

ZOOGEOGRAPHY OF INDIAN AMPHIBIANS: DISTRIBUTION, DIVERSITY AND SPATIAL RELATIONSHIP by S.K.Tiwari, 1991. Today and Tomorrow's Printers and Publishers, New Delhi. 187 pp. Hardbound with dust jacket. ISBN 81-7019-391-5 (India) and ISBN 1-55528-239 (U.S.A). Price Rs.295.00 or \$49.00. Available from: Today and Tomorrow's Printers and Publishers, 24B/5, D.B. Gupta Road, New Delhi 110005, India and Scholarly Publications, 7310, El Cresta Drive, Houston, Texas 77083, U.S.A.

The volume under review seems to have caught the herpetological world by surprise! Written by a zoogeographer, this is not a "mine of information", but is a minefield for the uninitiated.

The author is a professor of geography in the Government of Madhya Pradesh's Collegiate Education Services, his previous works including "Readings in Indian Zoogeography" and "Zoogeography of India and S.E. Asia" (both published in 1985).

Hardbound with a startling yellow dust jacket, the binding of this book is superior to the M.A. Smith volumes reprinted by the same publisher. However, paper and printing are as poor, some of the fold-out maps in the copy in my hand already being creased and warped. In addition, many of the pages as well as the dust jacket have an interesting reddish-brown stain.

The work is divided into six chapters, the first essentially an overview of amphibian biology, including brief commentaries on their shape, size, reproduction, distribution and economic value. The second chapter is concerned with the evolution, past distribution and classification of the world's amphibian fauna, relying heavily on published works. The third deals with the families of amphibians represented in India, and is perhaps the most useful section of the book. It is, however, here that references are made too frequently to Darlington (1957). The fourth chapter is titled "Systematic distribution of Indian Anurans". As with the previous chapters, I could not detect new data or interpretation; it depends heavily on Inger and Dutta's (1986) checklist.

The author's familiarity with the literature on the biogeography of the region's fish fauna is evident, and he occasionally draws several useful parallels with the distribution of the amphibian fauna. However, much of the data used in the synthesis are derived from Inger and Dutta's (1986) review which is unlisted in the References section, and no evidence of hands-on experience is evident

(if one excludes a passing comment on school trips by the author thirty years back). Another work frequently quoted is Noble (1931), although the more recent work of Duellman and Trueb (1986) is not.

It is unclear what the maps set out to achieve: the information they provide is certainly not always accurate. The distributional map of the hylids (map 4; page 63) shows the presence of these Palearctic frogs all over peninsular India and Southeast Asia (when, as correctly stated in the text, a single species, *Hyla annectans*, occurs to the northeast of the Indian region); the map of the microhylids (map 6; page 69) excludes northern India and Pakistan. Caecilians are shown occurring all over peninsular India (map 2; page 23), whereas members of this group, within the peninsula, are restricted to the Western Ghats.

Inconsistencies in nomenclature are also evident: For instance, page 93 lists ranid species of the genus *Tomopterna*, including *T. breviceps*, which is earlier (page 83) considered a member of the genus *Rana*.

In the penultimate chapter (Regional Distribution), the author sets out to describe the affinities of the Indian amphibian fauna. This he clearly fails to do concisely, getting lost in mostly unnecessary details about climate and vegetation. The chapter continues almost without a break into the last section (Chapter Six) on regional patterns of distribution, which discusses the various biogeographic zones within India. Once again, the author loses sight of the primary goals of the chapter, and dwells on describing tropical seasonal forests and tropical rain forests (of the latter category, very little are represented in the country). The book concludes abruptly: perhaps the author realised the futility of writing it.

Indraneil Das
Madras Crocodile Bank
Centre for Herpetology
Post Bag 4, Mamallapuram
Tamil Nadu 603 104
