

GENERIC AND SPECIFIC DIAGNOSES IN THE GIGANTIC MACROPODID GENUS *PROCOPTODON*

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Figures 1-10

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ABSTRACT

A revised diagnosis of the Pleistocene genus *Procoptodon* is presented. The species also are revised and diagnosed. Numerous diagnostic characters have been found in the patterns and construction of the teeth. Owen's species *Procoptodon goliah* (Owen), 1846, *Procoptodon rapha* Owen, 1873, and *Procoptodon pusio* Owen, 1873, are recognized. As indicated by Owen, 1874, *Pachysiagon otuel* is a synonym of *Procoptodon pusio*. All of these are from late Pleistocene faunas. No specimens of *Procoptodon* are now known from older faunas. It is thought that a common ancestry of *Procoptodon* and *Sthenurus* in the Sthenurinae is much farther back in the Tertiary than has been previously assumed.

INTRODUCTION

The largest and most bulky of all kangaroos is *Procoptodon goliah*. *Procoptodon rapha*, although also large, is smaller than *P. goliah*. Other late Pleistocene macropodids like *Protemnodon* and *Macropus ferragus* have skulls of equal length but they are not as deep as in *Procoptodon*. Nor does the evidence from the limbs indicate that the other large macropodids were as large as the largest *Procoptodon* species.

Procoptodon is currently classified in the subfamily Sthenurinae. R.H. Tedford (Ph.D. dissertation), as based on his Lake Menindee specimens, has revealed that *Procoptodon* is monodactyl in the hind foot, having reduced even the fifth metatarsal to a vestige, the forelimbs are proportionally much longer than in the macropodines and the basicranium is so shortened that the skull is as deep as it is long.

The other genus of the Sthenurinae is, of course, *Sthenurus*. Tedford has in press a revision of that genus. It is our purpose here to present revised diagnoses of the genus and species of *Procoptodon*. We have recognized Owen's species *P. goliah*, *P. rapha* and *P. pusio* (syn. *Pachysiagon otuel*). Our diagnoses are based primarily on the dentition. All three species are represented in the late Pleistocene Bingara fauna which was found in Bone Camp Gully, a tributary of Ironbark Creek, 15 miles east of Bingara, New South Wales. The collection has been loaned to us from the Australian Museum for a faunal report (Marcus, Ph.D. dissertation). Our detailed information is based primarily on those specimens as compared with casts of the holotypes. It seems desirable to present the diagnoses prior to the appearance of the longer report so they will be available to others working on fossil macropodids.

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