

Japan Eases Stance on U.S. Fish Imports

The Japanese government has taken important steps to make it easier for the U.S. fishing industry to export seafood products to Japan, according to Richard A. Frank, former administrator of the National Oceanic and Atmospheric Administration (NOAA). Frank made the announcement after returning from Tokyo last December where he met with Japan Fisheries Agency officials and Japanese fishing industry representatives to review steps taken by Japan to implement a bilateral fisheries trade agreement. That agreement was negotiated in Washington, D.C., last July, pursuant to a U.S. policy that has become known as the “fish and

chips” policy.

Under the policy, a country wishing to fish in the U.S. 200-mile Fisheries Conservation Zone must ease trade restrictions on U.S. fish imports in exchange for allocations of fish in U.S. waters. “Because the Japanese have fully implemented the terms of the July agreement,” said Frank, “the opportunities available to exporters of U.S. fish products to Japan have never been better.”

Among measures recently taken by Tokyo to implement the July accord are an increase in the Japanese import quota for herring and other fish, an increase in the number of Japanese organizations allowed to import fish

products, the establishment of contact points in both countries to assure continuous communication on trade matters, and an agreement to provide to the United States with current information on the condition of Japanese markets.

Frank emphasized to the Japanese that the July accord must be more than a technical agreement. It must produce a significant increase in U.S. exports of seafood to Japan over the next year, he said.

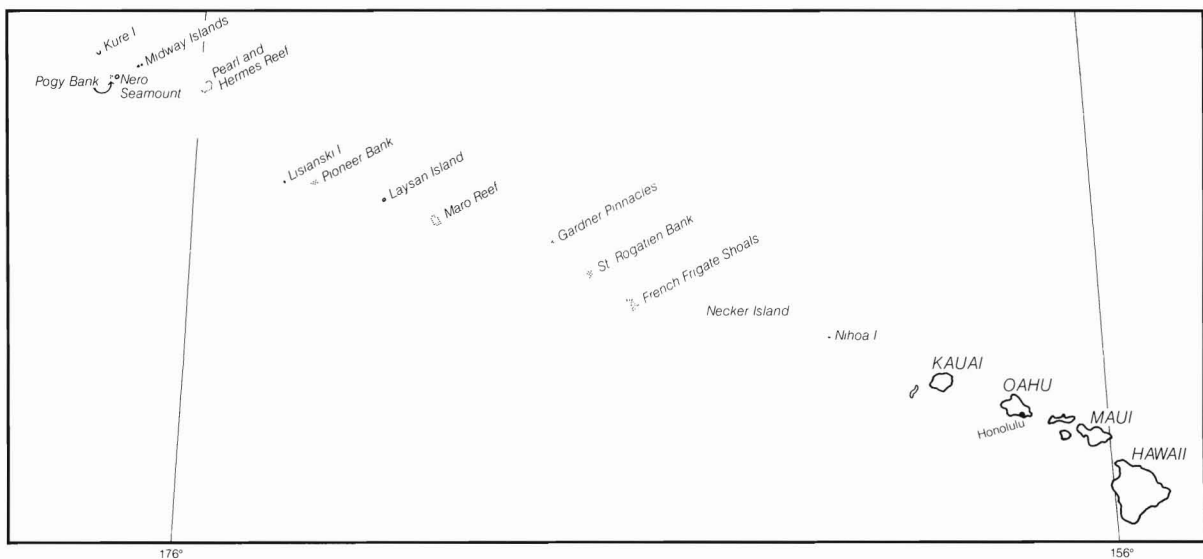
Following his meetings in Tokyo, Frank met with officials of the Korean government in Seoul. The NOAA administrator informed the Koreans of the U.S. intent to increase its seafood exports to Korea, and discussed the U.S. policy of linking fish allocations to Korea with the easing of trade barriers by Seoul. Frank reported that the Koreans indicated their willingness to enter negotiations leading to a trade agreement similar to the U.S.-Japanese accord reached in July. These negotiations were to begin this year.

Hawaiian Research Cruise Nets Good Numbers of Fish

The NOAA ship *Townsend Cromwell* returned to Honolulu on 16 December after a 44-day cruise to waters around the Northwestern Hawaiian Islands (NWHI), and reported find-

ing some fairly good concentrations of commercially valuable marine species. Cruise missions also included investigation of the Hawaiian monk seal, *Monachus schauinslandi*, status, at several islands in the chain and conducting a preliminary nearshore survey over reef flats at all island

locations to determine the distribution of brown and red seaweeds on which the microscopic unicellular alga, *Gambierdiscus toxicus*, grows as an epiphyte. (This alga has been implicated as a source of the ciguatoxin in the coral reef ecosystem which eventually finds its way to the flesh



and organs of some commercially important fishes.) Other surveys assessed the lobster, shrimp, bottomfish, kona crab, pelagic, and benthopelagic fish resources throughout the NWHI.

