SOME NOTES ON PANAMÁ BIRDS COLLECTED BY J. H. BATTY

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Among the birds acquired by the American Museum of Natural History from the Rothschild Museum was a large collection made by J. H. Batty in 1901 and 1902 in western Panamá. Batty's collection has never been reported upon, except for description of a few endemic forms from the somewhat isolated and mountainous Coiba Island. Further examination of Batty's specimens reveals data of distributional and taxonomic interest.

MOUNTAIN BIRDS IN THE LOWLANDS

In January and February, 1902, Batty visited the small, low islands off the Pacific coast of Chiriquí and Veraguas provinces, which have been worked by no one else. In addition to the usual lowland species, Batty collected a surprising variety of what have generally been regarded as exclusively mountain birds (Griscom, 1935). Since January and February are dry season months, the possibility of a seasonal altitudinal movement is suggested. While there is little temperature variation in Panamá, the prevailing northeast trade winds at this season have a marked desiccating effect on vegetation, particularly on the southwestern slopes. Migration, in the sense of a periodic shifting of entire populations, is not probable, but a descent from the mountains of many individuals may occur.

Little is known about altitudinal movements of neotropical birds. In nearby Costa Rica, Carriker (1910: 326) found that some mountain species periodically appeared at the lower levels when certain fruit ripened. In Colombia, Chapman "obtained no evidence of altitudinal migration" (1917: 88); but, more recently, de Schauensee (1948: 264) reported a few species which, occasionally at least, occur outside their altitudinal zone. Other western Panamá collectors, working chiefly inland, have taken a few such specimens, but nothing resembling the variety collected by Batty. Perhaps some of these forms have a more extensive altitudinal range than has been supposed; perhaps these coastal islands act as a trap for wanderers that can go no farther.

Of the islands mentioned below, Brava, Burica, Parida, Sevilla and Insoleta are off the coast of Chiriquí, the last near the Veraguas border. Cebaco, Gobernador, Afuera and Jicaron islands are off the coast of Veraguas. All are near the mainland (some less than a mile away), except Jicaron Island about 35 miles distant, between which

and the coast there is interposed the large Coiba Island. None of these islands is separated from the mainland by any continuous water gap exceeding five miles; the mountains are from 30 to 80 miles away.

The birds listed were all collected in 1902 by Batty, unless otherwise stated. A few records by others of mountain birds in the lowlands of western Panamá are also given.

Buteo jamaicensis costaricensis.—Parida I., Jan. 18; Brava I., Jan. 28; both immature. Peters (1931: 310) mentions an immature taken on the Caribbean slope at Changuinola, Bocas del Toro, Dec. 9, 1928.

Leucopternis p. princeps.—Cebaco I., Feb. 6.

Eupherusa eximia egregia.—Bogava, Chiriquí, Oct. 7, 1905 (H. J. Watson, in Amer. Mus. Nat. Hist.).

Elvira chionura.—Gobernador I., Jan. 11, 12, 13; Cebaco I., Feb. 7.

Lampornis c. castaneoventris.—Cebaco I., Feb. 1, adult male.

Selasphorus scintilla.—Cebaco I., Feb. 1; Gobernador I., Jan. 12, 13.

Trogon collaris puella.—Gobernador I., Jan. 12.

Trogon a. aurantiiventris.—Brava I., Jan. 26; Sevilla I., Jan. 28; Insoleta I., Jan. 2; Gobernador I., Jan. 13. (Specimens from the last two islands may possibly be flavidior.)

Momotus momota lessonii.—Sevilla I., Jan. 21, 23; Brava I. (4 spec.), Jan. 27; Afuera I., Jan. 10; Gobernador I. (3 spec.), Jan. 12; Cebaco I., Feb. 7. As there are numerous other examples taken in the lowlands of Chiriquí and Veraguas from at least September through March, Aldrich (1937: 77) may be correct in his suggestion that this is not exclusively a mountain form.

Aulacorhynchus caeruleogularis maxillaris.—Brava I., Jan. 28, 29, 30.

Aulacorhynchus c. caeruleogularis.—Cebaco I. (5 spec.), Feb. 4, 5, 6.

Piculus rubiginosus uropygialis.—Sevilla I., Jan. 24; Afuera I., Jan. 10.

Balanosphyra formicivora striatipictus.—Sevilla I., Jan. 22, 28; Burica I., Feb. 4.

Procnias tricarunculata.—Gobernador I., Jan. 12; Cebaco I. (9 spec.), Feb. 1-7. There are many other lowland records—in Chiriquí: Divala, Oct.—Dec. 1900 (34 spec.; Bangs, 1901: 365); on the Caribbean coast of Bocas del Toro at Changuinola, Aug. 13, 1927, and Almirante, March 2, 1926, Dec. 17, 18, 1928 (Kennard and Peters, 1928: 458; and Peters, 1931: 329). Carriker (1910: 326) has remarked on the altitudinal movement of this species in Costa Rica.

