
## DICTIONARY

"Multilingual Dictionary of Fish and Fish Products," compiled by J. J. Waterman, Fishing News (Books), 110 Fleet St., London, E.C. 4, England, 1968, 431 pp., $18.50.

Each of the 1,117 entries in this dictionary provides names, descriptions, and processing methods, if applicable, in French and English. The Latin name is given for each species. Common names also are given in German, Danish, Spanish, Greek, Italian, Icelandic, Japanese, Norwegian, Dutch, Portuguese, Swedish, Turkish, and Yugoslavian (Serbo-Croatian). There is a separate index for each language.

## FISH CULTURE

"The Fresh Water Cultured Fish Industry of Japan," by E. Evan Brown, Research Report 41, 1968, 57 pp. Information is available from Dr. E. E. Brown, Department of Agricultural Economics, Livestock-Poultry Building, University of Georgia, Athens, Georgia 30601.

Although Japanese farmers have raised fish for hundreds of years, production for commercial sale only began about 150 years ago. The industry grew slowly until the 1930's, but expanded rapidly during World War II. After the war, though largely ignored by the government, the growth continued. In 1950, output was officially calculated at 6,000 tons. From 1950 to 1966, volume increased to 41,000 tons, or by 583%. This was only $\frac{1}{2}$ of 1% of Japan's total 1966 catch, but 2.6% of the value of total wholesale sales. Each pound of cultured freshwater fish was worth more than 5 times the average value of other fish.

Dr. Brown spent July and August of 1968 in Japan studying freshwater fish culture. He describes the 4 major methods of culture, the 4 major species, marketing and institutional factors, and predicts the Japanese market for freshwater cultured fish will expand.

## FISH PROTEIN CONCENTRATE (FPC)

"Protein-Enriched Cereal Foods for Wor Needs," edited by Dr. Max Milner, 1968, 3 pp., illus., $6.50. Order from America Association of Cereal Chemists, 1821 Uni versity Ave., St. Paul, Minnesota 55104.

This book contains 32 papers by 38 author Many are devoted to recent experiences commercial production of low-cost, protei rich, foods. The increasing importance sophisticated marketing techniques is em phasized. Attention also is given to ne processing techniques and the use of uncon ventional protein concentrates in formulati cereal foods, including bread.

"Enrichment of Cereal Foods in Chile wi Fish Protein Concentrate," by Julio San Maria is of particular interest. Sr. San Maria describes the effort made in Chile sin 1950 to introduce fish protein concentra (FPC) into the diet of low-income groups. H regards FPC as a biologically and socio-ec nomically efficient protein-enrichment r source, stable, nontoxic, and entirely acce able to those in need of additional high-quali protein--infants, children, and pregna women.

He believes that adequate supplies of satisfactory product are being delayed u necessarily by insistence on esoteric 'quali standards,' which may be unnecessary Chile. The 'best,' he believes, in this ca is the enemy of the 'good enough.' He co cludes that "the critical state of child ma nutrition, due largely to protein deficienc calls for major early action. For Chile, is clear that fish flour, used as a supplem to cereal foods, is a resource of first choice

## NORTHERN FISHERIES

"Review of Fisheries in OECD Memb Countries, 1968," Organization for Econom Co-operation and Development, Paris, 19 163 pp., $2.80. For sale by OECD Public tions Center, Suite 1305, 1750 Pennsylva Ave., Washington, D. C. 20006.

The Review covers the main fisheries developments in 18 countries--including Canada, Denmark, Iceland, Japan, Norway, and the U.S. The 18 countries provide about half the world's fish supply and handle around three-quarters the global trade in fish and fish products.

## OCEAN ENGINEERING

"Handbook of Ocean and Underwater Engineering," edited by John J. Myers, Carl H. Holm and R. F. McAllister, McGraw-Hill Book Co., New York, 1969, 1,100 pp., illus., $25.

Designed to cover all aspects of ocean and underwater engineering, this work is the result of a cooperative effort between North American Rockwell Corp. and the U.S. Navy. Forty-one recognized authorities in various fields of ocean and underwater engineering have contributed to it.

The practical engineering aspects are discussed in 12 major subject sections: basic oceanography; basic hydrodynamics; underwater fields and instrumentation; tools, rigging and machinery; underwater cables; underwater power sources; materials and fouling; fixed structures; vessels and floating platforms; diving; ocean operations; and wind and wave loads.

## PREDATOR CONTROL

"Electrical Installation for Control of Northern Sqawfish," by Galen H. Maxfield, Harold E. Monan and Holbrook L. Garrett, Special Scientific-Fisheries No. 583, Department of the Interior, Fish & Wildlife Service, 1969, 14 pp., illus. Available from Division of Publications, BCF, 1801 N. Moore St., Arlington, Va. 22209.

The northern sqawfish, a predator on young salmon and trout in major river systems of the Pacific Northwest, also is a serious competitor of desirable food and game fishes in many of the lakes and tributary streams of those systems. In northern Idaho, sqawfish, peamouth, longnose dace, and suckers have become the dominant fishes in water that formerly produced trout. The principal cause of this increase in rough-fish populations has been changes in the stream environment--warmer water, reduced bank cover, siltation, and intermittent flow.

An electrode array was used to divert sqawfish into traps during their spawning migrations at Cascade Reservoir, Idaho. This paper describes and illustrates the array, the methods used, and the results.

## DATA PROCESSING

"Processing of Digital Data Logger STD Tapes at the Scripps Institution of Oceanography and the Bureau of Commercial Fisheries, La Jolla, California," by James H. Jones, SSR-Fisheries No. 588, Department of the Interior, Fish & Wildlife Service, 1969, 25 pp. Available from Division of Publications, BCF, 1801 N. Moore St., Arlington, Va. 22209.

The development of continuous sampling STD (salinity-temperature-depth) sensors as a prime data collection tool for oceanographic cruises requires development of techniques capable of handling the data with modern digital computing equipment. This paper describes a technique developed for processing STD data collected as part of the EASTROPAC Survey Program. Assuming that the data has been digitized and recorded on IBM compatible tape in the field, Jones describes the computer programs needed for processing the basic data tapes. A listing of the program with subroutines is given in an appendix.

## SHRIMP

"Gulf of Mexico Shrimp Atlas," by Kenneth W. Osborn, Bruce W. Maghan and Shelby B. Drummond, Circular 312, Department of the Interior, Fish & Wildlife Service, 1969, 20 pp., illus., $2.25. For sale by Superintendent of Documents, U.S. Government Printing Office, Washington, D. C. 20402.

Gulf of Mexico shrimp form the most valuable single U.S. fishery. From 1959 to 1963, an average of 107 million pounds (tail weight), worth $55 million to the fishermen, were landed annually. Three kinds of shrimp--brown, white, and pink--made up 98% of the landings.

The atlas illustrates the distribution and relative catches of the 3 species in the offshore commercial fishery. It also summarizes the commercial fleet's catch and effort, and the results of 15 years of exploratory fishing by BCF and the Fish and Wildlife Service.

--Barbara Lundy