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DESCRIPTIONS OF NEW BIRDS FROM THE TRES MARIAS ISLANDS, WESTERN MEXICO.

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The specimens upon which the present paper is based were obtained by myself and my assistant, Mr. E. A. Goldman, on the Tres Marias Islands, off the west coast of Mexico, during May, 1897. Our visit there was a continuation of the work carried on in Mexico by the Biological Survey of the Department of Agriculture.

Special efforts were made to secure series of the resident land birds, in which we were quite successful. The study of these series, in connection with our collection from the adjacent mainland during the same season, indicates that most of the resident land birds of the islands, not already described, differ in a more or less marked degree from their nearest mainland relatives. In most cases the island birds cannot be considered more than geographical races, although a few differ sufficiently to be treated as species. Not a single species has been found on the islands which has not a closely related form on the mainland. The bird fauna as a whole will be treated in detail in a paper now in course of preparation.

Previous work on the Tres Marias may be briefly summarized as follows: In 1865–1867 the group was visited three times by Colonel A. J. Grayson, who made extensive collections of birds for the Smithsonian Institution. From these collections a number of new species and subspecies have been described at various times by Baird, Cassin, Lawrence, and Ridgway. In addition, Von

Madarasz has described a *Virco* from a collection made there in 1881 by Mr. A. Forrer. Mr. Xantus is supposed to have visited the islands during his stay on the west coast of Mexico, but we have no definite information in regard to his trip.

I am indebted to Dr. C. Hart Merriam, Chief of the Biological Survey, for the opportunity to prepare the present paper. My thanks are due also to Mr. Robert Ridgway, Curator, and Dr. Chas. W. Richmond, Assistant Curator, of Birds in the U. S. National Museum, for continued favors during the progress of my work on Mexican birds.

All of the birds described below, except the Magdalena Wren, which seemed to be restricted to Magdalena Island, were taken on Maria Madre Island, and probably occur on the other islands also.

All measurements are in millimeters.

Columba flavirostris madrensis subsp. nov. Tres Marias Pigeon.

Type No. 156698, U. S. Nat. Mus., Biological Survey Coll., ♂ ad., Maria Madre Island, Mexico, May 13, 1897. Collected by E. W. Nelson and E. A. Goldman.

Description.—Differs from typical C. flavirostris in somewhat larger size; decidedly larger and longer bill and generally paler colors; lower border of greater wing coverts broadly margined with white as in Columba gymnophthalma. Dimensions of type: wing, 209; tail, 138; culmen, 17; tarsus, 26.

Average measurements of *Columba flavirostris.*— \Im (4 specimens): wing, 195.5; tail, 123.5; culmen, 13.7; tarsus, 24.7. \Im (3 specimens): wing, 193; tail, 120.6; culmen, 14.1; tarsus, 25.3.

Average measurements of *C. flavirostris madrensis.*— \emptyset (4 specimens): wing, 202.7; tail, 129; culmen, 15.7; tarsus, 27.1. \mathbb{Q} (3 specimens): wing, 201; tail, 127; culmen, 16.6; tarsus, 26.3.

A single specimen from the islands lacks the white margins on the greater wing coverts, but has all the other characters of the insular race, such as the large bill and pale colors. This is the only one among a dozen or more specimens examined which lacked this marking. The mainland yellow-billed pigeon not infrequently has a narrow margin of white on the borders of the greater coverts, but I have never seen one in which this character is so striking as on the ordinary island birds.

Leptotila capitalis subsp. nov. Tres Marias Dove.

Type No. 156709, U. S. Nat. Mus., Biological Survey Coll., ad. &, Maria Madre Island, Mexico, May 6, 1897. Collected by E. W. Nelson and E. A. Goldman.

Description of type.—Forehead, and crown to line between middle of

orbits, pale creamy drab, shading abruptly into the purplish iridescence which overlies remainder of crown and back of neck. This purplish iridescence on the neck ends abruptly just in front of shoulders, and is bordered by a narrow band of feathers tipped with greenish iridescence. Entire dorsal surface, including wings and middle pair of tail feathers, brown with an olive wash, except on tail and upper tail coverts. Throat distinctly whitish; remainder of lower side of neck and thence back over chest delicate creamy lilac; abdomen and under tail coverts white with a pale wash of buffy brown on edges of some of the feathers. Flanks dull buffy brown; tail feathers, except middle pair, blackish tipped with white—this tipping broadest on outer pair of feathers; under wing coverts and axillars pale cinnamon. Dimensions of type: wing, 152; tail, 109; culmen, 18.5; tarsus, 33.