Myadestes melanops.—Cebaco I., Feb. 6.

Turdus assimilis cnephosus.—Cebaco I., Feb. 4.

Catharus aurantirostris griseiceps.—Cebaco I., Feb. 5; Afuera I., Jan. 10.

Vireo leucophrys chiriquensis.—Sevilla I., Jan. 20.

Vermivora gutturalis.—Brava I. (3 spec.), Jan. 27, 30; Cebaco I., Feb. 7; (not otherwise known south or east of the Chiriquí mountains).

Parula pitiayumi inornata.—Brava I., Jan. 28.

Myioborus miniatus aurantiacus.—Brava I., Jan. 27, 28, 30; Cebaco I., Feb. 2, 3, 5; Boqueron, Chiriquí, Dec. 2, 1901.

Basileuterus melanogenys eximius.—Cebaco I., Feb. 2 (male, definitely not bensoni of the mountains of eastern Veraguas, but rather the Chiriquí mountain form).

Tangara icterocephala.—Cebaco I., Feb. 6.

Piranga leucoptera latifasciata.—Jicaron I., Jan. 14.

Piranga bidentata citrea.—Brava I. (6 spec.), Jan. 27, 28; Jicaron I., Jan. 15.

Buarremon b. brunneinuchus.—Sevilla I., Jan. 12, 21, 24; Bogava, Chiriquí, Nov. 7, 1907 (H. J. Watson in Amer. Mus. Nat. Hist.).

Another possible wanderer from the mainland is an example of *Cyclarhis gujanensis subflavescens* taken by Batty on Jicaron Island on January 14. This specimen is very different from *C. g. coibae* of nearby Coiba Island, but seems inseparable from Chiriquí highland birds.

A New Race of Turdus assimilis:

Turdus assimilis coibensis new subspecies

Type: Adult female, Amer. Mus. Nat. Hist. no. 503415 (ex Rothschild Mus.); Coiba Island, Veraguas, Panamá; April 20, 1901; J. H. Batty, collector.

DIAGNOSIS: Closest to daguae Berlepsch of tropical western Colombia, northwestern Ecuador and Darien, but bill longer, underparts more buffy (less grayish), the color extending over entire abdomen; under tail-coverts with broad fuscous margins, instead of being largely or immaculately white. Differs from cnephosus (Bangs) of the mountains of western Panamá and southwestern Costa Rica in blackish bill, much ruddier color above and below, broad fuscous margins to the under tail-coverts, and smaller size.

MEASUREMENTS: Type: wing (flat) 109 mm.; tail, 77; bill (chord of culmen) 21.5. Male (Amer. Mus. Nat. Hist. no. 503414, Coiba I., April 17, 1901, coll. Batty): wing, 110; tail, 83; bill injured (chord of gonys, 13.5).

RANGE: Coiba Island, Veraguas, Panamá.

MATERIAL EXAMINED: T. a. cnephosus: PANAMÁ, 2 males, 5 females (Chiriquí and Veraguas); COSTA RICA, 3 males. T. a. daguae: COLOMBIA, 4 males, 3 females; ECUADOR, 3 males, 3 females; PANAMÁ, 9 (Darien; in U. S. Nat. Mus., examined only for color). T. a. coibensis: COIBA ISLAND, 1 male, 1 female.

REMARKS: Although only two specimens are known, the birds are so distinct from *cnephosus*, the geographically nearest ally, and so strongly approach the distant *daguae*, often considered a distinct species, that there can be no doubt we have here another form endemic to Coiba Island. Batty collected a typical specimen of *cnephosus* (Amer. Mus. Nat. Hist. no. 503413) on Cebaco Island, Veraguas, some 30 miles east of Coiba Island and thus nearer to the range of *daguae*; but that specimen, taken on February 4, 1902, is doubtless a visitant from the mainland mountains.

In back color the type of the new form, a female, is slightly less ruddy (more olivaceous) than females of daguae, though the male specimen does not differ appreciably above from males of daguae.

The bill is intermediate between daguae and cnephosus, having the dusky color of the former and the larger size of the latter; cnephosus (Costa Rica and Panamá) bill, 5 males, 17.5–19.5 mm. and 5 females, 18.5–20; daguae (Colombia and Ecuador) bill, 7 males, 15.5–18.5 and 7 females, 16.5–19.5. Though the maxilla of the male is damaged, the mandible (gonys) of this specimen (13.5) and of the type (14) is actually longer than that of any of the measured specimens of cnephosus (12–13) or of daguae (10–12.5 mm.).

The intermediate character of some features of the new form tends to support Hellmayr's opinion (1934: 365) that daguae should be treated as conspecific with *cnephosus* and that both are part of the *T. assimilis* complex (cf. Miller and Griscom, 1925: 16).

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