

W. E. Evans Appointed Assistant Administrator of NOAA for Fisheries

William E. Evans, Chairman of the U.S. Marine Mammal Commission, has been named NOAA Assistant Administrator for Fisheries by Anthony J. Calio, Administrator of the Commerce Department's National Oceanic and Atmospheric Administration. As head of NOAA's National Marine Fisheries Service (NMFS), Evans will be responsible for the management and enforcement of fishery resources in the 200-mile-wide U.S. Fishery Conservation Zone and the

protection and conservation of threatened and endangered marine mammals, Calio said. Evans has been Chairman of the U.S. Marine Mammal Commission since April 1984.

A marine zoologist, Evans has been Executive Director of the Hubbs Marine Research Institute in San Diego, Calif., since 1977. He is nationally recognized for his research on the biological and physiological effects of acoustics on the behavior of marine animals, including

dolphins, sharks, whales, and tunas. He has worked with the NMFS in conducting aerial surveys to collect and evaluate data for stock estimates of dolphins. He has also done extensive research for the U.S. Navy on the dolphin's ability to navigate and to adapt to the ocean environment.

Evans earned a bachelor's degree in education from Bowling Green State University and received a master's degree from Ohio State University. He received his doctorate in biology and animal behavior from the University of California at Los Angeles. He is a member of numerous professional organizations and has taught at several major universities. He is married, has two sons and has resided in Escondido, Calif.

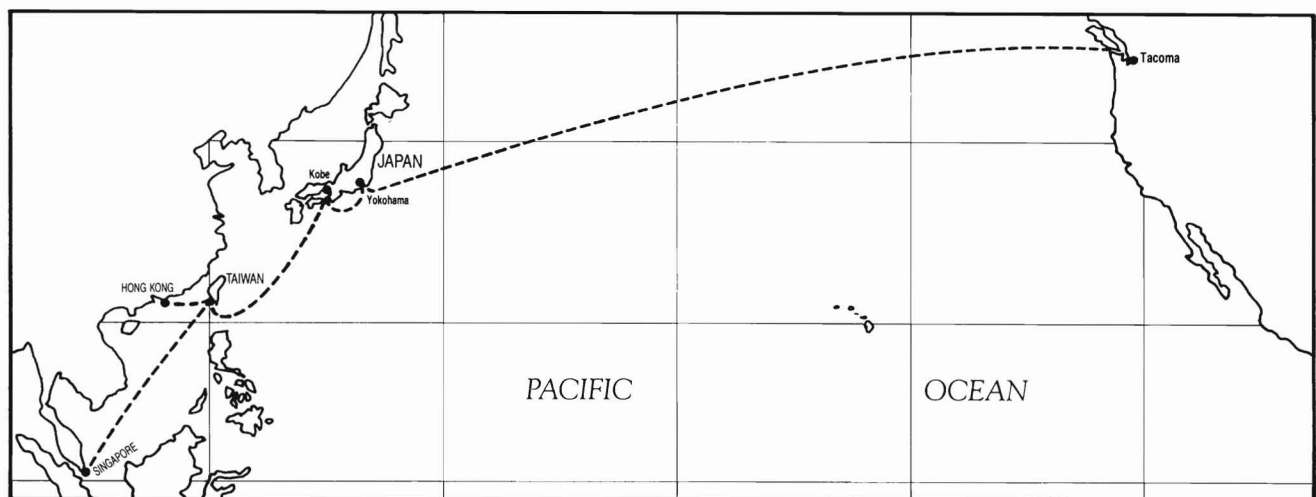
NMFS Agents Seize Record Shipment of Pacific Salmon

NMFS officials in Seattle, Wash., seized almost 595,000 pounds of Pacific salmon worth nearly \$800,000 in a Tacoma, Wash., warehouse in September. The fish were reportedly bound for Taiwan or Japan by way of the U.S. port in an alleged multimillion dollar fish laundering scheme.

The record haul, believed to be part of over 3.5 million pounds of salmon worth \$4,746,000 routed through Tacoma, consisted of chum, *Oncorhynchus keta*, and sockeye, *Oncorhynchus nerka*, salmon weighing from 4 to 6 pounds. It was seized by the NMFS enforcement agents in the course of a circuitous 13,000-mile round trip across the Pacific Ocean.

