

PROCEEDINGS  
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BIOLOGICAL SOCIETY OF WASHINGTON

GEOGRAPHIC VARIATION AND PLUMAGE  
SEQUENCE OF THE TANAGER *HEMITHRAUPIS*  
*FLAVICOLLIS* IN THE GUIANAS AND  
ADJACENT BRAZIL

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A request by Humphrey for the assistance of Parkes in determining the subspecific identification of a Surinam specimen of the tanager *Hemithraupis flavicollis* proved to be impossible to fulfill without additional revisionary study. In turn, geographic variation could not be studied properly until we had come to some understanding of the sequence of plumages in this species. Accordingly, pertinent specimens were borrowed through the courtesy of the authorities of the Chicago Natural History Museum and American Museum of Natural History to supplement those available in our own institutions. We are especially obliged to Emmet R. Blake for information and advice as well as for specimens loaned to us. Terminology for plumages and molts is that of Humphrey and Parkes (1959).

PLUMAGE SEQUENCE

In males of this species, four age classes are apparently separable. The juvenal plumage is greenish yellow, with the typically fluffy feather texture of juvenile passerines. This is succeeded by a second yellow plumage, brighter in color, acquired by a body molt, the juvenal wing and tail feathers being retained. The juvenal wing is easily recognizable, as it lacks a white speculum but has broad yellow wing-bars and edgings. This second yellow plumage is lost at the first *complete* molt. Stages of this molt are illustrated by two specimens before us: CM 83293, Obidos, Brazil, 18 January, is just beginning to acquire the yellow rump and has begun wing and tail molt, while CNHM 260731, Kaysergebergte Airstrip, Surinam, 19 December, has completed the wing molt except for the two outermost primaries (which are still sheathed), has completed the tail molt, and has the body molt completed or under way in most tracts. The

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plumage acquired at this molt resembles the definitive plumage of the male, but is browner or greener (less blackish) above, and has broader yellow edgings to the wing and tail feathers. This difference is illustrated by CM 61913, 4 June, and CM 62526, 17 July, both from French Guiana. The dorsal coloration in this "subdefinitive" plumage varies with the degree of blackness of the definitive plumage. In the Carnegie Museum material of the deep, velvety black race *centralis*, the one younger male, CM 91974, is just noticeably duller black dorsally than the two definitive males, but can be immediately identified by the yellow-edged upper wing coverts. In a duller-backed population like that of the lower Amazon, this "subdefinitive" stage is decidedly brownish above, as illustrated by two AMNH specimens from Faro. Birds of this age also tend to be yellower below than definitive males, this again varying with the general "yellowness" of the population as manifested in both sexes. The oldest available Surinam bird is a YPM specimen (Kaysergebergte Airstrip, 3 December), which has almost completed the second (i.e., first complete) molt, but still has some juvenal rectrices. This male is exceptionally yellow below and, judging from the comparisons of other available plumages, belongs to a rather yellowish population.

Since there is no evidence among any specimens we have examined that there is any alternate plumage in the cycle of adult birds, the four successive plumages of males described above may be called juvenal, first basic, second basic, and definitive basic. Plumage sequence in females has not been studied.

#### GEOGRAPHIC VARIATION

Blake (1961: 182) was the first to record specimens of this species with accurate data from Surinam. He reported two males from the Kaysergebergte Airstrip (spelled "Kaisersberg" by Blake). A third male from this same locality was reported by Humphrey and Freund (1962: 10). There is a fourth Surinam specimen in the Chicago Natural History Museum, a male from the Paloemeu Airstrip (for Surinam localities, see map in Humphrey and Freund, *op. cit.*: 3). Both Blake and Humphrey and Freund listed their specimens as *Hemithraupis f. flavicollis*, a race for which the type locality is Cayenne.

The three specimens from the Kaysergebergte Airstrip, all males, suggest the presence here in southwestern Surinam of a very yellowish race, which apparently extends southwest in the Acary Mountains at least to "Boundary Camp," British Guiana (see map in Blake, 1950: frontispiece). The one female examined (CNHM 120484, "Boundary Camp") resembles females of the undescribed lower Amazon population in having the upper tail coverts and adjacent rump area brighter than the back, but has yellows which are richer (more chrome yellow, less greenish), especially on the under tail coverts. This population almost certainly constitutes a valid subspecies, but formal naming should await the availability of males in definitive plumage.

Specimens from lowland British Guiana and the one male from the

Paloemeu Airstrip, Tapanahoni River, Surinam, differ so little in color from a good series from French Guiana and, as shown by Blake (1950: 469), differ so slightly in size, that they are best placed with *flavicollis*. It might be considered surprising, as Blake has pointed out to us (*in litt.*), that birds from Paloemeu Airstrip differ from those of Kaysergebergte, only some 80 miles away. However, there is a major drainage divide between these two localities which influences the respective taxonomic affinities of the two populations of *Hemithraupis flavicollis*, Kaysergebergte toward the west and Paloemeu toward the east.

