



Recent publications of interest to the commercial fishing industry are listed below.

FISH AND WILDLIFE SERVICE PUBLICATIONS

THESE PROCESSED PUBLICATIONS ARE AVAILABLE FREE FROM THE DIVISION OF INFORMATION, U. S. FISH AND WILDLIFE SERVICE, WASHINGTON 25, D. C. TYPES OF PUBLICATIONS ARE DESIGNATED AS FOLLOWS:

CFS - CURRENT FISHERY STATISTICS OF THE UNITED STATES AND ALASKA.

FL - FISHERY LEAFLETS.

SSR.-FISH. - SPECIAL SCIENTIFIC REPORTS--FISHERIES (LIMITED DISTRIBUTION).

SEP.-SEPARATES (REPRINTS) FROM COMMERCIAL FISHERIES REVIEW.

| <u>Number</u> | <u>Title</u> |
|---------------|---|
| CFS-903 | - Massachusetts Landings, 1952 Annual Summary, 16 p. |
| CFS-912 | - Massachusetts Landings, June 1953, 8 p. |
| CFS-915 | - Fisheries of the United States and Alaska, 1951 Annual Summary, 16 p. |
| CFS-917 | - Frozen Fish Report, September 1953, 8 p. |
| CFS-920 | - Fish Meal and Oil, August 1953, 2 p. |
| CFS-921 | - Florida Landings, July 1953, 6 p. |
| CFS-922 | - Texas Landings, August 1953, 3 p. |
| CFS-923 | - Massachusetts Landings, July 1953, 8 p. |
| CFS-925 | - Mississippi Landings, August 1953, 2 p. |
| CFS-926 | - New Jersey Landings, August 1953, 2 p. |
| CFS-927 | - Maine Landings, August 1953, 6 p. |
| CFS-929 | - Florida Landings, August 1953, 6 p. |
| FL-336r | - Quarterly Outlook for Marketing Fishery Products, October-December 1953, 40 p. |
| FL -405 | - Salmon Cannery Waste for Mink Feed, by James R. Leekley, Raymond G. Landgraf, Jr., Jeanne E. Bjork, and William A. Hagevig, 31 p., illus. (November 1952). Gives results of cooperative work between the U. S. Department of Agriculture Experimental Fur Station, Petersburg, Alaska, and the U. S. Department of the Interior Fishery Products Laboratory, Ketchikan, Alaska, on the value of salmon waste for mink feed. Other fishery products, such as flounders (stomach and intestines removed) halibut heads, and rockfish were tested for comparison. Data on proximate composition, and niacin, biotin, |

thiamin, and riboflavin content of the various test rations used are presented. The results indicated that: (1) frozen pink-salmon cannery waste shows considerable promise as the main protein portion of the ranch mink diet; (2) both adult and kit mink (3 months or older) made better weight gains when fed raw frozen salmon waste than when fed any of the other fish products tested (processed pink-salmon waste, frozen flounders, frozen pink-salmon heads, frozen red rockfish, frozen whole pink salmon, frozen ling cod, and frozen halibut heads); (3) frozen raw pink-salmon waste is a more satisfactory protein ingredient than the processed waste when used for feeding female mink during the breeding and gestation period up to the weaning of the young; and (4) subject to further tests, the authors are unable to recommend feeding pink-salmon waste to young mink approximately 1 to 3 months of age.

Sep. No. 358 - Tuna Fishing at Tahiti.

Sep. No. 359 - Deep-Water Trawling Survey off the Oregon and Washington Coasts (Aug. 25-Oct. 3, 1952).

Sep. No. 360 - Progress on Fishery Technological Research Projects, Fiscal Year 1953. Program for Fishery Technological Research, Fiscal Year 1954. Reports Published During Fiscal Year 1953 on Specific Phases of Fishery Technological Research.



MISCELLANEOUS PUBLICATIONS

THESE PUBLICATIONS ARE NOT AVAILABLE FROM THE FISH AND WILD-LIFE SERVICE, BUT USUALLY MAY BE OBTAINED FROM THE AGENCIES ISSUING THEM. CORRESPONDENCE REGARDING PUBLICATIONS THAT FOLLOW SHOULD BE ADDRESSED TO THE RESPECTIVE AGENCIES OR PUBLISHERS MENTIONED. DATA ON PRICES, IF READILY AVAILABLE, ARE SHOWN.

Canadian Shellfish for Everyday Meals, Consumer Bulletin No. 6, 14 p., printed. Department of Fisheries, Ottawa, Canada. Recipes for a number of dishes using lobsters, crabs, shrimp, oysters, scallops, and clams are given. The recipes have been tested and approved by the Canadian Department of Fisheries' Home Economics Section. A paragraph under each type of shellfish outlines how each species is purchased and the quantities required for serving meals for the family.