Averages of Leptotila fulrirentris brachyptera.— \$\int \(\begin{align*} \) (5 specimens): wing, 147.8; tail, 108.8; culmen, 16; tarsus, 31.3. \$\overline{\pi} \) (3 specimens): wing, 144.3; tail, 104.6; culmen, 15.6; tarsus, 30.6.

Averages of *L. capitalis.*— \Im (5 specimens): wing, 152.5; tail, 110.6; culmen, 17.9; tarsus, 32.2. \Im (3 specimens): wing, 151.6; tail, 107; culmen, 18.8; tarsus, 30.6.

This species can be distinguished at once from its nearest mainland relatives, *P. fulvirentris* and *P. fulvirentris brachyptera*, by its paler colors and larger bill. Stragglers of typical *brachyptera* occur on the islands, as shown by a specimen obtained there by Col. Grayson, now in the National Museum. This specimen is identical with the mainland bird and shows no sign of approach to the insular species.

Buteo borealis fumosus subsp. nov. Tres Marias Red-tailed Hawk.

Type No. 156714, U. S. Nat. Mus., Biological Survey Coll., ad. ♂, Maria Madre Island, Mexico, May 6, 1897. Collected by E. W. Nelson and E. A. Goldman.

Description.—Entire head and neck nearly uniform snoky brown, with scarcely a trace of lighter markings on throat or chin. Back and wings blackish brown; breast and remainder of lower surface, except neck, heavily marked with dull rusty, smoky brown, and dull whitish or buffy; no sign of lighter area on breast; the markings on ventral surface are in the form of indistinct barrings which are most clearly defined on the tibia. Dimensions of type: wing, 375; tail, 206; culmen, 26; tarsus, 81.

Averages of *B. borcalis fumosus.*— \emptyset (3 specimens): wing, 373.3; tail, 207.3; culmen, 26; tarsus, 81.3. φ (1 specimen): wing, 412; tail, 214; culmen, 30; tarsus, 84.

The Tres Marias form is darker and more uniformly marked below, and lacks the lighter areas on throat and breast that are found in *B. borealis socorroensis*. On the dorsal surface funosus is readily distinguishable from socorroensis by the uniformly smoky brown head and neck, the

rusty edgings to the neck and wing feathers of the latter bird being entirely absent. Curiously enough, although the Tres Marias Islands are only about one-fifth as far from the coast as Socorro Island, yet the Tres Marias race is more distinct from B. borealis calurus than is socorrocusis.

Polyborus cheriway pallidus subsp. nov. Tres Marias Caracara.

Type No. 156715, U. S. Nat. Mus., Biological Survey Coll., 3 ad., Maria Madre Island, Mexico, May 3, 1897. Collected by E. W. Nelson and E. A. Goldman.

Description.—General pattern of coloration as in *P. cheriway*, but much paler or lighter brown. The darkest adult from the islands is somewhat paler than the palest adult from the mainland in the considerable series I have examined. The same proportionately paler colors prevail on immature birds from the islands. The terminal black band on the tail of the island bird averages narrower, and the other dark bars on the tail are fainter. The light and dark markings on back at base of neck are in the form of regular bars instead of being broken into a roughly wavy pattern by the oval form of the black areas on the feathers, as in specimens of cheriway from the mainland of Mexico. The wing, tail, and tarsus average shorter than in cheriway of the Mexican mainland, bill about the same. Dimensions of type: wing, 370: tail, 198; culmen, 32; tarsus, 86.

Averages of *Polyborus cheriway* (from mainland of Mexico).— \nearrow (4 specimens): wing, 392; tail, 208.7; culmen, 32.5; tarsus, 90.7. \diamondsuit (2 specimens): wing, 396.5; tail, 217.5; culmen, 33.5; tarsus, 89.

Averages of *P. cheriway pallidus.*— \mathcal{J} (4 specimens): wing, 370.7; tail, 194; culmen, 32; tarsus, 86.5. \mathcal{J} (4 specimens): wing, 386.5; tail, 205; culmen, 32.7; tarsus, 88.

A specimen from the mainland adjacent to the Tres Marias group approximates the island form, and a series might prove the birds from that district to be intermediate.

Trogon ambiguus goldmani subsp. nov. Goldman's Trogon.

Type No. 156752, U. S. Nat. Mus., Biological Survey Coll., ad. &, Maria Madre Island, Mexico, May 10, 1897. Collected by E. W. Nelson and E. A. Goldman.

