



## AQUARIUM FISHES

"Unusual Aquarium Fishes," by Alan Mark Fletcher, J. B. Lippincott, Philadelphia, 1968, 143 pp., illus. The aquarium hobby is one of the largest in the world; nearly 20 million people in the U.S. alone keep fishes in aquariums. Despite this interest, few aquarists know little more than how to feed their pets. But many of the fishes commonly kept in aquariums are more than beautiful. They have habits and characteristics so bizarre as to defy credibility. There are fish that swim upside down, fish that walk on dry land, and fish that can see in and out of the water at the same time.

Mr. Fletcher offers descriptions and photographs of 35 kinds. Some of the photographs are remarkable, showing the fishes actually doing what makes them unusual.

## FISHES

"A Draught of Fishes," by F. D. Ommanney, Thomas Y. Crowell, New York, 1966, 254 pp., illus., \$6.95. A distinguished marine biologist describes fish: their life, breeding, and movements; methods of fishing and fish feeding, fish as harvest, and fish as food. The techniques of trolling, trawling, and long-line fishing are graphically demonstrated. Readers who know fishing chiefly as sport will learn how fish are farmed to feed teeming populations, what is being accomplished in international cooperation in fishery research, and what we can expect in sea harvests in the near future.

## FRESHWATER FISH PRODUCTION

"The Biological Basis of Freshwater Fish Production," edited by Shelby D. Gerking, John Wiley & Sons, New York, 1967, 495 pp., illus. Fresh-water fish production has made a substantial contribution to human nutrition and well-being over the years. Its contribution in the future will be vital in supplying protein to an increasing human population.

This book, a Symposium on Productivity of Freshwater Communities, stems from a technical meeting sponsored by the International Biological Program. It should be a landmark in the establishment of sound scientific principles for freshwater fish production. The Symposium is divided into 5 categories: (1) vital statistics of population, (2) relation of fish population to the food supply, (3) competition and behavior, (4) predation and exploitation by man, (5) the contribution of freshwater fish to human nutrition.

## GULF OF MEXICO

"Illustrated List of Common and Scientific Names of Fish from the Gulf of Mexico, in Latin, Spanish, Russian, and English," JPRS No. 46741, compiled by Milton M. Rose, Clearinghouse, Springfield, Va. 22151, \$3.00. This is a glossary of 129 fishes from the Gulf of Mexico.

## MAPS

"Seafloor Topography of the Central Eastern Pacific Ocean," Circular 291, by Thomas E. Chase, Fish and Wildlife Service, Dept. of the Interior, 1968, 33 pp. Available free from Branch of Reports, Publications Unit, 1801 N. Moore St., Arlington, Va. 22209. The offshore configuration of the floor of the eastern Pacific is presented on 26 topographic charts. Mr. Chase describes the methods and data used in their preparation and gives a general outline of the major topographic features. He has searched and evaluated all existing data pertinent to the sea floor topography, contoured the region in detail, and labeled the prominent undersea geological features.

## OCEANS AND OCEANOGRAPHY

"The Frail Ocean," by Welsey Marx, Coward-McCann, New York, 1967, 248 pp., illus., \$5.95. The ocean has increasingly and, justly, come to be regarded as a vast resource--a source to be fully explored and exploited. So long as exploitation remains a key work,

however, the ocean is imperiled. This is an account of the mighty ocean and of the delicate balance that has preserved it throughout the centuries. Today that balance is in jeopardy.

Wesley Marx writes with lyric joy of the ocean's splendor, communicating his sense of wonder at its enormous power and fertility, as well as his growing fear for its future. The book makes an eloquent plea--a plea that grows more urgent with each new ocean disaster--for the preservation of the seas and their myriad inhabitants.

"Uses of the Seas," edited by Edmund A. Gullion, Prentiss-Hall, Englewood Cliffs, N. J., 1968, 204 pp. A protein harvest from the seas. Oil well 285 feet underwater. Entire submarine cities. A fantastic vehicle that gathers minerals from the ocean floor. These and other technological marvels could easily start a new era of thoughtless imperialism. Edmund A. Gullion and a group of distinguished economists, political scientists, foreign policy experts, and oceanographers urge that the U.S. explore in advance the political and military defenses against such a threat.

They also answer such critical questions as: How much can sea technology benefit the underdeveloped countries? To what extent should nations and international organizations seek to "legislate" the uses of the sea? Can sea technology affect the U.S.-USSR strategic balance? What are the consequences of British withdrawal from strategic waters? Their answers help explain the direction of American policy and the unprecedented challenges to international stability. This book was designed as a background volume for the American Assembly, a nonpartisan educational organization. It provides a wealth of thought-provoking material.

"Your Future in Oceanography," by Norman H. Gaber, Richards Rosen Press, New York, 1967, 143 pp., illus., \$4.00. This book is one of a series written for the student who is interested in choosing a major career that is more than just a job. It is written on the premise that an oceanographer must know more than his own laboratory, office, or ship. He needs a grasp of the whole discipline: of who is doing what, and why, and how.

Mr. Gaber describes oceanography, the related sciences, and marine engineering, and explains the organization, future, and business of oceanography. He lists the col-

leges and universities offering degree programs in oceanography and marine science.

