



## TWO NEW SUBSPECIES OF BIRDS FROM GUATEMALA

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Ornithological studies were carried out on the Pacific lowlands of Guatemala during the period 1967–1977 in the course of research on the ecology of mosquito-transmitted encephalitis viruses. Two major manuscripts: "Type Localities of Birds Described from Guatemala" and "Birds of the Pacific Lowlands of Guatemala" are, at the time of this writing, *in press* (Dickerman, 1986 and 1987). See the latter for descriptions of study areas, full acknowledgments for support of research, and for the loan of materials used in the preparation of the two preliminary descriptions presented herein.

### *Melanerpes aurifrons* (Wagler) GOLDEN-FRONTED WOODPECKER

Specimens of *M. aurifrons* taken on the Pacific lowlands and from the Río Motagua drainage in the time of research on arboviruses were compared with the large series obtained by A. W. Anthony and Austin Paul Smith and studied by Ludlow Griscom (1932). It was immediately obvious that the series from the Pacific lowlands differed from specimens collected in the upper valleys of the Río Negro and the Río Motagua, and that one of the populations represented an hitherto undescribed subspecies.

However, it was necessary first to determine the extent and significance of size variation within Guatemalan populations that are currently assigned the name *santacruzii*. Specimens from the "Pacific slope" (undefined) were reported as smaller than birds from the "highlands" (also undefined) by Dearborn (1907), Griscom (1932), and Tashian (1953). Dearborn and Tashian noted that specimens from the Río Motagua valley were the largest of all. I was able to locate 26 measurable males collected below 4,000 ft elevation and 14 taken from above that height (this altitude being arbitrarily selected to separate "Pacific slope" from "highlands"). The wing chords of the series from the lower elevations averaged 2.3 mm shorter than the average for birds from the highlands (Table 1). The average difference was even smaller when 3,000 ft elevation was used as the division. Seven males from El Salvador, all procured below 4,000 ft elevation averaged 1.9 mm larger than the series from the lowlands of Guatemala. Thus size variation is only poorly, if at all, correlated with altitude.

In contrast, specimens from the upper valleys of the Ríos Negro and Motagua are dramatically larger, while in the lower Río Motagua valley the birds are smaller (Fig. 1, Table 1).

Within Guatemala, 4 subspecies of *Melanerpes aurifrons* may be recognized as follows:

#### *Melanerpes aurifrons dubius* (Cabot)

*Picus dubius* Cabot. Proc. Boston Soc. Nat. Hist., 1:164, 1849, Uxmal, Yucatán.

*Diagnosis:* *M. a. dubius* is distinguished from all other mainland populations by having a red belly.

*Range:* Department of Petén, intergrading with *santacruzi* in the lowlands of northern and eastern Department of Alta Verapaz, and with *pauper* in the lower Río Motagua drainage.

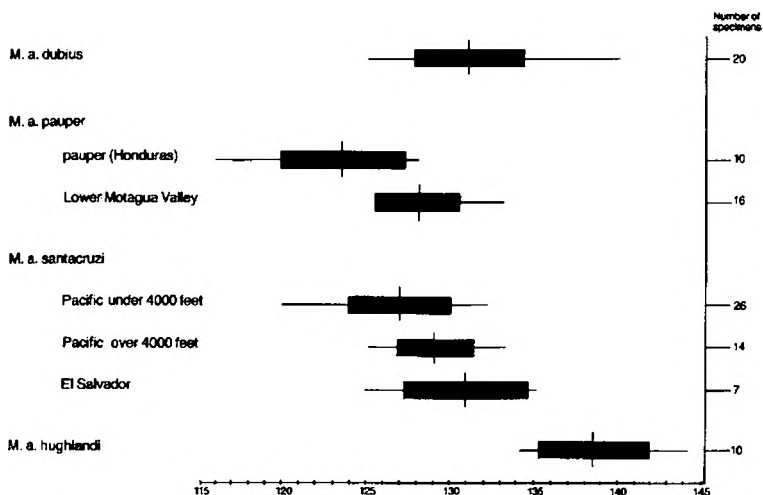


Fig. 1. Statistical analysis of wing chord measurements for adult male specimens of *Melanerpes aurifrons* from Guatemala and El Salvador. For each population the range, sample mean (vertical line), and one standard deviation on either side of the mean (solid black bar), and number of specimens examined are presented.

### *Melanerpes aurifrons pauper* (Ridgway)

*Centurus aurifrons pauper* Ridgway. Proc. U.S. Nat. Mus., 10:258, 1888, Truxillo, Honduras.

*Diagnosis:* Similar to *dubius* and *santacruzi*, but white bars of dorsum narrower in relation to the black bars (Fig. 2); lower belly and under tail coverts reddish-orange or yellow-orange, not red. *M. a. pauper* from Honduras is distinctly smaller than *dubius*, averaging smaller than *santacruzi*, and definitely smaller than birds from the upper Río Motagua valley.

