NOTES ON IMAGINARY SPECIES OF RAMPHOCELUS.

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In Part 2, 'Birds of North and Middle America,' 1902, Mr. Ridgway gathered together all that was known about various so-called "species" of tanagers of the genus Ramphocelus, but did not venture to dispose of the various names, his consistent practice throughout this great work. In the great majority of cases the types are unique and the source of origin is a guess. Many years of active exploration have now intervened, and we know that the species of this genus are active, gregarious and conspicuous birds of forest openings and cleared country, almost always exceedingly common, and favorites with professional collectors because easily found, easily shot and easily skinned. In fact Ramphocelus is the ideal subject for the "six minute skin." It is obviously impossible for there to be six lost species of these birds in Central America, and the present study was undertaken to see whether, in certain cases at least, some reasonable interpretation of the known facts could not dispose of one or more of the names that have been based upon these birds. One or two interesting points have been discovered, and a long series of comedies of errors have been unearthed.

One of the most important steps in understanding the variations in this genus was Chapman's evidence for the hybrid origin of R. chrysonotus Lafr., the parents being flammigerus and icteronotus. One at least of the intermediates in the collection of the American Museum of Natural History agrees exactly with the description of R. inexpectatus Rothschild, and this so-called species is undoubtedly such a bird, and never came from Panama at all. Berlepsch (Fifth Int. Ornith. Congress, 1910, p. 1061) has already reduced R. chrysopterus Boucard to the synonymy of R. chrysonotus. In this case also Panama, as the country of origin, is not definite, and I do not believe that R. chrysonotus should be accredited to Panama on this evidence. Now that Chapman has shown where this bird comes from and its probable origin, the chances of its occurring in Panama are exceedingly remote.

A second item of interest was Zimmer's demonstration that R. luciani Lafresnave was the same as R. melanogaster (Swainson). and that consequently it could not have come from Cartagena, Colombia (cf. Proc. Biol. Soc. Wash., 1929, p. 97). Bangs and I have also compared the type of *luciani* with Peruvian material and we agree absolutely with Zimmer. This still leaves a point to be cleared up, however. If we examine the literature of R. luciani all references to this species as a bird of Colombia go back to Lafresnaye's type, and all records from Peru are by authors who did not know of R. melanogaster (Swainson). But Lawrence recorded R. luciani from Panama (Lion Hill) on the basis of birds sent him by McLeannan, and Panama records in the literature go back to Lawrence. This is one of the few cases where definite specimens from a definite locality exist. The question naturally arises, if R. luciani is the same as R. melanogaster of Peru, what is the Panama bird called luciani by Lawrence? Thanks to the authorities of the American Museum of Natural History, Lawrence's birds are before me, and I have been able to compare them with the type of R. luciani. They prove to have nothing to do with that species.

A mere glance suffices to show that the adult male specimen is R. uropygialis (considered below); every point in the descriptions and the published critiques tallies perfectly. The bird differs from dimidiatus in being blacker, less red, on the head, throat and back but close examination shows that this difference is due to the feathers being much more extensively black basally than in dimidiatus. The red of the Panama bird is scarlet, not crimson, and orange scarlet on the rump. The minute red tips to the short, stiff feathers allow the dusky bases to show through as a dark veiling. While, therefore, it would be entirely correct to describe this bird as "maroon-headed," this color is an effect, rather than an actual pigment. Similarly the more extensive black bases to the feathers of the abdomen produce a dusky or flammulated appearance wherever the webs are in the least discomposed.

The female of Lawrence's *luciani* is quite different from the female of any other species of *Ramphocelus* but is closest superficially to the females of R. passerini costaricensis and R. flammigerus. The head, back, wings and throat are dusky brownish, the back with lighter edgings to the feathers, which are olivaceous, becoming yellower distally; rump brilliant orange; underparts orange-rufous, redder on chest and under tail-coverts. This somewhat anomalous bird, whatever it may prove to be, shows at least that R. dunstalli Rothschild is a redescription of the same thing. Rothschild's type was a male, which had not lost the orange-rufous underparts of immaturity. It is also obvious that this female is utterly different from the female of R. melanogaster.

