

What Future for the Billfishes?

In August 1988 the Second International Billfish Symposium was held in Kailua-Kona, Hawaii, in conjunction with the Thirteenth Annual Marine Recreational Fisheries Symposium. The proceedings for part I, on the fishery and stock synopses, data needs, and management considerations, has been published as *Marine Recreational Fisheries 13*, entitled "**Planning the Future of Billfishes, Research and Management in the 90s and Beyond**," by the National Coalition for Marine Conservation, P.O.

Box 23298, Savannah, GA 31403. The first international billfish symposium was held in 1972.

The material is presented as five separate panel presentations, plus a debate on the various approaches to billfish management. The first panel includes five articles on fisheries trends for the various species of billfishes in the Atlantic, Pacific, and Indian Oceans, and two on the economic trends affecting commercial and recreational billfish fisheries. These provide good historic reviews

of the various fisheries up to about 1985-86.

Panel two includes five articles assessing the condition of billfish stocks and the quality of stock assessment work. The third panel was devoted to identifying the biological, statistical, and economic data needed for management, while the fourth one reviewed and critiqued national and international strategies for managing billfishes and other highly migratory fishes. Following the debate session, the fifth panel was a summarizing session, "future prognosis and recommendations." Overall, the volume is a fine assessment of the status of knowledge about the various billfishes and their management which also points out areas where more data and research are needed. Hardbound, the 361-page volume is sold by the NCMC for \$31.50 postpaid.

Advancements in the Culture of Tilapia

"**The Second International Symposium on Tilapia in Aquaculture**," edited by R. S. V. Pullin, T. Bhukaswan, K. Tonguthai, and J. L. Maclean, has been published by the International Center for Living Aquatic Resources Management, MC P.O. Box 1501, Makati, Metro Manila, Philippines, as ICLARM Conference Proceedings 15. The huge volume includes 82 papers and 17 poster abstracts divided into the following sessions: Culture systems, management and production; pathology; genetics and reproduction; nutrition; physiology; biology and ecology; and economics and socioeconomics. The symposium was held in March 1987 in Bangkok, Thailand, and the third such symposium is scheduled for an African location, probably Côte d'Ivoire, in 1991.

The volume itself reflects an accent on the improvement of tilapia breeds and culture systems in many different nations; more papers were presented on aspects of genetics and reproduction than the other topics. Research results are presented on studies ranging from rela-

tionships between primary production and yield of tilapia in ponds, polyculture of tiger shrimp and Nile tilapia, role of tilapia in integrated farming systems, to the effect of predation by *Lates niloticus* on overpopulation of tilapia in ponds, energy budgets for cultured tilapias, and major diseases encountered in controlled environment culture of tilapias in fresh- and brackishwater in Arizona.

Reproductive studies included gonadal sex differentiation in *Oreochromis niloticus*, bidirectional-backcross selection for body weight in a red tilapia, viability of red and normal-colored *O. aureus* and *O. niloticus* hybrids, breeding characteristics and growth performance of Philippine red tilapia, use of electrophoresis for identifying and control of tilapia breeding stocks in Israel, production of sex-reversed Nile tilapia fingerlings in the Philippines, cold tolerance and growth of three strains of *O. niloticus*, and others.

Other papers discuss protein biosynthesis in circulated fishponds, a comparison of natural feeding and supplemental feeding of pellets in *O. niloticus* cage culture, evaluation of fixed and demand feeding regimes for *O. aureus* cage culture, salinity tolerances of red tilapia,

cannibalism among different sizes of *O. niloticus*, aluminum toxicity to tilapias, Philippine tilapia economics, and much more.

Hardbound, the 623-page reference is sold by ICLARM (airmail) at \$45 (paperback) of \$58 (hardback) or, in North America, by International Specialized Book Services, 5602 Hassalo St., Portland, OR 97213-3640, or, in Europe, by S. Toeche-Mittler GmbH, Versandbuchhandlung, Hindenburgstrasse 33, D-6100 Darmstadt, Federal Republic of Germany, at the same prices.

