

A REVISION OF THE CLASSIFICATION OF THE
COWBIRDS.

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THE Cowbirds form a natural little group of the family Icteridae and may be characterized as follows: Rather small, terrestrial or semiterrestrial Icteridae; bill stout and shorter than the head; nostrils with a superior operculum; middle phalanx of middle toe shorter than terminal phalanx; outer toe (without claw) reaching beyond second (subterminal) joint of middle toe; nostril small and round, much encroached upon beneath by feathering of the loreal antiae; all but one genus parasitic. (Taken partly from Ridgway, Bull. 50, U. S. N. M., part 2, 1902, p. 205.) The Cowbirds form a link in some respects between the Icteridae and the Fringillidae but belong in the former family although it is hard to draw a line between the two. The absence of obvious rectal bristles is the only external character that distinguishes the Icteridae as a group from the Fringillidae and the Cowbirds agree in this respect with the other members of the Icteridae.

The Cowbirds have been usually regarded as belonging to two genera; *Molothrus* and *Tangavius*, but I feel that *Molothrus* (as currently used) should be split into two genera, one for the bay-winged forms, and one for the other members of the genus. Fortunately a name is available for the Bay-winged Cowbirds—*Agelaioides* of Cassin, who first suggested a genus for these birds. Ridgway (Bull. 50, U. S. N. M., part 2, 1902, p. 207) wrote that the fact that the Bay-winged Cowbird, *M. badius* is not parasitic, “. . . taken in connection with the very different proportions of the primaries and the peculiar coloration . . . may necessitate the adoption of the name *Agelaioides* Cassin for a genus containing *M. badius* and *M. fringillarius*.” *Agelaioides* has been regarded as a valid subgenus by most writers but it seems worthy of generic rank. It contains the most primitive Cowbirds and may be characterized as follows: non-parasitic Cowbirds with short, rounded wings; “female” type of coloration in both sexes; no courtship display; the song utterance unlike the regular form common to all the other Cowbirds (*Molothrus* and *Tangavius*).

The genus *Molothrus* contains the typical Cowbirds, all of which have the typical type of song and courtship display; long, pointed wings, dark-plumaged males; and parasitic breeding habits. By typical courtship display I mean the fluffing of the body feathers, arching the wings, and drawing in the tail and bowing over forwards; by typical song I mean the glassy squeak preceded by a few bubbling notes. The display and song of *M. ater* being the best known to most people may be taken as typical. A person familiar with the North American *M. ater* in life would easily recognize *M. bonariensis* and *M. rufo-axillaris*, by sound and habit, as Cowbirds closely related to the North American species.

Molothrus rufo-axillaris differs greatly from *ater* and *bonariensis* in several ways. It has no sexual plumage dimorphism, both sexes being black (male type of plumage); the tail is proportionately longer and also considerably more rounded, and the wing tip longer. For these reasons I place it in a separate subgenus from *ater* and *bonariensis*. Inasmuch as the genus *Molothrus* is based on *M. ater*, the subgenus containing *rufo-axillaris* needs a name for which I propose

Streptovagus,¹ subgen. nov.

Subgeneric characters.—Black coloration in both sexes; wing tip at least twice as long as exposed culmen, tail longer and more rounded than in typical *Molothrus*.

This subgenus contains but a single species, *Molothrus rufo-axillaris*, the so-called Screaming Cowbird (hence the subgeneric name).

The subgenus *Molothrus* contains two species, *bonariensis* and *ater* and their races.

The genus *Tangavius* contains two species, *aeneus* and *armenti* and the former divides into three races. The genus may be characterized as follows:—Cowbirds with the three outer primaries incised on their inner webs; the feathers of the mantle enlarged to form a distinct ruff in the male; and the plumage of the neck and breast somewhat hair-like.

¹ *Streptitus* (noise) + *vagus* (vagabond).

KEY TO THE GENERA OF COWBIRDS.

- A. Outer primaries incised *Tangavius*.
- AA. Outer primaries not incised.
 - B. Wing tip shorter than exposed culmen. *Agelaioides*.
 - BB. Wing tip longer than exposed culmen. *Molothrus*.

Genus **Agelaioides**.