## SALMON

"The Atlantic Salmon. A Vanishing Species?" by Anthony Netboy, Houghton Mifflin, Boston, 1968, 457 pp., illus. Once the Atlantic salmon roamed over half the northern hemisphere, from the Arctic and Atlantic Oceans to rivers running deep into the interior of Europe and North America. In many lands it has been pursued so relentlessly--and so many barriers have been strewn along its migratory routes--that the fish are seen no more.

The species has utterly vanished from Portugal, Switzerland, Denmark, the Low Countries; it is in danger of extinction in France and Spain. Apart from the difficulties of keeping rivers inviolate, the salmon's life in the sea is now threatened by the discovery of at least part of its feeding haunts and migratory routes in the North Atlantic. Mr. Netboy has written a fascinating account of the salmon, its past, and its probable future in the countries where it still spawns. He warns of its possible extinction without some regulation of the high-seas salmon fishery.

## SEA OTTERS

"Sea Otters and the China Trade," by Robert Kingery Buell and Charlotte Northcote Skladal, David McKay, Co., 212 pp. Sea otters--what are they? Few people have seen one, and almost no one is aware of the animal's place in American history. Highly valued by the ancient mandarins of China for their beautiful shimmering fur, they were the basis of a lucrative trade with the Far East that drew men to the west coast of America even before the U.S. was a nation.

The hundred years of indiscriminate hunting from 1741 to 1841 exterminated most of them. By 1841 the Russians had moved out of California and the early wagon trains were climbing over the Sierra Nevada. The dream of an America that swept across a continent was nearly a reality, but the herds of sea otter that had started the whole cycle of commerce and trade along the coast had disappeared from the kelp beds. In 1911, an international treaty was signed by Great Britain, Japan, Russia, and the U.S. protecting the fur seals, sea otters, and polar bear in the north Pacific. The authors have written a stirring tale of the sea otters and the men who hunted them.

"Sea Otter," by George Seymour, article, "Outdoor California," Vol. 29, No. 4, July-Aug. 1968, pp. 11-12, illus. Available as a Wildlife Leaflet from the California Dept. of Fish and Game, 1416 Ninth St., Sacramento, Calif. 95814. The colorful, playful sea otter is making a slow, steady comeback after being hunted to the verge of extinction. By the turn of the 19th century, after 170 years of exploitation, only a few were left along the coast of California, and in some of the islands off the coast of Alaska. There are now between 500 and 600 of these gentle creatures living along the central California coast, and 30,000 to 40,000 in Alaskan waters.

Mr. Seymour briefly describes the animal, its life history and feeding habits, and the trade that caused its near extinction.

#### SEAWEED

"Irish Moss--A Growing Resource," by James Kinlock, article, "Fisheries of Canada," Oct. 1968, vol. 21, no. 4, pp. 3-7, illus. Seaweeds, in particular the one known as Irish moss, are becoming increasingly important to northeast Atlantic coast fishing communities. Mr. Kinlock describes the plant, its present harvesting and uses, and its place in the plans for all Canadian regions where there is a potential seaweed industry.

"Utilization of Kelp-Bed Resources in Southern California," Fish Bulletin 139, edited by Wheeler J. North and Carl L. Hubbs, Dept. of Fish and Game, Resources Agency of California, 1968, 264 pp., illus. The general objective of this bulletin is to assess the impact of man's past, present, and future activities on the kelp-bed environment. Chief emphasis has been given to problems concerning possible effects of kelp harvesting, particularly any effects on fish life. When kelp beds regress or disappear, both kelp harvesting and fishing suffer.

The contributors examine the diets, behavior, preferred habitat, abundance, and life history of kelp fishes. They show the ecological roles played by kelp as a food source and shelter, and in phytoplankton productivity.

#### SHAD

"The American Shad," FL-614, by Randall P. Cheek, Fish and Wildlife Service, Dept. of the Interior, August 1968, 13 pp., illus. Available free from Branch of Reports, Publications Unit, 1801 N. Moore St., Arlington, Va. 22209. The American shad, *Alosa sapidissima*, is one of the best known fishes of the Atlantic coast. It is found from the St. Lawrence to the St. John River in Florida in sufficient quantities to support fisheries of great commercial and recreational values. Like the salmon, the shad spends most of its life in the ocean, returning to freshwater streams to spawn; like the salmon, too, it is subject to the hazards of dammed and polluted rivers and overfishing.

If annual production of shad could be restored to 19th century levels, the commercial catch would be worth more than \$6.5 million, and the sport fishery would provide many additional man-days of fishing. Mr. Cheek describes the life history of the shad, the commercial and sport fishery, and summarizes the status of research and management of the species.

#### UNITED KINGDOM

"Torry Research Station Annual Report 1967," Ministry of Technology, London, 1968, 50 pp., illus., \$1.30. Available from British Information Services, 845 3rd Ave., New York, N. Y. 10022. The main object of the Torry Research Station's work is to ensure that there is as little deterioration of quality as possible from the time a fish is caught to the time it is eaten. Most of the work has been concerned with handling traditional species, such as cod, and with the techniques of freezing at sea.

During 1967, station personnel investigated the merits of boxing fish at sea, superchilling, and other methods of preservation; distribution methods; quality control; prepackaging of wetfish; use and development of new machines; and preservation and presentation of nontraditional species. The Annual Report is intended for people in the fish industry and interested members of the public. Technical jargon and scientific terminology have been eliminated.

--Barbara Lundy

