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NEW BOOKS

South Pacific Fishes

Randall, J.E. 2005. *Reef and Shore Fishes of the South Pacific.* University of Hawaii Press, 707 pp. ISBN 0-8248-2698-1. List price US$75.

The tropical South Pacific has long been recognized as supporting both a diverse and unique fish fauna, and the literature abounds with descriptions of the taxonomy, systematics, biogeography and ecology of many species. What has been lacking, however, is a comprehensive treatment that accounts for all known species within a geographical area. Jack Randall's newest book takes a giant step in that direction.

Randall has been the senior ichthyologist of the B.P. Bishop Museum in Honolulu since 1970. During a long and extremely productive career that began in the late 1940s (Greenfield, 2001), he has scuba dived in tropical and subtropical waters throughout most of the world, collected and photographed fishes, and has described, as of this writing, 555 species of fishes and published in excess of 636 papers and books. The focus of this volume is upon reef and shore fishes likely to be encountered in the tropical South Pacific region exclusive of Australia (see Randall et al., 1997 for a treatment of fishes of the Great Barrier Reef and Coral Sea), Vanuatu, the Solomon Islands, Papua New Guinea, and the Indo-Malayan area. Thus, the area of coverage extends from New Caledonia east to the Pitcairn Islands and Rapa Island, and includes the Loyalty Islands, the southern Gilbert Islands in Kiribati, Tuvalu, Fiji, Samoa, American Samoa, and the Tokelau, Phoenix, Austral, Society, Marquesas Islands, as well as the Tuamotu Archipelago. In all, 1,496 species from this vast region are represented with detailed species accounts, and photographs or drawings.

The book opens with a brief treatment of the geographic area and taxonomic groups covered. The emphasis is upon visible reef fishes, as offshore pelagic species and inshore, highly cryptic fishes such brotulas (Bythitidae), small false moray eels (Chlopsidae), spaghetti eels (Moringuidae), and many of the snake or worm eels (Ophichthidae), as well as most estuarine species, are omitted. The introduction continues with a summary of taxonomic practices used, and then moves on to a generalized description of those diagnostic characteristics necessary to describe both families and species. This description is supported by photographs of both cartilaginous and bony fishes in which the characters are clearly indicated. This section concludes with a brief account of the author's own experiences surveying, collecting and photographing fishes.

Randall pioneered both underwater and laboratory photography of reef fishes and evidence of his expertise is given liberally in this volume. All but 55 of the 2,000 color photographs, and additional black and white photographs are his, and most depict fishes in their natural habitats.

General locality data for each photograph is given in the margin and if a species was photographed outside of the geographic range of the book that locality is given as a reference, as well. For example, the photograph depicting the mottled fusilier, *Dipterygonotus balteatus* (Caesionidae), was taken off of Sulawesi, Indonesia. As there is no apparent geographic variation in color pattern for this species, the locality doesn't matter. Where variation does occur, because of geographic differences or some other factor, multiple photographs of the species are given. An example of this is the blackside hawkfish, *Paracirrhites forsteri* (Cirrhitidae), in which the "standard" color pattern is contrasted with both a juvenile color pattern and a melanistic form (one of many for this polychromatic species). Similarly, the halfspotted hawkfish, *Paracirrhites hemistictus,* is shown having two distinctive color morphs as is the yellowfin goatfish, *Mulloidichthys vanicolensis* (Mullidae), to name but a few examples. Differences in color pattern may also be attributed to sexual dimorphism, and various examples are given for the wrasses (Labridae) and parrotfishes (Scaridae) among various taxa. Some fishes show pronounced differences in color pattern between day and night and photographs of both patterns are given for a number of species. Some good examples are given for members of the family Caesionidae, including the redbelly fusilier *(Caesio cuning),* the blue-and-yellow fusilier *(Caesio teres),* the banana fusilier *(Pterocaesio pisang),* and the neon fusilier *(Pterocaesio tile).*