If we grant that these Panama birds are R. uropygialis Bonaparte. what is that bird? While proof is, of course, impossible, without comparing the type I am convinced that the bird is a hybrid between R. dimidiatus and icteronotus, the two species which, as I know personally, occur together in the same general region. If the Lawrence's male ("luciani") be put between these supposed parents, it is a perfect combination of the two, the black of icteronotus dominant over the red of dimidiatus, and the crimson of dimidiatus dominant over the yellow of *icteronotus*. Exactly similar conclusions are reached upon comparing the females. The dark reddish brown of dimidiatus crossed with the olive green of icteronotus produces the dusky-brown of uropygialis with the olive wash. The color of the rump is a similar combination, the red being The dull reddish brown of dimidiatus crossed with dominant. the yellowish of *icteronotus* produces the orange-rufous shade on the underparts of *uropygialis*.

This "lost" species (*R. uropygialis* Bonaparte 1851), was said to have come from "Guatemala," and has never been rediscovered. Several good descriptions and critiques of the type exist, as well as a colored plate, the former all written, however, by people who had never been able to make direct comparison with Lawrence's Panama birds or an authentic specimen of *luciani*. In this connection it should be noted that there is a serious discrepancy between the descriptions and the colored plate by Keulemans. The red of the rump and abdomen in the plate is far too dark, and the dusky spots on the rump are apparently imaginary. Curiously enough while Ridgway's description is an accurate copy of European ones, his key character for *uropygialis* is the spotted versus unspotted rump, a character which is not mentioned in Sclater's writings on this bird, with the type before him! It is apparent that uropygialis is a close relative of the *dimidiatus-melanogaster* group, which reaches its northern limit in eastern Chiriqui (Pacific Slope). As Bonaparte and Verreaux were both notoriously inaccurate as regards the localities for their Central American birds, even if I had not the evidence about *R. uropygia-lis* stated above, I should unhesitatingly expunge it from the list of Guatemala birds. Every reasonable probability would render such an origin impossible, knowing what we now do about this genus.

It is highly probable that *R. affinis* Lesson is exactly the same bird, and that the corrected locality, Colombia, is right. There are large areas of Colombia where *dimidiatus* and *icteronotus* occur together, and where a hybrid specimen might be found.

Only one more supposed species remains to be considered and that is R. festae Salvadori, from Chiriqui. This bird, a male, is R. passerinii with a band of dull red across the breast, the sides tinged with red, and with scarlet anal feathers. It was reported to be "much smaller" than passerinii, but this proves to be entirely erroneous. The measurements of the type show that it is exactly the same size and I cannot imagine how this impression arose. I have no hesitation in declaring festae to be an abnormal erythrism of R. passerinii, a well known phenomenon in other groups of red tanagers.

The following summary is suggested:-

Ramphocelus chrysonotus Lafresnaye = R. flammigerus \times icteronotus, cf. Chapman.

Ramphocelus chrysopterus Boucard, 1891 (Panama in error) = R. chrysonotus, i. e. $R. flammigerus \times icteronotus$.

- Ramphocelus inexpectatus Rothschild, 1897 (Panama in error) = $R. chrysopterus \times icteronotus.$
- Ramphoceilus luciani Lafresnaye, 1838 (Colombia in error) = R. melanogaster (Swainson) of Peru.
- Ramphocelus festae Salvadori, 1896 (Chiriqui) = R. passerinii costaricensus Cherrie of Chiriqui and southwestern Costa Rica.
- Ramphocelus affinis Lesson, 1840 (Mexico in error; changed to Colombia later, probably correctly) = $R.dimidiatus \times icteronotus$.

Ramphocelus uropygialis Bonaparte, 1851 (Guatemala in error; probably Panama or Colombia.) = R. dimidiatus \times icteronotus. Ramphocelus dunstalli Rothschild, 1895 (Panama, probably correctly) = R. dimidiatus \times icteronotus.

"Ramphocelus luciani" Lawrence, 1861 (nec Lafresnaye) (Lion Hill, Canal Zone) = R. dimidiatus \times icteronotus.

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