Description.—Males decidedly greener above than typical ambiguus, with very little of the coppery iridescence characteristic of the latter. Females and young differ still more, their backs being decidedly ashy and having much paler rufous on middle tail feathers; exposed parts of scapulars, tertiaries, and wing coverts gray, mottled with fine, wavy, black lines, with slight indication of the brown which forms the main color of these feathers in ambiguus proper; colors of lower parts decidedly paler. In size the two forms differ but little. Dimensions of type: wing, 128; tail, 148; culmen, 20; tarsus, 17.

Averages of *Trogon ambiguus.*— \mathcal{J} (4 specimens): wing, 131; tail, 161.2; culmen, 19.5; tarsus, 16.7. \mathcal{L} (1 specimen): wing, 127; tail, 170; culmen, 18.5; tarsus, 17.

Averages of T. ambiguus goldmani.— β (4 specimens): wing, 130.7; tail, 153.2: culmen, 19.7; tarsus, 17. φ (1 specimen): wing, 134; tail, 167; culmen, 19; tarsus, 18.

Nyctidromus albicollis insularis subsp. nov. Tres Marias Parauque.

Type No. 156765, U. S. Nat. Mus., Biological Survey Coll., ad. ♂, Maria Madre Island, Mexico, May 10, 1897. Collected by E. W. Nelson and E. A. Goldman.

Description.—The island birds can be distinguished from *N. albicollis*, of the adjacent mainland, by uniformly duller, more grayish brown colors of entire dorsal surface and broader transverse dark bars on lower surface, especially on abdomen and flanks. The culmen and tarsus are relatively shorter and wings and tail longer. Dimensions of type: wing, 173; tail, 169; culmen, 11; tarsus, 26.

Averages of N. albicollis insularis.— \nearrow (5 specimens): wing, 170.6; tail, 162.4; culmen, 10.9; tarsus, 25.9. \bigcirc (5 specimens): wing, 168.4; tail, 154.4; culmen, 11.6; tarsus, 25.8.

A notable feature of *insularis*, shown in the series before me, is its remarkable constancy of coloration compared with the amount of variation in the large number of mainland specimens examined. The latter show a wide range of color from grayish to rufous. A single specimen in the island series has a slight rufous shading, but agrees with the others in size. In the mainland series a specimen from Ixtapa, Jalisco, is colored like *insularis*, but agrees with other birds from the same region in its smaller size.

Myiopagis placens minimus subsp. nov. Little Green Flycatcher.

Type No. 156817, U. S. Nat. Mus., Biological Survey Coll., ad. ♂, Maria Madre Island, Mexico, May 10, 1897. Collected by E. W. Nelson and E. A. Goldman.

Description.—Similar to M. placens, but grayer, especially about head and neck; top of head and neck lighter than rest of dorsal surface instead of darker, as in the mainland form. The island form averages smaller than true placens. Dimensions of type: wing, 64.5; tail, 66; culmen, 12; tarsus, 19.5.

Averages of Myiopagis placens.— \nearrow and \diamondsuit (8 specimens): wing, 68.2; tail, 65.8; culmen, 11.2; tarsus, 19.1.

Averages of *M. placens minimus.*— β (5 specimens): wing, 64.9; tail, 64.8; eulmen, 11.8; tarsus, 19.4. φ (5 specimens): wing, 65.5; tail, 63; culmen, 11.6; tarsus, 19.2.

In the National Museum is a typical specimen of *placens* taken on the Tres Marias by Col. Grayson, showing that it occurs there as a straggler.

Cardinalis cardinalis mariæ subsp. nov. Tres Maria Cardinal.

Type No. 156907, U. S. Nat. Mus., Biological Survey Coll., ad. ♂, Maria Madre Island, Mexico, May 3, 1897. Collected by E. W. Nelson and E. A. Goldman.

Description.—Males most like those of *C. cardinalis igneus*, but red of under parts deeper and richer, lacking the pinkish suffusion notable in *igneus*; color of back also richer, and feathers less edged with gray.

The females of the two forms are more distinct than the males. C. mariæ has a large whitish throat area, and the entire abdomen is whitish, thus confining the main buffy area of lower parts to a broad pectoral band. The bill is more swollen; the wing is longer and tail shorter than in igneus. Dimensions of type: wing, 101; tail, 103; culmen, 20; tarsus, 29.