East African Fisheries Research Organization Annual Report, 1952, 45 p., printed. East African Fisheries Research Organization, P. O. Box 343, Jinja, Uganda, 1952. Discusses the factors which determine fertility in tropical lakes; hydrology of the Buvuma Channel; hydrological data from swamps; diatom flora of the East African lakes; entomology (especially the species of insects that live in the mud and upon which certain fish feed); mollusca (aquatic snails); the fish which live in tropical waters; crocodiles; and fish-eating birds.

Economic Values of Anadromous Fishes in Oregon River, processed, 28 p. Legislature of the State of Oregon, Salem, Oregon, October 28, 1952. This is another in what is becoming to be a long series of estimates of economic values of fishery resources in local, state, and national areas. The present report is in response to House Joint Resolution 17 of the Forty-sixth Legislative Assembly of the State of Oregon, Chapter 590, Oregon Laws of 1951. This Resolution created an Interim Committee to make a study of the economic values of anadromous fishes in the rivers of the State of Oregon. Commercial and sport fisheries for anadromous fishes are included in the estimates of economic values which are for 1951. With respect to the commercial fisheries, estimates are given for such items as net income to State (from outside sources), sale of anadromous fisheries products within the State, etc.; and with respect to the sport fishery, for such items as expenditures of anglers and value of their equipment. Conservative, sound, and scientific methodology is used to arrive at the estimates. Expenditure or income estimates are given and no attempt is made to consider capitalized values of income data.

—W. H. Stolting

Fisheries Research Papers, vol. 1, no. 1, 48 p., illus., printed. Washington Department of Fisheries, Seattle, Wash., July 1953. Includes the following papers: "General Views on Fisheries Management Goals," by Robert J. Schoettler; "Stream Flow and Silver Salmon Production in Western Washington," by William A. Smoker; "Migrations of Silver Salmon on Puget Sound," by Hans M. Jensen; "Notes on the Pacific Ocean Perch," by Dayton L. Alverson; "Length-Weight Relationships of the Lingcod," by Henry O. Wendler; and "The Sport Fishery for Salmon on Puget Sound," by Richard T. Pressey.

Fiskeri-Beretning for Aret 1952, 252 p., illus., printed, in Danish with English resume. I Kommission Hos G. E. C. Gad, Copenhagen, Denmark, 1952. This report contains detailed statistics on the Danish fisheries for the year 1952. Included in the report are data on number of fishermen, number of fishing craft, value of fishing vessels, catch by species, landed value of the catch, resumes by fisheries, and imports and exports of fishery products. Also includes comparative names of fish and shellfish in Danish, Latin, English, Swedish, German, and French.

"Food from the Sea" by J. F. Weiss, article, Agricultural and Food Chemistry, vol. 1, no. 13 (Sept. 16, 1953), pp. 822-28, illus. printed. American Chemical Society, 1155 16th St. NW., Washington 6, D. C. (Single copy 40 cents for members and 50 cents for nonmembers.) Despite evidences that human civilization originated along seashores and rivers where aquatic plants and animals were abundantly available, we now obtain a relatively small portion of our food from this rich potential source of supply. The factors for growth of marine plants and animals include all the essential mineral elements, larger quantities of dissolved carbon dioxide, and the sun's radiation to foster photosynthesis. The food chain of the sea utilizing these essentials begins with the microscopic plants (phytoplankton) fed upon by minute animals (zooplankton), in turn eaten by the tiny shrimp-like copepods, the principal member of the crustaceans. Next in the chain are the small schooling fishes like herring, menhaden, mackerel, which become food for the larger cod, salmon, tuna, and shark.

The efficiency in the use of the food and energy value originating in the phytoplankton via this chain is very low—of the order of one ten-thousandth part—when the cod, for example, is ultimately used for man's food. In addition, an estimated nine-tenths of the total phytoplankton production is lost as a potential source since this amount is not consumed by the sea animals that eventually become human food. As a basis for more direct use of these microscopic forms, the average composition of the dry substance of the zooplankton is reported as: 59 percent protein, 7 percent fat, 20 percent carbohydrate, 4.7 percent chitin, and 9.4 percent ash. At present the cost of harvesting and extraction is too high to permit the suggested use as an animal food source.

Recent discoveries of enormous quantities of the large and more massive accumulations of the small crustaceans in what is known as the sound scattering layer are cited as offering a second potential source of nutritive materials. Other non-utilized sea forms listed include the 3,000 species of sponges that could be converted to food, feedstuffs, and fertilizer.

