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JUVENAL PLUMAGE OF THE RUFIOUS-CROWNED SPARROW

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Field guides treat the juvenal plumage of the Rufous-crowned Sparrow (*Aimophila ruficeps*) with varying success. The treatment itself can be misleading, perhaps because of individual variation in wear and molt. Sources of information, though not illustrations of the species' molt and juvenile plumage, include Pyle's (1997) *Identification Guide to North American Birds* and the account for *The Birds of North America* (Collins 1999). Although the Rufous-crowned Sparrow is widely distributed in appropriate habitat of the Southwest, California, and Mexico, in the field its juvenal plumage can pose an identification challenge.

In his detailed study of the Rufous-crowned Sparrow Hubbard (1975) recognized 12 subspecies in the southwestern U.S. (east to western Arkansas) and Mexico south to Oaxaca. Five additional subspecies are found in California and Baja California (Collins 1999). The adult plumage of the five subspecies occurring in the U.S. ranges from darkest on California's Channel Islands to palest in Texas and Oklahoma.

Rufous-crowned Sparrows retain juvenal plumage from fledging through summer, replacing it from August to October (Pyle 1997). The juvenal plumage is largely if not entirely shed by about 20 September, however. This discussion, therefore, deals with a brief interval when one may encounter this plumage, which changes through the summer with wear. The molt that replaces the juvenal plumage (termed "first prebasic molt" by Pyle 1997) results in fresh body feathers and, usually (Collins 1999), wing coverts. The juvenal remiges are retained, but some or all (in 41% of specimens examined by Pyle 1997) the juvenal rufous-edged tail feathers are replaced by November. The signature rufous crown appears in September but in fresh plumage is partially obscured by gray feather edges. Little is known about the plumage subtleties of juvenile birds from the various subspecies (Louis Bevier, Paul Collins pers. comm.).

Of the five subspecies of the Rufous-crowned Sparrow constituting the Pacific coastal group, three occur in the U.S.: *ruficeps* (the subspecies featured on this issue's back cover), resident in central California and the along the coast south to the western Transverse Ranges; *obscura*, resident on Santa Cruz and Anacapa—and, formerly, Santa Catalina—islands in California's Channel Islands; and *canescens*, resident in southwestern California on lower slopes of the eastern Transverse Ranges, locally on the coastal plain, and in the Peninsular Ranges (Collins 1999). Grinnell and Miller (1944) mapped *canescens* as extending through the western Transverse Ranges to the Pacific in western Santa Barbara County, although subsequent field work has shown the Rufous-crowned Sparrows there to be *ruficeps* (P. Collins pers. comm.).

Rufous-crowned Sparrows are essentially sedentary, although there seems to be a degree of post-breeding movement by some adults to habitat not far from their breeding territories. Juvenile birds disperse from the fledging territory into adjacent, possibly marginal, habitat in fall and winter. There are only a handful of records of true vagrants (Collins 1999).

The juvenile shown in Figure 1 and on the back cover exemplifies the time of post-breeding dispersal. It was one of two juveniles visiting my property at Deer Canyon, Arroyo Grande, California, on 6 August 2006, allowing a few quick photos. A previous juvenile at the same location on 19 July 2004 was likewise a one-day occurrence. Although closer territories may exist, the closest known breeding territory is at least 3 air miles distant. Even this degree of wandering is somewhat noteworthy because of

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Figure 1. Rufous-crowned Sparrow (*Aimophila ruficeps*), Deer Canyon, Arroyo Grande, San Luis Obispo County, California, 6 August 2006. Note the streaky crown, strong gray malar stripe typical of the species, and facial pattern subtler than in adults.

the Rufous-crowned Sparrow's highly sedentary habits. But juvenile Rufous-crowned Sparrows may thus be found away from breeding territories, presenting the observer with a potential identification problem.

The Rufous-crowned is roughly intermediate in size between the *Spizella* and *Zonotrichia* sparrows. In the field its proportions remind one more of a Lincoln's Sparrow (*Melospiza lincolni*) than one of the slightly smaller, slender-tailed species of *Spizella*. Apart from the strong dark malar stripe and inconspicuous wingbars, in general appearance juvenile Rufous-crowned Sparrows show less contrast than adults of the species, appearing fairly nondescript. "Drab, brown, and streaky" may be an accurate impression of the bird but is somehow unfulfilling as a complete description.

Perhaps the first thing that must be noted about the juvenal plumage of the Rufous-crowned Sparrow is its *lack* of a rufous-crown, as shown on the back cover. The base color is instead the same warm medium brown of the back, finely streaked with dusky. Indeed, the crown, nape, and back share a common base color and streaks throughout. Two other features stand out as well: the dark gray malar stripe characteristic of the species and the two wing bars formed by the pale tips to the juvenal greater and median coverts. Adult wing coverts have dusky centers with grayish edges. The greater and median coverts of the juvenal wing, however, are dusky-centered with *buff* edges. This gives the juvenile Rufous-crowned Sparrow two wing bars, field marks not generally associated with the species. Because juvenile birds' first molt replaces the median and greater coverts, after September the contrast is lost.

The underparts of the juvenal plumage are variable. In the individual depicted here note the pattern of medium-brown pencil-thin streaks over a wash of buff on the upper breast and sides and seemingly random narrow streaks over whitish on the breast below. The belly is unmarked whitish, with morning dampness on the lower breast separating the feathers, giving the mistaken impression of a dark gray spot. The narrowness and sparseness of the streaking may be due to wear and, possibly,

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the beginning of body molt. In some newly fledged Rufous-crowned Sparrows, the dark stripes extend down over a pale brown to buff breast to the whitish belly and over light brown to buff all the way down the flanks. But in other fledglings the streaking is as minimal as in the individual photographed. The undertail coverts on juvenile birds are the same pale brown to buff of the breast's ground color, without the streaks.

Apart from the flattish head, slightly bulbous bill, and the dark gray malar stripe, a juvenile Rufous-crowned Sparrow's facial pattern can likewise confuse. The facial pattern simply echoes, in subtle form, that of an adult. A pale buffy fore-supercilium changes posteriorly to pale brown extending to the nape, beneath the finely streaked crown, as shown in Figure 1 and on the back cover. A medium-brown eye-stripe extends from the lores to the nape. The pale brown auricular seems somewhat better defined than that of an adult, owing partially to the small gray mark edging the auricular below and behind the eye. (This mark also appears on study skins of juvenile *ruficeps* in the collection of the Santa Barbara Museum of Natural History.) The juvenile's bill pattern, pink below with a grayish culmen, shows plainly in the photos.

The field problem posed by juvenile Rufous-crowned Sparrows is due to their unexpected plumage characteristics, variable treatment in field guides, and being encountered infrequently by most observers. The lack of a rufous crown, the presence of two wing bars, and breast streaking faintly like that of Lincoln's Sparrow are all features at variance with the adult. These photographs give one a glimpse of the briefly worn post-fledging plumage.

I thank Paul Collins, curator of vertebrate zoology at the Santa Barbara Museum of Natural History, for helpful discussion and comments on this note and for access to the museum's collection of specimens. Bill Bousman, Peter Pyle, and Mike Rogers commented on an earlier draft of the manuscript, improving it markedly. Their time and expertise is greatly appreciated. Philip Unitt, Paul Lehman and Joseph Morlan likewise suggested helpful upgrades to the text. Finally, I thank Louis Bevier and David Sibley for helpful remarks regarding the Rufous-crowned Sparrow's juvenal plumage.

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