Japan prohibits the importation of Taiwanese-caught salmon, and salmon can-

not legally be exported from Taiwan. The Commerce Department agency said that the salmon were shipped first to Singapore and Hong Kong. Then, a trading company in Costa Mesa, Calif., shipped the fish to Tacoma where, NMFS officials said, it was found labelled as squid instead of salmon. It is alleged that in Tacoma new container seals and bills of lading were used to obscure Taiwan as the country of origin, and that the salmon were to be re-



shipped to Japan—although it had already been in and out of Japanese ports.

The United States has a substantial salmon export market to Japan, and a U.S. bill of lading would be readily accepted there, fisheries officials noted. Sophisticated tests, the seized fish's appearance, including gillnet marks, and fishing patterns indicate they were

caught on the high seas. The Taiwanese ban on salmon exporting and gillnetting was imposed at U.S. urging, in an effort to eliminate migratory interceptions and bring Taiwanese gillnetting practices under control. In addition to forfeiture of the fish, civil actions against the trading company, Union Inc., and its general manager, Young Ho Lee,

were expected and civil penalties against the company and Lee could total \$150,000.

The salmon seized in the containers were described as being "immature and 'bright' in appearance," which would indicate harvest on the high seas before undergoing the physical changes associated with their returning to their natal streams. In addition, they were described as bearing gillnet markings. However, the bills of lading indicated the contents of the containers were frozen squid bodies and threadfin and horse mackerel—products of Taiwan.



Photographs of seized Pacific salmon.



Assistant Administrator for NOAA's SDIS Named

Thomas N. Pyke, Jr., of Arlington, Va., was appointed Assistant Administrator of the National Oceanic and Atmospheric Administration (NOAA) for Satellite, Data, and Information Services earlier this year by Anthony J. Calio, NOAA Administrator. Pyke, 44, a career Federal science program manager, has been director of the Center for Programming Science and Technology at the Department's National Bureau of Standards (NBS), and he is an internationally recognized expert in computer sciences, research, testing, and systems engineering.

Pyke will be directing NOAA's civil operational environmental satellite program and managing an extensive system of environmental data collection and distribution centers. He will also be responsible for making NOAA's informational resources more useful to the public. A native of the Washington, D.C., area, Pyke earned a bachelor's degree in electrical engineering as a Westinghouse Scholar from the Carnegie Institute of Technology in Pittsburgh, Pa., and a master's degree in computer systems, as a Ford Foundation Fellow, from the University of Pennsylvania. He joined the Bureau of Standards in 1960 as a student trainee specializing in computer hardware and software design. He is a member of numerous professional organizations and has published over 25 scientific papers and reports.

Foreign Catches of U.S. Atlantic Salmon Reduced

The North Atlantic Salmon Conservation Organization (NASCO) acted at its third annual meeting in Edinburgh, Scotland, during June 1986 to reduce harvests of Atlantic salmon, *Salmo salar*, of U.S. origin when these fish are outside U.S. waters, reported Allen E. Peterson, Director of the NMFS Northeast Fisheries Center and head of the U.S. Delegation to NASCO.

Atlantic salmon originating in New England rivers annually migrate along Canada both to get to and return from their summer feeding grounds off West Greenland. During this feeding and migration period, commercial fishermen off West Greenland and Canada harvest these U.S.-origin salmon. The number of U.S. fish harvested by these foreign fishermen often exceeds the number finally returning to U.S. rivers.

In NASCO's North American Commission, whose members include Canada and the United States, the United States proposed that Canada close its 1986 commercial fisheries in Newfoundland and Labrador on 1 September due to the high percentage of U.S.-origin salmon harvested off those Canadian provinces during the fall. Canada agreed to a 15 October closure. Historically, these fisheries have closed on 31 December.

In NASCO's West Greenland Commission, whose members include Canada, Denmark (in respect of Greenland), the European Economic Community, and the United States, the members agreed to an 850 metric ton (t) total allowable catch (TAC) based on a 1 August opening for both the 1986 and 1987 seasons. The agreement stipulates that if the opening is changed to a later date, the TAC may be increased according to the projected increase in weight of the salmon between 1 August and the later opening. The Home Government of Greenland elected to open the salmon fishery on 15 August with an increased TAC of 909 t. Although a smaller TAC would produce a larger return of U.S.-origin salmon, having the TAC set for 2 years instead of one will stabilize the West Greenland fishery in the face of

continued pressure for higher TAC's.

Peterson said that "the measures adopted by NASCO's North American and West Greenland Commissions clearly support U.S. efforts to restore its historical salmon runs by allowing additional salmon to return to their home waters. In Canada alone, we expect these measures, along with other measures taken over the last 2 years, to reduce Canadian harvests of U.S. fish upwards of 30 percent."