According to most writers there are two species of Bay-winged Cowbirds, *badius* and *fringillarius*, while Hellmayr (Verh. Orn. Ges. Bay., vol. 13, 1917, p. 108) has described a race of *badius* from the highlands of Bolivia—*A. badius bolivianus*. The difference between *badius* and *fringillarius* is more than one of shades of color and until more is learned of the latter (which is one of the rarest birds of the world in museums) I feel that it is entitled to specific rank. The genus then contains two species (with three geographic races).

KEY TO THE SPECIES AND RACES

- A. Remiges chestnut broadly tipped with fuscous. . . *A. fringillarius*.
- AA. Remiges dark olive brown slightly edged with chestnut
 - B. Wing length averaging 100 mm. *A. badius bolivianus*.
 - BB. Wing length averaging 90 mm. *A. badius badius*.

Agelaioides badius badius (VIEILLOT).

Tordo pardo-roxizo, Azara, Apunt., 1802, i, p. 290.
Agelaius badius Vieill., Nouv. Dict. d'Hist. Nat., vol. 34, 1819, p. 535.
Icterus fringillarius Spix, Av. Bras., i, 1824, p. 68.
Dolichonyx badius Cassin, Proc. Ac. Nat. Sci. Phil., 1866, p. 6.
Demeloteucus badius Stempelmann & Schulz, Bol. Ac. Nac. Cienc. Cordoba, 1890, vol. 10, p. 399.
Molothrus badius Hudson, Proc. Zool. Soc. Lond. 1870, p. 672; Sclater, Cat. Birds Brit. Mus., vol. 11, 1886, p. 338; Brabourne & Chubb, Birds S. Amer., 1912, p. 435.
Molothrus badius badius Wetmore, Bull. 133 U. S. N. M., 1926, p. 387.

The typical form of the Bay-winged Cowbird occurs in the northern half of Argentina (south to Rio Negro), the whole of Uruguay and parts of Paraguay (northern limit of range not definitely known).

Agelaioides badius bolivianus (HELLMAYR).

Icterus badius Lafr. & d'Orb., Syn. Av., vol. 2, 1838, p. 7 (part; Cochabamba & Sicasica, Bolivia).

Molothrus badius Sclater & Salvin, Proc. Zool. Soc. Lond., 1879, p. 608 (Tiltilo, prov. Yungas, Cochabamba, Sicasica (ex d'Orb.).

Molothrus badius bolivianus Hellmayr, Verh. Orn. Ges. Bay., vol. 13, 1917, p. 108.

The Bolivian Bay-winged Cowbird occurs in the highlands of central and northern Bolivia (provinces of Cochabamba, Yungas, Sucre, etc.). These birds are similar to the typical race but are somewhat larger and browner above. However Wetmore (Bull. 133 U. S. N. M., 1926, p. 387) writes that a skin in the U. S. National Museum from Mendoza is browner above than others from Buenos Aires but no larger and that another from the last named province has a wing length greater than that given by Hellmayr for *bolivianus*.

Agelaioides fringillarius (SPIX).

Dolichonyx fuscipennis Cassin, Proc. Ac. Nat. Sci. Phil., 1866, p. 7.

Molothrus fuscipennis Cassin, Proc. Ac. Nat. Sci. Phil., 1866, p. 7.

Icterus fringillarius Spix, Av. Bras., i, 1824, p. 68.

Molothrus fringillarius (Spix) Av. Bras., 1, 1824, p. 68; Sclater, Ibis, 1884, p. 8; Ridgway, Bull. 50, U. S. N. M., part 2, 1902, p. 207; Wetmore, 'Auk,' 1919, p. 197.

The Pale Bay-winged Cowbird is an extremely rare bird, being known from less than a dozen specimens. Its range appears to be eastern Brazil from Ceará and Pernambuco to Minas Geraes.

Genus *Molothrus*.

(Subgenus ***Streptovagus***).

Molothrus rufo-axillaris CASSIN.

Icterus brevirostris d'Orb. & Lafr., Syn. Av., vol. 2, 1838, p. 7; Berlepsch, Journ. f. Orn., 1887, pp. 10, 116.

Molothrus rufo-axillaris Cassin, Proc. Ac. Nat. Sci. Phil. 1866, pp. 14, 23; Sclater & Salvin, Proc. Zool. Soc. Lond., 1868, p. 140; Ridgway, Bull. 50 U. S. N. M., part 2, 1902, p. 207.

