

the late 1920's and two of them were used for other purposes before being converted to whalers. All more than 45 years old, they were probably due for retirement despite the whale conservation movement.

The four remaining vessels were built in the late 1950's or early 1960's. It is not likely they will be retired in the near future for, even if whaling were completely prohibited, they are

also equipped to serve as fish-processing factoryships. Two of the vessels, the *Vladivostok* and *Dalnii Vostok*, are deployed in the Northern Pacific, while the *Sovetskaia Ukraina* and *Sovetskaia Rossiia* continue to operate in the Antarctic. They are on the 13th and 15th Antarctic expeditions, respectively. Details on the composition of the Soviet whaling fleet are shown in the accompanying table.

Canada Signs Pacific Salmon Aid Agreement

The Federal Government of Canada and the Province of British Columbia have agreed to cooperate in the development of plans for a major program to expand significantly Canada's Pacific salmon resources, Environment Canada reports. A memorandum of understanding signed in Vancouver, B.C. last November by the Federal Minister of State for Fisheries, Roméo LeBlanc, and British Columbia's Minister of Recreation and Conservation, Jack Radford, cleared the way for federal-provincial cooperation in the preparation of coordinated program proposals.

At a morning meeting in Vancouver, they agreed to direct their staffs to prepare detailed proposals for a comprehensive salmonid enhancement program. Planning for the program, announced in Vancouver 24 March 1975 by Le Blanc, was already underway, and the federal government had com-

mitted more than \$1,000,000 for feasibility studies and planning activities last year. Development projects are due to commence in 1977, pending approval of the overall program by the federal Cabinet.

"I am gratified at the positive and enthusiastic response of the British Columbia Government in agreeing to cooperate in the planning phase of this exciting program," LeBlanc said. "Provincial support ensures a high degree of consultation in developing program proposals having such a significant economic effect on extensive areas of the B.C. coastline."

Radford stated that his department has particular responsibilities for freshwater recreational fisheries, but other provincial departments will also have significant interest in the proposed program. In developing streams for fish, some other uses for these streams, such as power generation or irrigation,

may have to be foregone. Land management practices may require modification in some watersheds to preserve the stream environment in a state suitable for fish. Radford also said the involvement of various provincial agencies with the Department of Recreation and Conservation would be coordinated by the Environment and Land Use Secretariat.

Glen Geen, Pacific regional Director-General of Fisheries Management for Environment Canada's Fisheries and Marine Service, was named chairman of a steering group responsible for the direction of planning activities. E. H. Vernon, Associate Deputy Minister (Fisheries), Department of Recreation and Conservation, heads provincial representatives in the group.

The program is aimed at significantly expanding the stocks of salmon to increase returns to the commercial fishery to \$400 million annually, while greatly enlarging the capacity of the sports fishery which already supports one million user-days of angling. The program also will ensure adequate resources for the traditional Indian food fishery. Achievement of these goals by applying proven enhancement techniques such as artificial spawning channels, hatcheries and fishways, could be attained by about 1990. Costs of the program, financed mainly by the federal government at an estimated \$250-300 million, should eventually be recovered in terms of increased returns to the salmon fisheries.

Publications

NMFS Issues Bicentennial Seafood Cookbook Series

A Seafood Heritage from America's First Industry is the first in a new Bicentennial series of booklets produced by the National Marine Fisheries Service featuring fish and shellfish cookery. Recipes range from "Angels on Horseback" (bacon-wrapped oyster appetizers) through "Beer Batter-Fried Fish," "Fish Salad Bunwiches," "Maine Fisherman's Coleslaw," and "Oyster Roast," to a "Tuna Barbecue" and more.

Recipes are conveniently proportioned for 25 persons for the many gatherings—club picnics, family reunions, fund-raisers, etc.—which will be scheduled during the Bicentennial

year. Further, the booklet includes entire menu plans, with an eye toward both taste and economy. Along with the menu suggestions, the well illustrated booklet includes historical vignettes appropriate to the nation's first 200 years and its long-time enjoyment of fish. Its historical anecdotes find Henry David Thoreau kindling a small fire to cook a "sweet and savory clam," and vegetarian Benjamin Franklin devising an elaborate rationale allowing him to partake of fresh-caught cod: "I balanc'd some time between principle and inclination, till I recollected that, when the fish were opened, I saw smaller fish taken out of

their stomachs; then thought I, 'If you eat one another, I don't see why we mayn't eat you.' So I din'd upon cod very heartily."

The seafood booklets cost \$0.80 each and can be ordered from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. Request Stock Number 003-020-00101-7.

Soft-Shell Clam Harvest, Salmon Diseases Noted

To facilitate an exchange of information between salmon growers and research scientists, the Washington Sea Grant Marine Advisory Program and the University of Washington College of Fisheries sponsored a work-

shop on 17 April 1974 on salmon diseases. The result is **Salmonid Diseases: A Workshop Summary**, edited by Terry Noshko and Ernest Brannon (WSG-WO-75-2).

