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Review

Ratites and Tinamous
by S.J.J.F. Davies, illustrated by Mike Bamford and Danika Loomes

Oxford University Press, Oxford. 2002. *ISBN* 0-19-854996-2
Pp. 336. Hardcover. 12 colour plates. US$85 / £65

This relatively small book, in hardback, is part of the OUP *Bird families of the world* series and, as is typical of books in this series, is both well produced and expensive. The maps and figures are well designed and produced, and the artwork depicting the species seems quite good, although the colours leave a bit to be desired. For example, the cassowary's head is much bluer in life than is depicted and the plumage of the brown kiwi is unlike that of the bird.

The book is divided into two parts. The first covers general aspects of ratite evolution, structure, behaviour, feeding and breeding biology, mythology and human uses, and their future, all in 66 pages. The second is a series of species accounts beginning with the tinamous, with rheas, emu, cassowaries, moa and kiwis, and ostrich and elephant birds thereafter. Each of these accounts provides a brief standard description of the plumages, some basic measurements (unfortunately, usually with relatively small sample sizes), field characteristics, descriptions of the voice, the range, habitat and status, the feeding and other general habits, displays and breeding behaviour, and lastly the breeding and life-cycle. Entries range from 1-2 pages for some tinamous to 17 pages for emu. Where available, data are given on details of the diet.

The main strength of this book is its extensive detail of the feeding biology and behaviours for all the extant species. Where the book falls down, however, is in its coverage of extinct taxa such as moa. These failures range from details of near trivia to the basics of nomenclature and an awareness of modern literature. For example, on page xxiii, in the account of the moa bone provided to Owen by Rule, Davies states that Rule obtained it from the Rev. William Williams. Rule, in fact, obtained the bone from his friend, the trader, John W. Harris (Buick 1931, Anderson 1989). It is disappointing to find that the author cites Anderson (1989) as his most recent authority on the taxonomy of moas ignoring the New Zealand Checklist (Turbott 1990) and all recent taxonomic papers on moas (eg Worthy 1988a, b; 1989; 1991; 1992, 1994). Thus on page 3, Davies states that "there were formerly at least 13 flightless species", when for over a decade only 11 have been accepted, and as if any moa were volant, but the text continues in this flight of fancy to state that they were "probably predated by introduced rats" (p. 3). The only rat that lived beside moas, *Rattus exulans,* was at c. 150 g and standing somewhat shorter than the ankles of even the smallest moa chick, not a likely predator. The cavalier approach to taxonomy of the extinct forms is carried through to the elephant birds, where the author states there were "at least five to seven flightless species". Species, especially of extinct forms, are human constructs, and as such there is a specific number – fourteen species of elephant birds have been described, of which seven or perhaps only three might be valid biological entities (Worthy and Holdaway 2002).

There are some glaring inconsistencies: "The ratites and tinamous take their name from the flat, raft (*ratis*) like form of the sternum. It is without a carina or keel, ... the sterna of tinamous have a keel" (p. 4).

The editors should know better than to allow the use of the tautology 'Gondwanaland', as this continent was named after the land 'wana' inhabited by Gonds, hence Gondwana is the accepted term.

The account explaining the present distributions of ratites omits entirely discussion of all the recent literature based on genetic data (e.g. Cooper et al. 1992; Cooper et al 2001) and the conclusion that "the assumption that they represent relicts of Gondwanaland is now seriously questioned" (p. 11) is contrary to the conclusions of Cracraft (1974) and most recent work. Following on from this apparent lack of awareness of the recent literature,

we find the assertion that "Agreement is general that kiwis are allied with moas and emus and cassowaries." (p. 12), which flies in the face of such work as (Bledsoe 1988; Cooper, 1997; Cooper et al. 1992; Cooper et al. 2001; Haddrath and Baker 2001) to name just a few works, which ally kiwis with emu and cassowaries, but place moa in a quite separate clade. Thus the coverage of moas in just 1.5 pages is not surprisingly somewhat weak, notwithstanding the use of a very dated taxonomy, with several statements that are contrary to accepted wisdom. For example, that moas "probably survived into the nineteenth century" (p. 242) has been well and truly dismissed (Anderson 1989). But statements like 'In all species the humerus is the shortest leg bone' (p. 242) is grossly careless in the least. And, statements like 'with four toes in most species', and 'the feathering, unlike that of ratites other than rheas, extended over the tarsometatarsus' seem to imply that some moas had more or less toes (all have four) and that all moa had feathered tarsi, when in fact this has only ever been described for a single species *Megalapteryx didinus*.

As a kiwi, I thought a look at the treatment of kiwi, might hopefully be better, but on p. 48 I found "....Kiwis suffer little predation, despite the introduction by humans of several potential predators into what had been a predator free environment for the birds until 1000 years ago. Only domestic dogs are known as serious predators of kiwis. The Polynesian, Norway and Black rats have all been introduced, as have three species of mustelids, and the domestic cat (Reid and Williams 1975), but appear not to attack kiwis." The literature on kiwi predation is huge and the dire straits these birds are now in as a result of predation, mainly by mustelids, is well known, and surely not in need of referencing by this reviewer. But, on p. 246, we see "Newly independent chicks of the North I. population suffer severe predation from Mustelids".

With this plethora of errors and inconsistencies, I am left wondering about the accuracy of other areas of the text for which I have no first hand knowledge. So, not only is this book, at US$85 / £ 65 list price, rather expensive, it contains too many errors to be of use to most New Zealand workers.

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