According to Richard Shomura, Director of the NMFS Honolulu Laboratory, the *Townsend Cromwell* cruise was part of a cooperative long-term effort involving the Honolulu Laboratory, the State of Hawaii's Department of Land and Natural Resources, the U.S. Fish and Wildlife Service, and the University of Hawaii's Sea Grant Program to survey and assess the living terrestrial and marine resources in the NWHI.

A variety of fishing gear including lobster, fish, and shrimp traps; kona crab nets; hydraulically operated handlines; shrimp trawls; and trolling lines were used for the surveys. Catches made by the various gears indicated relatively good concentrations of commercially valuable species such as red snapper, *Etelis marshi*; opelu, *Decapterus macarellus*; and fair concentrations of caridean shrimps, *Heterocarpus ensifer* and *H. laevigatus*. The *Townsend Cromwell* also intensified efforts to locate fishing grounds for kona crab, *Ranina ranina*, during the cruise. According to Paul Shiota, chief scientist on the first leg of the cruise, previous cruises revealed the presence of kona crab over sandy bottoms at several locations in the NWHI. On the latest series of cruises, the Honolulu Laboratory scientists attempted to define the kona crab's distribution and relative abundance more precisely to evaluate its commercial potential. Night "jigging" for opelu and akule during the dark moon phases of the month was reported particularly effective at French Frigate Shoals.

After a brief layover at Midway Islands, the *Townsend Cromwell* visited several seamounts in the northwest end of the Hawaiian chain. Richard N. Uchida, chief scientist for the return leg of the cruise, reported excellent bottomfishing at Pogy Bank, one of the banks in the Nero Seamount complex, about 40 miles southwest of Midway. Here, the catch rate of bottomfish, mostly red snap-

per, *Etelis marshi*, and sea bass, *Epinephelus quernus*, reached 6.1 fish per line-hour. Because the entire Nero Seamount complex is poorly charted on existing maps, the *Townsend Cromwell* also made some transects with the echo sounder to better define the topography of the bank.

The return leg of the cruise also involved considerable effort to locate additional shrimp trapping ground of commercial potential. Concentrations of caridean shrimps were first discovered at Necker Island, Laysan Island, Pioneer Bank, and French Frigate Shoals in 1973 on a cruise of the RV *David Starr Jordan*. The *Townsend Cromwell's* shrimp trapping operations have revealed that caridean shrimps also occur in varying densities at Gardner Pinnacles, Maro Reef, and St. Rogatien Bank. According to Uchida, the catch rate, which was highest at Gardner Pinnacles, is only about a third of that obtained for trapping conducted off Oahu several years ago. Uchida estimated that about 27 percent of the *H. ensifer* and 56 percent of the *H. laevigatus* at Gardner Pinnacles were ovigerous or carrying eggs. Also, about 21 percent of the *H. ensifer* catch at Gardner Pinnacles consisted of cannibalized individuals. The highest rate of cannibalism occurred in traps with large catches and in which the bait supply was nearly exhausted.

Assisting cruise leaders Shiota and Uchida were Research Assistants Darryl T. Tagami, Victor A. Honda, Steven Kramer, Nathaniel Shippen, and Systems Analyst George Liao. Also included in the field party were William G. Gilmartin and Eric Knudtson, who were responsible for the studies on the monk seal, and Nancy Withers and Deborah Burns, who collected algae samples for their ciguatera research.

Howard Raymond Cited for Significant Paper

Howard L. Raymond of the NMFS Northwest and Alaska Fisheries Center, Seattle, Wash., received an award from the American Fisheries Society for the most significant paper

in the 1979 issues (volume 108) of the *Transactions of the American Fisheries Society*.

The title of his paper is "Effects of Dams and Impoundments on Migrations of Juvenile Chinook Salmon and Steelhead from the Snake River, 1966 to 1975." Raymond has been working on fish-passage problems at the Center for 21 years.

Botulism Studied in Hatchery Fish Kills

Botulism was recognized as a major cause of juvenile salmon mortalities in the Pacific Northwest in 1979 when Mel Eklund and the botulism research group at the NMFS Northwest and Alaska Fisheries Center's Utilization Research Division identified type E *Clostridium botulinum* as the causative organism in the loss of over 1 million juvenile coho salmon at one Washington State hatchery.

In 1980, the research team conducted further studies in cooperation with the Washington State Department of Fisheries at the same hatchery earlier in the season. The disease was recognized in early stages last September when large numbers of the organism were found in the sediments and toxin was identified in the intestines of the juvenile salmon. The fish were moved to concrete-lined ponds and less than 20,000 salmon were lost. In October 1980 the Klaskanine Hatchery in Oregon lost 230,000 juvenile coho salmon. Eklund's group examined samples of the fish and pond bottom and confirmed the causative agent as type E botulism.

More recently, in response to queries about mortalities of juveniles at steelhead hatcheries, samples were taken for examination and botulism was identified as the cause of major mortalities in three different steelhead trout hatcheries. Research is currently in progress at the NWAFC using small-scale facilities for salmon and trout disease studies to determine methods for controlling the disease and minimizing botulism outbreaks in hatchery ponds.