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Book Review

Tunas and Billfishes of the World

Bruce Collette and John Graves, with illustrations by Val Kells. Johns Hopkins University Press, Baltimore, Maryland, 2019. Hardcover US$75.

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Tunas and billfishes are ecologically important top predators in tropical and temperate ecosystems around the world. They support a wide variety of lucrative commercial fisheries, and some taxa are also very popular with recreational anglers. Their evolutionary adaptations, such as regional endothermy, highly efficient swimming dynamics, and cross-basin migration behaviors, have provoked fascination in biologists and ecologists for many decades.

The recent publication of a new, beautifully illustrated book (*Tunas and Billfishes of the World* by Bruce Collette and John Graves) does justice to these captivating fishes. The two authors are world experts on the taxonomy, fisheries, and conservation of tunas and billfishes, and have spent much of their careers studying and publishing on these topics. There are 51 species from 15 genera described in the book, covering the families Scombridae, Istiophoridae, and the monotypic Xiphiidae. Detailed information is included for each species on their appearance, distribution, foraging habits, movements, and reproduction, as well as current conservation status. The book is thus a very welcome update to the much cited but by now rather dated FAO Species Catalog published by Collette and Nauen in 1983. As the authors point out, there have been several taxonomic changes to the tunas and billfishes in the past

35 years. Upon reading the new book, it's also striking how much newer technologies have added to our knowledge of these species during this time. The advent of advanced archival tags for tracking movements, and molecular techniques for determining stock structure and estimating population sizes, are two good examples.

The book is likely to become an essential, standard reference on tunas and billfishes for many years to come. It will clearly be of great use to marine biologists, recreational anglers, and also those who are just interested in learning more about these incredible fishes. The color illustrations are particularly beautiful, and also very useful in showing diagnostic characteristics in the Field Marks for each species. While the diagnostic key at the start of the book would be most useful to a taxonomist, or a scientist in the laboratory, the Field Marks would be more useful at sea, or when identifying a fish from photographs.

Information on threats to the populations of each species, as well as The International Union for Conservation of Nature Red List status and results from available stock assessments, are included for each species. It's notable that for many species, the determinations from the latter two sources are somewhat conflicting. Where this occurred, I appreciated that the authors provided thoughtful discussion on the sources of these disparities, and described the sometimes complex fisheries and management structures in easily understandable terms.

Overall, this book provides an excellent, authoritative reference on the biology, taxonomy, and fisheries for tunas and billfishes worldwide. It should be immensely valuable to scientists and fishermen alike. With the superb color illustrations by Val Kells, this volume is also attractive enough to be a coffee-table book, and would make a wonderful holiday gift for a "fishy" friend or relative.

References

B. Collette and C. E. Nauen. 1983. Scombrids of the world. FAO species catalog vol 2. FAO Fish Synopsis 125:1–137.