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THE IDENTITY OF COOK'S KANGAROO.

By

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In a joint paper concerning "Captain Cook's Kangaroo", in the "Australian Zoologist" for 1925, original accounts were quoted to emphasize the fact that, contrary to popular belief, and subsequent writings which maintained the fallacy, Cook's party did not observe the actual animal at Botany Bay. It was also demonstrated conclusively that the Great Grey Kangaroo (*Macropus major* Shaw, 1800), hitherto generally listed as *Macropus giganteus*, is not identical with the small species of kangaroo first observed by Cook and his party at Cooktown.

The ineligible generic names of *Jaculus* and *Jerboa* were applied to Cook's animal in 1777 in reference to the outward resemblance to the small rodent jerboas of other lands, together with the specific names of *giganteus* and *gigantea*, respectively by Erxleben and Zimmermann, because of its gigantic size in comparison with them. It was indicated, however, by the present authors in the Check-list of Mammals¹, that the name *giganteus* for Cook's species was also antedated by that of *cangaru*, applied by Müller in 1776 in the *Systema Naturæ* of Linné, based upon the original written versions of the name used by the aborigines.

In our first paper it was found impossible to indicate the definite identity of Cook's kangaroo because of the lack of topotypical representatives of the several species of macropods known to occur in the Cooktown area, and the seeming inconsistencies in the hunters' and naturalists' descriptions. Analysis of a copy of Solander's MS. Latin description which Iredale had procured, however, eliminated the medium-sized "Agile Wallaby" by its partially hairy rhinarium, sandy to yellowish coloration, and somewhat stocky build, and suggested that the animal might have been a small wallaroo.

The size given for the animal actually described, however, did not accord with that of a fully grown wallaroo, and a decision regarding its identity was deferred until skins and skulls of the various local species could be obtained for comparison. Fortunately, Iredale joined the British Museum Barrier Reef Expedition at Low Isles in 1929, and it was arranged that he should visit Cooktown and secure specimens if possible. As a result of his inquiries, skins and skulls of a wallaroo and whiptail wallaby were subsequently purchased, showing the wallaroo to be a richly coloured animal of the *antilopinus* type, and therefore in no way comparable with the "mouse" and "ash" coloured animal of the Cook accounts.

In a renewed effort to settle the identity of Cook's species, Troughton recently reviewed the characteristics of the whiptail in regard to the specimen from Cooktown and found them in general agreement with the original accounts, excepting that the incisors were not in accordance with our first interpretation

¹ Iredale and Troughton.—Check-list of the Mammals Recorded from Australia, Mem. Austr. Mus., vi, 1934, p. 55.

of Solander's description. Further analysis of the debatable passage, however, makes it clear that the phrase which apparently referred only to the structure of the third incisor, actually constitutes a comparative reference to the combined anterior ones, in the light of which interpretation the description of the incisors proves to be quite typical, within the known variation, of these teeth in the whiptail wallaby.

In addition to the incisors, other salient points of agreement between the first accounts and the whiptail are the slender form and long tapering tail, which equals the body length, long ears, and especially the rhinarium, which is entirely hairless and black, with a mosaic scale-pattern. The general coloration of the Cooktown skin, which is less contrasted than in typical southern examples, agrees also with the original accounts, which variously note "mouse colour", "dark mouse or grey colour", "ash-coloured", and "cinereus" in Solander's description, for the general colour. Allowance must of course be made for individual and seasonal variation such as shown in a series of southern examples, and for the fact that "dark mouse colour" would imply the presence of the dusky brown commonly seen in rodents, while the colour value of "cinereus" was differently understood in the past.

Regarding the marked discrepancy in weight given for the first and last of the three animals reported as captured by Cook's party, a study of the various accounts shows that Solander's description, and other details, refer only to the first male taken on July 14th, with the head and body 28 in. and the tail 26 in. in length, and a total weight of 38 lb. The measurements afford a total length of 1,372 mm. which accords quite well with that of southern animals of similar age, especially in view of indications that the Cooktown form is of smaller average size. In this regard, the weight is in full accordance with the mean values of 49 and 32 lb., for two males and two females respectively, given by Finlayson² from the Dawson Valley, Queensland.

Concerning the relative weight of various species of *Wallabia*, Finlayson noted of the whiptail that "its body weight is probably low in comparison with its linear dimensions", and that even in old males the slimness of the forequarters remains. Although old males frequently attain to comparatively exceptional size, as in all members of the kangaroo family, it seems evident that the large 84 lb. animal killed by Cook's party a fortnight later, over twice the weight of the first capture, and 35 lb. in excess of the maximum mean given for southern whiptails, must have represented a different species. The latter animal was most probably a young wallaroo, the bright coloration of which was overlooked in view of the general similarity in form of animals of such unique interest at the time. However, it is clear that the actual descriptive matter was based upon the small male first captured, a few points only being added from the intermediate small female, merely the weight and no other details being given for the last and much larger animal. The identity of the latter cannot therefore affect the conclusion that the small animal represented the first recording of the whiptail form of wallaby.