Molothrus rufoaxillaris Sclater & Hudson, Arg. Orn., vol. 1, 1888, p. 86; Sclater, Cat. Birds Brit. Mus., vol. 11, 1886, p. 338.

Molobrus brevirostris Stempelmann & Schulz, Bol. Ac. Nac. Cienc. Cordoba, vol. 11, 1890, p. 399.

Molothrus brevirostris Chubb, Ibis, 1910, p. 644; Dabbene, Orn. Arg., 1910, p. 402; Wetmore, Bull. 133 U. S. N. M., 1926, p. 386.

The Screaming Cowbird is found in the northern half of Argentina (south to Rio Negro), Uruguay, Paraguay, southern Bolivia,

and southeastern Brazil. It is the only species of Cowbird that has not become different enough in different parts of its range to warrant recognition of geographic forms.

(Subgenus **Molothrus**).

KEY TO THE SPECIES.

- A. Body blackish with a metallic green or bluish sheen males.
 - B. Head coffee brown *M. ater* and races.
 - BB. Head not coffee brown *M. bonariensis* & races.
- AA. Body brownish with no metallic sheen females.
 - B. Height of bill at base less than $\frac{2}{3}$ length of culmen *M. bonariensis* & races.
 - BB. Height of bill at base at least $\frac{2}{3}$ length of culmen *M. ater* & races.

Molothrus bonariensis. CABANIS.

KEY TO THE RACES.

- A. Body with no bright metallic sheen females.
 - B. Wing length less than 90 mm. *minimus*.
 - BB. Wing length more than 90 mm.
 - C. Wing length more than 108 mm. *cabanisii*.
 - CC. Wing length less than 108 mm.
 - D. Middle of abdomen lighter than rest of underparts and streaked with olive-brown. *occidentalis*.
 - DD. Middle of abdomen not lighter than rest of underparts and not streaked with olive-brown.
 - E. Entire body dark blackish *melanogyna*.
 - EE. Body not blackish but brownish.
 - F. Underparts almost as dark as back.
 - G. Wing length more than 98 mm. *aequatorialis*.
 - GG. Wing length less than 98 mm. *milleri*.
 - FF. Underparts much lighter than back.
 - G. Tail 80 mm. or longer. *venezuelensis*.
 - GG. Tail less than 80 mm. *bonariensis*.
 - AA. Body with a bright metallic sheen males.
 - B. Wing length more than 120 mm.
 - C. Wing length more than 125 mm., tail more than 100 mm. *cabanisii*.
 - CC. Wing length less than 125 mm., tail less than 100 mm. *aequatorialis*.
 - BB. Wing length less than 120 mm.

of 12 specimens from the provinces of Cochabamba, Sucre, and Santa Cruz and comparing them with the topotype in the Museum of Comparative Zoology. The basal constriction of the bill and the tomial flexure are not at all constant in this series. The birds average larger than an equal series from Argentina but the extremes of both are about the same and the average difference is not great. Therefore I do not recognize *maxillaris*.

***Molothrus bonariensis minimus*, DALMAS.**

Molothrus minimus Dalmas, Mem. Soc. Zool. France, 13, 1900, p. 138.

Molothrus atronitens Cabanis, in Schomb. Reis. Brit. Guiana, vol. 3, 1848, p. 682; Selater, Ibis, 1884, p. 6; Ridgway, Bull. 50 U. S. N. M., part 2, 1902, p. 211; Stone, Auk, 1891, p. 346.

Molothrus atro-nitens Goeldi, Ibis, 1897, p. 164; Chapman, Bull. Am. Mus. Nat. Hist., 1894, p. 36.

Molothrus discolor Cassin, Proc. Ac. Nat. Sci. Phil., 1866, p. 20.

Lamprospar guianensis (not of Cabanis) Cassin, Proc. Ac. Nat. Sci. Phil., 1866, p. 22.

Molothrus sericeus Selater, Cat. Am. Birds, 1862, p. 135; Newton, Ibis, 1860, p. 308.

Molothrus bonariensis Cory, Auk, 1886, p. 220; Cat. W. I. Birds, 1892, p. 124.

Molothrus bonariensis atronitens Chapman, Bull. Am. Mus. Nat. Hist., vol. 36, 1917, p. 631.

Molothrus bonariensis minimus Hellmayr, Verh. Orn. Ges. Bay., vol. 14, 1920, p. 281.