Fisheries Management and Extended Jurisdiction

Publication of "**Management of World Fisheries**," subtitled "Implications of Extended Coastal State Jurisdiction" and edited by Edward L. Miles, has been announced by the University of Washington Press, P.O. Box 50096, Seattle, WA 98145-5096. The volume constitutes the proceedings of a workshop organized by the World Fisheries Project, Institute for Marine Studies, College of Ocean and Fishery Sciences, Univer-

sity of Washington, Seattle, and held 8-11 July 1985.

During the last 10-15 years many changes have occurred in the world's fisheries and their management, particularly relating to the extension of authority of coastal nations over their resources to 200 miles. This volume provides a good look at those changes and an assessment of their effect and implications for the improvement of fisheries management in the future. The contributions, by recognized fisheries authorities, are divided into three parts. Papers in Part I present an overview of the effects of extended fisheries jurisdiction on the management of fish stocks, including a comparison of the effects in a region under the open-access regime with regions under EFJ. Part II evaluates in more detail the trends that have occurred in six regions: Northeast Atlantic, East Central Atlantic, Northeast Pacific, Northwest Pacific, West Central and Southwest Pacific, and the East Central and Southeast Pacific.

Finally, in Part III, J. A. Gulland, Robert Kearney, and Edward Miles present their views on whether and how fishery management might be improved under EFJ. Some of the conclusions include managing fisheries by objective (indeed defining fishery management objectives); define national net benefit for fisheries; elaborate in more detail the nature of authority needed to make timely decisions and take effective action; define specific management alternatives and evaluate their probable consequences; and others. Indexed, the 318-page hardbound volume is sold by the publisher for \$30.00.

A Global Dictionary of Important Fishes

The "**Five-Language Dictionary of Fish, Crustaceans and Molluscs**" by Willibald Krane had been published by Van Nostrand Reinhold, 115 Fifth Avenue, New York, NY 10003, under the AVI imprint. While the book does not provide definitions, it does present a lengthy and cross-referenced listing of the names of more than 2,000 commercially important fishes and primary fish

products in five different languages (English, German, French, Spanish, and Italian), as well as the appropriate Latin or scientific names. In addition, there are five corresponding language indexes and a scientific name index to help the user locate the appropriate name of the particular species or product.

The author was chief chemist and head of the Nordsee Deep-Sea Fisheries central laboratory in Bremerhaven, and the book seems to have a European cast to it which does not always follow the common names given in the American Fisheries Society's special publication on common names of fishes. Still, by cross checking the reader should be able to find what he or she is looking for, particularly for the non-American fishes.

In the main section of the book (p. 13-259), the names or terms are arranged in alphabetical order according to the key word in English. Readers are advised to look up first the name or term sought in the alphabetical index of the particular language. Each primary entry is numbered, and in each language the primary name or wording is listed first, followed by those names used in particular regions or which are less common or unofficial names.

Under the term "common," for example, over 50 species are given in the English index, ranging from "common American squid" to "common whitefish." A number of marine mammals are also listed, including various whales, sea otter, etc. In another example, the John Dory has at least four listings, once with just the family name Zeidae, under the A's as "American John Dory," with the Latin name *Zenopsis ocellata*, and also with the Latin name *Zeus japonicus*. Hardbound, the 476-page volume costs \$69.95, and it should help fish processors, buyers, and others involved in the fish trade to find out what fish or product they are interested in.

Counting the Whales

Publication of "**The Comprehensive Assessment of Whale Stocks: The Early Years**," edited by G. P. Donovan, has been announced as Special Issue 11 of the International Whaling Commission, The Red House, Station Road, Histon, Cam-

bridge CB4 4NP, U.K.

