

GEOGRAPHIC VARIATION IN SPIZELLA ATROGULARIS.

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THAT the Black-chinned Sparrow of southern California and Lower California differs in some measurements from specimens of this species from the Mexican plateau has been pointed out by Ridgway (Birds N. and Mid. Am., part 1, 1901, p. 323, footnote). Coues (Proc. Acad. Nat. Sci. Phila., 1866, p. 87) had previously suggested the possibility that birds from these two regions represent two distinct forms; but his idea was based upon certain plumage variations which are, as it turns out, seasonal, and not peculiar to birds from either section.

With the assistance of Dr. Louis B. Bishop and Mr. J. Eugene Law, supplementing the resources of the Museum of Vertebrate Zoölogy, specimens in fair sufficiency are available to us from Arizona, and these differ from southern California birds just as do the Mexican ones, judging from the measurements given by Ridgway (*loc. cit.*). There are evidently two recognizable forms of the Black-chinned Sparrow, one occurring on the Mexican plateau and northward into central Arizona, the other in southern and Lower California. The Arizona birds appear to be of larger size, though in measurements this size difference is definitely reflected only in the longer tail. The wing and tail feathers are so markedly affected by wear in this species that it is essential that comparisons be made between specimens taken at the same season. Furthermore, in the Arizona subspecies the lower parts are of a clearer gray. In the California birds the breast has a slight, but appreciable, brownish cast.

In Lower California the Black-chinned Sparrow occurs probably as a summer visitant in the mountains in the northern part of the peninsula, and as a winter visitant in the Cape San Lucas region. Birds from both sections prove to be the same as those from southern Upper California. Now as to names for the two races:

Spinites atrogularis Cabanis (Mus. Hein., i, April, 1851, p. 133, footnote) was described from "Mexico." The name *Struthus atrimentalis* Couch (Proc. Acad. Nat. Sci. Phila., VII, April, 1854,

p. 67), applied to a specimen from Agua Nueva, Coahuila, Mexico, may be passed as a synonym of *atrogularis*. *Spizella evura* Coues (Proc. Acad. Nat. Sci. Phila., 1866, p. 87, in synonymy), applied to the young plumage, from Fort Whipple, Arizona, and a name of peculiar standing (see Ridgway, *loc. cit.*), may also be ignored in this connection. We do find a name, however, that appears to be available for the Pacific coast subspecies of *Spizella atrogularis*.

Coues (*loc. cit.*) in his account of the species says: "Several specimens from Cape St. Lucas, in precisely the plumage of my autumnal Whipple examples, I find labelled by Baird with the MSS. name 'S. *cana*, n. s.' " This seems to be the first place in which the name *cana* appears in print. Baird's type specimen, no. 23867, collection of the United States National Museum, is, through the courtesy of Dr. C. W. Richmond, available to us for examination. It is labelled as collected by John Xantus (original number 6022) in the Sierra San Gertrude, Lower California, January, 1861. There is some uncertainty as to the date and exact locality, as Dr. Richmond advises us that in Xantus' original field catalogue, no. 6022 is entered as a "*Peucaea*," from Cape San Lucas, October 15, 1860. However that may be, we have here a specimen of Black-chinned Sparrow from the Cape region of Lower California, definitely designated as a type and with a name affixed. This bird, together with others from that region, is exactly like southern California birds in appearance. In fact, it seems likely that at least some of the birds breeding in southern California spend the winter in southern Lower California. The name *cana*, though originating with Baird, must be accredited to Coues, since the latter was the first author actually to publish the name.

Our conclusions are that there are two recognizable forms of the Black-chinned Sparrow, with names and diagnoses as follows:

Spizella atrogularis atrogularis (Cabanis). MEXICAN BLACK-CHINNED SPARROW.

S[*pinites*]. *atrogularis* Cabanis, Mus. Hein., i, April, 1851, p. 133, footnote.

Type locality.—"Mexico."

Range.—From west-central Arizona, as far north as the Hualpai Mountains and Fort Whipple southward over the Mexican plateau. A single

Spizella atrogularis atrogularis

			Wings ^s	Tail	Culmen	Depth of bill	Tarsus	Middle toe without claw
36988 ¹	♂	Chiricahua Mts., Ariz.	Dec. 6, 1923	75.0	9.0	6.0	20.0	13.2
27744 ²	♂	Sierra Ancha, Ariz.	June 20, 1917	69.2	9.2	6.2	20.0	12.5
13200 ³	♂	Colorado R., Calif., opp. The Needles	Mar. 3, 1910	—	9.0	6.2	19.0	12.2
6982 ³	♂	Chiricahua Mts., Ariz.	June 24, 1921	61.0	9.0	6.0	19.0	12.2
36939 ¹	♀	Chiricahua Mts., Ariz.	Nov. 6, 1923	62.0	8.8	6.0	20.0	12.5
6983 ³	♀	Chiricahua Mts., Ariz.	June 24, 1921	58.0	9.0	6.0	—	12.0

Spizella atrogularis cana

4300 ⁴	♂	San Jose, Lower Calif.	May 5, 1925	62.0	8.8	5.2	18.5	10.2
36661 ¹	♂	El Valle, Lower Calif.	Jan. 28, 1924	58.0	9.2	6.0	17.0	10.2
36660 ¹	♂	El Valle, Lower Calif.	Jan. 22, 1924	61.0	8.2	5.8	18.5	11.5

Measurements in millimeters (average, minimum and maximum) of *Spizella atrogularis cana* from southern California; 10 males

Wing	Tail	Culmen	Depth of bill	Tarsus	Middle toe without claw
62.6 (60.0-64.5)	66.7 (64.0-70.0)	8.7 (8.2-9.0)	5.7 (5.5-6.0)	18.0 (17.5-19.0)	11.8 (11.0-12.5)

¹ Coll. L. B. Bishop.
² Coll. Mus. Vert. Zool.
³ Coll. J. E. Law.

⁴ C. Lamb, field number.
^s Measurements in millimeters.

specimen taken on the west side of the Colorado River opposite The Needles, March 3, 1910 (Mus. Vert. Zool. no. 13200), brings this subspecies into the avifauna of California.

Characters.—Slightly larger, with notably longer tail (see accompanying table). Under parts, of a clearer, more slaty tone of gray.

Spizella atrogularis cana Coues. CALIFORNIA BLACK-CHINNED SPARROW.

S[pezella]. cana Coues, Proc. Acad. Nat. Sci. Phila., 1866, p. 88, in text ("Cape St. Lucas," Lower California; ex Baird MS).

Type.—Male; no. 23867, United States National Museum; Sierra San Gertrude, Cape San Lucas region, Lower California, Mexico; January, 1861; collected by John Xantus; original no. 6022.

Range.—From central California, as far north as Independence Creek, Inyo County, Coulterville, Mariposa County, and eastern Alameda County, southward over southern California to the southern end of the Lower Californian peninsula.

Characters.—Smaller, with decidedly shorter tail. Gray of under parts with an appreciable brownish cast.

We are under obligations to Dr. Chas. W. Richmond, Associate Curator, U. S. National Museum, not only for the loan of the type specimen of *Spizella cana*, but for an expression of his authoritative opinion as to the application of the several names that have been based upon specimens of *Spizella atrogularis*.

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