

THE RELATIONSHIP OF THE BROWN AND BLACK-BACKED TREECREEPERS

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SUMMARY

HARRISON, C. J. O. 1970. The relationship of the Brown and Black-backed Treecreepers. Emu 70: 9-11. The typical form of the Brown Treecreeper *Climacteris p. picumnus* occurs in south-eastern Australia, a darker form with paler head markings *C. p. melanota* occupying the peninsula east of the Gulf of Carpentaria. Specimens from near Cardwell are intermediate, not faded, examples of *melanota*. Variation occurs in *C. p. picumnus*, specimens from the north-east being slightly darker with slightly paler head markings. These four groups might form an interrupted cline. Alternatively, the north-eastern forms of *picumnus* might be regarded as intermediate. In either case it seems preferable to regard *picumnus* and *melanota* as forms of a single species.

INTRODUCTION

Two geographical representatives of the Brown Treecreeper *Climacteris picumnus* occur in eastern Australia, the typical brown form *C. p. picumnus* from Victoria to central Queensland, and a blackish-brown form, the Black-backed Treecreeper *C. p. melanota*, on the peninsula east of the Gulf of Carpentaria. Keast (1957) considered these to be distinct forms of a single species. Macdonald (1966) suggested that they had reached the status of full species.

Ventrally the plumage is similar in both, most feathers showing a pale rachial streak with dark borders, the sides of the breast being sandy-buff, becoming more rufous on flank feathers and greyer towards the upper breast; but on *melanota* the flank feathers tend to be darker and browner. *C. p. picumnus* is medium-brown dorsally, the feathers of the top of the head being distinctly greyish and usually showing an ill-defined darker zone along the rachis. The supercilium and throat are light sandy-buff, the former extending back only a little beyond the eye, and the ear-coverts are brown with some pale buff streaking, the whole colouring of the sides of the head being modified by a faint greyish wash. The tail is brown like the back, but with a broad blackish subterminal band on all but the central pair of rectrices. *C. p. melanota* differs in being uniformly blackish-brown dorsally, the colour also obscuring any subterminal band on the tail and leaving only a faint suggestion of a paler tip to the rectrices. The top of the head is dark, but the supercilium is cream-coloured and extends from the nostrils to the nape, contrasting with the crown and with similar dark colouring in the upper parts of the ear-coverts. The

malar region bordering the ear-coverts is creamy-white tinted with warm-buff.

Specimens of *C. p. melanota* were collected south of Normanton and at the mouth of the Staaten River by the second phase of the Harold Hall Australian Expedition, and Keast (1957) records specimens from Walsh River and Barron River, near Cairns (Fig. 1). There is a record of this form (stated to have been identified by collecting a specimen) nesting within 110 km of Richmond in 1904 (Berney 1905). The northern-most specimens of *C. p. picumnus* in the British Museum are from Glendower, Torrens Creek, and 18 km south-west of Townsville.

INTERMEDIATE SPECIMENS

In the coastal area a gap north of Townsville apparently separates the ranges of the two forms. Keast (1957, 1961) suggested that a tongue of somewhat dry savanna country, extending inland from the sea and caused by aridity, which may have been more severe in the recent past, had constituted a barrier enabling the two forms to diverge; but placed this between Townsville and the Burdekin River, and seemed doubtful that it should in its present state function as a barrier for this species. The specimen from near Townsville, referred to above, is in this zone.

Within this apparent gap in distribution, on the Kiriama Tableland near Cardwell, Barnard (1926) collected in 1925 specimens that resembled *melanota*, but were deep-brown and not blackish-brown dorsally. Keast (1957, 1961) mentions these, but appears to regard them as marginal forms of *melanota* resembling *picumnus* in some characters, although there seems to be no comparable variation otherwise