This 25-page paperbound booklet contains papers on such topics as furunculosis epidemics in Pacific salmon, control measures for vibriosis and corynebacterial kidney disease, viral diseases of North American salmonids and their relation to nutrition, and legal status of using preventative vaccines.

Another recent Washington Sea Grant booklet is **A Review of the Hydraulic Escalator Shellfish Harvester and its Known Effects in Relation to the Soft-Shell Clam, *Mya arenaria*** (WSG-75-2). Authors of the 32-page publication are Michael A. Kyte and Kenneth K. Chew. Though Puget Sound (Wash.) tidelands have substantial stocks of the soft-shell clams, there have been few such commercial harvests. Because little information has been available on the long-term effects of the hydraulic escalator shellfish harvester on the environment, Sea Grant scientists undertook the survey reported in this publication.

Single copies of both booklets are available by mail at 50 cents each for postage and handling from the Sea Grant Communication Services, Division of Marine Resources, University of Washington, HG-30, Seattle, WA 98195. Bulk copy rates are available upon request.

Getting Down to Business in Commercial Fishing

The failure of both large and small businesses can too often be traced to poor management. Commercial fishing is not immune to the problem. Now, **The Fisherman's Business Guide** has been written by Frederick J. Smith for the commercial operator who seeks business management guidance.

The book is divided into three parts: 1) Economic concepts; 2) management tools; and 3) applications. Using the book, one can examine a commercial fishing operation and weigh decisions in aiming for the best returns on labor and capital investments. The author, an associate professor and extension marine economist at Oregon State University, Corvallis, has taught nu-

merous fishery-business related courses from Narragansett (R.I.) to Newport (Oreg.).

In Part 1, the first two of the seven chapters discuss the economic, political, and physical environment within which a fishing business must operate: Fishery Resource Management and The Decision-Making Process. The other five chapters, dealing with economic principles and concepts, include: Business Objectives and Planning; Demand, Supply, and Fish Prices; Fishing Costs and Returns; Maximizing Profit in a Fishing Business; and Coping with Risk and Uncertainty.

The five chapters in Part II examine important tools in successful fishing business management: Management Information; Profit and Efficiency Analysis; Partial Budgeting; Financial Budgeting; and Business Organization. Finally, Part III applies business management to some major fishing business decisions: Selecting a Fishery; Boat Size and Ownership; and Boat Management.

Such often changeable data as ongoing research and tax and resource management regulations are not discussed in the book. A bibliography is provided for reference on these and other fast changing fishery matters. A listing of other sources of information gives the addresses of the various Marine Advisory Services and National Marine Fisheries Service offices.

The 172-page book contains 51 tables and diagrams and is available for \$10.95 from the International Marine Publishing Company, 21 Elm Street, Camden, Maine 04843.

Foreign Fishery Books Translated

A limited number of the following publications, translated and printed for the National Marine Fisheries Service under the Special Foreign Currency Science Information Program (financed with Public Law 480 funds), are available for free distribution from the Language Services Division, F43, Office of International Fisheries, NMFS, NOAA, Washington, D.C. 20235.

Biological and Technological Characteristics of Grenadier Family Fishes (Macruridae) of the NW Atlantic, by J. Nodzynski and C. Zukowski, was

recently translated and printed for NOAA/NMFS. This Polish publication was issued by the Gdynia Sea Fisheries Institute in 1971. It contains a brief outline of a survey of the grenadier species occurring in the ICNAF fishing grounds of the Northwest Atlantic. Two species in particular, the black and gray grenadiers, have been analyzed from both the biological and technological points of view.

Principles and Problems of Zoogeography, by P. Banarescu was published in 1970 by the Romanian Academy of Sciences Publishing House. Its translation and printing were recently produced for NMFS in Yugoslavia under the Special Foreign Science Information Program financed by PL-480 monies. The book discussed in detail the geographical distribution of freshwater and marine animals. Its eight chapters cover the subject of zoogeography and its relation to other sciences; geographic bases of animal specification; ranges of species and supra-specific taxa; faunas, their component elements and zoogeographical units; role of selection and competition in dispersal of taxa and the formation and evaluation of faunas; paleogeographical theories; problems of reconstruction and evolution of taxa ranges; and problems of zoogeography of freshwater animals.

Introduction to Oceanography and Marine Meteorology, by M. Buljan and M. Zore-Armanda was published in 1971 by the Institute for Oceanography and Fisheries, Split, Yugoslavia. This textbook was recently translated for NOAA by the Nolit Publishing House, Belgrade, under the Special Foreign Currency Science Information Program (financed with Public Law 480 monies). It is made up of two parts. The first one covers marine geology, chemical and physical properties of the sea, motion of the sea, organic production, and related topics. The second part deals with marine meteorology, meteorological codes, the reading of synoptic charts, and meteorological phenomena in the Mediterranean and Adriatic Seas. A brief historical review of explorations of the sea in Yugoslavia and other parts of the world is also presented. The volume includes a glossary of oceanographic and meteorological terms and a short bibliography.