Work on defining, identifying, and accomplishing a "Comprehensive Assessment" of whale stocks has been in progress for nearly a decade and this volume presents the results of the initial steps via a series of reports of workshops and meetings, reviews and studies, and papers that describe potential or proposed management procedures.

Among the reviews published are survey techniques for estimating cetacean abundance, molecular techniques for examining genetic variation and stock identity in cetaceans, and an analysis of Southern Hemisphere minke whale mark-recovery data. Finally, five papers are presented on various aspects of the regulation of whale stocks and the setting of catch quotas which help to document the progress up to about 1988-89. Hardbound, the 210-page volume is available from the IWC at £25.00 (\$45.00) plus £5.00 (\$8.00) for postage and handling.

A Review of European Maritime History

Publication of "**European Naval and Maritime History, 300-1500**" by Archibald R. Lewis and Timothy J. Runyan has been announced by the Indiana University Press, Tenth & Morton Streets, Bloomington, IN 47405. The authors are professional historians; Lewis is editor of *The American Neptune* and Runyan has edited "Essays in Maritime History." Specifics on maritime history in the earlier centuries are few, but this volume provides a good review of and perspective on what is known, particularly about vessel development and use, commerce, and naval tactics during the medieval era—a time of growing importance of maritime trade and naval strength.

The authors begin with the late Roman world (up to A.D. 500), then move into a discussion of Byzantine, Muslim, and Latin western naval power and shipping/commerce in the Mediterranean region during about 500-1500. They then discuss the Irish, Frisian, and Viking roles in the northern seas during 500-1000. Then they review the rise of the English and Iberian sea power.

While much of the book reflects naval

advances and activities, the rise of the fish trade in the latter centuries is also documented, along with the rise of the Hanseatic League, cities bordering the North Sea, which drew strength from its monopoly of the Baltic herring trade and salt supplies for herring and cod preservation. Also mentioned is the extension of fishing to North American waters by the late 1400's, plus technological developments such as the increasingly larger merchant and fishing vessels in the North Atlantic and other improvements in vessel design, such as the multimasted Netherlands-North Sea herring buss of the 1500's with frame-first construction.

Also examined are the historic relationships between sea power, economic development, and commercial interests, including development of trade in marine resources. Thus, the book is a fine synthesis of early and modern writing on the medieval naval and maritime legacy, combined with recent underwater archaeological findings. Indexed and well illus-

trated with maps, photos, and drawings, the 192-page volume is available at \$9.95 (paper) and \$22.50 (cloth).

Angling Annual and Records Published

The 1990 edition of "**World Record Game Fishes**" has been published by the International Game Fish Association, 3000 East Las Olas Blvd., Fort Lauderdale, FL 33316-1616, and contains a new series of articles, along with the annual angling records of considerable interest to sport fishermen. Articles this year report on angling off Baja California, Mexico, and British Columbia and Labrador, Canada. Also included is a rating of "99 of the world's best fishing holes" by noted angling writer A. J. McLane; a look at Michigan's effort at producing trophy size "triploid" chinook salmon by Don Garling and Howard Tanner; and angling for dorado, *Salminus maxillosus* and *S. brevidens*, in Argentina's Parana River.

As usual, Section 4, the updating of IGFA's "world records" for freshwater and saltwater trophies and fly fishing catches will be of interest to many readers. In addition, Section 6 lists the 14th annual fishing contest winners and members of the 5, 10, 15, and 20-to-1 clubs, plus the 1,000-pound club members—that is, those anglers taking fish that weigh 5, 10, etc. times the breaking strength of their line and those taking fish weighing over 1,000 pounds, respectively. Also included is a section on IGFA's angling rules for records and contests, a guide to sport fishes around the world, and appendices on worldwide gamefish record-keeping organizations, state record-keeping agencies, worldwide tag-and-release programs, and more. An annual contribution to IGFA of \$20 (U.S.) and \$30 (all other nations) entitles the donor to both IGFA membership and a copy of the annual publication, as well as a bimonthly newsletter *The International Angler*, among other services.