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JOHN G. ERICKSON, 2515 Thomas Ave. S., Minneapolis 5, Minnesota.

**The Generic Allocation of the Green-tailed Towhee.**—The Green-tailed Towhee, currently placed in the genus *Chlorura* Sclater, 1862, was originally described by Audubon (1839). The twenty-second supplement (1947) to the American Ornithologists' Union Check-List of North American birds designates the species as *Chlorura chlorura* (Audubon). The species breeds from central Oregon and south-central Montana to southern California, southeastern New Mexico, and central western Texas. In general it is a bird of the mountains or, in the Great Basin, of high plateau country. The purpose of the present paper is to present evidence to show that this species is a true *Pipilo* allied to the type species, *Pipilo erythrophthalmus*, by way of the closely related *Pipilo ocai*, the Collared Towhee, of Mexico.

Few species of North American birds have been moved about generically more than the Green-tailed Towhee. Ridgway (1901: 401-402) lists eight genera in the synonymy of the species and there have been two others in use since 1901. The species appeared most frequently in the literature under *Pipilo* prior to 1896 when Ridgway placed it in a new monotypic genus, *Oreospiza*. He proposed this separation in spite of his remarks favoring it as a *Pipilo*, which appeared in 1890 in a review of a work by Salvin and Godman. Salvin and Godman (1879-1887) had placed the species in *Embernagra*, and Ridgway correctly pointed out the line of relationship to the true towhees via the rufous-capped Mexican forms currently known as *P. ocai*.

The original use of the genus *Oreospiza* for the Green-tailed Towhee appears on page 439 of Ridgway's "Manual" (1896), and in the appendix (1896: 605) he writes as follows:

"Page 439, *Pipilo chlorurus* (= *Oreospiza chlorura*): This bird, which has been referred by different authors to the genera "*Embernagra*" (i. e. *Arremonops*) and *Atlapetes*, but which is really far more out of place in either than in *Pipilo*, I propose to make the type of a new genus, *Oreospiza*, whose characters are intermediate between, or rather a combination of, those of *Pipilo* and *Zonotrichia*."

This constitutes the original description of the genus.

Five years later Ridgway (1901: 399) wrote the following: "*Oreospiza* is inter-

mediate between *Pipilo* and *Zonotrichia*, though much nearer the former, with which it agrees in its stout feet with long claws, rounded tail, and form of bill. Its coloration, too, is not so abnormal for *Pipilo* as has been supposed, every feature of color—rufous cap, white throat, yellow carpal edge, and olive-green upper parts—being shared by some species of that genus, though by none in the same combination. The wing, however, is very different from that of *Pipilo*, being quite the same in the relative length of the primaries as that of *Zonotrichia*, that of *Z. albicollis* being even more rounded."

In the statement quoted above with reference to color features, Ridgway's remark that the rufous cap and other color characters are, "shared . . . , though by none in the same combination," is simply in error. *Pipilo ocai* combines these and other color characters also found in the Green-tailed Towhee. It thus seems that Ridgway's only remaining basis for separation is that of wing shape which, in the Green-tailed Towhee, is longer and more pointed than in *Pipilo ocai* and *P. erythrophthalmus*.

Long, pointed wings are characteristic of species which are strong flyers or which make long migratory flights. Mayr (1942: 92, 95) discusses the correlation between wing length and geographic distribution and points out that forms of cooler climates tend (1) to have longer wings and (2) to be more migratory than forms of warmer climates.

The Green-tailed Towhee is migratory, and it seems apparent that the relatively longer wing is correlated with this habit.

Further changes in the generic position of the Green-tailed Towhee, following Ridgway's description of *Oreospiza*, have been dictated solely by nomenclatural problems. In 1915 Richmond proposed the genus *Oberholseria* to replace *Oreospiza* Ridgway, 1896, because the latter was preoccupied by *Oreospiza* Keitel, 1857. The change to *Chlorura* Sclater, 1862, was effected in 1947, as noted above, since *Chlorurus* Swainson, 1839, was deemed not to preoccupy Sclater's name.

In view of the foregoing it can scarcely be argued that the basis for *Oreospiza* Ridgway is entirely beyond question. It now remains to present the evidence in favor of its inclusion with the true towhees in the genus *Pipilo*.

In two recent papers (1950; 1954) I have described the extensive hybridization which occurs in Mexico between *Pipilo erythrophthalmus* and *Pipilo ocai*. Nearly 1,500 specimens showing evidence of hybridization between these two species have been examined up to the present. The two species are strikingly different in color pattern (1950: plate 11), and *P. ocai* is approximately 30 per cent heavier in weight than *P. erythrophthalmus*. Moreover, these species show well-marked, but overlapping, ecological differences (1950: 152-153; 1954: 270-273). Their songs, although similar, are easily distinguished, but the common call notes of the two are easily confused. Their eggs are alike in color and pattern, and both build similar nests. Both are species of dense underbrush and both scratch in the leaf litter in the same manner. *P. ocai* is primarily a bird of the understory vegetation at the higher elevations where the dominant trees are conifers. *P. erythrophthalmus* occurs most abundantly in the brushy thickets at lower elevations where oaks are more frequently dominant. Hybridization occurs at some of the points where the two species come into contact.

