

RICHARDSON'S MEXICAN COLLECTION: BIRDS FROM ZACATECAS AND ADJOINING STATES

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In 1888 and 1889, W. B. Richardson collected extensively for Salvin and Godman in Mexico. I reported (Webster 1973) on part of the collection—17 species from the western state of Zacatecas. Herein I report on more of that collection. I have found that Salvin and Godman's accession catalog for these years is decidedly incomplete. While I located in the British Museum collection probably all of the Zacatecas, Aguascalientes, and Jalisco specimens of the species I anticipated (or which were in the Salvin and Godman catalog), there doubtless remain specimens of other species that I did not find.

The following list includes only those species for which Richardson's collection provides new information on the taxonomy and distribution of Mexican birds. I have included new state records for Aguascalientes and some other states as well as for Zacatecas (an asterisk denotes a new state record). All measurements are in millimeters; wing measurements are of the chord. I have seen all but three (Blue-throated Hummingbird, Allen's Hummingbird, longspur) of these species in Zacatecas (1950–1964), and here include extracts from my own field notes where they are appropriate. I have not been able to find any field notes or journal that Richardson may have kept.

Numenius americanus parvus. Long-billed Curlew. Racial identity of the two specimens taken by Richardson is clear. The male (wing 265, culmen 119) was taken at Zacatecas City 16 August 1889 and the female (276, 144) there the following day. During my only winter trip to Zacatecas, I saw the species almost every day (2–10 February 1964) on the grassland of Laguna Valderama, including a flock of 39 on 6 February.

Zenaidra macroura marginella. Mourning Dove. A male (wing 137) taken at Jerez in September 1888, and an immature female (wing 136) that I collected at Laguna Valderama 14 July 1952 are as pale as any specimens from far western United States. However, their small size for the race (cf. Aldrich and Duvall 1958) suggests that attention be paid to Pitelka's (1948) suggestion of a distinguishable Mexican population. I have seen no specimens of truly typical, dark-colored *Z. m. carolinensis* from Mexico except those from the east—Tamaulipas, Vera Cruz, and *Distrito Federal.

Bubo virginianus pallescens. Great Horned

Owl. Richardson collected a total of six in February, March, and August of 1889, at Zacatecas City. I took the opportunity to measure and compare the entire series (19 *B. v. pallescens*, including 14 from Mexico; 2 *mayensis*; and 11 *mesembrinus*) of Middle American Great Horned Owls in the British Museum, essentially repeating earlier work by Webster and Orr (1958) with a different series of specimens. Most of the results confirmed our published work; most of the differences were trivial, but a few were notable, as follows. Page 135, lines 31–32: very pale specimens occur in the highlands south to Zacatecas. Page 138, lines 10–12: extremes of local variation are in groups F, G, and L; as in Jalisco, four of the five dorsal color groups are represented in Zacatecas. Page 139, line 13: the extreme of pale, fine ventral barring is found in Arizona, Sonora (southern as well as northwestern), and southeastern Oaxaca. Page 140, lines 1–2: other places where black, coarse barring occurs are southern Texas and Central America. Page 140, lines 35–36: *B. v. mayensis* is uniform in color and similar to the medians of *pallescens* and of *mesembrinus* in dorsal darkness and coarseness of the ventral barring.

Lampornis clemenciae bessophilus > *clemenciae*. Blue-throated Hummingbird. Richardson took five specimens 2–5 August 1889 in the Sierra Valparaiso. They are intermediate in color between the duller northwestern race (Arizona and Durango specimens compared) and the brighter southern race, but nearer the former (intermediates from San Luis Potosi; typical specimens of *clemenciae* from state of México, Distrito Federal, Vera Cruz, Guerrero, and Oaxaca). Wing length of four Zacatecas males is 76 to 78, \bar{x} 77.3, again intermediate (cf. Browning 1978).

**Eugenes fulgens fulgens*. Rivoli Hummingbird. Richardson took a female in the Sierra Valparaiso on 3 August 1889. I have seen the species several times in Zacatecas, but only in pine-oak forests in June (Webster 1964).

