Juvenile-plumaged Le Conte’s Sparrows on Migration

Are they being overlooked?

by Peter Pyle * and David Sibley *

Juvenile passerines receive little or no attention in the body of literature that concerns itself with field identification. Birders generally assume that these are short-tailed youngsters found only on the breeding grounds and that, although they often appear different from older birds of their species, their identification is easily secured via the company of their parents. Certainly, most North American passerines undergo their first prebasic (post-juvenile) molt before leaving the breeding grounds, and in most of the roughly thirty North American species that migrate regularly before completing this molt (e.g., some tyrannid flycatchers, swallows, and western Chipping Sparrows [Spizella passerina arizonae]), the juveniles sufficiently resemble adults (or are distinct on their own) that identification is not a problem. The situation may not be so clear, however, among juvenile sparrows of the genus *Ammomanthus*.

Molt patterns are not revised—birds still do what they have always done, but our understanding of these molts has changed. Since Dwight (1900) first described molt patterns in six North American species of *Ammomanthus* sparrows, there have been revisions by several authors (Sutton 1935, 1936; Cartwright et al. 1937; Tordoff and Mengel 1951; Murray 1968). There remains uncertainty, especially concerning the timing and geographic location of the first prebasic molts (Pyle et al. 1987). This literature indicates that Henslow’s (A. henslowii), Sharp-tailed (A. caudacutus), and Seaside (A. maritimus) sparrows complete this molt on or near the breeding grounds, as do most passerines, but that many juvenile Baird’s (A. bairdii) and some juvenile Grasshopper (A. savannarum) sparrows undertake the fall migration before they have begun or finished molting. There has been little information published as to where Le Conte’s sparrows (A. lecontei) complete their first prebasic molt, although it has generally been assumed (e.g., National Geographic Society 1987) that juveniles are found only on the breeding grounds. During the past five years, however, we have captured four vagrant Le Conte’s sparrows in full juvenile plumage on Southeast Farallon Island (SEFI), California, and three other juveniles have recently been recorded in California and Connecticut, suggesting that they regularly leave the breeding grounds in this plumage. Because field observers are less familiar with the juvenile plumages of *Ammomanthus* sparrows than with the definitive plumages, the occurrence of at least three species in juvenile plumage away from the breeding grounds could result in identification uncertainties. In addition to documenting juvenile-plumaged Le Conte’s Sparrows on migration, we here discuss the first prebasic molt in this species and point out identification tips useful in separating juvenile Le Conte’s Sparrow from its congeners.

**Juvenile Le Conte’s Sparrows on Migration**

On 11 September 1986, Pyle, Phil Henderson, Steve N.G. Howell, and Sophie Webb observed a juvenile-plumaged *Ammomanthus* sparrow in a dead-twig thicket of a fallen SEFI. With the bird row but opened and coaxed, the observers convinced him to stick a length of chord c meters—prisingly Conte’s *Ammomanthus* had an antematized bird was photographed in an antematized at 11 and 1, seen on its migration. Su juvendi-plu...
we have a fallen Monterey Cypress on SEFI. We tentatively identified
the bird as a Grasshopper Sparrow, but we were uncertain
with considerable orchestration.

Sucessively, three more
Ammodramus (Porter et al. 1967)
photographed in the field during the
measurements that sur-
Cone's Sparrow among the
length of 178 millimeters, and
posed, such as 47 millimeters tail
length and found to have a wing
clock and to have a wingspan of 196 millimeters.

Figure 2. Note the prominent buffy rump and the buffy
together with the long pointed rectrices
on this juvenile Le Conte's Sparrow. Photographed
12 September 1980 in Southeast Florida.

Figure 1. Note the short triangular earing and small gray auricular patch
diagnostic of this species among the
11 September 1980. Photographed
Florida Island, California.
September 1987 (Figure 3), 20–24 September 1987, and 7 October 1989. Other juvenal-plumaged birds have subsequently been found by Jon Dunn, Louis Bevier, and Bruce Broadbooks at Furnace Creek Ranch (FCR), Death Valley National Monument, California, on 18 October 1989 (Figure 4); by Frank W. Mantlik in Westport, Connecticut, on 18–22 October 1989 (Figure 5); and by Randy J. Moore in Ventura, California, on 20–24 September 1990. (This is undoubtedly only a partial list of such records.)

