

AN UNDESCRIBED INSULAR RACE OF THE CAROLINA WREN

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Dog Island, 7 miles long and with a maximum width of 1 mile, lies slightly more than 3 miles off the coast of Franklin County, Florida, from which it has been separated for about 20,000 years by the general submergence of the coastline. Possibly two-thirds of its area is suitable for Carolina Wrens (*Thryothorus ludovicianus*). Although the gaps in the island chain of which Dog Island is a part and the gap between the western end of this chain and the mainland represent distances of less than 3 miles, the easternmost of these gaps is probably a more effective barrier for most small land birds than is readily apparent. The distance between western Dog Island and eastern St. George Island is scarcely more than 2 miles, but about 2½ to 3 miles of the eastern end of St. George Island are devoid of trees and virtually without shrubby vegetation. This barrier should be as effective for Carolina Wrens as the water gap between Dog Island and the mainland.

In an attempt to determine the amount of possible divergence in the Dog Island population, several of us collected a series of Carolina Wrens there from 1960 through 1970. During the period 1958 to 1970 a comparable series was taken on the adjacent mainland (chiefly Leon, Wakulla, and Franklin Counties), and a smaller series was taken on St. George Island from 1962 to 1971. Because of the rapid fading of color in this species, it is important that all specimens were collected within the same 13-year period.

For the purpose of comparing wing and tail length, all specimens collected from October until young appeared in spring were treated as adults, except for one October specimen with sheaths at the bases of the rectrices. Summer-collected adults are typically pale and were not used in the color comparisons, but were included in the specimens measured. Immatures collected before October were not used in the study.

The following measurements were made with dial calipers: wing chord, length of tail, tarsus, and bill from nostril. Because of the possibility of changes due to growth or feather abrasion throughout the year, specimens were divided into the following seasonal groups: October–December, January–April, May–August. Differences among these groups, however, proved slight and inconsistent, and the number of specimens in most groups constituted too small a sample. Therefore

all populations were ultimately represented by their year-round averages, except that the sexes were separated.

In all measurements taken, Dog Island birds differed only slightly from those on St. George Island and the adjacent mainland, with a great deal of overlap. Assuming that the small number of specimens from Dog Island is representative, there is some indication that this population has a relatively longer tail, thus producing a high tail/wing ratio, but the difference is not statistically significant.

In comparing color in these series of wrens, precautions were taken to overcome the difficulties inherent in working with this species (Lowery, Auk, 57: 95, 1940). All specimens used in the study were of comparable age (1958–71), clean, and not treated with borax. To allow for seasonal fading, populations were compared within seasonal groups (October, November–December, January–February, and March–April). No consistent color differences between the sexes could be detected. Although individual variation is considerable in most seasonal groups, only 4 of the 17 Dog Island specimens are as dark as those collected at comparable seasons on the mainland. On this basis the new race is described.

Thryothorus ludovicianus nesophilus

TYPE: Adult male, No. 564737 U. S. National Museum. Collected on Dog Island, Franklin County, Florida, 29 January 1962, by Henry M. Stevenson. (Original number, Florida State University 5520w.)

DESCRIPTION OF TYPE: Upperparts rufous brown to grayish brown, approaching umber on head, the secondaries and rectrices with numerous, faint, fuscous crossbars; primaries largely fuscous with pale buffy spots; chin, upper throat, and superciliary stripe white; sides of neck with some white to pale buffy spots; remainder of underparts pale buffy cinnamon to whitish (paler than most specimens from the mainland). Bill brownish, but paler near base of lower mandible; feet fleshy brown.

MEASUREMENTS (mm): Adult males (12): wing, 53.8–62.0 (58.8); tail, 45.2–54.3 (48.6); bill from nostril, 11.0–13.3 (12.3); tarsus, 19.8–22.7 (21.7). Adult females (7): wing, 54.0–57.5 (55.6); tail, 43.6–47.1 (45.4); bill from nostril, 11.0–12.7 (11.9); tarsus, 20.0–21.3 (20.7).