Males of this population from lowland British Guiana differ from French Guiana specimens in color only in having a slight tendency toward the scaly blackish marks below the yellow throat patch typical of several races of this species; this could be interpreted as the beginning of intergradation toward *auricularis*, the next race to the west, which possesses these marks. We have nothing to add to Blake's pertinent remarks (1950: 468-469), which should be consulted, about the validity of the supposed race *hellmayri* from western British Guiana.

Pinto (1944: 534) did not list this species from the lower Amazon region of Brazil, but mentioned in a footnote that the nominate race of the Guianas probably extended into adjacent extreme northern Brazil. He overlooked the record of Griscom and Greenway (1941: 331), who listed the Carnegie Museum specimens from Obidos. The latter authors made no taxonomic comments, nor did they mention that this was the first report of the (supposed) nominate race from Brazil. Zimmer (1947: 16) listed without comment two males from Faro, just upstream from Obidos, in the American Museum of Natural History. However, as shown by his list of specimens examined, he had only one male of true *flavicollis*, a trade skin from "Cayenne," for comparison.

The population of the lower Amazon proves to constitute another recognizable race, and of these enough material is available to permit formal separation, as follows:

***Hemithraupis flavicollis obidensis*, new subspecies**

*Type:* Carnegie Museum No. 83807, adult ♂, Obidos, Pará, Brazil, collected 23 February 1921, by S. M. Klages (original No. 26904).

*Characters:* Males in definitive basic plumage differ from *flavicollis* of French Guiana in being duller, more brownish black above, and in having the yellow of throat, rump, and under tail coverts less intense. The difference in dorsal coloration is even greater in males in the second basic ("subdefinitive") plumage, in which Cayenne males are brownish black, Amazonian males dark brownish olive. Amazonian males in the latter plumage also have more of a pale yellow wash over the white portions of the underparts than do corresponding Cayenne males. Males in the first basic plumage and females are paler and more greenish above and below, with the upper tail coverts and lower rump more contrasting with the back.

*Range:* North bank of the lower Amazon in Brazil; known from Obidos

and Faro in Pará. A single young male from the Rio Manacapurú, Amazonas (Carnegie Museum) also appears to belong here.

*Remarks:* There is some noticeable variation in nominate *flavicollis* even within French Guiana, with the characters best developed in the eastern part of that country (Pied Saut, Oyapock River), where both sexes are darkest in dorsal coloration. Separation of *obidensis* does not delete nominate *flavicollis* from the list of Brazilian birds, as the Carnegie Museum has one male (in 2nd basic plumage) from "Upper Arucaú," in northernmost Pará near the French Guiana frontier (on this locality see Todd, 1942: 369).

#### SPECIMENS EXAMINED

*H. f. flavicollis:* FRENCH GUIANA: Pied Saut, Oyapock River, 14; Tamanoir, Mana River, 8. BRAZIL: "Upper Arucaú," Pará, 1. SURINAM: Paloemeu Airstrip, Tapanahoni River, 1. BRITISH GUIANA: Rockstone, 1; Potaro Landing, 4; Tumatumari, Potaro River, 1; Caramang River, 2.

*H. f. obidensis:* BRAZIL: Obidos, Pará, 10; Faro, Rio "Jamunda" (= Nhamundã), Pará, 2; Rio Manacapurú, Amazonas, 1.

*H. f. subsp.:* SURINAM: Kaysergebergte Airstrip, 3. BRITISH GUIANA: "Boundary Camp," Acary Mountains, 2.

#### LITERATURE CITED

- BLAKE, EMMET R. 1950. Birds of the Acary Mountains, Southern British Guiana. *Fieldiana: Zoology*, 32: 415-474.
- . 1961. New bird records from Surinam. *Ardea*, 49: 178-183.
- GRISCOM, LUDLOW AND JAMES C. GREENWAY, JR. 1941. Birds of lower Amazonia. *Bull. Mus. Comp. Zoöl.*, 88: 81-344.
- HUMPHREY, PHILIP S. AND RUDOLF FREUND. 1962. Notes on a collection of birds from Surinam. *Postilla*, No. 60: 11 pp.
- HUMPHREY, PHILIP S. AND KENNETH C. PARKES. 1959. An approach to the study of molts and plumages. *Auk*, 76: 1-31.
- PINTO, O. M. 1944. *Catalogo das aves do Brasil*, part 2. Dept. de Zool., Secretaria da Agric., Indúst. e Comércio, São Paulo. 700 pp.
- TODD, W. E. CLYDE. 1942. List of the hummingbirds in the collection of the Carnegie Museum. *Ann. Carnegie Mus.*, 29: 271-370.
- ZIMMER, JOHN T. 1947. Studies of Peruvian birds. No. 51. The genera *Chlorothraupis*, *Creurgops*, *Eucometis*, *Trichothraupis*, *Nemosia*, *Hemithraupis*, and *Thlypopsis*, with additional notes on *Piranga*. *Am. Mus. Novitates*, No. 1345: 23 pp.



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