Range.—Northern Brazil, the Guianas, Venezuela, Colombia (one record La Morelia), Tobago, Trinidad, Grenadines, Lesser Antilles, Vieque, Greater Antilles (introduced) and Barbadoes (introduced). Birds from Venezuela and Colombia are only doubtfully referable to this race and are probably intermediates between *minimus* and *venezuelensis*.

***Molothrus bonariensis venezuelensis* STONE.**

Molothrus venezuelensis Stone, Auk, 1891, p. 347; Brabourne & Chubb, Birds S. Am., 1912, p. 435.

Molothrus discolor (not *Passerina discolor* Vieill.; not Selater & Salvin, Proc. Zool. Soc. Lond., 1879, p. 509) Cassin, Proc. Ac. Nat. Sci. Phil., 1866, p. 20.

Molothrus bonariensis venezuelensis Cherrie, Sci. Bull. Mus. Bklyn. Inst. Arts & Sci., 1916, p. 210.

Range.—Venezuela. This race is easily distinguished from

aequatorialis by the dark color of the females, and larger size of the males in *aequatorialis*.

***Molothrus bonariensis occidentalis* BERLEPSCH AND STOLZMAN.**

Molothrus occidentalis Berlepsch & Stolzman, Proc. Zool. Soc. Lond., 1892, p. 378.

Xanthornus purpurascens Hahn, Vog. aus Asien, Lief v. t. 4; Voeg. as Af. etc., pt. 5, pl. 4, 1819.

Molothrus purpurascens Cassin, Proc. Ac. Nat. Sc. Phil., 1866, p. 20.

Molothrus occidentalis Brabourne & Chubb, Birds S. Am., 1912, p. 435.

Molothrus bonariensis occidentalis Bangs & Noble, Auk, 1918, p. 459; Chapman, Bull. A. M. N. H., 1926, p. 697.

Range.—Western Peru and southwestern Ecuador (coastal).

***Molothrus bonariensis aequatorialis* CHAPMAN.**

Molothrus bonariensis aequatorialis Chapman, Bull. A. M. N. H., 1915, p. 661; 1917, p. 631; 1926, p. 697.

Range.—According to Chapman this race inhabits the tropical zone of southwestern Colombia south into western Ecuador (coastal region or at least west of the Andes). In the American Museum there is a juvenal specimen probably of this race (A. M. N. H. 136758) from southern Panama west of the mountains (Boca de Cupe, Tuyra River, Darien). The range may, therefore, extend along the coast from Ecuador to Darien.

***Molothrus bonariensis cabanisi* CASSIN.**

Molothrus discolor (not *Passerina discolor* Vieill., not Cassin, Proc. Ac. Nat. Sc. Phil., 1866, p. 20) Selater & Salvin, Nom. Av. Neotr., 1873, p. 37, et Proc. Zool. Soc. Lond., 1879, p. 509.

Molothrus cassini Finsch, Proc. Zool. Soc. Lond., 1870, p. 576; Berlepsch, Journ. f. Orn., 1873 p. 250; Selater, Ibis, 1884, p. 6; Allen, Bull. Am. Mus. Nat. Hist., 13, 1900, p. 163.

Molothrus robustus Cabanis MS. teste Finsch, *l. c.*

Molothrus cabanisi Cassin, Proc. Ac. Nat. Sc. Phil., 1866, p. 13; Selater, Ibis, 1884, p. 166; Stone, Auk, 1891, p. 346; Brabourne & Chubb, Birds S. Am., 1912, p. 435.

Molothrus bonariensis cassini Chapman, Bull. Am. Mus. Nat. Hist., vol. 34, 1915, p. 662.

Molothrus bonariensis cabanisi Chapman, Bull. Am. Mus. Nat. Hist., vol. 36, 1917, p. 631.

Molothrus bonariensis cabanisi Todd & Carriker, Annals Carnegie Museum, vol 14, 1922, p. 476.

Range.—This race occurs in the central Andes in Colombia

(and in western Venezuela?). Chapman records it from several stations in the tropical zone west of the eastern Andes in Colombia. The stations are as follows: Caldas, San Antonio, Cali, Miraflores, and San Agustin. According to Todd & Carriker it is rare in the Santa Marta region.

Molothrus bonariensis milleri NAUMBURG & FRIEDMANN.

Molothrus bonariensis milleri Naumburg & Friedmann, Auk, October, 1927, p.

