canned tuna imports were off one percent, canned salmon fell 60 percent, and canned sardines were down 53 percent from last year.

New supplies in some cases were well below the quantities used and caused a drastic reduction in domestic

inventories. Inventory declines of other products this year reflect the industry's efforts to reduce inventories to a more manageable level. Although inventories normally increase during the first three quarters of a year, the total quantities of saltwater fish held in cold storage dropped 25 percent from 1 January to 30 September 1975. Specifically, inventories of frozen blocks of fish declined 20 percent, total fillet stocks fell 37 percent, and sticks and portions holdings fell 22 percent from the first of the year.

Because of the decline of new products and heavier demand, prices for fillets, halibut, and canned sardines increased. Prices for other products remained stable except for a drop in the price of lightmeat canned tuna.

The outlook is for a further decline in new supplies, which will result in higher prices and reduced consumption. The season for peak landings in the United States and abroad has passed. With lower inventories overseas, the prospect for a substantial increase in imports is dim. It is expected, however, that projected lower prices for beef in the coming months will affect the seafood market and will probably moderate the expected price increases for seafood products.

Copies of the report may be obtained from the Economic and Marketing Research Division, National Marine Fisheries Service, Washington, D.C. 20235.

Awards Presented for Service to Fisheries

Awards, including the Department of Commerce Gold Medal to Gerald B. Collins, a Unit Citation to the NMFS Northwest Fisheries Center, and "Service to Fisheries" plaques to NOAA Administrator Robert M. White, were officially presented in October 1975.

Collins, then a research scientist with the NMFS Northwest Fisheries Center, received the Commerce Department's highest honor, the Gold Medal, in a Washington, D.C. ceremony on 21 October for his major contribution to fishery science and administration. He was one of six Commerce Department employees receiving the award.

Now retired, Collins spearheaded re-

search on anadromous fish passage in the Columbia River and its major tributaries for over 25 years. He initiated an adult salmon behavioral laboratory at Bonneville Dam on the Lower Columbia, resulting in advances in man's knowledge of fish physiology and performance in fishways. Earlier in 1975 he proposed a program of transporting juvenile fish from the Snake River to downstream release points below the lowest dams in the Columbia River. This program is expected to increase the survival rate of steelhead trout and spring chinook salmon.

Foreign Fishery Developments

Sri Lanka Develops Marine Fisheries

The Asian Development Bank has loaned the Government of Sri Lanka \$3.1 million to finance the foreign exchange costs of a fisheries development project. The Sri Lanka project aims at promoting the development of coastal and offshore fisheries by exploiting stocks of pelagic fish resources 30-100 miles from the coast. New vessels to be acquired under the project are: 200 28-foot vessels; 30 38-foot vessels; and two 60-foot stern trawlers. Training and technical guidance are also included as part of the project, which is to be completed by the end of 1978. (Source: U.S. Embassy, Colombo.)

According to the NMFS Office of International Fisheries, Sri Lanka's

Collins received his doctorate in biology from Harvard University and entered Federal Service in 1939. He was Director of the Coastal Zone and Estuarine Studies (CZES) Division of the Northwest Fisheries Center.

On 1 October, NOAA Administrator Robert M. White presented a Unit Citation plaque to Dayton L. Alverson, Director of the Northwest Fisheries Center, in a ceremony at the Center. With 211 members, the Center is the largest group so recognized. The award was for outstanding contributions to the NOAA/NMFS programs

in the following areas: 1) International Fisheries Activities and Law of the Sea; 2) Fisheries Development and Conservation Engineering; 3) Columbia River Basin Studies; 4) Environmental Conservation Studies; and 5) Reporting and Publishing of Research Results.

Following that presentation, White was given plaques for "Service to Fisheries" by William Saletic, representing the Pacific Northwest commercial fishing industry, and by Edward Manary, president of the Northwest Steelheaders, representing sport fishermen.

fisheries production reached the 100,000 metric ton level in 1972. Fully 98 percent of 1974 production was from coastal (99,000 metric tons) and inland (8,000 metric tons) fisheries. The remainder was the deep-sea fisheries catch of approximately 2,000 metric tons. Present annual domestic production is insufficient to supply local demand and about 17,000 metric tons of processed fish are imported each year.

At present, the fishing fleet exploiting the coastal fisheries of the island nation consists of about 17,000 non-powered craft, about 4,400 small craft mechanized with outboard motors up to 20 horsepower, about 2,100 28-foot FRP or wood vessels and 27 37½-foot steel vessels. In addition to the coastal fishing fleet, two 317-ton tuna vessels operate in the Indian Ocean and five 240-ton trawlers operate on the Wadge Bank off India's coast.

Colombo and Galle are the principal fishery ports. Fishery harbors are under construction at Beruwela, Mirissa, and Tangalla in the south, and at Trincomalee in the northeast. Freezing and cold storage facilities for fish are already available in Colombo and Galle; such facilities are planned for Beruwela, Mirissa, Tangalla, and Trincomalee.

Sri Lanka's fisheries project is designed to cut down the imports of fish by promoting the development of coastal and offshore fisheries. The general area of the fishery to be developed is along the southern coast of Sri Lanka, south of Colombo from Kalutara to Hambantota. Two 60-foot trawlers will operate, in a pilot program, from Trincomalee on the northeast coast.

The Fishery Cooperatives of Sri Lanka will receive loans from the Bank of Ceylon and the Peoples Bank to enable them to acquire fishing vessels, engines, fittings, gear, and navigational equipment.

Greenland Demands Fishery Extension to 100 Miles

The Executive Committee of the Greenland Council met with the Minister for Greenland on 26-27 November 1975, and the Council demanded the immediate extension of Greenland's fisheries limit to 100 miles. The demand was prompted by a recent increase of foreign shrimp fishing in Greenland's waters, particularly by the Faeroese, Soviets, and Spanish.

Greenland's traditional fishing income was based on cod and salmon

until recently, but the shortages of both cod and salmon, and the resultant quota restrictions of those species, led the Greenlanders to fish for shrimp. Their major fishing income is now from this species, and a peeling and canning industry has been developed in recent years. Fishers catch a majority of the shrimp in Disko Bay (west-central Greenland), but the rapid expansion of the international shrimp fleet in the outer Greenland waters has raised