**Selasphorus sasin*. Allen's Hummingbird. Richardson took a male at Jerez in September 1888. The wing measures 36.2 and the outermost rectrix 1.8 in width. The date accords well with Phillips' (1975) migration map for the species.

Trogon elegans ambiguus. Coppery-tailed Trogon. Richardson collected six specimens in

TABLE 1. Wing length of adult male Vermilion Flycatchers.

Subspecies	Locality	n	Range	\bar{x}	SD	C.V.
<i>flammeus</i>	Arizona	47	76–84	80.51	1.96	2.44
<i>flammeus</i>	Baja California, Calif., Sonora	16	77–82	79.62	1.36	1.71
<i>flammeus</i>	Chihuahua, Sinaloa	12	79–86	81.67	1.93	2.37
<i>mexicanus</i>	south Texas	15	80–85	82.20	1.33	1.62
<i>mexicanus</i>	Zacatecas, Aguascalientes, San Luis Potosi	15	80–86	83.20	1.80	2.16
<i>mexicanus</i>	Tamaulipas, Nuevo Leon	22	80–87	82.18	1.81	2.20
<i>mexicanus</i>	Jalisco, Michoacán, Colima	22	79–89	82.00	2.07	2.52
<i>mexicanus</i>	Morelos, Hidalgo, Distrito Federal, State of México, Puebla, Oaxaca, Guerrero	45	75–87	82.31	2.33	2.83
<i>mexicanus</i>	central Vera Cruz	9	75–81	78.67	1.29	1.64
<i>mexicanus</i>	Chiapas	6	76–81	78.83	—	—
<i>blatteus</i>	southern Vera Cruz, Yucatan	19	70–77	74.00	1.84	2.49
<i>blatteus</i>	Guatemala, Honduras, Belize	11	71–75	72.91	1.17	1.60

the Sierra Valparaiso 27 July to 4 August 1889, including juveniles.

When Van Rossem (1934) described the race *canescens* from Sonora and elsewhere in northwestern Mexico and Arizona, he recorded no comparison with the race *goldmani*, which had been described by Nelson (1898) from the Tres Marias Islands. But the characters that these two describers used to differentiate their races from *ambiguus* of southern and eastern Mexico were the same (paler reds and browns; greener-backed males). Apparently no one since 1934 has attempted really to evaluate the three races all together, although Stager (1957) noted that specimens from the Tres Marias were different from *ambiguus* only in the paleness of the females.

I compared series of 11 adults from the Tres Marias of presumed *goldmani*, 8 from Sonora and Sinaloa of presumed *canescens*, and 51 from central, eastern, and southern Mexico of presumed *ambiguus*. Like Stager, I can see no geographic variation in the back color of males—green, blue, and copper are individual color variations. However, the red ventral color of each sex is paler to the west and north, and the brown of females (both dorsal and ventral) is paler and less extensive in the northwest. Measurements of the wing of males are: 7 from the Tres Marias Islands, range 125–134, \bar{x} 130.3; 4 from Sonora and Sinaloa, 123–129, 127.0; 13 from Zacatecas, Jalisco, and Nayarit, 126–138, 132.9; 11 from San Luis Potosi, Nuevo Leon, and Tamaulipas, 124–140, 132.4; 13 from Guerrero, Oaxaca, Vera Cruz, and Distrito Federal, 125–136, 132.3.

Therefore *T. e. canescens* Van Rossem is a synonym of *T. e. goldmani* Nelson. Some specimens from Zacatecas and Nayarit are intermediate in color, although best referred to as *ambiguus*.