This race seems to be more closely allied to the western *aequatorialis* than to any other. The female of the present race is less olivaceous below and is smaller than the female of *aequatorialis*. The male of *milleri* is bluer, less violaceous, and smaller than that of *aequatorialis*. Range: Brazil, Matto Grosso-Corumba, Descalvados, Cuyaba.

Molothrus bonariensis melanogyna STOLCMAN.

Molothrus sericeus Pelz., Orn. Bras., 1871, p. 200, part.

Molothrus bonariensis, Brabourne & Chubb, Birds S. Am., 1912, p. 434, part.

Molothrus bonariensis melanogyna Stoleman, Ann. Zool. Mus. Polonici. Hist. Nat., 1926, pp. 194-195.

The female is solid blackish above, not brownish as in all other races of this cowbird.

Intermediates between this race and typical *bonariensis* occur in Rio Grande do Sul, Brazil; Paraguay (Puerto Pinasco); and extreme northeastern Argentina (Misiones). The subspecies is known only from the province of Rio de Janeiro (La Raiz, Organ Mts., Serra do Itatiaya, Campo do Jordao) and Parana, Brazil.

Molothrus ater (BODDAERT).

The North American Cowbird has become differentiated into three geographic races:—*ater*, *artemisiae*, and *obscurus*.

KEY TO THE RACES.

- A. Body blackish with greenish metallic sheen..... males.
- B. Wing length less than 105 mm.....*obscurus*.
- BB. Wing length more than 105 mm.
 - C. Wing length more than 112 mm. *artemisiae*.
 - CC. Wing length less than 112 mm. *ater*.

- AA. Body not blackish; with no metallic sheen.....females.
 B. Wing length less than 95 mm.....*obscurus*.
 BB. Wing length more than 95 mm.
 C. Wing length at least 100 mm.....*artemisiae*.
 CC. Wing length less than 100 mm.....*ater*.

The differences between *ater* and *artemisiae* are average ones so that by no means all the specimens of either can be identified by the above key. *M. a. artemisiae* is similar to *M. a. ater* but somewhat larger and with a slenderer bill. *M. a. obscurus* is distinctly smaller than either of the other two. *M. a. californicus* does not seem distinct enough from *obscurus* to warrant recognition. (No specimens seen however.)

***Molothrus ater ater* (BODDAERT).**

Oriolus ater Bodd., Tabl. Pl. Enl., 1783, p. 37.

Molothrus ater Coues, Check List, 1873, p. 43 (part); Bendire, Life Hist. N. Am. Birds, vol. 2, 1895, p. 590 (part); Wetmore, Auk, 1920, p. 402.

Emberiza pecoris Wilson, Am. Orn., 2, 1910, p. 145.

Passerina pecoris Vieillot, Nouv. Dict. d'Hist. Nat., 25, 1819, p. 22.

Molothrus pecoris Swains., Faun. Bor.-Am., 2, 1831, p. 277; Baird, Rep. Pacific R. R. Surv., 9, 1858, p. 524; Salvin & Godman, Biol. Centr.-Am., Aves, 1, 1886, p. 450 part.

Fringilla ambigua Nuttall, Man. Orn. U. S. & Can., 1, 1832, p. 484 (young).

Molothrus ater ater Ridgway, Birds N. & Middle Am., 2, 1902, p. 207 part; Barrows, Mich. Bird Life, 1912, p. 434; Chapman, Handb. Birds E. N. Am., 1912, p. 359.

Range (breeding).—United States and Canada, north to Nova Scotia, New Brunswick, central Quebec and southern Ontario; west to eastern Minnesota, northern Iowa, central Nebraska, southwestern Kansas, and the greater part of New Mexico (except the extreme west); south to central Texas, the greater part of Louisiana, south central Arkansas central Tennessee, southeastern Kentucky, and central Virginia; east to the Atlantic coast from Ashland, Virginia, north to Dartmouth, Nova Scotia.

Range (winter).—United States and Mexico, north to Massachusetts, New York, and Michigan, south to Florida, Alabama, Mississippi, Louisiana, Texas, and central Mexico (Michoacan). Accidental in Bermuda.

***Molothrus ater artemisiae* GRINNELL.**

Molothrus ater artemisiae Grinnell, Univ. Cal. Publ. Zool., 5, 1909, p. 276; Taylor, Univ. Cal. Publ. Zool., 7, 1912, p. 380; Oberholser, Auk, 1918, p. 209.