*Range:* Found in the lower Río Motagua valley southwest to Gualán where they are intermediate towards the upper valley subspecies newly described below.

*Discussion:* Specimens from the lower Río Motagua valley are closest to *pauper* in color and pattern, but average larger than birds from Honduras, and thus are somewhat intermediate towards *dubius*. Selander and Giller (1963) believed *pauper* was not recognizable, but they only used small and in some cases heterogeneous series. Short (1982) followed Monroe (1968) and recognized the distinctness of *pauper*.

TABLE 1

Wing chord measurements (in millimeters) of Golden-fronted Woodpeckers (with means and standard deviations).

SUBSPECIES	MALES	FEMALES
<i>Melanerpes aurifrons dubius</i>	125-140 130.9 (3.4) n = 20	122-132 126.9 (3.4) n = 20
<i>Melanerpes aurifrons pauper</i>	116-128 123.4 (3.7) n = 18	108-130 119.3 (5.2) n = 19
Lower Motagua Valley	126-133 128.0 (2.4) n = 10	122-128 124.5 n = 4
<i>Melanerpes aurifrons santacruzi</i>		
Pacific slope <4,000 ft	120-132 126.9 (3.0) n = 26	
>4,000 ft	125-133 129.0 (2.2) n = 14	122-133 125.9 (3.1) n = 16
El Salvador	125-136 130.9 (3.6) n = 7	125-134 128.2 (3.8) n = 5
<i>Melanerpes aurifrons hughlandi</i>	134-144 138.5 (3.2) n = 10	128-144 136.0 (2.4) n = 20

*Melanerpes aurifrons santacruzi* (Bonaparte)

*Centurus Santa Cruzii* Bonaparte. Proc. Zool. Soc. London, pt. 5, p. 116, 1837 (=1838). "Guatemala." San José, Department of Escuintla, Guatemala (designated below).

*Diagnosis:* Similar to *dubius*, but belly yellow to yellow-orange. In fresh plumage with yellowish wash on dorsum.

*Range:* Western, central, and southern Guatemala; intergrading with *dubius* in the lowlands of the Department of Alta Verapaz, probably in the western part of the Department of Petén; and with the following subspecies, 1 mi N of Usumatán in the foothills of the Sierra de las Minas.

*Discussion:* *Centurus Santa Cruzii* Bonaparte (1837) was named at the request of the collector, Colonel Velasquez de León, in honor of a former "scientific professor" in México. Colonel Velasquez was in Guatemala on a "fortnight's scientific tour" and undoubtedly obtained all of his specimens between the Port of Ystapa (=Ixtapa) and Antigua or Guatemala City (see Dickerman, 1981 and 1986). Griscom (1932, p. 226) erroneously restricted the type locality to Santa Cruz, Department of El Quiché, from which no specimens are available even

today! I recommend that San José, Department of Escuintla, Guatemala, be recognized as the type locality of *Centurus Santa Cruzi* Bonaparte (= *Melanerpes aurifrons santacruzii*).

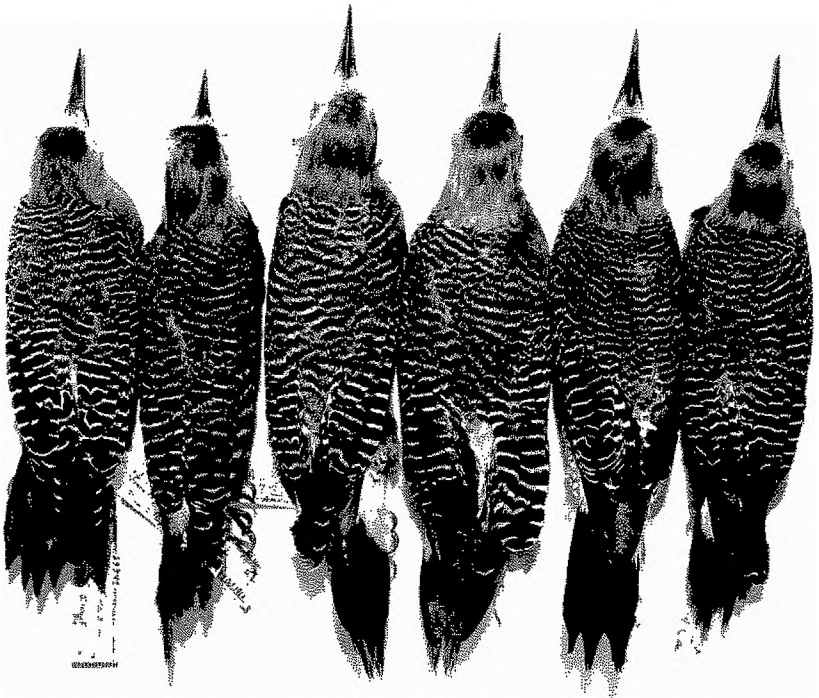


Fig. 2. American Museum of Natural History specimens of adult males of the Golden-fronted Woodpecker, *Melanerpes aurifrons*, from left to right: *M. a. santacruzii*, San José, Guatemala, 399138 and 399139 (topotypes); *M. a. hughlandi*, Sacapulas, Guatemala, 406694 (holotype) and 406695 (paratype); and *M. a. pauper*, Puebla, Guatemala, 394561, and 1 mi W of Jaral, Honduras, 811594.

