

REVIEWS

.Whitten, A.J., Mustafa & G.S.Y. Henderson. *The Ecology of Sulawesi*. Gajah Mada University Press, Yogyakarta xxi + 777 pages, 64 plates in colour and B & W, 326 text figures, maps and line drawings, 14 appendices, price Rp. 27,500 (Rp. 15,000 for Indonesian language version). Available overseas at \$ 25 (paper bound) or \$ 35 (cloth bound), at the following outlets :

Australia: Dutch Indonesia Books, Maroondah Hgwy, Croydon, Victoria.

Europe : Foris Publications, Dordrecht, The Netherlands, and Heffer Bookshop, 20 Trinity Street, Cambridge, U.K.

Singapore : Select Books, Tanglin Shopping Centre, Tanglin Road, Singapore.

U.S.A.: Sinauer Associates, Sunderland, Mass. 01375 (price \$ 35 paper, \$ 50 cloth).

For the interested layman, this might have been entitled "What you always wanted to know about tropical ecology in general, and of Sulawesi in particular, but were afraid to ask because the subject matter looked daunting". However this book is much more than ecology made simple, and as its length implies, it is a comprehensive account of the full spectrum of subjects covered by the term, as applied to Sulawesi, presented in an exceptionally readable manner. It is difficult to sufficiently emphasize how totally absorbing the authors have made the text, and how thoroughly the subject has been researched, even to the extent of providing identification keys to such groups as mangrove trees, tree ferns, geckos, parrots, bats, etc.

The book was produced within the Environmental Management Development in Indonesia Project, funded through Canadian bilateral aid, and is the second in a series. The first, *The Ecology of Sumatra*, by Whitten A.J., S.J. Damanik, J. Anwar & N. Hisyam, was published in 1984, funded by UNDP, (and a corrected second edition is scheduled to appear in December 1987). Studies are just now commencing in Kalimantan, for the next in the series. Indonesia can consider itself fortunate to receive the funding that permits this programme, to have the institutions interested in running it and to have Tony Whitten to lead the study teams.

Throughout the book, the undercurrent is the theme that ecology is complex and inter-related, and that sustainable use of the environment requires an understanding of the multi-disciplinary principles involved. This message is clearly directed at the planners, like myself, who are

concerned with the sustainable development of natural resources to meet the increasing demands of a burgeoning population, and the Indonesian language version is written for the students who will become the planners of tomorrow. Implicitly, and sometimes explicitly, cogent arguments are presented for the reasoning behind the environmental impact analysis that is now required for any development project in Indonesia, and the subjects that would need to be analyzed. The pressures on the environment in Sulawesi, both natural and man-made, are already intense, as a result of inadequate knowledge and education, opportunities and, very often, the lack of opportunities. The options are not yet closed, and the last chapter, entitled "Resources and the future", should be compulsory reading for a wide body of people; it ends with the portentous statement that "unless (the growth of human populations) continues to be tackled with every ounce of political and popular will, then sustainable development is just a dream".

Obviously, in a book of this nature, the value to the specialist lies in understanding disciplines outside his own. The ornithologist learns little about the birds themselves, but a very great deal about the habitats on which they depend. The amateur geologist will be tantalized by the short section in Chapter 1, and will turn quickly to the comprehensive bibliography, if only to seek a better understanding of the maps in Fig. 1.1, showing the geological evolution of the island, which unhappily have become almost incomprehensible in reduction to fit the text. My only criticism of the book lies in the poor reproduction of some of the text figures and their annotations, and some obvious errors that have slipped through the proofs.

The distribution of Sulawesi's noted endemic birds is given in Table 1.10 for the mainland and six associated island groups, but as the text records, the known distribution over the mainland is by no means uniform. Many areas still await scientific study.

Figs. 1.43 to 1.47 show the remaining forest areas and existing and proposed conservation areas for each of the four provinces, but the poor reproduction has made these confusing, and over-generalisation may have given a rather optimistic picture of the extent of forest. It is important to realize that most of the lowland forest on the island has already been lost, particularly the richest alluvial areas, many of which have been cleared by land-hungry farmers from outside within the past one or two decades. In 1978 I witnessed the clearing by Balinese farmers of some fine alluvial forests south of Parigi. While the coastal plain of Morowali lies within a national park, my own experience of the birds there was disappointing (and it is, incidentally, regrettable that no full ornithological report has been published from the Operation Drake survey

there in 1980). Perhaps the most extensive lowland forest is that at Lariang on the west coast, bordering Central and South Sulawesi (Table 1.26 and Fig. 1.45), but pressures were already commencing in 1978 and will certainly intensify.

Proposals have been made for making Lariang a nature reserve, but I am not aware of any follow-up and the proposals would surely meet opposition from agricultural developers. An ornithological survey is urgently needed in the region in order to support the arguments that conservation should be incorporated into the region's development plans.

Different chapters look at the various ecosystems, and three chapters are rightly devoted to the various wetland habitats. Sulawesi has some important wetland sites, and not all of these are mentioned. For example, there is a substantial inland swamp near Toli-Toli which is believed to carry a good range of wetland birds (the Comb-crested Jacana *Irediparra gallinacea* has been reported there), but the site lies very close to a transmigration settlement, and engineers are already eyeing the drainage potential. Ornithological data from the extensive Aopa swamp is very limited; a few birds are listed in Table 4.12 but I believe these are not derived from any of the four references listed. On p. 453 there is a rather enigmatic reference to 80 species being recorded in a day at this site.

