



# BOOKS

## DEMERAL FISHES

"Demersal Fish Resources: Composition, Distribution, and Commercial Potential of the Continental Shelf Stocks off Southeastern United States," by Paul Struhsaker, 'Fishery Industrial Research,' Vol. 4, No. 7, Fish & Wildlife Service, Department of the Interior, 11 \$, pp. 261-300, illus. Available from Division of Publications, 1801 N. Moore St., Langton, Va. 22209.

The Bureau of Commercial Fisheries and other agencies have been exploring the waters bordering the southeastern U.S. since 1950. The exploratory fishing vessel 'Silver Bay' conducted trawling explorations for offshore demersal fishes in this area from 1959 to 1964. This report summarizes and evaluates the results.

The primary purpose of the explorations was to determine the commercial potential of offshore demersal stocks. There were two other aims--to find offshore concentrations of species that could be used immediately by the fishing industry, and to obtain a picture of the distribution and availability of demersal fish stocks as they are related to the general features of the shelf environment.

The most productive grounds were found in northeastern Florida and South Carolina, although isolated productive areas occurred along most of the southeastern coast. Mr. Struhsaker reports that moderate-to-large schools of snappers, groupers, porgies, and other ecologically associated species can be consistently made with roller-rigged New England-type fish trawls. He estimates, conservatively, that proper use of the resources could at least double the present annual landings of snappers and groupers in the area.

The report includes a fishing log and chart of stations, where catches of commercial fishes were made, and a list of demersal fishes taken during the exploration, with notations of their occurrences in the trawl catches.

## DOLPHINS

"The Dolphin, Cousin to Man," by Robert Stenuit, Sterling Publishing Co., New York, 1968, xv + 176 pp., illus.

Robert Stenuit, oceanographer, world-famous diver and author, has been deeply interested in dolphins since his first contact with them in 1964. In this fascinating introduction to the study of dolphins, he discusses all aspects--biology, intelligence, domesticability--and their future as active partners with man in exploitation of the sea.

## FRESHWATER FISH

"Methods for Assessment of Fish Production in Fresh Waters," International Biological Program Handbook No. 3, edited by W. E. Ricker, Blackwell Scientific Publications, Oxford & Edinburgh, 1968, 313 pp., illus.

This is a companion volume to the "Biological Basis of Freshwater Fish Production" (CFR, Dec. 1968). It is aimed at biologists who have basic university training in zoology and some knowledge of ecology and freshwater biology, but with no special experience in research on fish. With the aid of this handbook, such biologists will be able to carry out worthwhile and rewarding research in fish production in any part of the world.

## FISH 'VOICES'

"An Atlas of Fish Sounds," edited by B.P. Manteifel (in serial report 'Translations of USSR Resources No. 3'), JPRS Trans. No. 47.707, 46 pp., \$3. Available from Clearinghouse, U.S. Department of Commerce, Springfield, Va. 22151.

Published in the USSR in 1968, this atlas contains data on the characteristics of the 'voices' of 79 species of cartilaginous and bony fishes, mostly marine. It includes sounds of feeding, maneuvering of schools, threat, and others. It gives the taxonomic



position of the fishes and describes the biological significance and physical characteristics of fish sound. The original Soviet publication included sound graphs and a phonograph disc with recording illustrating 'vocal' abilities of certain species, but these are not included with the translation.

#### FISH FINDING

"Fish Location by Hydroacoustic Devices," by V.G. Azhazha and E.V. Shishkova, *Pishchepromizdat*, Moscow, 1960. Translation No. TT 67-51265, 1968, 113 pp., illus. U.S. Department of Commerce, Clearinghouse, Springfield, Va. 22151.

Sonar is an apparatus that detects the presence and location of a submerged object by means of sonic and supersonic waves reflected back to it from the object. It is widely used for measuring the depth of the sea and locating coasts, ships, and shoals of fish.

This is a Soviet textbook on the use of hydroacoustic instruments on scouting and fishing vessels. It explains the physical principles of fish finding, sonar computations, and the practical aspects of using hydroacoustic equipment. The Soviet-made NEL 5r is described in detail because it incorporates all the elements typical of other types of echo sounders.

#### FISH HOLDS

"Care of Fish Holds," by Wayne I. Tretsven, *'Fishery Industrial Research,'* Vol. 4, No. 6, 1969, Fish & Wildlife Service, Department of the Interior, Washington, D.C. Available from Division of Publications, 1801 N. Moore St., Arlington, Va. 22209.