The SEFI juveniles represent four of the six records of Le Conte’s Sparrows from the island, the others being an individual collected on 13 October 1970 (McCaskie 1975) and one captured and banded on 11–12 October 1986 (Figure 6). Interestingly, both of these were also first-year birds, as confirmed by incomplete skull pneumatization, but both had already molted into first basic plumage, which is essentially indistinguishable from the definitive basic (winter) plumage of adults. Five other fall records in California, between 17 October and 27 November (McCaskie 1975, 1989, 1990; Roberson 1986), were of basic-plumaged birds. Although none of them could be positively aged, it is likely that some or most of these were immatures in first basic plumage.

Since Le Conte’s Sparrow is a vagrant in California and Connecticut, the occurrence of juve-
nal-plumaged birds in those states may represent an anomaly related to that which caused their misorientation. To further investigate whether or not Le Conte’s Sparrows regularly migrate in juvenile plumage, we examined specimens at the California Academy of Sciences (CAS) in San Francisco and the Museum of Vertebrate Zoology (MVZ) at the University of California Berkeley. Among four immature fall migrants in the collections were birds in juvenile plumage from Lake County, Illinois, 8 October 1927 (MVZ 64489), and from Lincoln, Nebraska, 27 September 1902 (MVZ 31235), and birds labeled as “immatures” in basic plumage from Lawrence, Kansas, 26 October 1907 (CAS 81519) and 9 November 1907 (CAS 81520).

The collections also contained birds in full juvenile plumage from within the breeding range at Shoal Lake, Manitoba, 17 September 1918 (MVZ 105895), and from Lake Koshkonong, Wisconsin, 7 September 1894 (CAS 49032). Finally, Sutton (1967) noted that of nineteen first-year specimens from Oklahoma collected between 2 October and 13 December, the first two, on 2 and 8 October, were in juvenile plumage whereas the remaining seventeen were in first basic plumage. It is clear that the first prebasic molt of the Le Conte’s Sparrow, like that of the Baird’s and Grasshopper sparrows, can occur either on the breeding grounds or on the wintering grounds.

Locality and Timing of the First Prebasic Molt

Because of energy constraints, passerines typically do not molt and migrate at the same time; among healthy juveniles of most species, one event almost always precedes the other. A similar pattern seems to prevail among juveniles of the few species that are capable of either strategy, molting before migrating or migrating before molting, this life-history choice perhaps depending on whether fledging occurred from an early or a late brood, respectively. The evidence supports this pattern in Le Conte’s Sparrow. All six of the California juveniles and the four specimens of juveniles at CAS and MVZ appeared to be in full juvenile plumage (although a few pin feathers that were noted on the two 1987 SEFI juveniles suggested that molt had just begun), whereas the two SEFI birds and two specimens in first basic plumage displayed no juvenile feathers.

Regarding the timing of the first prebasic molt, the dates of the specimens and of the California birds suggest that juveniles occur on migration in September through mid-October, whereas birds in first basic plumage have been recorded on migration as early as 11 October and through November. This fact indicates that the first prebasic molt, which does not include the primaries, secondaries, or rectrices (Murray 1968), occurs either mostly during September on the breeding grounds, or during October and November on the winter grounds, a pattern that results in a protracted fall migration in this species (Murray 1969). The evidence further suggests that the majority of juvenile Le Conte’s Sparrows molt before migrating, although it is interesting that juveniles outnumber basic-plumaged birds on SEFI, where censusing is complete and objective. More study is needed on the dynamics of this molt; the possibility exists that the proportion of birds that do migrate in juvenile plumage varies annually in response to the timing and success of the breeding season.

Identifying Juvenile Le Conte’s Sparrows

The casual observer could easily misidentify a juvenile Le Conte’s Sparrow as a Grasshopper Sparrow, as we almost did with the first of the SEFI birds. Although they are superficially similar, several field marks, when scrutinized carefully, readily separate juvenile Le Conte’s from juveniles of Grasshopper and the other Ammodramus sparrows.