Pyrocephalus rubinus mexicanus. Vermilion Flycatcher. Several years ago (Webster 1959) I identified Zacatecas specimens as belonging to the northwestern race, *flammeus* (Van Rossem 1934). Now that I have examined 360 specimens from the northern part of the species' range (see Table 1) and measured 239 adult males, I must change my opinion, and I now recognize the three northern races with ranges as described by Traylor (1979). However, *flammeus* is but a weakly distinct race; I am able to distinguish it from *mexicanus* only on the basis of the color of males, and even then, populations in Baja California, southern Texas, and Jalisco are variously intermediate. The distinction between *mexicanus* and *blatteus* is much clearer, because they differ significantly in size as well as in color. Two color differences exist in males. The hue of the red areas is more orange-red (vermillion) in *flammeus*, and more cardinal red in *blatteus*, with *mexicanus* in between. The blackish dorsum is blackest in *mexicanus*, with *flammeus* paler (but not browner) and *blatteus* paler and browner than *mexicanus*. No specimens of *pinicola* Howell are included in this study.

Pitangus sulphuratus derbianus. Derby Flycatcher or Great Kiskadee. Richardson did not take any in Zacatecas, but collected five at Bolaños, Jalisco, which are near-topotypes (cf. Webster 1968). Comparison of the British Museum series, after my earlier work with other collections, prompts me to comment on the northern races. I found that three characters alleged by Van Rossem (1940) to differentiate subspecies do not vary significantly with geography: rufescence of the dorsal surface of the wing appears to be an individual variation, with extremes scattered throughout the range in the 134 specimens from Texas and Mexico. Extent of rufescence of the outer rectrices I

TABLE 2. Length of wing in male Derby Flycatchers.

Subspecies	Locality	n	Range	\bar{x}
<i>texanus</i>	south Texas	16	117-129	123.12
<i>derbianus</i>	Tamaulipas, Nuevo Leon, Puebla, Morelos, Guerrero	11	116-128	122.09
<i>derbianus</i>	Sinaloa, Nayarit, Zacatecas, Jalisco, Colima	22	116-129	122.05
<i>guatemalensis</i>	central and southern Vera Cruz, Chiapas, mainland Yucatan	9	114-129	120.33

classified as little, moderate, or large on each specimen; the "little extent" class was more common in Guerrero than elsewhere, but occurred in every major area sample, as did the "large extent" type. Variation in length of wing is shown in Table 2.

Color of dorsum and of venter *does* vary geographically to a significant degree. Ventrally, Texas specimens are slightly paler than the rest, but a series (eight specimens) from the Yucatan islands (Mujeres, Meco, and Cozumel islands) is distinctly paler still. Dorsally, specimens of *derbianus* (for ranges, see Table 2) are palest and grayest; specimens from the Yucatan islands are the least green, but dark and dull; specimens of *texanus* are grayer and paler and less green than *guatemalensis* but darker and browner than *derbianus*; specimens of *guatemalensis* (matching series from Central America not listed above) are darkest and greenest. The Guerrero series is intermediate between *derbianus* and *guatemalensis*. I refrain from describing a race from the Yucatan Islands, despite the clear color characters, because all the specimens are old (1880s) and unsexed. Miller et al. (1957) were correct in synonymizing *palliatius* with *derbianus*, but incorrect in excluding the race *guatemalensis* from Mexico.

**Hirundo rustica erythrogaster*. Barn Swallow. Richardson took two at Aguascalientes, Aguas., a male and an unsexed adult, in August 1888.

Sitta pygmaea chihuahuae. Pygmy Nuthatch. There seem to be four races in Mexico as Van Rossem (1929) stated. However, Van Rossem chose Mound Valley, Chihuahua, as the type locality of his Sierra Madre Occidental race (*S. p. chihuahuae*) and this is only 300 km southwest of the type locality of *melanotis* in Cochise Co., Arizona. The characters of *chihuahuae* (short bill and wing; buffy anterior but pale gray posterior underparts; bluer, darker upperparts) are well differentiated only in specimens from Durango and Zacatecas. I conclude that the arrangement of races set up by Van Rossem (1929) and concurred in by Miller et al. (1957) may stand,

but uncomfortably. Richardson took five specimens in the Sierra Valparaiso.

Troglodytes aedon. House Wren. The series of 19 wintering specimens (actually, October to 9 April) from Mexico in the British Museum is instructive. Also, I have compared 25 wintering Mexican specimens from other museums. (These remarks exclude the brown-throated races breeding in Mexico and southeastern Arizona, cf. Phillips et al. 1964). In general, I agree with Paynter's (1960) treatment. Although *aedon* and *parkmanii* are completely distinguishable if their ranges are restricted to the ends of the cline as given by the AOU (1957), *baldwini* denotes a broad series of varying integrades that is best not recognized by name.