Molothrus ater dwighti Bishop, Auk, 1910, p. 61.

Molothrus ater Baird, Orn. Simpson's Exp., 1876, p. 379; Am. Ornith. Union Check List, 1886, no. 495 part; Preble, N. Am. Fauna 27, 1908, p. 407.

Molothrus ater ater Ridgway, Bull. 50, U. S. N. M., part 2, 1902, p. 207 part; Visher, Auk, 1912, p. 110; Burleigh, Auk, 1921, p. 558.

Molothrus pecoris Baird, Rep. Pacific R. R. Surv., 9, 1858, p. 524 part; Cassin, Proc. Ac. Nat. Sc. Phil., 1866, p. 17 part; Henshaw, Zool. Exp. W. 100th Merid., 1875, p. 312 part.

Emberiza pecora Say in Long's Exp. Pittsburgh to Rocky Mts., 2, 1823, p. 199 footnote, part.

Range (breeding).—Western North America, north to southern Manitoba, southwestern Mackenzie, and central British Columbia; west to southwestern British Columbia, western Washington, central Oregon, and eastern California; south to south eastern California, southern Nevada, Utah, south central Colorado, south central Nebraska and southeastern South Dakota; east to Minnesota.

Range (winter).—South to Texas, Vera Cruz, and Michoacan, Mexico, north to the Canadian border; accidental on the Farallon Islands, Calif.

***Molothrus ater obscurus* (GMELIN).**

(*Sturnus*) *obscurus* Gmelin, Syst., Nat. 1, pt., 2, 1788, p. 804.

Molothrus obscurus Cassin, Proc. Ac. Nat. Sc. Phil. 1866, p. 18; Brewer, Bull. Nutt. Orn. Cl., vol. 4, 1879, p. 123.

Molothrus pecoris var. *obscurus* Baird, Brewer, & Ridgway, Hist. N. Am. Birds, 1874, vol. 2, pl. 32, fig. 8; Lawrence, Mem. Bost. Soc. Nat. Hist., vol. 2, 1874, p. 280.

Molothrus ater obscurus Coues & Sennett, Bull. U. S. Geol. & Geogr. Surv. Terr., vol. 4, 1878, p. 22; Ridgway, Bull. 50 U. S. N. M., part 2, 1902, p. 210.

Molothrus ater californicus Dickey & Van Rossem, Condor, 1922, p. 308.

Range.—Resident in Mexico and the southwestern United States north to southern Louisiana, southern Texas, southwestern New Mexico, southern Arizona, and southern California; south to Colima, Oaxaca, and Vera Cruz, Mexico.

Genus **Tangavius.**

KEY TO THE SPECIES.

- A. Body silky brown with golden reflections. *T. armenti* ad. male¹
 AA. Body not silky brown, with no golden reflections. *T. aeneus* male & female.

¹ Female of *T. armenti* not known.

Tangavius armenti (CABANIS).

Molothrus armenti Cabanis, Mus. Hein., 1, p. 192; Journ. f. Orn., 1861, p. 82; Cassin, Proc. Ac. Nat. Sc. Phil., 1866, p. 18.

Range.—Coast region of Colombia; Cartagena (Cabanis), Savanilla (Lawrence). Cassin recorded a specimen from Demarara, but the identification was probably wrong. The specimen was said to have been in the collection of the Academy of Natural Sciences at Philadelphia, but Dr. Witmer Stone tells me that he has no knowledge or recollection of any specimen of *T. armenti* in that institution. It probably was an immature *Molothrus bonariensis minimus*. As far as I have been able to discover only four specimens of this rare bird exist in the museums of the world; an adult male in the Amer. Mus. Nat. Hist. at New York and three immature birds in the Berlin Museum. The specimen listed in the 'Cat. Birds Brit. Mus.' is probably not of this species. It was listed doubtfully as *armenti* and recorded as from Venezuela. It came to the British Museum with the Sclater collection. In Sclater's catalogue it is listed as "Molothrus? (ins. Trinitat?)."

Tangavius aeneus (WAGLER).

KEY TO THE RACES.