Regarding the habits and habitat of Cook's Whiptail, it is notable that the original illustration reproduced in our first paper shows the animal in the upright position characteristic of the species when disturbed while feeding, as well as the slender neck and shoulders, large ears, and attenuated tail recognized as

² Finlayson.—Trans. Roy. Soc. South Austr., iv, 1931, pp. 75-8, pls. ii-iii.

characteristic of the whiptail, and commented upon in the original accounts. In reproducing the figure it was stated that a pencil drawing of the animal described by Parkinson, draughtsman on the Endeavour's voyage, was probably preserved in the British Museum, but since visiting Cooktown Iredale has confirmed the fact that the general surroundings in the illustration are so similar to those of Cooktown, pictured in the absence of habitation, as to indicate that the plate actually represents Parkinson's original drawing.

The details of the illustration and accompanying accounts accord closely with Finlayson's general account of the whiptails of the Rockhampton area concerning their appearance, habits, and favoured habitat. The whiptails, he states, resemble the Toolache (*Wallabia greyi*) in spending most of their time in very open country, and are more easily approached and observed than any other wallaby in the district. It is also stated that the whiptail is regarded locally as an extremely fast wallaby, and that it is more diurnal than other brush wallabies, feeding out in the open up to 10 a.m. and after 4 p.m. except in extreme heat, while in winter it may be seen about all day. The undulating park-like uplands of the broad-leaved ironbarks are given as the typical whiptail habitat, richly grassed, with frequent low broken rocky out-crops which are free from bushy growth though at times bordered by it, and with the trees rather widely spaced. The significance of the point regarding the comparative ease in observing the species, and the similarity in detail of this data with the illustration and the first accounts are too obvious to warrant further comment.

On the possibility of survival of these beautiful wallabies, Finlayson provides reason for grave concern, because like so many open country mammals they evince a curiosity which earns them a reputation for stupidity amongst shooters and trappers, who state that in winter when large mobs gather on the sunny sides of ridges a dozen may be shot before the others move off, providing the shooter does not change position. The instinct for self-preservation from man is said to be almost nil, and makes destruction, encouraged by its attractive coloration and habits, tragically simple, so that although they are fairly numerous over a large area in suitable tracts, Finlayson, knowing the fate of open country species elsewhere, formed the opinion that the whiptail could not survive the present rate of slaughter in the cattle country of the Dawson River.

As he points out, probably the many thousands of wallabies killed each year in coastal Queensland do not merely represent the normal increase, as interested parties are apt to assume, but the natural concentration from large and relatively poor feeding areas to smaller and more attractive ones supporting denser populations. Thus with settlement, these "fur pockets" act as natural traps, and the resultant slaughter, which is apparently local, actually affects vast areas of the species' original range. It is this factor of concentration which is emphasized as being mainly responsible for the unexpected suddenness which has marked the fading or extinction of many fascinating and more observable marsupials, since the discovery of Australia.

Although it was gratifying to find that a specimen of Cook's species could be secured within twelve miles of Cooktown in 1929, one wonders how long this delightful and historically interesting species will survive in the restricted area of Cape York Peninsula with increased settlement following upon the opening of the proposed road through from Cairns. Surely no more potent plea for the protection and conservation of native fauna, by provision of suitable reserves,

could be placed before scientific and governmental authorities than the risk of extermination of such beautiful creatures, the first of their kind observed with such interest by Captain Cook's party on the vast eastern coast of Australia.

In concluding this general review, it may be noted that, having accounted for the apparent discrepancy in regard to the incisors and the extreme size of one of the animals, and considering the general points of similarity, we have no reasonable doubt that the Cape York representative of the well known whiptail wallaby is identical with the original animal described by members of Cook's party and known to them by the aboriginal name of "kangooroo" or "kanguru". The whiptail wallaby of the far north should therefore be known as *Wallabia cangaru*, as the name *giganteus* of Erxleben is antedated by Müller's specific designation.

As Cook's animal is shown to be a large wallaby, or medium-sized kangaroo, and the name *giganteus* was based on a comparison with the true jerboas which, as Banks stated, would be "no larger than a common rat", rejection of the name for the Great Grey Kangaroo is not to be regretted, especially as the valid and equally appropriate one of *major* is available for that fine species of large kangaroo.

