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VARIATION IN THE SHARP-TAILED SPARROWS

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In 1995, following Greenlaw (1993), the AOU split the Sharp-tailed Sparrow into two species, the Saltmarsh (*Ammodramus caudacutus*) and Nelson's (*A. nelsoni*) Sharp-tailed Sparrows. The former breeds in coastal saltmarshes of the central East Coast, the latter in the northern interior, around the southern coast of Hudson Bay, and along the northeastern seaboard. Both species winter along the southern Atlantic coast of the U.S.; Nelson's also occurs along the northern coast of the Gulf of Mexico, and small numbers reach coastal California.

Rising (1996) discussed plumage features distinguishing the Saltmarsh from Nelson's in the field and indicated that these species are readily separable by fairly simple means (e.g., presence vs. absence of breast streaking). Sibley (1996) covered the plumage and structure of the sharp-tailed sparrows, acknowledged identification pitfalls due to hybridization and plumage variability, and proposed field marks to help refine our ability to distinguish the two. Mlodinow (1997) voiced concerns that photographs in Sibley (1996) did not always agree with the text and that some birds pictured might not be identifiable to species in the field, valid points that reflect two related issues. First, even an excellent photograph does not always enable a bird to be identified; take heed of this when watching any problematic species—do not walk away once you think you have a good photograph. Rather, watch the bird, make sketches and field notes, and try to obtain a series of photos. Second, the two species of sharp-tailed sparrow can indeed be difficult to distinguish!

Integral to advancing our knowledge of any such identification problem is an appreciation of individual variation within a species. In California, the only known sharp-tailed sparrow is the brightly marked nominate race of Nelson's (*A. n. nelsoni*), on geographic grounds the form most expected to occur. The Saltmarsh Sharp-tailed Sparrow is most unlikely in the West. Key plumage features Sibley (1996) listed for nominate Nelson's relative to the Saltmarsh: bright orange in face contrasts little or not at all with the orange breast and usually buffy throat; grayish whisker line, so orange submoustachial blends directly into buffy throat; breast streaking usually faint grayish or brownish, mainly on sides of lower breast; the orange breast contrasts sharply and cleanly with the white belly. The duller, northeast Atlantic coast race of Nelson's, *A. n. subvirgatus*, is relatively distinctive, as discussed by both Rising (1996) and Sibley (1996).

Howell photographed the trio shown on the back cover when they were caught and banded at Bolinas Lagoon, Marin County, California, on 25 January 1990. All were considered to be nominate Nelson's (supported by measurements), and they showed a healthy degree of intraspecific variation. In particular, the heavy dark breast streaking of two birds, and the dark whisker and whitish throat of the center bird, are atypical of Nelson's. One visible plumage feature favoring Nelson's is the similar color and tone of orange on the face and chest. Interestingly, though, a different, close-up photo of one of these birds suggests that the face is brighter than the chest (similar to Figure 12 of Sibley 1996), again highlighting the danger of using photos to evaluate subtle tones and contrasts. Other photos of all three birds show a contrasting white belly (not shown well in the Featured Photo, but good for Nelson's).

Which plumage features should be given greater weight in establishing an identification? Having learned the inherent variability of some plumage features, many field

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observers are extending their focus to structural characters that tend to be less variable. For example, while the typical colors of female Scarlet (*Piranga olivacea*) and Summer (*P. rubra*) tanagers are reasonably distinctive, an oddly plumaged bird could present problems—but not if one studies details of bill structure. Sibley (1996) noted two structural characters that might be of use for separating Nelson's and Saltmarsh sharp-tailed sparrows: bill size and primary projection, i.e., how far the primaries on the closed wing project beyond the tertials.

Nominate Nelson's (such as the left-hand bird in the Featured Photo) typically has a shorter and proportionately less slender bill than the Saltmarsh (cf. Figure 3 in Sibley 1996). Note, though, that all sharp-tailed sparrows have relatively long, slender bills, that the two species' bill lengths overlap (Pyle 1997), and that clear views from the side are needed to evaluate this feature accurately (cf. the foreshortened bill in Figure 1 of Sibley 1996). Because the two species' bill depths are similar, however, it is the ratio of length to depth that contributes to the longer, more slender-looking bill of the Saltmarsh Sharp-tailed Sparrow. Thus, in eleven specimens each of *A. n. nelsoni* and *A. c. caudacutus*, exposed culmen divided by bill depth at the base gave ratios of 1.6 to 1.9 (mean 1.75) for Nelson's, 1.9 to 2.1 (mean 2.0) for the Saltmarsh. Pyle (1997) gave primary projections of 5–12 mm for Nelson's, which migrates farther, and 0–7 mm for the Saltmarsh. Thus, little to no primary projection indicates a Saltmarsh Sharp-tailed, a moderately long primary projection a Nelson's. Nevertheless, the two species' bill shapes and wing-tip projections can overlap, and a suite of characters should be used in any attempt to identify problematic birds.

Nominate Nelson's appears slightly smaller with a shorter, smaller bill and more rounded head, the Saltmarsh slightly larger, longer billed, and flatter headed. These structural differences are quite noticeable in direct comparison, though their use as field marks requires some comparative experience. Among plumage features, we suggest that observers ignore breast streaking and focus on the overall brightness and contrast of the underparts: nominate Nelson's appears more uniformly washed with orange on the face and chest, and the white belly contrasts relatively strongly with the orange chest. The Saltmarsh typically shows the brightest orange in its face, with the breast a paler shade that does not contrast strongly with the dingier belly.

Sharp-tailed sparrows often creep through dense vegetation, so some birds may not be seen well enough to discern the characters needed to confirm identification. As always, responsible field identification must include the willingness to let some birds "get away" as unidentified, rather trying to force upon them an identity.

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