Holds in fishing vessels have long been a problem. Difficult or impossible to clean, they are often the cause of unnecessary spoilage of fish. Mr. Tretsven suggests methods of cleaning and sanitizing the hold, and applying a preservative to wooden holds. He recommends an approved fungicide for treatment of wood in the holds. Reporting on the effectiveness of lining the hold with polyethylene sheeting, he concludes that it is a practical method for keeping fish and ice from contact with the hold, and for keeping the hold clean and dry.

#### MARKETING

"Report on Market for Frozen Fish in U.S.," by Dag Halland and Stig Valland, 1968. Translation No. PB 182 816 T, 94 pp., (microfiche 65¢). U.S. Department of Commerce, Clearinghouse, Springfield, Va. 22151.

This is a report on the results of a research project conducted in the U.S. for 6 months during the summer of 1968. Halland and Valland give their views of the U.S. marketing system, the structure of the European fishing industry, centralized versus decentralized exports, and the most profitable alternatives. Concluding that present conditions on the U.S. market are unfavorable to Norwegian frozen fish exporters, they suggest that better marketing techniques should give Norway a bigger share of this market. Her present share is only 10%.

#### PROCESSING

"Rapid Method for the Estimation of EDTA (Ethylenediaminetetraacetic acid) in Fish Flesh and Crab Meat," by Herman S. Groninger and Kenneth R. Brandt, *'Fishery Industrial Research,'* Vol. 4, No. 6, 1969, Fish & Wildlife Service, Dept. of the Interior, Washington, D.C. Available from Division of Publications, 1801 N. Moore St., Arlington, Va. 22209.

EDTA has been reported useful, or potentially useful, as an additive to seafoods to stabilize color, retard the formation of struvite, inhibit enzyme-catalyzed changes in flavor, and to inhibit the growth of bacteria. Since EDTA often is applied by spraying or dipping the seafood, the amount of EDTA actually added must be determined by a suitable quantitative method.

This paper describes a simple and rapid method giving about 90% recovery of added EDTA from fish flesh and crab meat.

#### MARINE CORROSION

"Marine Corrosion," by T. Howard Rogers, *George Newnes Ltd.,* London, 1968, 307 pp., illus.

Corrosion is an insidious consumer of stocks of raw materials, a squanderer of productive capacity, and a dissipator of fruits of our labors.



The systematic study of the corrosion of metals stems only from the end of the first World War. Despite the great technological advances since then, there is still no cheap construction steel alloy with any better corrosion resistance to sea water than was available 100 years ago.

There is a large volume of corrosion literature, but it is distributed over a wide range of scientific and trade journals. Mr. Ebers has attempted to cover the corrosion problems of the marine and ship building industries in a single volume.

## OCEANOGRAPHY

The Waters of the Sea," by P. Groen, D. V. Nostrand, Princeton, N.J., xiv + 328 pp., ill.

This is a book about the sea, with particular reference to its physics. A highly readable and descriptive work, it is intended primarily for students of geography, marine geology, marine biology, and students in nautical schools. It covers exploration of the coasts, water of the sea, sea ice, waves, ebb and flow ocean currents, and energy exchange in the oceans.

## COOKERS (TECHNOLOGY)

Opening Oysters and Other Bivalves Using Microwave Energy," by Joseph M. Mendicino, et. al. 'Fishery Industrial Research,' Vol. 4, No. 7, Fish & Wildlife Service, Department of the Interior, Washington, D.C., pp. 241-248, illus. Available from Division of Publications, BCF, 1801 N. Moore St., Arlington, Va. 22209.

Opening the shells of oysters and of other bivalves is difficult, time-consuming, and potentially dangerous. The rate of production of an inexperienced shucker is so low that he cannot earn the wages he must receive under minimum wage laws. This paper discusses the microwave process, and concludes that it is more efficient and less expensive than shucking by hand.

## STURGEON

Age, Growth, Food, and Yield of the White Sturgeon (*Acipenser transmontanus*) of the Fraser River, British Columbia," by S. N. Sakula and P. A. Larkin, article, 'Journal of the Fisheries Research Board of Canada,' Vol. 25, No. 12, 1968, pp. 2589-2602, illus.