The Mexican wintering ranges of these gray forms are more extensive than recognized by Paynter and earlier authorities. Of *parkmanii*, I examined specimens from these states—Jalisco, *Distrito Federal, Guerrero, Oaxaca, Vera Cruz, *Chiapas (5 May 1948, 60 km NE San Cristobal, 1,700 m, Univ. Mich.). Of *aedon*, I examined eight specimens from Vera Cruz (hardly "rare" as stated by Paynter and by Miller et al. 1957) and one each from *Oaxaca (City of Oaxaca, March 1889) and *Colima (Plains of Colima, 16 Jan. 1890). Of intermediates, which might be called "*baldwini*," I examined specimens from Vera Cruz, Michoacán, and Est. México.

Catherpes mexicanus. Canyon Wren. I am unable to evaluate properly the race *C. m. cantator* (Phillips 1966) from Nayarit. I have compared 120 specimens from the areas of central and southern Mexico assigned by Phillips to *C. m. cantator* plus *C. m. mexicanus*, but no specimens from Nayarit. The wing length is slightly shorter to the northwest, viz.: 19 males from Durango, Zacatecas, Aguascalientes, Jalisco, and Michoacán ranged from 60 to 70, with a mean of 64.68, SD 2.56, C.V. 3.95. Nineteen males from Guerrero, Oaxaca, Puebla, and Distrito Federal ranged from 64 to 72, mean 68.42, SD 2.25, C.V. 3.29. Also, the northwestern sample is slightly paler and grayer than the southeastern sample.

Myadestes townsendi. Townsend's Solitaire. Study of Richardson's specimens from western Mexico, plus reexamination of the Zacatecas specimens (Webster 1958), clarifies somewhat the status of this species in Mexico. Briefly, most of the specimens are wintering examples of the northern race (nine specimens: Sierra Bolaños, Jalisco, February–March 1889; three specimens: Chihuahua, 1888 [10 March, Casa Colorado; 23 March, Rio Verde; 30 March, Tutaca]). A single Zacatecas specimen of Richardson's (27 July 1889, Sierra Valparaiso), like the three from that state I reported earlier (1958), is of the darker subspecies *M. t. calophonus*. I did not see the specimens from Sonora reported by Salvin and Godman (1889) and Van Rossem (1945).

**Phainopepla nitens nitens*. Phainopepla. Richardson took a female in the Sierra Calvillo, Aguascalientes, in August 1888. The large size (wing 95, tail 89) places it clearly with the southern race, like specimens I previously recorded from Zacatecas (Webster 1968).

**Vireo huttoni carolinae*. Hutton's Vireo. Richardson collected four of this central-and-eastern Mexican race in the Sierra Calvillo, Aguascalientes, in August 1888.

**Vireo solitarius cassinii*. Solitary Vireo. Richardson collected a male of this race in the Sierra Calvillo, Aguascalientes, in August 1888. Without doubt the bird (adult plumage, wing 72, tail 50) is a migrant; no specimen of a breeding race has been recorded from the state.

**Piranga rubra*. Summer Tanager. Richardson took a female (wing 96) and a male (wing 98) in fresh plumage at Calvillo, Aguascalientes, in August 1888. The size indicates *P. r. rubra*; the pale color of both specimens suggests *P. r. cooperi*; the bright yellow of the female indicates *P. r. rubra*. Presumably they are migrants from an intermediate population.

**Piranga ludoviciana*. Western Tanager. Richardson took a male at Calvillo in August 1888.

**Calcarius mccownii*. McCown's Longspur. Richardson took one male and two with sex unrecorded at Zacatecas, Zacatecas, 4 February 1889. The male and one of the others are in adult male plumage. This record extends the range for the species 490 km to the southeast from the previous known extreme of Villa Ocampo, Durango (Miller 1906).

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