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CRITICAL NOTES ON CENTRAL AMERICAN BIRDS

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In the course of my work on the Dwight Collection of Guatemala birds several cases have arisen where the proper identification of a certain species involves an extended revision of other Central American forms. By arrangement with the American Museum of Natural History, it publishes preliminary papers by me on novelties in the Dwight Collection itself or revisions based almost exclusively on material belonging in New York City, but I am to publish elsewhere diagnoses of new forms, the types of which are not in the New York institution, as well as revisions of groups, my studies of which were not based primarily on the collections of that Museum. Three such revisions have recently appeared in these Proceedings (Vol. XI, pp. 43-48; pp. 51-56; pp. 67-72). The present paper is of similar scope and content. While the Dwight Collection has always been the original starting point of the study, the material used has been that of the Museum of Comparative Zoölogy. For invaluable re-enforcements I am, however, greatly indebted to the Field Museum of Natural History and the British Museum. Dr. Lowe kindly loaned me essential specimens from the Salvin-Godman Collection, and I am fortunate in being able to make one of them the type of a new subspecies.

Selasphorus platycercus guatemalae subsp. nov.

Type, British Museum (Register, 87.3.22.1071), male adult; Quetzaltenango, Guatemala, August, 1862; O. Salvin, 1728.

Subspecific characters.—Similar to typical *S. platycercus* (Swainson) of Mexico and western North America, but smaller; adult male with cinnamon axillars, and always (often strongly) tinged with cinnamon on sides, flanks and under tail-coverts; *two* pairs of outer tail feathers always with broader cinnamon-rufous edging, and sometimes a third pair with narrow edging; female also smaller, more extensively spotted with dusky bronze on the throat, and tending to have shorter white tips to the outer tail feathers.

Material examined:—

Selasphorus p. platycercus.—Large series from western United States and northern Mexico.

Selasphorus platycercus guatemalae.—Guatemala: Quetzaltenango, Cuipache and San Martin (10,000 ft.), four adult males, three adult females (British Museum); Barillos, one female, above Tecpam, one (sex uncertain) (Dwight Collection).

Thanks to Dr. Lowe's great kindness in forwarding for examination the series of this little hummingbird in the British Museum, taken by Salvin in Guatemala, I am enabled to describe a Guatemalan race, for it would have been quite impossible to base this description on either of the two very poor specimens in the Dwight Collection. The characters of the new form are most pronounced in adult males, and I welcome the opportunity to designate as type one of these specimens in the British Museum. The subspecies is confined to the temperate zone on the higher volcanoes of western Guatemala. Mexican specimens are apparently much nearer northern birds in both size and color.

	MEASUREMENTS	
	Wing	Culmen
Male *platycercus*	48–50 (49)	17–19 (17.6)
Male *guatemalae*	45–46.5 (45.7)	15–16 (15.5)
Female *platycercus*	48–50.5 (49.3)	17–19 (17.6)
Female *guatemalae*	45–47 (46)	15.5–17 (16.3)

Trogon elegans australis subsp. nov.

Type, no. 116,576, M. C. Z., female, adult; Bagaces, northwestern Costa Rica; Nov. 14, 1895, C. F. Underwood.

Subspecific characters.—Similar to typical *Trogon elegans* Gould of central Guatemala, but outer webs of lateral rectrices with more numerous and broader black bars, and female and immature male with the brown of the plumage a warmer, more bistre, shade, not dull grayish brown.

Dearborn re-discovered this Trogon in Guatemala at El Rancho, and, thanks to the authorities of the Field Museum, I have before me the single skin preserved. Two specimens are also available from the Dwight Collection, collected by Anthony at Progreso. These birds constitute a connecting link between *ambiguus* and *elegans*, and show that the series available from further south in Central America constitutes an unnamed form. It is a tribute to Gould's care and skill that the description and plate of *T. elegans* in both editions of his monograph leave no doubt whatever that he had a specimen from Guatemala before him.

While, therefore, as a matter of form, the southern bird is formally described above, this is the one we all know, and it is really the typical form that needs to be described. In the grayish brown of the females and immature birds this is sharply different from *elegans australis* and exactly like *ambiguus*. The single adult male differs from *australis* only in being slightly more freckled, less barred, on the outer webs of the lateral rectrices. Its tail is far more green, less golden, than in either of the other races, but this may be individual variation. While, therefore, there is as yet an absolute difference in the pattern of the tails of adult males of *ambiguus* and *elegans*, no such difference exists in females and young males. It is one of degree only. Numerous specimens of *ambiguus* before me have from three to eight narrow bars on the outer web of the outer rectrix. In typical *elegans* the five to ten bars are slightly wider and less interrupted. In *australis* the bars are noticeably broader, usually eight to eleven in number.

