

NOTES ON SPECIES OF THE AUSTRALIAN GENUS PARDALOTUS.

By LEONHARD STEJNEGER.

In his "Catalogue of the Birds in the British Museum," vol. x (1885), p. 54, Mr. R. Bowdler Sharpe distinguishes three different forms of *Pardaloti* having the "head streaked with white on hinder crown and occiput," as follows:

- a'. All the primaries edged with white, forming a large wing-patch; tips of primary-coverts scarlet.....*ornatus*.
 b'. Third and fourth primaries edged with white; tips of primary-coverts scarlet, or orange, or yellow*assimilis*.
 c'. Third primary only edged with white; tips of primary-coverts always yellow
affinis.

The first and third of these he treats of as good species, but *assimilis* he regards as "subsp. α " of *P. ornatus* (p. 56).

In looking over the collection in the National Museum, I find that it possesses three specimens of true *P. ornatus* TEMM. (or *P. striatus auctorum plurimorum nec GMEL.*); three typical specimens of *P. affinis* GOULD (= *P. striatus* GMEL. nec auct.*); and besides, seven specimens which are identical with *P. affinis*, with the exception that they have the tips of the primary coverts colored *red and not yellow*; that is, they have the outer edge of *only the third primary* white, plus a red wing spot. These I take to be typical *P. assimilis* of RAMSAY, for the reason that this author gives no other character by which to distinguish *assimilis* from *affinis* than the color of the wing spot.† I may also mention that a specimen from New South Wales (U. S. Nat Mus., No. 88285), which the National Museum in 1882 received from the Linnean Society of that province is marked "*Pardalotus assimilis* ♂." The specimens under consideration consequently differ somewhat from Mr. Sharpe's six speci-

* Mr. Sharpe has already pointed out the fact that *P. striatus* GM. is *not ornatus* TEMM., and he has also hinted at the probability of the former being Gould's *affinis*. Latham in his description mentioned the black head with the white stripes, the yellow supraloral spot and the *yellow* tips to the outer wing-coverts, "making an oblique mark near the outer edge of the wing." If, therefore, his bird is a *Pardalotus* at all, its characters fit very well the species in question. Latham does not give any locality, and Gmelin's assertion of its habitat being South America is, therefore, evidently an invention of his.

† His definition is as follows (Proc. Linn. Soc. New South Wales, II, 1878, p. 180, footnote): "Tips of spurious wings *always orange-red* never *yellow* as in *P. affinis*." Gould also uses the term "spurious wing," both, of course, meaning the *primary-coverts*.

mens which have the "third and fourth primaries edged with white." He says: "I find, moreover, that all the birds for which I propose to adopt Ramsay's name of *P. assimilis* have, as a rule, the third and fourth primaries edged with white, the third for two-thirds of its length, the fourth only near the base, but varying in extent and sometimes extending a good way up the edge of the feather." Except two, none of my specimens show the slightest trace of white on the fourth primary (except at the tip, of course), not even at the extreme base. The only specimens (U. S. Nat. Mus., Nos. 33048 and 99432) showing features similar to those described by Mr. Sharpe have the middle portion of the outer web very narrowly edged with white, while the base is left black; but one of these specimens (No. 99432) also differs in having a similar, though still narrower, white edge to the second primary (the first one is narrowly edged in all of them). The tips of the primary coverts in this specimen are orange red (they ranging in the series from scarlet vermilion to orange red) and altogether the birds look to me as only presenting a slight individual variation. The next question arises as to the similarly colored specimens of the British Museum, but I hardly think that they can come under any other category.

Mr. Sharpe furthermore states that his *assimilis* have the primary coverts all the way from pure yellow to crimson. Those with yellow tips and white-edged fourth primary I should refer to *affinis* proper, to which they apparently take the same position as does my aberrant specimen to true and typical *assimilis*.

We have, then, two forms, *affinis* and *assimilis*, the only distinguishing character of which is the color of the tips of the primary coverts. But, if we have to take Mr. Sharpe's word for it—and my series seems to corroborate his statement—this color "varies from yellow and orange to scarlet and even crimson." It seems to me unquestionable that we have here proven to us "*intergradation*" between these two forms, and, according to the code of nomenclature of the American Ornithologists' Union, the names of these two forms should therefore stand as *Pardalotus affinis* (or *striatus*) and *Pardalotus affinis* (or *striatus*) *assimilis*.

Toward *P. ornatus*, which has all the primaries (except the second) edged with white, I can see no intergradation, and hence the reference of *assimilis* to this species is quite incomprehensible to me.

If *P. ornatus* must necessarily have a subspecies, such a one may probably be found in *P. melanocephalus*. The only specimen of the latter in the possession of the National Museum (No. 107515) shows considerable tendency towards the former, and may indeed be regarded as somewhat intermediate, for it has two distinct white stripes on the occiput and a few white spots on the black ear-patch. At any rate, *P. melanocephalus* and its yellow-rumped counterpart, *P. xanthopygius*, are very closely allied to *P. ornatus*, and should not be separated in any synopsis by the interposition of *P. punctatus* and its allies. Accord-

ingly I should arrange the species somewhat differently from what Mr. Sharpe has done, and propose the following amended

KEY TO THE SPECIES.

- a*¹. Cap and back uniform olive, the feathers slightly margined with dusky.
P. quadragintus.
- a*². Cap and back colored differently, the ground-color of the former being black.
- b*¹. Cap dotted with white or yellow round spots.
- c*¹. Forehead concolorous with the rest of the cap; supraloral spot white; under tail-coverts yellow.
- d*¹. Rump chestnut *P. punctatus.*
- d*². Rump yellow *P. xanthopygius.*
- c*². Forehead pale fawn, differing from the rest of the cap; supraloral spot scarlet; under tail-coverts yellow. *P. rubricatus.*
- b*². Cap without rounded spots.
- c*¹. Third (and often fourth) primaries only edged with white.
- d*¹. Tips of primary coverts yellow *P. affinis.*
- d*². Tips of primary coverts red *P. affinis assimilis.*
- c*². All the primaries edged with white, forming a large wing-patch.
- d*¹. Cap streaked with white on occiput, and ear-coverts densely spotted with white *P. ornatus.*
- d*². Cap and ear coverts uniform black.
- e*¹. Rump dull tawny *P. melanocephalus.*
- e*². Rump bright yellow *P. uropygialis.*

P. quadragintus has been made No. 1, as probably the most generalized form, and next to it is placed *P. punctatus*, which in its young plumage shows considerable general resemblance to the green-headed species, and which also in the white round spots on the smaller wing-coverts shows its near relationship.

The National Museum possesses specimens of the following species:

- P. quadragintus*, 2 specimens.
P. punctatus, 15 specimens.
P. xanthopygius, 1 specimen.
P. affinis, 3 specimens.
P. affinis assimilis, 7 specimens.
P. ornatus, 3 specimens.
P. melanocephalus, 2 specimens.

Specimens of *P. rubricatus* and *uropygialis* are, therefore, very desirable.

Among the six specimens of *P. assimilis* is the one brought home by Mr. Peale (U. S. Explor. Exped.) and recorded as *P. striatus*.

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