The Status of some Australian Treecreepers*

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Australia, as Keast remarked (1957), is peculiarly rich in "forms that replace each other geographically", and that "inevitably there is confusion as to the actual status of such forms". In no case is this better illustrated than in some treecreepers of the family Climacteridae, especially forms of the *picumnus* group (after Keast). The valid forms in this group are:

picumnus Temm. & Laug., 1824
rufa Gould, 1840
melanura Gould, 1842
melanota Gould, 1846
wellsi Ogilvie-Grant, 1909

It seems clear that this group of taxa have evolved from a recent common stock but the stage of speciation reached, which might vary in each case, is not certain. It is difficult to apply the conventional yardsticks of intergradation, hybridization and sympatry. Information is scanty and opinions have been based on relatively few data. Some fresh material obtained by the Hall Australian expeditions shed a little more light on the problem but without solving it conclusively.

The R.A.O.U. has not changed its checklist opinion (2nd edn, 1926) that all are separate species, a situation reflected by Cayley (3rd edn, 1959). Keast (1957) regarded *picumnus* and *melanota* as conspecific. He also kept *melanura* and *wellsi* together, as did Serventy and Whittell (3rd edn, 1962).

In forming his opinion that *melanota* is "only a distinctive colour race of *picumnus*" Keast lacked material from a wide area in central Queensland between the two forms. He found that *picumnus* "does not vary significantly throughout its range", but in *melanota*, which has a relatively more restricted distribution, he found evidence to "suggest that there is a northward cline of increasing pigmentation". There is some support for the conclusion that *picumnus* has no significant geographical variation. Although there is quite appreciable variation in certain features, especially the olive-brown colour of the upperparts, this is largely accounted for by seasonal change. Two specimens taken at Eidsvold in January are in post-breeding moult with both old and new feathers present. The former are a lighter faded colour and the latter are much darker. This provides a useful yardstick for measuring the range of seasonal variation in that feature for one locality. A large amount of material would be required to compare birds from widely separated localities in exactly the same plumage condition, and material in such quantity is not available, but in the few more or less equit-

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able comparisons which it has been possible to make the indication is that there is little if any significant variation in the colour of the upperparts which can be related to distribution.

It is possible that seasonal variation accounts for the "not precisely typical birds" referred to by Barnard (1926) in the Cardwell area. These birds are sometimes quoted as evidence of hybridization between *picumnus* and *melanota*. They may be hybrids, but two specimens I have examined, by courtesy of the Director of the Queensland Museum, are in my opinion rather faded *melanota*. Both were taken in December and are in very worn plumage. Incidentally, the collector recorded one specimen as adult and the other as immature which probably accounts for the statement about birds in this area breeding early, "as fully-grown immature birds were seen", but I doubt very much if the bird so marked was in fact immature. Another bird taken near Townsville, about 150 miles south of Cardwell, is quite clearly *picumnus*.

In addition to the Townsville (*picumnus*) and Cardwell (*melanota?*) specimens there is now evidence of both *picumnus* and *melanota* occurring close together on the upper Flinders River. Berney (1905) recorded the black, or black-backed treecreeper *melanota* (with confidence for he "shot a specimen for identification") at Richmond, or at least "within a radius of 70 miles of the township". Further up the river, at Glendower near Hughenden and less than 100 miles from Richmond the Hall expeditions collected specimens of the brown-backed form, *picumnus*; moult was just completing and the feathers of the upperparts have the richer olive-brown typical of fresh plumage. Wilkins also collected *picumnus* at Torrens Creek in 1923.

These few data suggest that the process of speciation as between *picumnus* and *melanota* has proceeded further than Keast suspected, that in fact the two forms can be accepted as full species. It has long been assumed that speciation between *melanota* and *melanura* has proceeded much further than between *melanota* and *picumnus*. This assumuption is based on sympatry without hybridization, so far as is known. The evidence of overlap is two records of *melanura* in the territory of *melanota* in Cape York east of the Flinders River. Both records, one more or less dependent on the other, can be questioned.

The first is a statement by John Gilbert in his diary (see Chisholm, 1945:193) that he found a new *Climacteris* on June 9, 1845, in the "wild country of the Lynd", which he identified as *melanura*. Later Gould described a new species, *melanota*, on a specimen obtained by Gilbert, reputedly on the day he was murdered, June 28. On the face of it therefore it seemed that Gilbert secured both forms but there are reasons and facts which point to the conclusion that he only obtained *melanota*. For example, it was reasonable that Gilbert should identify his first specimen as *melanura*, which

is very similar to *melanota* and the only one of the two described at that time. Also if he obtained a second new bird which in the hand would be obviously different from the first it is unlikely that he would have omitted to comment on it in his diary. In that connection it seems probable that he obtained the second specimen on the 13th when he noted, "again met with the new *Climacteris*", than on the 28th when he made no reference to it in his diary, which had been completed for that, his last, day. It was only rather belatedly that Gould mentioned that this specimen was "one of the birds collected by poor Gilbert on the day of his lamented death". Gould was not too careful about his statements and quotations and many have been misleading. The factual evidence is that there are no specimens of *melanura* among the Gilbert specimens collected on the Leichhardt expedition, which are identified as from locality "Port Essington", among the Gould specimens in the Academy of Natural Sciences, Philadelphia (see de Schauensee, 1957). But there are male and female cotypes of *melanota*.

The other evidence for overlap of *melanura* and *melanota* is a sight record by Keast (1957:485) at Einasleigh in 1952. Keast tells me that this was rather a snap identification made in difficult circumstances but in country where because of Gilbert's record he expected to see *melanura*. It must be extremely difficult to distinguish between *melanura* and *melanota* in the field unless one has a clear view of the presence or absence of a white eye-stripe. It is possible that in young birds of *melanota* the white eye-stripe is not a clearly defined character.

In summary, new data and a reassessment of previous data seem to show that only three of the *picumnus* group of treecreepers have established secondary contact, *picumnus/melanota* and *melanota/melanura*. Distribution is allopatric, apparently without hybridization. It seems probable that these three forms have attained species status. The case of the two isolates, *rufa* and *wellsi* has not been discussed. The former, *rufa*, is generally accepted as a species, but *wellsi* is not very distinct morphologically from *melanura* and its status as race or species is large a matter of opinion or convenience.

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