The situation concerning the degree of relationship between *ocai* and *erythrophthalmus* is relevant here in order to establish beyond any doubt that these two are properly considered congeneric. If this be granted then it remains only to demonstrate the close relationship between *P. ocai* and the Green-tailed Towhee in order to show the latter also to be a *Pipilo*.

In color pattern the Green-tailed Towhee is far more similar to *P. ocai* than the latter is to *P. erythrophthalmus*. The Green-tailed Towhee looks like a diminutive edition of *ocai* with the breast and facial areas gray rather than black. If size alone is considered of importance it may be pointed out that one race of *P. erythrophthalmus*, the Socorro Island population, *P. e. carmani*, is smaller than the Green-tailed Towhee.

The ecological preferences of the Collared and Green-tailed towhees are extremely similar. Both occur in dense brushy vegetation, and in many parts of its range the Green-tailed occupies the shrubby undergrowth associated with conifers.

The songs of the two species are recognizably different but show a remarkably similar pattern. After becoming familiar with the song of *P. ocai* at many localities in Mexico in 1946 and 1948, I heard the song of the Green-tailed Towhee near Irwin, Bonneville County, Idaho, on July 10, 1949. The similarity in the two songs was striking. The call notes are even more alike. Both utter a mewling note which may be written, "zree" or "zew." This cat-like note is also characteristic of many races of *P. erythrophthalmus*, especially the "Spotted Towhees" of the western United States and Mexico.

In coloration and pattern of markings, the eggs of *P. erythrophthalmus*, *P. ocai*, and the Green-tailed Towhee are nearly identical. All of these species lay eggs which have a whitish ground color with reddish markings.

The evidence presented above contains many points in favor of including the Green-tailed Towhee in *Pipilo*, but there is another line of reasoning which, although negative, bears on the question. The so-called brown towhees, *Pipilo fuscus*, *rutilus*, and *aberti*, are probably not so closely allied to *P. erythrophthalmus* as is the Green-tailed Towhee. Davis (1951: 100-102) suggests that the brown towhees may be more closely related to the genus *Melospiza* and not congeneric with the red-eyed towhees, *ocai* and *erythrophthalmus*. I am in agreement with Davis on this point and propose, as a first step toward the correct generic alignment of these various forms, that the Green-tailed Towhee be recognized as a true *Pipilo*. If one is to disagree with this proposal he must justify the inclusion of the brown towhees in *Pipilo* because they are without doubt less closely related to the type species, *Pipilo erythrophthalmus*, than is the Green-tailed Towhee.

The name of the Green-tailed Towhee becomes *Pipilo chlorurus* (Audubon) if this recommendation is accepted.

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CHARLES G. SIBLEY, *Department of Conservation, Cornell University, Ithaca, New York.*

**A Hybrid Longspur from Saskatchewan.**—When members of two populations belonging to categories of the rank of species or higher mate and produce viable offspring the resulting individuals are termed "hybrids." (Mayr, 1942: 258.) "Sympatric hybridization" is applied to examples in which an occasional hybrid is formed between two species which coexist over large areas without interbreeding (Mayr, 1942: 259).

The Chestnut-collared Longspur (*Calcarius ornatus*) and the McCown's Longspur (*Calcarius mccownii*) are sympatric over most of their breeding ranges. Both nest in the prairie regions of south-central Canada and the north-central United States. They are frequently reported as summer residents at the same locality. However, the two species do exhibit different ecological preferences. In southwestern Saskatchewan, Bent (1908:30) reported Chestnut-collared Longspurs "more abundant on the more grassy prairies" and McCown's "commoner on the more barren plains." In the eastern half of Montana, Saunders (1921: 114-116) found the Chestnut-collared preferring "areas of rather long grass bordering marshy ground, or in wet hollows where the soil is alkaline" and the McCown's more abundant on "the high, dry prairie benches" where "the grass is shorter than in places inhabited by *C. ornatus*." These same differences in habitat have been emphasized by DuBois (1935) in his studies of both longspurs in Teton County, Montana. Bailey and Niedrach (1938: 244) found that in north-central Colorado, "the flat expanses were typical nesting areas of the McCown's Longspurs and the valleys of the Chestnut-collared." Although these observations indicate well-marked average differences in habitat preference each of the authorities cited also points out that both species may at times nest in the same or closely adjoining areas.

Between May 23 and June 4, 1946, one of us (Pettingill) engaged in field studies near the town of Kronau, eighteen miles southeast of Regina, Saskatchewan. The area is part of the so-called Regina Plain, a flat, treeless region mostly under cultivation except for occasional pastures and small areas along streams and roads. These uncultivated areas were covered with grass, usually quite thick and tall, and stalks of scrubby vegetation occurring in clumps or as scattered plants. Many of these areas were investigated and Chestnut-collared Longspurs established on territories were invariably found. In addition Western Meadowlarks (*Sturnella neglecta*) and Baird's Sparrows (*Ammodramus bairdi*) were present, but there were no McCown's Longspurs.