Peterson added that "It's gratifying to see that salmon producing and salmon harvesting nations can, in fact, work together to reverse the continuing worldwide decline of Atlantic salmon runs."

In other actions taken at the NASCO annual meeting, the North American Commission adopted proposals to investigate the impact of acid rain on Atlantic salmon and the effects of introducing and transferring Pacific salmon into the Great Lakes and along the Atlantic seaboard. The NASCO Council, which oversees all three Commissions (North American, West Greenland, and North East Atlantic), elected Allen Peterson to a second term as Vice President, and the North American Commission elected Frank E. Carlton, a U.S. Commissioner from Savannah, Ga., as its Chairman.

The purpose of the treaty establishing NASCO is to promote the conservation, restoration, enhancement, and rational management of salmon stocks in the North Atlantic Ocean by means of international cooperation. NASCO also provides for the acquisition, analysis, and dissemination of scientific information on these stocks. The members are Canada, Denmark (in respect of the Faroe Islands and Greenland), the European Economic Community, Finland, Iceland, Norway, Sweden, and the United States. The USSR is expected to join NASCO in the near future.

N.E. Offshore Lobster Gear Marking Rules Set

Effective 22 June 1986, Federal regulations require that all offshore lobster gear be marked according to a recently approved uniform gear marking system. The new regulations require that:

1) Lobster pot trawls of three or less pots be marked with a single buoy;

2) Trawls consisting of more than three pots have a radar reflector and a single flag or pennant on the westernmost end (marking the half compass circle from magnetic south through west to and including north), and that the easternmost end of the trawl (meaning the half compass circle from magnetic north through east to and including south) be marked with a radar reflector only;

3) Radar reflectors are to be standard tetrahedral corner radar reflectors of at least 8 inches (both in height and width) and made of metal; and

4) Lobster pot trawls are not to exceed 1½ miles in length as measured from buoy to buoy.

This uniform marking system is intended to be used in the offshore lobster fishery, as defined by the following areas of applicability:

1) Gulf of Maine Gear Area—All waters of the U.S. fishery conservation zone south of lat. 42°20'N seaward of a line drawn 12 miles from the baseline of the territorial sea (state waters).

2) Georges Bank Gear Area—All waters of the fishery conservation zone south of lat. 42°20'N and east of long. 70°00'W, or the outer boundary of the territorial sea, whichever lies further east.

3) Southern New England Gear Area—All waters of the fishery conservation zone west of long. 70°00'W and east of long. 71°30'W at a depth greater than 25 fathoms.

4) Mid-Atlantic Gear Area—All waters of the fishery conservation zone west of long. 71°30'W and north of lat. 36°33'N at a depth greater than 40 fathoms.

These gear marking requirements were included in an amendment to the American Lobster Fishery Management Plan, which was prepared by the New England Fishery Management Council and approved by the National Marine Fisheries Service. The amendment also clarifies that red crab gear set beyond 200 fathoms is not gear capable of taking lobster. As such, this gear is not subject to the provisions of the lobster regulations. In addition, the amendment

provides authority to the Regional Director to grant exemptions from the regulations and/or close areas for research or educational purposes beneficial to the lobster resource. Questions on the rules should be directed to Carol J. Kilbride at (617) 281-3600 extension 331.

New FMP Implemented For N.E. Groundfish

A new Fishery Management Plan for the entire range of bottom-dwelling fish found in the North Atlantic went into effect on 19 September 1986, according to Richard Schaefer, acting director of the National Marine Fisheries Service's Northeast Region in Gloucester, Mass. The new Northeast Multispecies Plan will replace the current Interim Plan which was in place for 4 years. The Multispecies Plan is broader in scope than the three-species Interim Plan, as it aims at managing 10 valuable species in the complex of important demersal (bottom living) species: Atlantic cod, haddock, yellowtail flounder, pollock, redfish, American plaice, white hake, and the winter, windowpane, and witch flounders.

According to the New England Fisheries Management Council, developer of the Plan, the objective is to control or reduce fishing mortality primarily on juvenile fish, but also on adults. The approach is to allow enough spawning so that these fish populations can recover from the pressure of fishing and replace themselves. The ultimate goal is to promote a healthy fishery. The Council hopes to accomplish its goal through Multispecies Plan measures which are more stringent than those of the Interim Plan.