Examples of more extensive use of the higher forms of sea animals are recently-discovered lobster and red crab grounds about 100 miles offshore

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from Cape Cod, and the ocean quahog and the sea mussel fisheries exploited as a result of World War II food needs.

Attention is called to: (1) the relatively undeveloped state of fishing and fishery products preservation in comparison to advances in other industrial fields; (2) the small portion of the whole fish now used for food; (3) the recent but still incomplete application of efficient conversion of fish wastes into animal feedstuffs. The proposed uses for fishery products are: (1) as fish flour to combat malignant malnutritional diseases in protein deficient tropical areas; (2) the low-temperature high-vacuum dehydration of fish to supply a less expensive but nutritive product at points where fresh fish is not available; (3) the wider use of enzymatic digestion to convert fish into fish pastes or sauces, or the fish wastes into valuable feedstuffs supplements and fertilizers. As examples of better utilization of fishery resources, the article cites the potential of pond and brackish-water fish culture and the edible meat of whales not now consumed.

Aside from the need for a more complete harvest of the sea's potential bounty and a more efficient use of the fishery products when harvested, the article lists as the most pressing problems to fuller sea resources utilization: (1) better distribution methods for the very perishable products; (2) improvement in purchasing power and living standards of backward nations; (3) facilitation of free flow of commodities between nations.

—Charles Butler

(India) The Rao Plan: Deep Sea Fishing as a Cottage Industry, Fishery Series—I, II & III, by U. Shanker Rao, 102 p., illus., printed. B. P. M. Syndicate, 37 Monokarpukur Road, P. O. Rash Behari Avenue, Calcutta 29, India. This book, which describes a plan for the development of the coastal fishing industry in India, is divided into three sections. Part I covers a brief survey of the commercial possibilities for the development of deep-sea fishing in India. Part II describes a scheme for the construction and chartering of standardized motor fishing vessels. Part III offers suggestions for a long-term Indian coastal fish survey to be carried out with the voluntary assistance of merchant ships trading in Indian waters, and a short-term immediate survey of certain selected areas of the coastal waters, estuarine river mouths, and the Sundarbans.

(North Carolina) Fourteenth Biennial Report 1950-1952, 120 p., illus., printed. North Carolina Department of Conservation and Development, Raleigh, N. C., 1952. A report of the North Carolina Department of Conservation and Development for the biennium July 1, 1950-June 30, 1952. It describes the work of the various divisions

of the Department, including the Division of Commercial Fisheries. This section discusses briefly the progress of the oyster program and the catch and value of various fishery products. A chart on the development of State agencies administering natural resources in North Carolina and an organization chart of the Department of Conservation and Development are included.

The Production of Halibut Eggs on the Cape St. James Spawning Bank off the Coast of British Columbia, 1935-1946, by Richard Van Cleve and Allyn H. Seymour, Report of the International Fisheries Commission No. 19, 44 p., illus., printed. International Fisheries Commission, Seattle, Wash., 1953. This report covers an investigation of the halibut egg production off Cape St. James, describing specifically the region sampled, method of sampling, spawning season, distribution of the halibut eggs, production of eggs on the Cape St. James grounds, correlation of egg production with other measures of abundance, and comparison of mortality rates on Cape St. James and Goose Island banks. An appendix contains discussions on the accuracy of sampling, method of analysis of the data, variability of egg populations, rate of development of the ova, rate of mortality of halibut eggs, and relation of depth distribution of ova to water density.

Regulation and Investigation of the Pacific Halibut Fishery in 1952, Report of the International Fisheries Commission No. 20, 22 p., illus., printed. International Fisheries Commission, Seattle, Wash., 1953. A brief review of the Commission's administrative and investigational activities in 1952 with reference to the Pacific Coast halibut fishery. In 1952 the Commission completed its twenty-first year of regulation of the halibut fishery and continued the statistical and biological investigations which form the basis for the regulations and a guide to future control of the fishery. Also presented are the 1952 regulations, statistics of the fishery, abundance of halibut in Areas 2A and 3A, the fishery in the special small areas, size and age composition of catches, and the tagging program.

TRADE LIST

The Commercial Intelligence Branch, Office of International Trade, U. S. Department of Commerce, has published the following mimeographed trade list. Copies of this list may be obtained by firms in the United States from that Office or from Department of Commerce field offices at \$1.00 per list:

Canneries - The Netherlands, 17 p. (August 1953). Includes fishery products canneries. The report also points out: "The fish canning industry of little importance prior to the last war, has vigorously expanded since 1945." The name and address of each cannery, relative size, and the products canned are given.