Averages of Cardinalis c. igneus.— \mathcal{J} (4 specimens): wing, 94.5; tail, 106; culmen, 20; tarsus, 26.6. \mathcal{L} (3 specimens): wing, 91.6; tail, 104.3; culmen, 20; tarsus, 26.8.

Vireo hypochryseus sordidus subsp. nov. Tres Marias Vireo.

Tupe No. 156898, U. S. Nat. Mus., Biological Survey Coll., ad. ♂, Maria Madre Island, Mexico, May 13, 1897. Collected by E. W. Nelson and E. A. Goldman.

Description.—Differs from V. hypochryseus in duller, more olive green on dorsal surface, and dingier, more greenish yellow under parts. The bill is darker horn color and larger than in true hypochryseus. Dimensions of type: wing, 66; tail, 61; culmen, 13; tarsus, 21.

Averages of Vireo hypochryscus.— \bigcirc (5 specimens): wing, 63.4; tail, 57.8; culmen, 12.4; tarsus, 19.5. \bigcirc (2 specimens): wing, 63; tail, 55.5; culmen, 12; tarsus, 20.

Averages of V. hypochryseus sordidus.— \bigcirc (7 specimens): wing, 67.3; tail, 60.3; culmen, 13.3; tarsus, 21. \bigcirc (3 specimens): wing, 66.3; tail, 60.7; culmen, 12.7; tarsus, 21.1.

Melanotis cærulescens longirostris subsp. nov. Tres Marias Blue Mockingbird.

Type No. 156923, U. S. Nat. Mus., Biological Survey Coll., ad J. Maria Madre Island, Mexico, May 4, 1897. Collected by E. W. Nelson and E. A. Goldman.

Description of type.—General color dull slaty blue with a grayish cast; top of head and all of neck and breast paler than rest of body; remainder of lower parts dull grayish blue (becoming smoky bluish in some specimens); back, rump, scapulars, and wing coverts dull slaty blue. Two central tail feathers and outer web of other rectrices same as back; rest

of tail dull black; lores, ear coverts, and fore part of chin black. Dimensions of type: wing, 101; tail, 104; culmen, 29; tarsus, 32.

Averages of *Melanotis carulescens.*— \circlearrowleft (4 specimens): wing, 115.5; tail, 125.5; culmen, 24.9; tarsus, 31.2. \circlearrowleft (1 specimen): wing, 106; tail, 111; culmen, 24.5; tarsus, 29.

Averages of *M. carulescens longirostris.*— $\vec{\lozenge}$ (3 specimens): wing, 104.6; tail, 105; culmen, 29; tarsus, 30.6. φ (1 specimen): wing, 108; tail, 102; culmen, 29; tarsus, 32.

The grayer colors, smaller size, and larger bill are the main points distinguishing this form from typical carulescens.

Thryothorus lawrencii magdalenæ subsp. nov. Magdalena Island Wren.

Type No. 156943, U. S. Nat. Mus., Biological Survey Coll., ad. &, Magdalena Island, Mexico, May 28, 1897. Collected by E. W. Nelson and E. A. Goldman.

Description of type.—Back warm umber brown with a slight grayish wash; top of head and neck deeper, purer rufescent than back; rump and upper tail coverts lighter, brighter rufescent than back; wings and middle tail feathers rufous brown; tail irregularly barred with blackish brown and whitish, the latter color more or less heavily shaded with dull rufous brown; a distinct white supra-loral stripe from base of bill to nape; sides of head and neck indistinctly marked with blackish lines; chin, throat, breast, and middle of abdomen white; sides of breast and flanks reddish brown; under tail coverts whitish with a shaft line and spot (or bar) of blackish brown near tips. Dimensions of type: wing, 55; tail, 55; culmen, 16.5; tarsus, 21.

Average of 3 adult males of *Thryothorus lawrencii*.—Wing, 60; tail, 55.6; culmen, 17.2; tarsus, 22.

This form combines certain characters of typical *T. felix* with those of *T. lawrencii*. The rufous on the crown and nape is even deeper than in typical *felix*, while the white lower parts are as in true *lawrencii*.

Compared with a specimen of *felix* from Ometepec, Guerrero, believed to be typical, *magdalene* has a pure white area covering most of lower parts in place of the rich rufous of *felix*. The rufous of the flanks is paler; under tail coverts less barred; crown and rump nearly the same shade of rufous; back a little grayer; sides of head much less heavily streaked with black.

From *lawrencii* it may be distinguished by its much richer colored or more rufous upper parts, by somewhat heavier dark streaking on the side of the head and neck, and by the richer wash of rufous on the flanks.