

Spencer Wilkie Tinker. *Fishes of Hawaii. A Handbook of the Marine Fishes of Hawaii and the Central Pacific Ocean.* Honolulu: Hawaiian Service, Inc., 1978. Pp. xxxvi, 532, illustrations, drawings. \$14.95.

Aristotle studied about a hundred species of fishes, all from the Aegean Sea; Rondelet, one of the Renaissance "fathers" of ichthyology, dealt with 234 species, mostly European; two centuries later, Linnaeus in the now taxonomically critical tenth edition of the *Systema naturae* of 1758 diagnosed some 413 species. As yet, the world of fishes was still manageable and the class of specialists, as well as that of interested laymen, was small. Nowadays, however, we recognize about 20,000 species and it is no longer possible for the talented ichthyologist to master this whole field. Meanwhile, an ever-wider circle of snorklers, scuba-divers, aquarists and just plain holiday-makers, most especially in the warmer waters of the world where the ichthyofauna is richer, are seriously in need of guidance. The result has been, if not a plethora, then a steady stream of popular books on tropical marine fishes. Various formulae have been tried and it is of interest to judge Spencer Wilkie Tinker's contribution to this genre.

The great era of ichthyofaunal studies dates from about the 1850s. It is bejewelled by names like Pieter Bleeker (Indonesia), Felipe Poey (Cuba), Francis Day (India), Wilhelm Rüppell (Red Sea) and many others, leading up in our own times to such classics as J. L. B. Smith's book on southern African fishes, first published in 1948. Smith's work was a fine example of a relatively new approach, the book that was as much used by ichthyologists as by laymen. Smith really did try to make easily worked keys (especially his masterly finray guide), he provided almost every species with a picture, and he gave biological, ecological and sporting information of more general interest. Modelled on Smith, but far too complex for the layman (and for many an ichthyologist too) were Ian Munro's guides to the fishes of Ceylon and New Guinea. Carcasson's field guide to Indo-Pacific fishes merely compressed the Munro formula into little more than

a check-list. Meanwhile, another formula had appeared, the picture book. The camera lens is vastly cheaper than the eye of the artist, so why not show fishes in life and not as dead specimens? The result has usually been bulky, as for example the six incomplete jobs at *Pacific Marine Fishes* by Warren Burgess and Herbert Axelrod, although one cannot but admire the many superb pictures. Yet another formula is the *Species Identification Sheets* produced by FAO and so far covering the Caribbean, the Mediterranean and southeast Asia, intended primarily for fisheries biologists and market recorders but often of considerable value to ichthyologists. If one day these are issued in book form and not in loose-leaf folders, then they will provide another useful alternative to the layman.

Such are the contending styles. Tinker's choice was to eschew keys and to rely on good black and white (and 109 color) photographs, as well as line drawings, with a brief description and notes on habits, habitat and points of general interest. Pictures are undoubtedly the best general guide to identification and it is most important that they should be placed with the description, as they are here, and not be relegated to the back of the book. With about five hundred fishes, the non-specialist needs to be able to flick through to get his bearings in a visual way before settling to more exact identification. The classification of fishes underwent a major reorganization in the late sixties and more and more popular books now adopt what is loosely called "Greenwood et al." but Tinker, perhaps through caution, does not. However, dipping here and there and looking through his Appendix, he evidently did his best to keep abreast of name changes and new species, with literature references up to as late as 1977.

Curiously enough, the Hawaiian fish fauna seems to have been particularly well served in the literature, beginning with Jordan and Evermann's fine study published in 1905, with 441 species and very many of these illustrated. Long out of print, this was reprinted in 1973 and is still notable for its excellent descriptions. Fowler's *Fishes of Oceania* of 1928 was a *tour de force* for the reference hunter and Tinker's own earlier version of the present book, published in 1944, afforded some help to the amateur (but very poor color plates). The standard modern work has been that by Brock and Gosline (1960), which has an excellent family key as well as keys to species (584, or 448 inshore) and is primarily of use to the student.

Tinker's book will, I suspect, supersede that by Brock and Gosline for the non-specialist, although he could with profit have emulated their family key with its thumbnail sketches and diagrams. However, he has admirably succeeded in his aim to build "a bridge across the chasm that separates the beginning or amateur naturalist from the seemingly involved and

difficult world of fish names and fish classification." This is a useful addition to twentieth century ichthyofaunal compilations (in the best sense of the word) and people will reach for their Tinker as they still reach for Smith, Munro, Böhlke, Randall and a number of other handy guides.

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