Reviews

A Biology of Birds with Particular Reference to New Zealand Birds, by B. D. Heather. Ornithological Society of New Zealand, 1966. 102 pp., 66 black and white photographs, line drawings, or diagrams. Price A$1.25. (Available from Secretary, Mist Net Service—see vol. 11, no. 3, p. 65).

One may fairly wonder why people write textbooks. Many contain no obviously novel ideas or new interpretations. Often they are simply transcriptions of information contained in standard works, presented prosaicly as yet another. The justification for this one is 'with particular reference to New Zealand birds'.

All right, my bias has shown. It is another textbook. How well does it achieve its stated aim? The main text originally formed a chapter in 'Biology for Sixth Forms'. I was most interested in 'Features of the New Zealand Avifauna' and 'Birds and Man in New Zealand'. The largest section deals with 'Anatomy and Physiology of Birds'. The treatment here is uneven, a disproportionate amount, 21 pages, being given to detailing minutiae of skin, feathers, coloration, plumages and moult, while all other aspects of anatomy and physiology are dealt with in a mere 18. I can only hope that sixth-form New Zealanders are not expected to learn the terminology that is the author's obsession. Technical words seem included for their own sake, and I hardly think many neophytes are to be stimulated by podotheca, neossoptile, homochromy or vexilla.

An irritating feature is the lack of reference to illustrations; another is the absence of an index. The first because one may wonder just what a picture illustrates or unwittingly read past it. A diagram of the adaptive radiation of Darwin's Finches is reproduced on p. 96, but having arrived there I can no longer remember where it was referred to, or if in fact it was. This demonstrates my second irritation. What is worse than yet another textbook is one with an inadequate index. This book does not even have one—apparently a strategem to keep the cost down. Fortunately the 'Index [sic] of Contents' is fairly detailed.

The book contains many half truths: there is no bladder in birds (p. 73). Herbst's corpuscles are certainly not tactile (p. 79); only amoeboid cells move about independently (p. 97); a conditioned response is a reaction that seems instinctive but has been learned (p. 97); fluid-filled pleural cavities allow free movement by the lungs (p. 98); birds in colder regions lay more eggs (p. 12). Some statements are obviously false: primates are the only other vertebrates with colour discrimination (p. 77). Others seem difficult to justify: singing gives pleasure to a bird (p. 65); development of local dialects in a population can give rise to new species (p. 65); in robins, the tendency to melanism is through noeteny (p. 27). Some statements may confuse readers not studying biology. Sixth-form students will hopefully appreciate that feather muscles are controlled by the sympathetic nervous system (p. 45). But no mention is made of the parasympathetic or even the autonomic nervous system. How many non-student readers will recall, if they ever knew, such functional anatomy?

The author's understanding of animal behaviour and its study does not appear strong. Behaviour is to be interpreted in terms of its causes in the mind of the bird (p. 93). He feels that the study of bird behaviour traditionally has been applied to the breeding season and that Lack's 'Life of the Robin' is a stimulating example of what can be achieved by behaviour work in the Lorenz-Tinbergen tradition (p. 94). Interesting ideas are unfortunately rare: a nice one is that head-bobbing of waders may assist in judging distance by quick comparison of two points of view (p. 75).

Exercises for practical work are suggested. Many of these are purely descriptive and mechanical. Some group exercises seem designed to keep students busy—counting barbules on feathers, for example (p. 45). Enthusiastic students are even encouraged to count all the feathers on a bird. Studies of life history emphasise the contribution they can make to ornithological knowledge, whereas in fact the main contribution will be to the student in learning techniques of observation and recording. As such, these projects will be no less exciting to the student, in or out of school, already enthusiastic about birds.

An excellent feature of the book is its regular reference to more advanced discussions, often the sources, of certain sections. This is marred only by its being somewhat out of date. More recent additions in areas covered by the author might include: Farner and King 'Avian Biology', 1971 (Academic Press); Greenewalt 'Bird Song: Acoustics and Physiology', 1968 (Smithsonian Institution Press); and Sparks' 'Bird Behaviour', 1969 (Hamlyn). It might also be worth noting that a new checklist of the birds of New Zealand was published in 1970, and that more up-to-date information on bird photography than in Hosking's 1944 book is contained in Hosking and Newberry's 'Bird Photography as a Hobby', 1961 (Stanley Paul, London).

Perhaps I have been unduly harsh in emphasising weaknesses rather than strengths. Viewed through my previously professed bias, few strengths emerge. It is unfair to criticise an author for failing to achieve things he never attempted to achieve. I fail to appreciate the satisfaction one gets from writing a new textbook in an old field; it so rarely seems a creative activity—only slightly more so than reviewing. The price of the book is low enough that it should attract those not yet sufficiently embarked in ornithology to have started a reference library. In fact it will be valuable indeed if read by those never having delved into basic ornithology and it can be recommended to them. But they should remember that the book is aimed at school students doing a biology course and that many details may seem irrelevant to them. Good standard works on ornithology are becoming more accessible; Van Tyne and Berge's 'Fundamentals of Ornithology' (624 pp) is now available in a paperback edition for about $4.00. For those already initiated and interested in New Zealand's birds, pp 12-41 of the present book make good supplementary reading.

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