

The White-Plumed Honey-eater (*Meliphaga penicillata*), Gould, and its various sub-species

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Since describing a new sub-species of *Meliphaga penicillata* under the name of *Ptilotis geraldtonensis*, Ashby, in *The Emu*, vol. xx., p 190, my skins have twice been to Melbourne for comparison, and a considerable correspondence has passed between Mr. A. J. Campbell and others and myself in reference to its true place in the Natural Taxis.

On the occasion of a recent hurried visit to Melbourne I had the opportunity (with the facilities granted by Mr. J. A. Kershaw) of comparing the very fine series of *P. penicillata* and its congeners in the "H. L. White Collection" in the National Museum with the series in my own. The following is a *resume* of this examination.

Two very interesting results stand out; *Geraldtonensis*, which was taken by myself in the creek-beds both at Geraldton and at Dongara, in W.A., is the same bird that is common at Moora, 150 miles further south. *Geraldtonensis* is not *M. carteri* Campbell, neither is it identical with *M. ladasi*, Mat., the possibility of this being so was suggested in a footnote in the said paper.

I am inclined to agree with Mr. Gregory M. Matthews in considering the whole series as one species, but I think it might be wise to recognise two divisions; one I should describe as the FOREST DIVISION and the other as the DESERT DIVISION. In each of these divisions connecting links still exist, and it is very probable that intermediates between the Forest series and the Desert series also exist, but in the series examined it is easy to assign all the forms to their respective division.

FOREST DIVISION.

All the birds in this series are coloured in varying degrees with yellowish-green.

(1) From the "H. L. White Collection" a number of skins taken in Victoria were examined, and these were identical with skins in my own collection from the Adelaide Hills; they are the darkest of the series, the face and other coloured portions are greenish-yellow.

(2) A specimen in my collection from Torr Downs on the River Darling and another collected by myself near Broken Hill correspond with the birds in the "H. L. White Collection" from New South Wales, and are generally paler in tone than not; but the yellowish-green coloration is similar to skins from Victoria and South Australia.

(3) Two males collected by the writer on September 6th, 1916, in The Gorge, near Port Germain, S.A., on the western side of the Flinders Range, are still paler, and the yellowish-green coloration is more extensive and a little more yellow in shade.

(4) Three skins collected by myself at Geraldton, W.A., and two skins in the "H. L. White Collection" from Moora W.A., and labelled *P. carteri*, are identical and were described in my paper *loc. cit.* as *Geraldtonensis*. The skins from Port Germain, in S.A., are the nearest, but the Geraldton and Moora skins show a decided increase in the extent and brightness of the yellowish-green; also the streaks on the throat extend in the W.A. skins over the chest, and are almost pure yellow. This is easily the yellowest form of the Forest series.

Note.—Mathews sub-sp. *Mellori* and *Whitei* are represented by my No. 1. The type of Gould's *Meliphaga penicillata* probably corresponds with the skins I have marked No. 2. *Rosinae*, Mathews, is probably the same as my two Port Germain birds, that I have numbered 3. My own *Geraldtonensis* is at the head of this group as being the most divergent from type and containing the most yellow in its coloration of any of the forms that come under my suggested Forest Division. Although this form in its general characters evidently belongs to this division, there is a slight wash of "buff" in the central tail feathers, this character being much more in evidence in those I have assigned to the Desert Division.

DESERT DIVISION.

All the birds in this series are coloured with yellow, instead of yellowish-green, and all show a wash of buff so characteristic of Desert Birds.

1. Two skins in the "H. L. White Collection" from East Murchison and Lake Way, both females, are slightly darker on the upper side than the more northern form of *M. carteri*, but I cannot separate them from that sub-species.

2. Six skins in the "H. L. White Collection," two (a male and female) from Carnarvan and Pt. Cloates respectively; one (a male) from Lawson; three (both male and female) from Upper Coongan.

One skin from my own collection taken in August, 1911, at Roebourne. All these seven skins are alike and are identical with Campbell's type, which came from North-West Cape, half-way between the southern limit of Carnarvan and the northern limit of Upper Coongan. These are all strikingly pale desert forms, highly coloured with yellow and showing a buff tinge modifying the yellow in places, and giving a desert tone to the whole bird.

3. In the "H. L. White Collection" is a nice series of North's *leilavalensis*, from Oodnadatta, River Diamantina, Mt. Benstead and Flinders River. These are all smaller birds than *M. carteri*

from North-Western Australia, but nevertheless I think properly find their place in the "Desert Section"; the "black" of the ear-coverts is in this sub-species, grey.

Conclusion.—Since drafting the foregoing I have turned up the Rainfall Map of Australia as published in Mr. D. E. Hutchins' work on Australian Forestry. The great central belt with a rainfall of 10 in. and under, commences inside the States of Queensland and New South Wales, and covering a large part of South and Western Australia, runs out to the coast at Carnarvon and extends almost to North-West Cape, the type locality of Campbell's *carteri*, but this species has extended further north into the 20-inch rainfall belt. The East Murchison form, *ladasi* and *leilavalensis*, also have their habitats within this dry belt, which includes the whole of what is often termed the desert portion of Australia.

The difficulty Mr. A. J. Campbell found in separating *geraldtonensis* from his *carteri* was chiefly due to two very distinct forms and several minor ones, being included under the name *carteri* in the "H. L. White Collection." Also the artist, in the beautiful figure of *carteri*, in *The Emu*, vol. III., plate xvi., has failed to suggest the general modifying influence throughout the plumage of the colour I have termed "Desert Buff." He certainly has suggested it in the central tail feathers, but actually there is little of the plumage where the presence of this shade is not to some extent in evidence. Of the desert forms I should prefer Campbell's *carteri* as the type; North's bird was described the same year.

Note.—The skins referred to under my heading (1) will correspond with Mathew's *ladasi*. Those under the heading (2) will include *carteri*, Campbell, and *calconi*, Mathews. The leading (3) includes all the variants of North's *leilavalensis*. As I understand the forms classed above under the Desert Division are found in the Red Gums and other Eucalypts, in the creek beds, it seems a little strange that they should have taken on the desert coloration. Possibly it is due to the creek beds in these districts being separated by tracts of desert, whereas further south the intervening spaces are covered more or less with low scrub.

The Annual Congress and Camp-out of the R.A.O.U.

The Annual Congress and Camp-out of the R.A.O.U. was held from October 6th to 20th, in Sydney and at Lake Wallis. Twenty-six delegates from the four Eastern and Southern States attended and 23 took part in the Camp-out. In the absence of the President (Mr. C. A. Barnard), the senior Vice-President (Dr. J. A. Leach) occupied the chair.