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Notes on the habits and taxonomy of *Rhodospingus cruentus*

by Raymond A. Paynter, Jr.

Received 17th March, 1971

Monotypic *Rhodospingus cruentus* is endemic to the arid equatorial region of western Ecuador and of extreme northwestern Peru. Within this restricted area it exhibits seasonal movements, appearing in abundance in the coastal lowlands during the rainy season from January to June, when it breeds, and apparently retreating to slightly higher elevations during the dry season, although not entirely deserting either region at any time (Marchant 1958; 1959).

I observed the species on several occasions, from 11th to 13th October 1965, while 5 km south of Sabiango, Loja, Ecuador, at an altitude of 650 m. It was found either singly or in loose flocks of up to 10 individuals, usually feeding in the foliage of acacias but sometimes in tall grass in company with flocks of *Volatinia jacarina*. Of the seven specimens collected three were males, two females, and two of indeterminate sex. The males were in immature plumage; just one adult male was seen in the three days of observations. The males weighed 11.0, 11.2, and 11.5 g; the females 11.9 and 13.3 g. The only call heard was a soft "zip".

One specimen was preserved in fluid. Its stomach and well-developed crop contained ovate, flattened caryopsis seeds ($2.5 \times 1.0 \times 0.7$ mm) of an unidentified grass (Gramineae). The seeds in the crop had been ingested uncrushed. No grit was present anywhere in the alimentary tract and it is assumed that the fragmentation of the seeds which was noted in the ventriculus had occurred without the aid of abrasive material. Goodfellow (1901: 474) tentatively identified grass seeds in a specimen collected in October, but Marchant (1959; 1960) reported that the bird feeds on insects. Presumably Marchant's observations were made during the rainy season when he was studying reproduction. It is probable that the species, existing as it does in an area of seasonal extremes in rainfall, is capable of utilizing a wide variety of food. Its tongue (Fig. 1), which is slender and pointed, grooved in the centre, rolled on the edges at the apex, and equipped with a bifurcated frayed tip, suggests that the species may also be capable of feeding on nectar and possibly pollen.

The systematic position of *Rhodospingus cruentus* within the hierarchy of the nine-primaried oscines is uncertain. The species was named *Tiaris cruentus* by

Lesson (1844) and thus placed with the New World buntings and finches within the family Fringillidae. Although always associated with the emberizine finches, it obviously has been thought to be an odd emberizine, as evidenced by several generic shifts. It first was moved from *Tiaris* to *Lophospingus* by Bonaparte (1850), next to *Coryphospingus* by Sclater (1860), and finally put in the monotypic genus *Rhodospingus* which was erected by Sharpe (1888). However, no one seems to have questioned the species' familial (or subfamilial) affinities prior to my recent suggestion (Paynter 1970) that it might be a tanager (Thraupinae). That is probably because the bill of *R. cruentus* has an angulate commissure and this has usually been considered a fairly definitive "fringillid" character (e.g., Ridgway 1901). I am wary of using the bill as a diagnostic character at *any* taxonomic level. A sharply angulate bill appears to me to be mechanically more efficient in crushing hard foods than is a straight bill. This condition is, therefore, merely indicative of the food eaten rather than of ancestry. Although, admittedly, there are no clear-cut criteria for differentiating the various oscine families and subfamilies (see Storer 1969; Paynter & Storer 1970), I believe that *R. cruentus* more nearly resembles the birds currently treated as tanagers than those which are placed within the subfamily Emberizinae.

