

A New Species of *Sthenurus* (Marsupialia, Macropodidae) from the Pleistocene of New South Wales

A contribution from the Museum of Paleontology, University of California, U.S.A.

By LESLIE F. MARCUS

Assistant Professor, Department of Statistics, Kansas State University, U.S.A.

(Fig. 1)

Manuscript received 5.6.62

ABSTRACT

A new species of *Sthenurus*, *Sthenurus andersoni*, is described from the Pleistocene Bingara fauna of New South Wales, Australia. The holotype is a left mandible, lacking the ascending ramus. Fourteen paratypes and three referred specimens were also used in the description. *S. andersoni* appears to be closely related to *S. atlas*.

INTRODUCTION

The genus *Sthenurus* is represented by three species in the Bingara fauna from Murchison County, New South Wales, Australia (Marcus, 1962, unpublished Ph. D. dissertation). The holotype and paratypes of *Sthenurus andersoni*, the most abundant species of the genus, are from a quarry deposit excavated by the Department of Mines of New South Wales in 1887. William Anderson (1890) directed the collection of the specimens and described the deposit.

Sthenurus andersoni, is similar to, but smaller than, *S. atlas* (Owen), 1838. Its lower molars are lower crowned, shorter and relatively wider than those of *S. atlas*. *S. andersoni* and *S. atlas* represent long-jawed members of the genus, whereas *S. oreas* and *S. pales*, both represented at Bingara, and *S. occidentalis* from Western Australia are short-jawed (more like *Procoptodon* in this respect). *Sthenurus* molars maintained sharp crests throughout all wear stages. In *Procoptodon* they are worn off to form triturating surfaces. Propalinal motion would be restricted in *Sthenurus* by the interlocking of the upper and lower molar crests.

The clay deposit in which the Bingara fauna occurs is of limited extent and overlies late Tertiary or early Quaternary basalts. Hundreds of specimens were excavated from this deposit and these represent five families of marsupials. Mandibles of macropodids are the most abundant fossils. *Diprotodon optatus*, *Thylacoleo carnifex*, *Macropus titan*, and *Zygomaturus trilobus* are associated with *Sthenurus andersoni* at Bingara and the Wellington Caves in New South Wales, and at the Darling Downs in Queensland. These species were elements of a widespread middle to late Pleistocene fauna.

ACKNOWLEDGEMENTS

The author was a member of the University of California Museum of Palaeontology expedition to Australia in the summer of 1954, and was supported by that institution for continued research in Australia until January, 1955. Dr. R. A. Stirton arranged for the loan of specimens from the Australian Museum, Sydney. The collections, notes and diagrams that he made were constantly used during the preparation of this paper. Oliver Chalmers and Harold Fletcher, of the Australian Museum, gave invaluable assistance in the assembling and shipping of the extensive Bingara collection to the University of California. The illustrations were prepared by Augusta Lucas.

DESCRIPTION OF FOSSILS

*Sthenurus andersoni**, Marcus, n. sp.

Holotype.—Left mandible, Australian Museum no. MF 946. Ascending ramus lacking; angle partially lacking; root of I_{2-3} , P_3 , part of alveolus and anterior root of M_{1-2} , and M_{2-4} preserved; Bone Camp Gully, V5572.

Paratypes†.—Bone Camp Gully, V5572: Left mandible, P_3 , M_{1-2} , MF3. Right mandible, P_3 , M_{1-3} , UC 60015. Right mandible, M_{2-2} , UC 60016. Right mandible, I_{2-3} , P_2 , DP $_{3-3}$, P_3 excavated from its crypt, MF 10. Left mandible, M_{2-4} , MF 942. Left mandible,

* For the late Charles Anderson (1876-1944), of the Australian Museum, who before his death curated and was studying a large part of the Bingara collection.

† V and UC numbers refer to vertebrate localities and specimens, respectively, of the University of California Museum of Paleontology; MF and F numbers refer to specimens in the Australian Museum.