- A. Wings and tail with a vivid metallic sheen. adult males.
 B. Back and rump alike, bronze color. *T. a. involucratus*.
 BB. Back bronze color; rump distinctly violet.
 C. Wing over 112 mm. *T. a. aeneus*
 CC. Wing under 112 mm. *T. a. assimilis*.
 AA. Wings and tail with no vivid metallic sheen. females and young
 B. General color dark sooty gray or blackish.
 C. Wings and tail slightly glossed with bluish green. *T. a. involucratus* ad. female.
 CC. Wings and tail not glossed. *T. A. involucratus* yg. male.

BB. General color not very dark; sooty gray.

C. Upper parts faintly glossed; feathers of back with darker centers. *T. a. aeneus* ad. female.

CC. No gloss above; feathers of back with no darker centers.

D. Under parts indistinctly streaked with pale yellowish gray. *T. a. aeneus* yg. male.

DD. Under parts unstreaked. *T. a. involucratus* yg. male.

NOTE.—I have not seen any adult females or young of *T. a. assimilis* but they probably differ from the corresponding plumages of *T. a. aeneus* in size only, the ratio being the same relatively as given for the adult males. I have also not seen any young females of *T. a. aeneus*.

Tangavius aeneus aeneus (WAGLER).

Psarocolius aeneus Wagler, Isis, 1829, p. 758.

Agelaius aeneus Gray, Gen. Birds, 2, 1849, p. 346.

M(olothrus) aeneus Cabanis, Mus. Hein., 1, 1851, p. 192 footnote; Ridgway, Man. N. Am. Birds, 1887, p. 367 part.

Molothrus aeneus Cassin, Proc. Ac. Nat. Sc. Phil., 1866, p. 18 part; Selater, Cat. Birds Brit. Mus., vol. 11, 1886, p. 334, part; Salvin & Godman, Biol. Centr.-Am., Aves, 1, 1886, p. 451 part.

C(allothrus) aeneus Ridgway, Man. N. Am. Birds, 1887, p. 589 part.

Callothrus aeneus aeneus Ridgway, Bull. 50 U. S. N. M., part 2, 1902, p. 203.

Range.—The lowlands of western Mexico, in the states of Sonora and Sinaloa and the Territory of Tepic, north to southern Arizona (Sacaton).

Tangavius aeneus involucratus LESSON.

Molothrus aeneus Selater, Proc. Zool. Soc. Lond., 1856, p. 300; Cat. Birds Brit. Mus., vol. 11, 1886, p. 334; Am. Ornith. Union Check-List, 1886, no. 496; Salvin & Godman, Biol. Centr.-Am., Aves, 1, 1886, p. 451 part.

Agelaius aeneus Cassin, Proc. Ac. Nat. Sc. Phil., 1848, p. 90.

Icterus bonariensis Bp., Proc. Zool. Soc. Lond., 1837, p. 116.

M(olothrus) robustus Cabanis, Mus. Hein., 1, 1851, p. 193; Ridgway, Man. N. Am. Birds, 2d ed., 1896, p. 367 part.

Callothrus robustus Ridgway, Man. N. Am. Birds, 1887, p. 594; Bendire, Rep. U. S. N. M., 1893, p. 599; Ridgway, Bull. 50 U. S. N. M., part 2, 1902, p. 201.

Tangavius involucratus Lesson, Revue Zool., II, 1839, p. 41.

Range.—Eastern Mexico and Central America breeding north to San Antonio, Texas. From Texas its range extends through

eastern Mexico (states of Tamaulipas, Vera Cruz, Puebla, northern Oaxaca, and Yucatan), Guatemala, Nicaragua, Costa Rica, to Veragua, Panama.

Tangavius aeneus assimilis (NELSON).

Molothrus aeneus (not *Psarocolius aeneus* Wagler) Cassin, Proc. Ac. Nat. Sc. Phil., 1866, p. 18 part; Lawrence, Mem. Bost. Soc. N. H., 2, 1874, p. 281 part; Salvin & Godman, Biol. Centr.-Am., Aves, 1, 1886, p. 451 part.

C(allothrus) aeneus Ridgway, Man. N. Am. Birds, 1887, p. 589 part.

Callothrus aeneus assimilis Nelson, Auk, vol. 17, 1900, p. 266; Ridgway, Bull. 50 U. S. N. M., part 2, 1902, p. 204.

Range.—Southwestern Mexico in the states of Jalisco, Colima, Guerrero, and the Pacific slopes of Oaxaca.

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