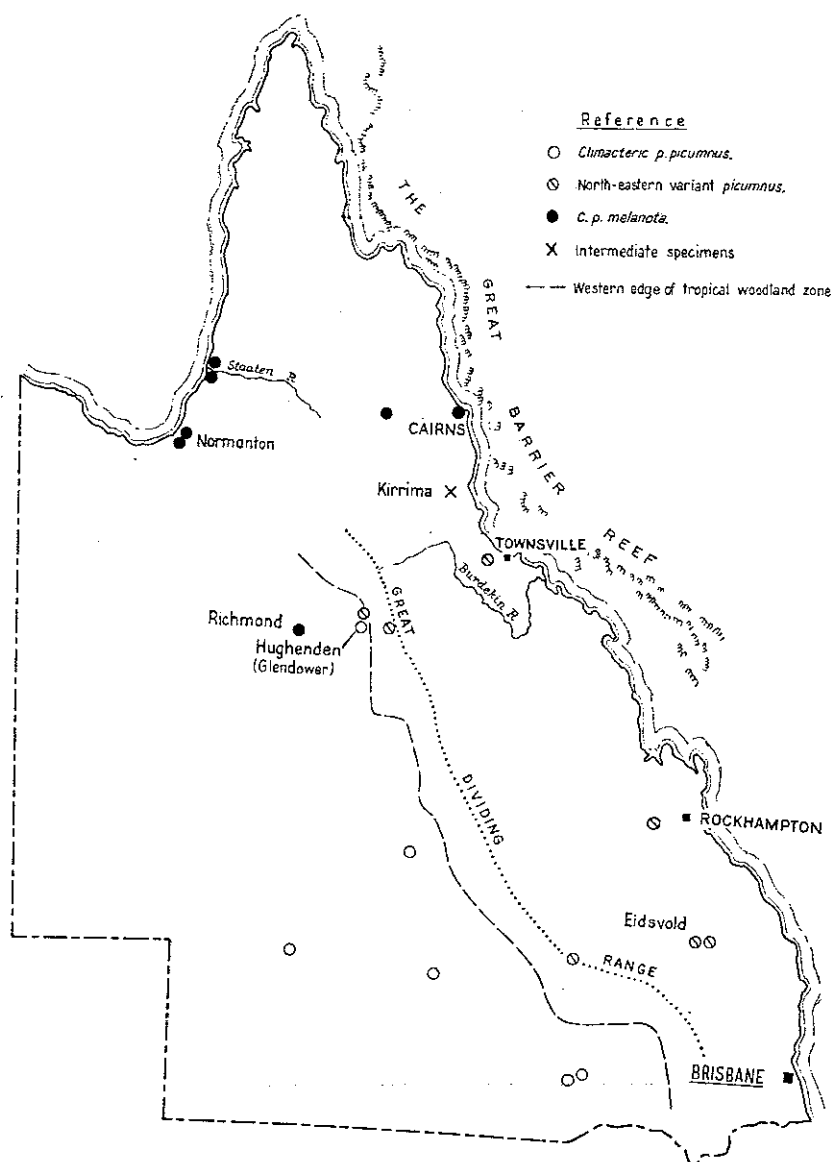


Figure 1. Locality map of specimens discussed in text.

within the *melanota* population. Macdonald (1966) examined two of the specimens, loaned by the Queensland Museum, and decided that they were faded specimens of *melanota*.

These specimens (QM reg. no. 03492 & 03493) have been examined again. They are deep-brown dorsally, intermediate in colour between *picumnus* and *melanota*. There are signs of fading and wear on some feathers, but a careful examination of the mantle feathers of the adult reveals a feather just breaking out of its quill, the colour of which shows that this intermediate shade of brown is natural and not the result of fading. The superciliary stripe has a slightly more buff tint than that of *melanota*, and is therefore slightly darker and not lighter as would have happened if fading had occurred. The tail shows a broad blackish subterminal band, less obvious

than that of *picumnus*, but differentiated from a paler tip and basal portion on the outer rectrices. These lighter brown basal portions are usually concealed by the upper tail-coverts. Had fading occurred, one would expect the subterminal band to be paler and the hidden bases darker. Barnard's statement that some specimens were juvenile suggesting local breeding has been questioned (Macdonald 1966), but one of the two specimens from the QM, labelled as a juvenile, has a distinctly shorter and less tapered bill than those of adults, and, whereas adult bills are blackish, this is brown, paling to reddish-buff at the base and showing traces of thick yellowish flanges at the gape, distorted in drying and hence probably softer at the time of collection. The specimen also shows only a single feather of the adult throat pat-

tern. This seems to confirm its immaturity and that local breeding had occurred.

VARIATION IN *C. p. picumnus*

It has been stated (Keast 1957, 1961; Macdonald 1966) that there is no significant variation within *picumnus*, but some specimens in the British Museum in fact differ from the typical description. The variation is consistent, the crown feathers tending to be dark-brown rather than greyish, and the superciliary streak creamy instead of buff and extending well back towards the nape. The sides of the head lack the greyish wash, the ear-coverts appearing browner and the sides of the throat showing the warm-buff tint like that of *melanota*. Compared with material of a similar age the dorsal plumage may be a little darker, but in view of the variations that generally occur through foxing and fading this is likely to be a poor character. The differentiation of the head pattern cannot be attributed to fading. The contrast in coloring of the crown and supercilium in the variant birds is reminiscent of that of *melanota*. Despite slight variation it was possible repeatedly to separate the group of individuals showing the above characters by plumage alone.

This group of variant individuals represent most of the specimens from the north-east of the range of *picumnus* (Fig. 1). Specimens have been collected at Glendower, Torrens Creek, 18 km south-west of Townsville, Westwood (50 km west of Rockhampton), Eidsvold (two specimens), and Mount Hutton. An old specimen from Moreton Bay may have been similar, but is too faded on the head for certain determination. Specimens showing these characters constituted all available material from within the 'tropical woodland' vegetation zone of Queensland south of Townsville, which extends a little west of the Great Dividing Range. The second phase of the Harold Hall Australian Expedition collected seven specimens at Glendower. Four were typical *picumnus*, two showed slightly more marked superciliary stripes, and one was similar to the variant form. These birds were collected at four different points, and the last bird, a female, was with a dull-coloured typical *picumnus*-type male. It may be significant that this area around Hughenden where both forms of *picumnus* and *melanota* come close together, is at

the watershed of river systems extending eastwards, north-westwards and south-westwards.

The variation appears at present rather discrete and localized, but the material may be inadequate. The distinction is fine and may not be immediately apparent without comparative material; it seems preferable not to recognize it nomenclatorially.

DISCUSSION

The present information suggests two alternatives: either the typical *picumnus*, north-eastern *picumnus*, Kirrima *melanota* and typical *melanota* represent stages on a cline of increasing differentiation of head pattern and darkening of dorsal plumage, broken north of Townsville and possibly north of the Kirrima Tableland; or the Kirrima specimens, being completely intermediate between *picumnus* and *melanota*, may be evidence for interbreeding of the two forms where they meet in the coastal region. The other area of close approach is at Glendower and Richmond where they apparently approach to within 50-275 km (Berney 1905 and Harold Hall Expedition specimens), but are not definitely known to meet. If interbreeding had occurred regularly these north-eastern *picumnus*, showing some similar characters to *melanota*, might be evidence of earlier interbreeding with subsequent crossing back to *picumnus*, but with some retention of visible *melanota* characters. In either case it would seem preferable to regard *picumnus* and *melanota* as forms of a single species.

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