Schaefer profiled the Multispecies Plan as having new minimum fish sizes for seven major commercial species and minimum sizes for cod and haddock taken by recreational fishermen; a 1-month extension for haddock spawning closed areas; a closed area in southern New England to protect juvenile fish; a stricter program governing the use of small mesh as well as the 5½-inch regulated mesh; marking requirements for

gillnets; a Technical Monitoring Group to recommend further measures to ensure effective conservation and an annual fishing permit. Schaefer stated that the NMFS will monitor the Plan, work closely beside the Council, and will be prepared to implement additional measures when necessary to ensure the Plan's success. For copies of the regulations or detailed information, call 617-281-3600 extension 252.

NWAFAC Hosts Fisheries Acoustics Symposium

The third "International Symposium on Fisheries Acoustics (ISFA)" is scheduled for 22-26 June 1987 under the sponsorship of the NMFS Northwest and Alaska Fisheries Center in Seattle, Wash. It has been organized with the assistance of the International Council for the Exploration of the Sea (ICES) and the Food and Agriculture Organization (FAO) of the United Nations and will provide an interdisciplinary review of the uses of acoustics in fisheries science and management.

The principal themes of the Symposium are: 1) Survey-based stock assessment and management results and their evaluation; 2) the accuracy and repeatability of calibration measurements and the factors affecting quantitative assessments; 3) advances in acoustic techniques and auxiliary technology, and the limitations imposed by physics and biology; 4) the patchiness of fish and plankton populations and the problems of direct and remote sampling for species and size distributions; and 5) special topics, including (but not limited to) applications of acoustics in population and ecosystem modeling, the instrumentation of sampling gear, biological oceanography, environmental monitoring, and aquaculture.

Registration should be made before 15 March 1987. For further information contact Martin O. Nelson, Chair, ISFA Steering Committee, Division of Resource Assessment and Conservation Engineering, NMFS Northwest and Alaska Fisheries Center, 7600 Sand Point Way, N.E., Bin C15700, Building 4, Seattle, WA 98115-0070, U.S.A.

Bluefish Safe to Eat

Bluefish, *Pomatomus saltatrix*, the main Atlantic Coast sport fish, are not only great sport fish but they are safe to eat, the Commerce Department's National Oceanic and Atmospheric Administration (NOAA) has announced. Their pesticide levels show no health threat and PCB (polychlorinated biphenyl) levels for all but some of the largest bluefish are within the 2 parts per million set by the Food and Drug Administration (FDA), according to NOAA's National Marine Fisheries Service.

The announcement revealed preliminary results of a 12-month study, largest of its kind ever conducted, by NOAA in cooperation with the FDA and the Environmental Protection Agency (EPA). A final report will be issued in December. This study, involving more than 3,400 bluefish caught from Maine to Florida, shows that levels of PCB's in commercially available bluefish pose no health threat for the public, primarily because bluefish constitute only a small portion of the diet of most fish eaters. The study stated, however, that there "might be health concerns" for those who consume contaminated bluefish daily for several years. Nevertheless, the FDA said even those groups that eat bluefish from areas of the highest PCB levels would not be endangering their health during the next few months, while the data are being analyzed for the final report.

The annual bluefish catch has been more than 130 million pounds in recent years. In 1985, commercial landing totalled almost 14 million pounds, worth about \$2.4 million. The 179-page study, "Report on 1984-86 Federal Survey of PCBs in Atlantic Coast Bluefish," was requested by the U.S. Congress in 1984.

Hawaii Deepwater Shrimp Research Is Encouraging

The deepwater Hawaiian "ono" shrimp, a striking bright red shrimp which is harvested by trapping in water 2,000 feet deep, has for several years been of considerable interest to the local

fishing industry for its development potential, reports Richard S. Shomura, Director of the NMFS Southwest Fisheries Center's Honolulu Laboratory. Last summer, laboratory scientists on the NOAA ship *Townsend Cromwell* completed a 16-day research cruise to assess a segment of that resource.

Steve Ralston, Chief Scientist on the cruise, reports that over 1.5 tons of shrimp were caught at a small 3-square-mile study site situated in mid-channel between the islands of Kauai and Niihau. The shrimp were generally large, with an average size 1.2 ounces each. The preliminary catch rate experienced at the study site was 50 pounds per trap for an overnight soak, but after 13 days of concentrated fishing this had declined to slightly less than 25 pounds, although the size of shrimp remained large throughout. Based on the results of the cruise, Ralston estimated that the initial abundance of harvestable shrimp in the area was about 1 ton per square mile of bottom. Although the study site visited was characterized by an initial catch rate that was unusually high, the results were encouraging for those attempting to develop a local fishery for this species.