Both these sites also clearly require ornithological study, perhaps under the auspices of the Asian Wetlands Bureau, together with another swamp which is almost entirely unknown, that named Teu on Fig. 4.1, lying beside the Laa River, with a gross wetland area of 14,000 ha (not 525 ha as given for the 'lake' in Table 4.1).

These are just a few of the areas where ornithologists with adequate time and funds (more than is usually needed for chasing up endemics in national parks such as Lore Lindu, Dumoga and Tangkoko-Batuangas, the usual venue of bird tourists), would be enabled to make a valuable contribution to our knowledge, and assist in identifying conservation priorities.

Indonesia is justly renowned for its rich and diverse natural environments, but they urgently require study, before sheer population pressure over-runs them. Options for wise planning still remain, but the data base required on which to evaluate them is still inadequate. This book will serve an invaluable purpose, if it is read by sufficient numbers of people, and the authors are to be congratulated for presenting the difficult subject of ecology in a manner that will encourage a wide readership.

Hails, Christopher & Frank Jarvis (1987). *Birds of Singapore*. Times Editions, 422 Thomson Road, Singapore. Price US\$ 15.00 (Sin.\$ 29.90), plus US\$ 0.50 (Sin.\$ 1.00) for surface mail, if ordered direct from the publishers.

This is an introductory book to the birds of Singapore, it is not a field guide for the serious ornithologist. Nevertheless I feel sure that every ornithologist in the region will wish to possess a copy. As an introduction, it is comprehensive and clearly designed to encourage an interest among Singaporeans in the little that is left of their natural surroundings. This is at once apparent from the format of the book, printed on high quality paper between hard covers. Frank Jarvis' paintings are beautifully done, representing the birds in natural poses, sometimes rather too natural. What is more natural, in an urban landscape, than to depict the Common Kingfisher perching on a frayed, rusty coil of wire? While ornithologists may question some of the illustrations, they are extremely appealing and entirely appropriate for the expected readership. The publishers are particularly to be commended for the artistic way in which the illustrations are interposed through the text.

The initial chapters describe in very readable language the habitats and good locations to be found on the island, with lists of the common birds for the four dominant habitats (excluding wholly urban). There are sections on how to watch birds, general biology, breeding and migration, and the necessary illustrations of bird parts, bills and tails.

The 107 pages of the systematic section describe and illustrate 131 of the more common birds, out of a current checklist of 295 species (the checklist is given at the back), with one or more representatives from almost every family (one notes that no species of duck is sufficiently common in Singapore to warrant inclusion). Chris Hails' text is free-style, as are the illustrations, and succeeds in passing on the author's thorough familiarity with the birds he describes, and indeed his enthusiasm. Only occasionally may the text confuse a beginner, when for example attempting to compare similar waders under the heading of one species, a problem encountered by any authors preparing a popular bird book. Introduced species are included, where they are sufficiently common in the feral state, and at first it is somewhat startling to see described a bird such as the Hwamei of Southern China.

While the illustrations are indeed beautiful, the impression is gained that truth is sometimes sacrificed for artistic license. For one unaccustomed to handling oriental birds in the hand, I was surprised to see the Malkoha so blue, the underparts of the Parakeet so yellow, or the

Treeswift so green. My strongest complaint lies in the immense collar of the Spotted Dove, and anyone familiar with the Asian Palm Swift would surely have illustrated a more slender bird. It is not clear from the text why one of the two swiftlets in flight is shown brown, and the other black - do they represent differences between the two species or between the ventral and dorsal views of one bird? some of the little pen sketches look incomplete; are three of the waders on P.81 white?

These criticisms are not meant to detract from what is a very useful and well-presented book. Singapore is lucky to have a Government that employs an ornithological consultant, and its highly urbanized and comparatively affluent inhabitants will surely wish to buy it in large numbers.

As Sir Peter Scott says in his introduction, "the tropical regions of the world are badly in need of such texts, since they -----stand to benefit most by having a public which is fully aware of the importance of conserving its natural heritage". How true this is of Indonesia, where popular bird books are non-existent (at time of writing). Of course, Singapore's 295 species hardly compares with Indonesia's 1600, so that several popular books would be required, but we can report that a start has been made. In the meantime, Indonesians might note that all but 9 of the 131 species described occur in Sumatra, and all but 19 in Java, though those that are common in Singapore may not necessarily be those that are representative here.

D.A.H.

Also received

Buden, D.W. (1987). *The birds of the Southern Bahamas. An annotated checklist.* B.O.U Checklist No.8 Available from B.O.U., c/o Zoological Society of London, Regent's Park, London.NW1 4RY. Price 11 Pound (UK) or 12 Pound (overseas). (Add 3 Pound for payment other than in sterling) 119 pp.

Grimes, L.G. (1987). *The birds of Ghana.* B.O.U Checklist No. 9. Available from B.O.U., c/o Zoological society of London, Regent's Park, London NW1 4RY. Price information not received. 276 pp.

These are the eighth and ninth checklists in the current B.O.U. series, the previous checklists being Libya, Zanzibar and Pemba, The Gambia, Nigeria, Cyprus, Serengeti National Park and Wallacea. Six more are in active preparation, including Sumatra (early 1988), Singapore and the Phillipines.

Owen, Daniel, David Bilton, Katelonsdale & Stuart Stratchdee. 1987. Proyek Kelelawar. Final report of the Oxford University Expedition to the Togian Islands, Sulawesi, Indonesia, Summer 1987.

This very well produced report describes the caves of the Togian Islands, and the results of their research on 16 spp. of bats and on the invertebrate fauna. The latter is expected to yield several new species, and probably a species from an entire new family of Millipedes. Ornithologists will be disappointed that the cave-nesting swiftlets were not identified.