The Fraser River white sturgeon fishery rose from 80,000 pounds in 1880 to a peak of 1 million pounds in 1897. Despite regulations dating from 1911, catches have declined steadily. Since 1918, commercial catch has ranged from 10-50,000 pounds annually. The sport fishery might take an additional 20-30,000 pounds a year.

This report concludes that a sustained yield of about 25% more than the present catch is possible; also, a trial fishery for 2 or 3 years, taking about 100,000 pounds per year, may be warranted.

## TESTING EQUIPMENT

"An Improved Fish Measuring Board," by C. W. Woods, Publication No. 125, Fisheries Research Division, Marine Department, Wellington, N. Z. Reprinted from 'N. Z. J. mar. Freshwat. Res.', Vol. 2, No. 4, pp. 678-83, illus.

Measurements of fish length are subject to many forms of error; one is number bias. This may be unimportant if the measurements are made to a greater accuracy than is required for analysis, but it can waste time. C. W. Woods describes a fish-measuring board that permits rapid and easy length measurement to be made without a number bias.

## TUNA

"Tuna Distribution & Migration," by Hiroshi Nakamura, Fishing News (Books) Ltd., London, 1969, 76 pp., illus.

Water temperature has long been considered a primary factor in controlling fish distribution. On the basis of data on occurrence, size composition, spawning, feeding, etc., of tunas, Nakamura published a set of hypotheses on the distribution and migrations of tunas in relation to ocean currents in 1954. This book revises his hypotheses in the light of information obtained since then. All the results of his investigations seem to support his opinion that "an area covered by a certain ocean current is a distinct habitat of tunas, a discrete ecological sphere."

## SALES PROMOTION

"The Nautical Way," Book Department, Institutions Magazine, Chicago, 1969, 104 pp., illus., \$3.95.



This book is a sales-promotion effort for fish and seafood. It includes information on food service operations, equipment, products and purchasing, preparation recommendations, merchandising ideas, and 100 fish and seafood recipes.

#### TURTLES

"On the Coast of Tamaulipas," by Humberto Chavez, Martin Contreras G., and T. P. Eduardo Hernandez D., reprinted from 'International Turtle & Tortoise Society Journal,' Vol. 2, Nos. 4 & 5, 1968, 21 pp., illus.

The region of Rancho Nuevo, Tamaulipas, is the only important nesting zone of the ridley turtle, Lepidochelys kempi (Garman) in its entire geographic distribution. Sale of its eggs is forbidden by Mexican law. However, in 1963, it was estimated conservatively that 80 to 90% of the nests were destroyed by men on the day of their construction.

An arrival of 40,000 specimens was recorded in 1947. But by 1966 the largest arrival observed had less than 2,000 turtles. A program to study their biology, and to develop a plan to protect them, was initiated by the Mexican government in 1966. This is a report on a 3½-month study made in 1966. It includes a description of the turtle's nesting and biology.

#### VANISHING SPECIES

"The Canterbury Mudfish, Galaxias burrowsius Phillips, A Vanishing Species," by W. Skrzynski, Publication No. 122, Fisheries Research Division, Marine Dept., Wellington, N. Z. Reprinted from 'N. Z. Jl. mar. &

Freshwat. Res.', Vol. 2, No. 4. Dec. 1968, 688-87, illus.

Galaxias burrowsius is able to survive of water in damp earth for long periods can be assumed that it occupies isolated waters that dry periodically, and where it probably has no competition from other fish. Such waters, once common on the Canterbury Plains, have been almost eliminated by draining or connection to rivers and artificial channels. Mr. Skrzynski, believing it unlikely that G. burrowsius will continue to survive has summarized all available information on it in this paper.

#### WHALES

"The Whale," Simon & Schuster, New York 1968, 287 pp., illus., \$20.

This is a beautiful book; it contains 200 illustrations, 87 in full color, including drawings, paintings, ancient woodcuts, old whaling prints, and photographs of contemporary whaling operations. But it is far more than a book to look at. It tells the myths and stories of whales throughout history. It includes the complete natural history of every species of whale and dolphin. And it provides a detailed history and description of whaling from earliest times to the present. A most complete and definitive review of a fascinating creature.

The main author and supervising editor is the former director of the Zoological Society of London, Dr. Leonard Harrison Matthysen. F.R.S. Scientists from the important whaling countries have helped to make the book a product of complete international cooperation.

--Barbara Lunn