A Review of the Spotted-breasted Wren
(*Pheugopedius maculipectus*)

The rich material of this species in the Dwight Collection beautifully supplements that already existing in the Museum of Comparative Zoölogy. When the two are combined, the type of the species is before me, topotypes of most of the races in series of twenty to fifty, and ample material from every recorded nook of the bird's range. As usual, when material of any variable Central American bird approximates completeness, the amount of racial variation is seen to be much greater than previously discernible or suspected, and this will continue to be the case for years to come with hundreds of species.

Before racial variation can be intelligently discussed as regards this particular wren, other types of variation must first be understood, so that proper allowance for them can be made. First and foremost is the biology of the species as a whole. The spotted-breasted wren departs from the majority rule of Central American birds in being equally at home in dry scrubby woods, open gallery forest, or dense heavy rain forest, and is thus subject to an unusual variety of conditions. It is, however, a strictly lowland tropical type, and, consequently, in parts of its range groups of individuals are effectively isolated from other groups by mountain barriers. One interesting generalization is outstanding in a study of the species. The degree of difference between races inhabiting markedly different climates is much greater than that between races living in similar climates, but isolated from each other.

Seasonal variation is quite considerable. Ample and seasonably comparable material must be available in order to make proper allowance for it. Broadly stated, worn specimens are duller and paler than freshly moulted birds. The paler races are consequently grayer, the more richly colored races less russet, on the upper parts and flanks. There is a great deal of color change due to the age of the specimen, the

browns changing to a peculiar 'rusty,' due to the fading out of the gray and olive tones. This is obviously perceptible in skins collected by Brown in eastern Honduras in 1902, as compared with recent material collected by Peters. The subspecies *umbrinus* Ridgway from 'Guatemala' was founded on old Coban trade-skins. A good series of these is before me. Any one comparing them with fifty recent skins from Vera Paz, collected by Anthony, could not possibly believe them to be the same form if he were unaware of such a thing as *post mortem* color change.

There is marked sex variation in size, but I can detect none in color. Measurements apply to males only, and are in millimeters, the number of specimens of each race measured being exactly the same.

Pheugopedius maculipectus maculipectus (Lafresnaye)

Type locality, 'Mexico'; I designate Vera Cruz.

Range.—Southeastern Mexico, in States of Vera Cruz, Puebla and Oaxaca.

General diagnosis.—The type obviously agrees with a fine series from Vera Cruz and Tehuantepec. The so-called typical form is really an intermediate in both color and size. It is not as gray as the two paler races, but lacks the warm russet or burnt sienna tint of the more southern forms. The black spots below are of medium size, and occupy about as much area as the white ground color. The legs, feet and bill are relatively stout, and the tail relatively broadly barred.

Material.—The type and twenty-one specimens from Vera Cruz and Tehuantepec.

Pheugopedius maculipectus microstictus subsp. nov.

Type, no. 48,696, Mus. Comp. Zoöl., male adult; Santa Leonor, Tamaulipas, Mexico; March 9, 1909, F. B. Armstrong.

Subspecific characters.—Differing from all other races in having much slenderer bill, feet and legs, and a more narrowly barred tail; black spots on under parts much smaller and fewer, the white ground color greatly exceeding in area the black; paler and grayer throughout than *maculipectus*, though not as extreme in this respect as *cano-brunneus;* size as in *maculipectus*.

Range.—Southern Tamaulipas (Alta Mira, Santa Leonor, Rio Cruz), with a maximum rainfall of 80 inches.

Material.—A series of twenty-three specimens.

Pheugopedius maculipectus cano-brunneus (Ridgway)

Type locality, Temax, Yucatan.

Range.—Outer two thirds of the Yucatan Peninsula in dry, relatively open forest and scrub, with a rainfall of 80-40 inches.

General diagnosis.—A pale and gray extreme, the most marked race as regards color differences; otherwise exactly as in *maculipectus* and consequently differing radically from *microstictus* in the characters mentioned under that form.

Material.—Four specimens at the moment, but I have collected this subspecies in Yucatan and Quintana Roo, and have often studied and compared the excellent series in the American Museum of Natural History.