***Melanerpes aurifrons hughlandi*, subsp. nov.**

*Holotype*: Adult male, AMNH 406694, Sacapulas, Department of El Quiché, Guatemala, collected 4 February 1928, by A. W. Anthony.

*Diagnosis*: White bars of back and flanks wider than in *santacruzii* and *dubius* (Fig. 2); differs from *santacruzii* in lacking a yellow wash on the dorsum. Median area of lower belly yellow to yellow-orange. Larger than other subspecies in Guatemala (Fig. 1, Table 1).

*Range*: Upper Valley of the Río Negro (Sacapulas, El Quiché) and upper Río

Motagua valley (Progreso to Zacapa); intergrades with *santacruzi* at Joyabaj, Department of El Quiché.

*Discussion:* Griscom (1932) mentioned that specimens from Progreso were paler yellow on the belly than other specimens from Guatemala, but 3 of the 4 specimens in the AMNH collection from Progreso were taken in July, and 2 of those are juveniles, accounting in part for the paler coloration. Other specimens from the valley range from pale yellow to yellow-orange. One of 7 females from the type locality has a reddish-orange belly.

*Etymology:* Named in honor of the late Hugh C. Land in recognition of his contributions to our knowledge of the Guatemalan avifauna and for his kind advice that led to our extensive virological research at La Avellana.

#### *Aimophila ruficauda* (Bonaparte) STRIPE-HEADED SPARROW

Eleven specimens of the stripe-headed sparrow were prepared in the course of the arbovirus studies in Guatemala. Three from the Río Motagua Valley represent the pale buffy form, *A. r. connectens* Griscom (1930). When that subspecies was described, specimens were not available from the southern Pacific lowlands. In comparing the specimens from La Avellana with recently taken specimens of *A. r. lawrencii* (Salvin and Godman) from the xeric Pacific lowlands of Chiapas and the nominate form from Costa Rica, it became obvious that the Guatemalan coastal population represented an undescribed subspecies which is not part of a color cline, and which may be known as:

#### *Aimophila ruficauda ibarrorum*, subsp. nov.

*Holotype:* Adult female, AMNH 813904, La Avellana, Department of Santa Rosa, Guatemala, collected 18 August 1971, by Robert W. Dickerman; original number VBP (=Virus Bird Project) 8942.

*Diagnosis:* Most similar to *A. r. ruficauda*, but chestnut areas of tail, rump, shoulder, and edges of tertials darker. Edges to unworn interscapulars and nape grayer as in *lawrencii* (although darker), less brown than in *ruficauda* and *connectens*. The crown stripes are blacker as in *ruficauda* and the flanks are deeper, more cinnamon-rufous than in other forms. Generally darker and richer in color than *lawrencii* and *connectens*.

*Range:* Arid lowlands and interior of Guatemala and adjacent El Salvador.

*Etymology:* Named in honor of Jorge Ibarra for his efforts in the conservation of Guatemalan wildlife, and for "Don" Vicente Ibarra and his family at La Avellana, who were my valued mentors and indispensable aides in the field.

*Remarks:* Wetmore (1941, p. 580) suggested that 2 specimens collected 8 December 1937 at Los Chilamates, Department of Jutiapa, might represent an undescribed form. Later (*in* Tashian 1953, p. 209), Wetmore identified the specimen taken by Tashian at Lake Atescatempa, and the 2 specimens he himself had provisionally referred to *connectens* in 1941, as nominate *ruficauda*, noting minor differences in the black of the back. My own examination of the 2 specimens in question revealed that the adult male (USNM 352744) from Los Chilamates is typical of *ibarrorum*. The second specimen (USNM 352745) is a first year female, and is darker than a female (USNM 361769) in comparable plumage from Liberia,

Costa Rica. An adult male (Carnegie Museum 135,354) in fresh plumage, from Sabana Grande, Honduras, is richer in color than *ruficauda* from Costa Rica, and is intermediate towards *ibarorum*.

Immatures of all subspecies of *Aimophila ruficauda* have less well-developed breast bands; and they are buffier, especially on the posterior part of the crown stripe and hind neck than adults, and must be compared *inter se*.

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