DIAGNOSIS OF SUBSPECIES: Similar in size and color to *T. l. ludovicianus* (*T. l. euronotus* of Lowery), but differing in having paler underparts, a whiter superciliary stripe, and possibly in having a higher tail/wing ratio. Compared with *T. l. burleighi*, it is less pale, has shorter wings (significant at the 1 percent level), and longer tail (significant at the 5 percent level).

RANGE: Confined to Dog Island, Franklin County, Florida.

REMARKS: Two fall males (FSU 5520mm and 5520nn) were unusually dark, their underparts matching those of the darkest mainland birds, but the superciliary stripe is whiter. The possibility that an occasional mainland bird may wander to the island in fall cannot be entirely dismissed, as such wandering occurs (though rarely) among the Florida Keys. Although birds collected in summer were omitted from the color comparisons, they too appear paler below than most mainland birds collected in that season. The paler color of this race may represent an adaptation to the less densely wooded habitat it occupies.

In describing a Mexican race of this wren (*T. l. tabascensis*), Lowery and Berrett (Occ. Pap., Mus. Zool., Louisiana State Univ., No. 24, 1963) mentioned "fine but very noticeable dusky flecking or spotting on the under parts. . . on both the upper breast and abdomen as well as on the sides and flanks," stating that such spotting was not observed in any other Carolina Wrens examined. Of more than 100 specimens I studied, only two collected on Dog Island and one from St. George Island show distinct ventral spotting. The much larger series from the mainland contains no bird with distinct ventral spots.

COMPARISON WITH NEARBY INSULAR POPULATIONS: Wrens collected on St. George Island tend to be intermediate in ventral coloration between those from Dog Island and those from the mainland but are closer to the mainland birds. Both sexes have a lower tail/wing ratio than either of the other populations, but the differences are small when the comparison is made with mainland birds, and the number of specimens constitutes too small a sample. In any case, the tail/wing ratio is near the opposite end of the scale from that in the Dog Island population. Therefore, it seems best at this time to consider St. George Island birds with the mainland race. St. Vincent Island (west of St. George) is separated from the mainland by less than a mile, and much of it is heavily wooded. It seems most unlikely that its Carolina Wrens would differ materially from those on the mainland. The two specimens collected there resemble mainland birds and have been included with them in this study.

COMPARISONS WITH OTHER POPULATIONS: Carolina Wrens inhabiting most of the Florida Peninsula (*T. l. miamensis*) are distinctly larger and darker than those in northwest Florida, which are, in turn, darker than the Dog Island birds. In fact, the only population of wrens previously described as paler than the birds on the coastal mainland is that inhabiting islands off the Mississippi coast (*T. l. burleighi*). The likelihood that the Dog Island birds are more closely related to *burleighi* than to the population on the adjacent mainland, *T. l. ludovicianus*,

from which they were presumably derived, seems extremely remote, but the possibility had to be considered. Loans of all specimens except the type of *T. l. burleighi* were obtained from the U. S. National Museum and from Louisiana State University, and from the latter institution smaller series from the mainland of Mississippi and of Louisiana were borrowed. All of these were compared with the new race in color and measurements. It should be mentioned, however, that the number of specimens was too small in some cases. Also, as Lowery pointed out (pers. comm.), some fading had occurred since the description of *burleighi* (Lowery, Auk, 57: 95, 1940). As a result, nearly all these birds were markedly paler than those from northwest Florida, having been collected 10 to 20 years earlier. Therefore it may be of little significance that the specimens of *burleighi* were the palest of all those examined, including the Dog Island population. Their museum age, however, cannot account for their noticeably small size and relatively long wings and short tail. These differences from the Dog Island population proved to be statistically significant in both sexes. The resulting tail/wing ratios were 74.0 percent in males and 75.7 percent in females, as against 81.8 percent in each sex in *nesophilus*. Although longer wings are hardly to be expected in insular forms of land birds, the important point is that the variation takes an opposite direction from that in Dog Island birds.

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