



"Ocean Life" (In Color), by Norman B. Marshall, 290 illustrations, many drawn from living specimens by Olga Marshall, 214 p., \$4.95. The Macmillan Co., Publishers, 866 Third Avenue, New York, N. Y. 10022.

A handbook of life in the oceans, handsomely illustrated in color. Dr. Marshall has designed it as a reference of current knowledge about the oceans beyond the tide marks.

He describes "the physical nature of the oceans and their fringes, and the history of exploration of the oceans' life forms." He outlines the "different environments and patterns of marine life, the life history of various groups and their ecological relationships."

The book contains a catalogue of various genera of life forms to match the 290 illustrations of particular species. There are underwater photos of corals. Mrs. Marshall painted some illustrations especially "to capture the transparent characteristics of jelly-like organisms."

"Sounds of Western North Atlantic Fishes (A Reference File of Biological Underwater Sounds)," by Marie Poland Fish and William H. Mowbray, 207 p., illus., \$12.50. The Johns Hopkins Press, Baltimore, Md. 21218.

"In 1954 the Office of Naval Research requested the Narragansett Marine Laboratory to institute and maintain a reference file of

biological underwater sounds which would be an up-to-date reference library of the recorded sounds of identified marine animals. To identify with precision and certainty sounds monitored in the field without seeing the organism that produced them is considered impossible by many investigators; such identification must be circumstantial, at best. However, certain information is useful in tentatively determining the source of sounds under such conditions; therefore, supplemental data are included here on distribution, ecology, and behavioral patterns of fish which may influence the occurrence of biological underwater sounds.

"Through our own research activity this library now contains characteristic sounds of numerous invertebrates, at least 24 marine mammals from both the Atlantic and Pacific oceans, and over 150 fish species recorded during experimental monitoring of some 300 species representative of coastal waters from Canada to Brazil. This report is limited to 220 species in 59 families of fishes studied by us along the Atlantic coast of the United States and in the Caribbean islands. Sound analyses, illustrated by 160 spectograms and 329 oscillograms, are presented for 153 species in 36 families. For each species, information is included on distribution, habits, size, sound production, and sonic mechanism."

"Fish and Invertebrate Culture--Water Management in Closed System," by Stephen H. Spotte, and Foreword by James W. Atz, 1970, 145 p., \$8.95. Can be obtained from John Wiley & Sons, Inc., Publishers, 605 Third Avenue, New York, N. Y. 10016.

The book "shows how to culture freshwater and marine fishes and invertebrates in closed-system environments by controlling the chemical and physical factors in the water affecting their normal physiology.

"Part 1, Effects of Animals on Captive Water, treats biological, mechanical, and chemical filtration and the carbon dioxide system. Part II, Effects of Captive Water on Animals, deals with respiration, salts and elements, toxic metabolites, disease prevention by environment control, and laboratory tests.

"Fish and Invertebrate Culture offers the culturist both theoretical and practical information. For example, nitrification is discussed, along with its practical applications, such as how to construct and operate a biological filter. The chemical filtration techniques using activated carbon, ion exchange resins, air-stripping, ozone, and UV irradiation are also dealt with, both in theory and in practice. There are instructions for mixing large volumes of synthetic sea water, discus-

sions of the best buffer materials, and formulas for calculating the carrying capacity of a culture system.

"Special features include line drawings of water management equipment and equipment functions, practical and up-to-date tables, and an extensive bibliography."

"Ferro-Cement Boat Construction," by Jack R. Whitener, 128 p., illus., \$7.50. Cornell Maritime Press, Inc., Cambridge, Md. 21613.

"Here is a practical guide to every phase involved in construction of the hull, finishing and fitting out of ferro-cement boats. It also includes the following reports of vital interest to those contemplating construction:

"I: An Investigation of 'Ferro-Cement' Using Expanded Metal--by J. G. Byrne and W. Wright.

"II: Some Notes on the Characteristics of Ferro-Cement--by Lyal D. G. Cullen and R. W. Kirwan.

"The plan sections contain outline examples of four plans readily available in full scale . . . an 18' Auxilliary Cruiser, a 25' Cruiser, a 38' Sailing Ketch and a 54' Trawler."