Owing to popular supposition that only the largest members of the family are to be regarded as kangaroos, the difference between them and wallabies forms the subject of frequent inquiry at the Museum. Because of this, the scientific name of Captain Cook's Whiptail Wallaby, now established as *Wallabia cangaru*, is most appropriate as the generic and specific names link the aboriginal ones as an indication that no marked difference actually exists, while associating the primitive inhabitants with the landing of the "Endeavour" at Cooktown and the first observation of kangaroos on the coast of "New Holland".

Indeed, the change in nomenclature of long standing is unusually fortunate, based as it is upon the actual identity of the original species described during Captain Cook's visit, which has been the subject of mis-identification for over one hundred and sixty years. The interest and practical advantages attaching to the solution of the matter should overcome the usual sentimental objections to taxonomic change and prove, in this instance we hope, a source of satisfaction to historians as well as naturalists.

Captain Cook's Whiptail.

Wallabia cangaru Müller, 1776.

Mus cangaru Müller, Syst. Nat. (Linné), Suppl., 1776, p. 62.

Jaculus giganteus Erxleben, Syst. Anim., 1777, p. 409.

Jerboa gigantea Zimmermann, Spec. Zool., 1777, p. 526.

Didelphys gigantea Schreber, Säugthiere, iii, 1777, p. 552, pl. cliv.

Zerbua kangaru J. R. Forster, K. Vet. Ac. Handl., xxxix, 1778, p. 113.

Didelphis kenguru Zimmermann, Geogr. Gesch., ii, 1780, p. 231.

Mus caenguru Hoslin, Syst. Nat. (Linné), i, 1781, p. 125.

General Characters.—The above account has dealt with the agreement of the original descriptions with the general features accepted as characteristic of the whiptail wallaby, and it is now necessary to consider to what extent the southern animals differ from the Cape York one as typical of the first described form. Examination of a young adult topotypical skin and skull indicates that the main points are that the size and weight are consistent in suggesting that the size

averages smaller; the ear is shorter and not definitely bi-coloured as in southern examples, the brown coloration extending to the tip and being merely grizzled with buff hairs on the edges and upper fourth.

Entire coloration less contrasted in tones, the light cheek mark narrower and less defined owing to being buffy instead of clear white, and the dark lower border is paler; limbs toning with the body, especially the forearms, which are buffy grey instead of whitish, and rump marks less defined. Fur of back shorter, less dense, and unicoloured save for the variegated tipping, there being no trace of contrasted light basal coloration. The rhinarium, not described for the southern form in the "Catalogue", entirely naked, the short hairing of the nose stopping at a line above the nostrils, instead of extending down half the distance between them, as figured in the "Catalogue" for *W. agilis*, the other member of the genus occurring at Cooktown.

The skull of the topotypical adult male supports the contention of relatively smaller size in that the dimensions barely equal those of a younger adult female from the south, and the general proportions are smaller, except in the slightly greater zygomatic width. The intertemporal constriction is 3.5 mm. narrower than in a southern female's skull of similar total length, thereby confirming its superior age, contrasted with the relatively smaller proportions, which are obvious but difficult to define with a single example for comparison. The dentition appears quite similar, any slight differences suggested in the third incisor and fourth premolar being negated by the individual variability of these teeth.

Dimensions.—Measurements of the flat skin are not given, as stretching renders them misleading. The paws are unfortunately lacking. Ear-length 75 mm.

Skull of adult male: Greatest length 130; basal length 116.5; zygomatic breadth 65.5; nasals, length —, breadth 18.5; constriction 17.5; palate length 77.5; palatal foramina 7.3; basi-cranial axis 34.5; basi-facial axis 85; facial index 247; pm⁴ 5.7; molars¹⁻³ 24 mm.

Habitat.—The more open hilly country about Cooktown, Cape York Peninsula, North Queensland; topotype from within 12 miles of the town.

Remarks.—The restricted and more definitely coastal range of the Cape York whiptail is confirmed by a combination of distinctive features which it seems advisable for the present to regard as being of full specific value. The southern animal will therefore be distinguished by the very appropriate name of *elegans*, as already shown in our Check-list, instead of *parryi* as listed in the British Museum Catalogue.

Although Lambert's account of *elegans*, in the Transactions of the Linnean Society of London for 1807, was considered inadequate by Thomas, the description of the colour and dimensions, with the illustration, conclusively establishes its association with the southern form of whiptail wallaby. The coloration of "a beautiful silver-gray", and the name of "Silver" kangaroo, given by Lambert could not possibly refer, as Thomas suggested, to the *melanops* form of Great Grey Kangaroo or the Red-necked Wallaby, or to the sombre wallaroo of New South Wales, while agreeing completely with a well known colour phase of the whiptail wallaby.