

BOOK REVIEW

THE FRESHWATER FISHES OF WESTERN BORNEO (KALIMANTAN BARAT, INDONESIA), by Tyson R. Roberts. *Memoirs of the California Academy of Sciences*, Number 14, pp. i-xii, 1-210. ISBN 0-940228-21-1. Published by the California Academy of Sciences, San Francisco, California 94118.

Of the 290 species of fishes known from the Kapuas, the largest river in insular Southeast Asia, Roberts recorded 263 during an intensive one and a half month survey in 1976. These represent 40 families and 120 genera, of which one family, three genera and 25 species are described as new. The book is well organised, with useful sections on fish biology, reproduction and problems in freshwater fish systematics. A particularly useful chapter on the history of ichthyological explorations in Borneo dating back to 1653, is to be commended. The almost 390 publications listed in the bibliography further enhances its value as a reference text.

Figures are of a very high quality, and the various keys, although intended for the fishes of the Kapuas, is also invaluable for ichthyologists working in Peninsular Malaysia. Roberts has also managed to utilise the keys for two particularly useful but as yet unpublished theses on Sundanian cyprinids – Sontirat (1976) on *Cyclocheilichthys* and Kamasuta (1981) on *Osteochilus*. There however, appear to be some discrepancies in the key for *Osteochilus*. *O. wandersii* was separated out on the basis of its black midlateral stripe extending to the tip of the caudal fin rays. The figure of *O. enneaporus* however, showed the same stripe extending to the edge of the caudal fins very clearly although in the key, the stripe was supposed to have stopped at the caudal peduncle.

The range extension for several species previously known only from Peninsular Malaysia is of interest. These include the balitorids *Homaloptera nebulosa*, *H. tweediei*, *H. ogilviei* and *Neohomaloptera johorensis*, as well as the cobitid *Pangio semicineta*. A striking new genus and species of nemacheiline cobitid, *Barbucca diabolica*, is also described from Peninsular Malaysia and the Kapuas. A more detailed description should have been prepared for a particularly interesting species, *Lepidocephalus spectrum*, the first known epigeal, non-troglobitic cobitid which is completely blind. Weber & de Beaufort's record of *Botia hymenophysa* in Singapore cited by Roberts (p. 102) is certainly erroneous. Alfred (1966: 60) had already indicated that Weber & de Beaufort's Singapore listing was probably due to a misreading of Duncker's (1904) record. The new family established for the Malaysian and Sarawakian *Parakysis verrucosa* is timely, the species possessing numerous characters distinct from typical akysids. Although Roberts doubts earlier records that the large sisorid *Bagarius yarrelli* is present in Peninsular Malaysia, the Zoological Reference Collection (Department of Zoology, National University of Singapore) has nine specimens from Kuala Tahan in Pahang collected during the time of the Raffles Museum (see also Zakaria-Ismail, 1987). As for the spelling of the species name used for *Clarias teysmanni*, the original spelling, "*teijsmanni*" should be retained as the Dutch language has no "y". Among the characters used to distinguish the new and very distinctive siluriid *Silurichthys sanguineus*, was the red colour. It must be noted however that the reviewer has encountered specimens of *S. hasseltii* which also have parts of the body red, the colouration sometimes disappearing after prolonged

aquarium rearing. Another new species, *Mastacembelus notophthalmus*, closely allied to the better known *M. favus*, was established for some specimens from Malaysia previously referred to *M. armatus*.

Some interesting biological aspects are also recorded. Myrmecophagy in *Hemirhamphodon pogonognathus* is shown. This may be a more general habit among freshwater hemirhamphids as the reviewer has also noticed this for Singapore specimens of *Dermogenys pusillus*. The scale-eating *Paradoxodacna piratica* (new genus and species) makes it only the second such chandid known. Even more unexpected is the mouth-brooding behaviour reported for *Parambassis apogonoides*.

It is unfortunate that although the book was published in 1989, the manuscript had in fact been sent to press in 1984. As a result, it does not incorporate many of the recent changes in nomenclature (eg. *Pangio* in place of *Acanthophtalmus*; and Balitoridae in place of Homalopteridae; transfer of several *Mastacembelus* species to *Macrogathus*) (Roberts, 1986; Kottelat, 1987, 1988).

Roberts' book will undoubtedly prove to be one of the most important publications for students of freshwater ichthyology in Southeast Asia. It will definitely play a major role in catalysing research into one of the most important biological resources of this region.

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