Cooperation Needed in Atlantic Salmon Program

The Federal Government's program to restore the Atlantic salmon, *Salmo salar*, to rivers in the northeastern United States has encountered a couple of problems, according to Allen E. Peterson, Jr., Director of the National Marine Fisheries Service's Northeast Fisheries Center in Woods Hole, Mass. "The first problem," notes Peterson, "is the hesitancy of some fishermen along the coast of eastern Canada to return tags to the Fisheries Center taken from salmon that they have harvested because of uncertainty over whether Canadian citizens qualify for the \$8.00 (U.S.) reward." Peterson noted that "anyone, U.S. citizen or not, qualifies for the reward."

"The second problem is the incidence of a few fishermen in the northeastern United States in unsuspectingly returning tags from illegally harvested salmon." Salmon cannot currently be legal-

ly harvested in some northeastern U.S. rivers. These closures are designed to protect small hatchery-produced salmon until they descend to the sea where they can grow, mature, and then someday return as large, highly prized gamefish.

The tagging program, a joint effort between the National Marine Fisheries Service, the U.S. Fish and Wildlife Service, and the New England states, attaches tags to about 150,000 of the million-plus hatchery-produced juvenile or smolt Atlantic salmon which are annually released into the Connecticut River, the Merrimack River, and various Maine rivers. Each $\frac{5}{8}$ -inch long, green or blue-colored tag is attached behind the dorsal fin of the 7- to 9-inch long smolt, and has a number on one side and the phrase, "REWARD, NMFS, WOODS HOLE, MASS., USA 02540," on the other side. To claim the \$8.00 reward, fishermen catching legal salmon should send the tag to the Fisheries Center along with information on when, where, and how (rod and reel, trap net, etc.) caught, and the length and weight (if possible) of the fish.

Peterson indicated that "our ability to manage Atlantic salmon depends upon our knowledge of their habits, and we need to know more about their habits at sea, including routes of migration, timing of migration, and areas of concentration." Tag returns provide that knowledge, but some Canadian fishermen are reluctant to return tags, in part, because of a feeling that only U.S. fishermen can claim the U.S. reward. Peterson countered that "the reward will be paid to any party who returns a tag along with the requested information on its capture."

On the other hand, some American fishermen have returned tags from salmon caught in the Connecticut River and its tributaries when there was a ban on keeping salmon caught in those waters. A total ban on keeping salmon caught in the main stem of the Connecticut River is now in effect until further notice by all four states bordering the river (Connecticut, Massachusetts, New Hampshire, and Vermont), both to protect the smolts until they can descend the river to reach the sea, and to protect the returning adults which are the

broodstock of the whole restoration program.

It's unclear whether fishermen returning tags from illegal fish have misidentified the salmon smolt as another species (brown trout, rainbow trout, etc.), are unaware of the applicable state ban, or feel that tag-bearing fish are exempt from the ban (which they are not).

Peterson states that "the Fisheries Center will continue to pay rewards for tags taken from any salmon regardless of the apparent circumstances of harvest." He added, though, that "in order to reduce the harvest of tagged smolts next spring, the Fisheries Center will undertake an educational campaign with the U.S. Fish and Wildlife Service and the New England states to help fishermen better distinguish between small salmon and small trout, and to be aware more fully of all state regulations pertaining to salmon fishing."

Curd Reduction in Canned Frozen Salmon

Recent research by the Utilization Research Division (URD) of the NMFS Northwest and Alaska Fisheries Center shows that phosphate treatment of thawed sockeye and pink salmon prior to canning is effective in reducing the curd that forms during the retorting process. Currently the research is being directed toward phosphate treatment of boneless and skinless salmon packed chunk-style in the can. The results are even more dramatic than when normal skin-on, bone-in fish is canned.

The treatment of the skinless fish cut in chunks allows thorough and uniform application of the phosphate. Curd formation is minimized by the treatment. The canned salmon has a very attractive appearance and the flavor and texture is superior to fish canned without treatment. The industry has shown a great deal of interest in this development because, first, it would provide the means of producing a highly acceptable canned salmon from frozen fish, and second, because there seems to be a demand for canned salmon that is free of skin and bones. Source: Richard W. Nelson, URD, NWAFC, Seattle, Wash.