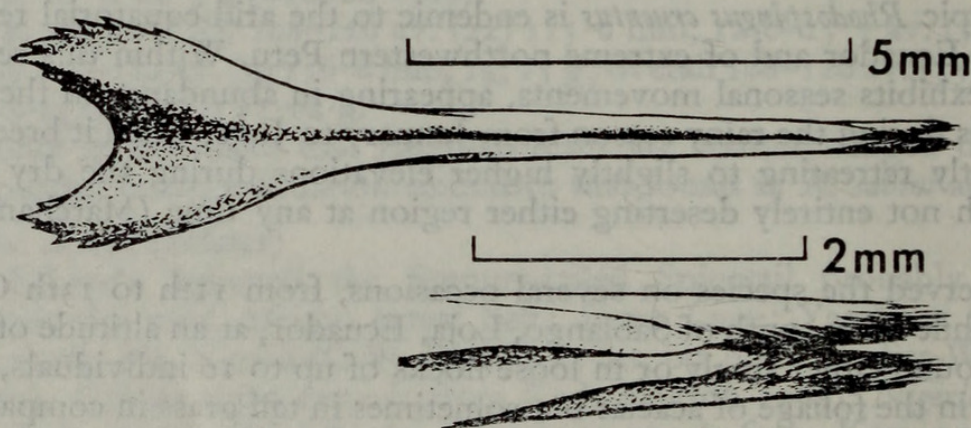


Figure 1. Tongue of *Rhodospingus cruentus*

Rhodospingus cruentus is sexually dimorphic in adult plumage. The female is brownish olive above, with a blackish olive tail and wings; below it is buffy on the throat and chest, turning more yellow on the abdomen. Similarly coloured birds are to be found throughout the oscine families. The adult male, on the other hand, is quite distinctive. It is black dorsally with an elongated, silky, partially concealed, vermilion crest, has a white patch at the base of the remiges, and has white axillaries; ventrally it is vermilion, shading to yellowish red on the lower abdomen.

Of the 275 species presently included within the Emberizinae, only seven other species have any red in their plumage. Two of these species, which constitute the genus *Coryphospingus*, have crown patches in the males which are quite similar structurally to that of the male of *Rhodospingus cruentus*. *Coryphospingus* may be closely related to *Rhodospingus*. I suspect it is, but I do not know. The remaining five species with red in their plumage are members of the genus *Paroaria*, but this genus is definitely remote from *Rhodospingus* and very possibly should not be treated as a member of the Emberizinae at all (see Paynter 1970: 212).

The type of crest found in *Rhodospingus* and the two species of *Coryphospingus* is found nowhere else within the Emberizinae. In fact, crests of any

sort are rare in this large subfamily, occurring elsewhere (as elongated broad crown feathers rather than as partially concealed patches of silky feathers) only in *Lophospingus* (two species), *Charitospiza* (monotypic), and *Emberiza* (*E. variabilis*), as well as in the doubtfully emberizine genera *Paroaria* and *Melophus*.

On the other hand, within the Thraupinae red is a fairly common colour and crests similar to that of *Rhodospingus* are found in *Habia*, *Iridosornis*, *Tachyphonus*, and *Trichothraupis*. The genus *Tachyphonus*, a group of eight species in which the males are mainly black, though lacking forms with large areas of red, has five species with crown patches very similar to that in *Rhodospingus*. In addition, white axillaries as well as white bases to the remiges are found in seven of the eight species. The enumeration of similarities between the genera cannot be pushed much further. All species of *Tachyphonus* have tails which are proportionally longer than that of *Rhodospingus* and white or red lesser wing coverts and coloured rumps also occur several times, all of which lessen the similarity between the genera. In monotypic *Trichothraupis*, a taxon which could easily be considered congeneric with *Tachyphonus*, both sexes are brown and are not strikingly dimorphic, but the crown patch, white-based remiges, and white under-wing coverts are all found and, also as in *Rhodospingus*, the lesser wing coverts do not contrast with the rest of the wing. I am not prepared to claim a close relationship between *Rhodospingus* and *Tachyphonus* or *Trichothraupis*, although it is easy to hypothesize that *Rhodospingus cruentus* could have evolved from a population of either *Tachyphonus* or *Trichothraupis*, both of which are wet region genera, that became isolated to the west of the Andes. I do, however, wish to stress that *Rhodospingus* seems to fit more with the ill-defined group we treat as the Thraupinae than with the equally ill-defined subfamily Emberizinae.

Field work was aided by Grant GB-4210 from the National Science Foundation.

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Notes from coastal Eritrea on selected species

by Jeffery Boswall

Received 22nd March, 1971

The following records were obtained during a visit to Eritrea, Ethiopia, from 22nd May to 15th June 1970. During this period, I was either in Massawa or among the islands of the Dahlak Archipelago.



Paynter, Raymond A. 1971. "NOTES ON THE HABITS AND TAXONOMY OF RHODOSPINGUS-CRUENTUS." *Bulletin of the British Ornithologists' Club* 91, 79–81.

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