Fishes are arranged in current phylogenetic order, although the author has allowed some wiggle room to account for recent, pending and often controversial changes in reef fish systematics (e.g., parrotfishes, which are either in the family Scaridae or the subfamily Scarinae within the Labridae, or wrasses, depending upon whom you talk to). This wiggle room stops at the family level, however, as recent changes at the level of genus and species (e.g., within the cardinalfishes, Apogonidae) reflect current thinking. Descriptions of each family are given that include details on basic morphological characteristics, species richness, ecology, and relevant taxonomic and systematic literature. Typical species descriptions include morphological characters, body size, geographic distribution, ecology, behavior or other topics of interest. The descriptions are short but adequate. Both the glossary and references sections are more so and quite useful.

Even a book with 707 pages must conform to the dictates of space limitations, and so not all species likely to be seen within the geographic area of coverage (aside from those groups mentioned above) are treated. This is understandable. A comprehensive checklist of all species known from the major geographic localities covered, similar to that seen in Myers (1999), would have been welcome. This book does not suffer for not having such a checklist, however, and I suspect, given the effort still devoted to surveying and collecting fishes within the region, that a not-insignificant book could be devoted to this subject alone. In the meantime,

this latest effort by Jack Randall is essential for professional and amateur reef fish watchers alike.

References

Greenfield, D. W. 2001. Historical perspectives: John E. Randall. Copeia 2001: 872–877.

Myers, R.F. 1999. Micronesian Reef Fishes, 3rd ed. Coral Graphics, Barrigada, Guam.

Randall, J. E., G. R. Allen & R. C. Steene. 1997. Fishes of the Great Barrier Reef and Coral Sea. Revised and expanded edition. University of Hawaii Press, Honolulu, Hawaii.

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Marianas Flora and Fauna

Vogt, S. R. & L. L. Williams. 2004. *Common Flora and Fauna of the Mariana Islands.* 158 pp. PubIished by Laura Williams and Scott Vogt. ISBN 1 878453 67 X

The Mariana Islands are, again, gifted by the appearance of a new field guide which covers both animals and plants present on the islands. This is a welcome book, because both the Naturalist's Guide to Guam (1968) by the Guam Science Teachers Assoc., which reviewed both plants and animals (but had line drawings, or black and white photos) and Trees and Shrubs of the Northern Mariana Islands (1991) by Raulerson & Rinehart have been out of print for several years.

This book has a map of the Mariana Is. archipelago, an introduction with definitions, island speciation and endemism, and then a brief discussion of the types of ecosystems found in these islands. The main part of the book presents animal and plant species; each species covered is shown in a color photograph on one side of a page; completing the page side is information about the species pictured. The animals are presented in related groups: first, birds: forest and water, shore- and sea birds; then reptiles and amphibians, crabs, and mammals; and finally, trees. In their groups, plants and animals are usually presented alphabetically, by genus. The tree section is introduced by definitions and drawings referring to the characteristics of the plants.

The book ends with a list of useful references, three indices (one alphabetized by scientific names, one by Chamorro names, and one by English names), an appendix of newly arrived amphibians, and a final page of measurement conversions (English & Metric). Guam, which has lost many of its native birds (to the snake *Boiga),* has in recent years become a "frog refugium", so the appendix noted is quite useful.

The book is written for the lay person, for use in the field; it is a size (21 cm long x 14 cm wide) easily carried in a pack, and the color photographs are clear and recognizable. There are no "keys", but visual identification should be easy. Often, species names come with their

"namers" or "authorities" the person(s) responsible for giving the organisms scientific names and publishing them in a professional journal. No animal "namers" are identified here, and the plant "namers" are often incorrect, and always assigned incorrectly. These are not problems for most people using this book, unless they want to publish something about the organisms in a formal paper. There are a very few inaccuracies *(Pandanus dubius* does not have male & female flowers on the same tree).

This book is recommended to all persons interested in natural history, and to all parents with children who are curious about organisms and the environment.

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