

THE HISTORY AND SIGNIFICANCE OF THE FOSSIL *CASUARIUS LYDEKKERI*

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(Fig. 1) Manuscript Received 14.5.61

In 1891 Lydekker (pp. 353-354) made known the existence of a fossil cassowary of the Pleistocene of New South Wales, Australia. His report was based on a cast presented to the British Museum by the Trustees of the Australian Museum, Sydney, New South Wales. The original specimen, which according to him was preserved in the "Museum at Sydney" we now know later appeared, unnumbered, among material in the Mining Museum at Sydney. About 20 years ago it was transferred to the Australian Museum and given the number MF 1268.

The significance and identity of the specimen had been lost sight of over the years, and, in 1954, it was placed in the hands of Mr. Leslie F. Marcus, a representative of the Museum of Paleontology of the University of California, U.S.A., with the suggestion that it be studied. In 1960 I began checking the characteristics of this fossil, which consists of the distal end of the tibiotarsus. It seemed clearly to show the configuration of a cassowary rather than that of an emu, which latter has a less tapered proximal extension of the lateral condylar mass on the anterior surface. The question then arose of the distinctness of the specimen from the cassowary reported by Lydekker, the only fossil cassowary on record (Lambrecht, 1933:111). In November of 1960 an opportunity was presented of taking this "unknown" fossil to London, where it was compared with the cast, A 158, now with the additional number B 10394. To my considerable surprise it proved to be the original of the cast. All minor imperfections of the original and details of blood-vessel channels corresponded perfectly; a section of the shaft, about 3 centimetres long on the anterior aspect, had apparently broken out and been lost since the time the cast was made.

In 1911 Rothschild (p. 151), in recording all known ratite birds, fossil and Recent, listed "*Casuarius lydekkeri* Rothschild" from the Queensland Pleistocene. In his key on page 162 he characterizes *C. lydekkeri* as having the "extensor groove [of the distal part of the tibiotarsus] enormously deep" in contradistinction to that of *Casuarius bennetti*. Earlier in the key he had separated the cassowaries with broad tibiae, such as *Casuarius casuarius*, from the more slender types of the *bennetti* group. All the characters used in the key are adapted quite obviously from Lydekker's description of specimen No. 158 and his comparison of it with *Casuarius picticollis* (= *C. bennetti* of current taxonomy). Whether or not Rothschild personally examined No. 158 we do not know, but inasmuch as he used Lydekker's characterizations in contrasting the tibiae, named the form thus diagnosed for Lydekker, and made extensive use of various other ratite material at the British Museum, it is clear that he was basing his name on No. 158 and intended to describe it as a new species. His new name evidently dates from this publication, as I can find no other reference to it earlier in his works. For nomenclatural purposes this publication affords sufficient description to make the name identifiable and available in accord with the rules of that period. No. MF 1268 should be regarded as the holotype in that it was the only specimen known at the time of the original description and No. 158, the cast, was an obvious replica of it.

The source of the specimen has caused concern on two scores. Rothschild's mention of "Queensland Pleistocene" is unexplained and must be presumed to be a lapsus. The Australian Museum has been carrying MF 1268 on its records in recent years as from the diatomaceous deposits at Cooma because a loose label bearing that locality was in an open tray in which the specimen, then unnumbered, was received from the Mining Museum. Other fossils received at the same time in the trays from that museum were chiefly from Bingara and the Wellington Caves. A search for diatoms in the matrix of the shaft of the type showed none. There is therefore no firm basis for the purported derivation from Cooma, and the absence of diatoms throws real doubt on such a source. The locality given by Lydekker, that is, "cavern-deposits of the Wellington Valley", may therefore be regarded as the correct one although there is no later direct evidence to support the conclusion. This is the view of H. O. Fletcher, of the Australian Museum, who has kindly supplied me with the foregoing data concerning the circumstances of receipt and cataloguing of the specimen at his institution. The British Museum's record of information on the cast repeats the statement of source as the Pleistocene cave deposits of the Wellington Valley.