Pheugopedius maculipectus umbrinus (Ridgway)

Type locality, 'Guatemala'; I designate Vera Paz.

Range.—Caribbean rain forest of eastern and northern Guatemala and western British Honduras, areas with 100-120 inches of rain annually. Intergrading northward in Tabasco with *maculipectus*, eastward and northeastward in eastern British Honduras and southern Quintana Roo with *cano-brunneus*.

General diagnosis.—This and the next two races are radically different from the preceding three in being much more heavily spotted with black below, with the spots larger and occupying a greater area than the white ground color. This is the darkest and most richly colored race; the browns have a pronounced russet or burnt sienna tint, especially above. It is only minutely larger than *maculipectus*.

Old trade-skins have undergone such extensive *post mortem* change that they are useless for a proper understanding of the characters of the form. Specimens from western British Honduras are typical *umbrinus*, and not *maculipectus* as recently recorded by Austin. Other specimens from eastern British Honduras and southern Quintana Roo form a perfect series of intergrades toward *cano-brunneus*. These intergrades are curiously like *maculipectus*, and are separable only in series.

Material.—Over sixty specimens from Baja and Alta Vera Paz and two from western British Honduras (Cayo District).

Pheugopedius maculipectus varians subsp. nov.

Type, no. 56,398, Dwight Collection, male adult; San José, Guatemala; Feb. 3, 1920, Austin Paul Smith.

Subspecific characters.—Closely resembling *umbrinus*, but minutely larger; much paler and duller, most obviously on the pileum and wings; quite different in color, however, from *maculipectus* in having the brown areas distinctly russet rather than olive.

Range.—Pacific coast of Guatemala below 2500 ft., probably also in Chiapas.

Material.—Sixteen specimens from various localities in Guatemala.

Pheugopedius maculipectus petersi subsp. nov.

Type, no. 136,857, Mus. Comp. Zoöl., male adult; Lancetilla, eastern Honduras; Feb. 18, 1928, J. L. Peters.

Subspecific characters.—The largest race, with the longest and stoutest bill, its width at base double that of *microstictus;* resembling *umbrinus* in the heavy spotting below, but slightly paler, more olive, less russet brown; upper parts correspondingly less russet than in *varians*, but neither paler nor darker; resembling *maculipectus* in the olive rather than russet tone of the brown, but slightly darker.

Range.—Eastern Honduras.

Material.—Fourteen specimens from Lancetilla and Ceiba.

	MEASUREMENTS	
	Wing	Culmen
microstictus	55–58 (56.5)	14–16 (15)
maculipectus	55–58 (56.5)	14–16 (15)
umbrinus	55–60 (57.7)	14–16 (15.5)
varians	57–63 (59.3)	15–16.5 (15.5)
petersi	57–63 (61.4)	15–17 (15.8)

Chamaethlypis poliocephala ridgwayi subsp. nov.

Type, no. 118,269, Mus. Comp. Zoöl., male adult; Boruca, southwestern Costa Rica; June 10, 1906, C. F. Underwood.

Subspecific characters.—Nearest to *Chamaethlypis poliocephala caninucha* Ridgway of western Guatemala, but a deeper, brighter, more sulphur yellow below, and greener, less olive brown above, in breeding plumage; winter adults and immature birds with less buffy brown wash below; size slightly smaller, wing of males averaging 53.6 mm. instead of nearly 56 mm.

Range.—Localized in the savannas of southwestern Costa Rica and western Chiriqui.

Material examined:—

Chamaethlypis p. caninucha.—Western Guatemala, fifty-one specimens from various localities, including topotypes (Dwight Collection); twenty-seven specimens from northwestern Costa Rica and the plateau country near San José.

Chamaethlypis p. ridgwayi.—Southwestern Costa Rica, twenty-two specimens; Boquete, Chiriqui, two males, two females.

About ten per cent of the large series from western Guatemala have at least a trace of white or yellowish on the eyelids, making it impossible to maintain *caninucha* specifically distinct from *poliocephala.* Many years ago Mr. Ridgway described a subspecies *icterotis,* based on specimens from San José. Such specimens show a very slight approach to the new form in color below only, but he was, I believe, entirely correct afterward in reducing *icterotis* to synonomy. Adequate series of the form here proposed did not exist, when he worked on the warblers in 1902, and it is named after him in recognition of his outstanding work in this genus.