The combination of the facial features and upperpart plumage is unique to each species. The contrastingly buffy nape, short triangular or anchor-shaped eye-line, small auricular patch, and prominent buffy and dark stripes on the upperparts will easily separate juvenile Le Conte’s from juvenile Sharp-tailed on the breeding grounds, and from the other Ammodramus on migration or the wintering grounds. Juvenile Savannah Sparrows (Passerculus sandwichensis) might also be con-
fused with juvenile Le Conte’s. Like Henslow’s Sparrows, however, Savannahs molt very quickly into first basic plumage, usually before the tail is fully grown, and thus should be seen only on the breeding grounds for a short period after fledging. Both juvenile and adult Savannah Sparrows have broad, dark malar streaks, which juvenile Le Conte’s Sparrows lack.

In addition to plumage, several other field criteria may help observers distinguish juvenile Le Conte’s Sparrows on migration. As supported by measurements (Murray 1969), the posture of Le Conte’s Sparrows is slimmer than that of the other *Ammodyramus* and Savannah sparrows, giving individuals an almost reptilian appearance in the field. The SEFI birds often cocked their relatively long tails over their backs as they foraged, a behavior we also noted with Sharp-tailed Sparrows. (In most cases, however, Le Conte’s and the other *Ammodyramus* sparrows will be seen flying straight away and diving into tall grass.) The only calls known from wintering or migrant *Ammodyrama-

mus* sparrows are a very high, thin *sissis* and a soft *chip* from Le Conte’s Sparrow and, rarely, a sharp *tsip-tsip* from Grasshopper. Vocalizations are so infrequent that they are probably of little use in identification; in any case, calls should be listened for and carefully noted if a migrant juvenile *Ammodyramus* sparrow is encountered. As with any field identification challenge, we recommend that observers combine these clues with the less subjective plumage criteria before concluding the identification process.

Most of the regional references (e.g., Lowery 1974, Mengel 1965, Sutton 1967, Walkinshaw 1968; Murray 1969, Oberholzer 1974, Imhof 1976, Dinsmore et al. 1984), and recent regional reports in *American Birds* indicate that Le Conte’s Sparrows are not typically observed on migration before mid-to-late September or on the wintering grounds before mid-October, although Dinsmore et al. (1984) listed records in Iowa for 5 and 14 September, Sutton (1967) mentioned an early sight record from Oklahoma on 8 September, and Imhof (1976) recorded one from the Tennessee Valley, Alabama, on 23 September; plumage information was not given for any of these records. The CAS and MVZ specimen evidence, along with the records from SEFI (where eastern vagrants typically arrive two to three weeks later than at similar latitudes within normal migratory routes), suggest that juveniles are being overlooked on migration in early to mid-September and on the wintering grounds from late September to mid-October. As a “skulker,” Le Conte’s Sparrow is notorious for its ability to escape detection; this fact may make identification of juveniles especially difficult because of their resemblance to other *Ammodyramus* sparrows. We hope that this article will encourage further observations and documentation of juvenile-plumaged Le Conte’s and other *Ammodyramus* sparrows south of the breeding grounds.

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FIGURE 7. JUVENILE LE CONTE'S AND THE OTHER JUVENILE AMMODRAMUS SPARRWS

a. Le Conte’s Sparrow in juvnel plumage. Many individuals migrate in this plumage, with records as late as 22 October. Note the prominently buffy nape-collor with subdued grayish streaking, prominent buffy median-stripe and supercilium, short triangular (anchor-shaped) eyeline, small gray auricular patch, lack of malar streaks, fine streaking across the breast, and boldly streaked pattern to the upperparts.

b. Sharp-tailed Sparrow in juvenile plumage. Birds in this plumage should be found only on the breeding grounds, which are in the inland races (Ammmodramus caudacuta nelsoni and A. c. alten), overlap in both range and habitat with those of Le Conte’s Sparrow. In comparison to Le Conte’s, note the more subdued median stripe, duller nape without streaks, less contrasting upperparts, thicker eyeline, and larger and broader auricular patch. Beware of hybrids between these two species (Murray 1968). See Dickerman (1962) for more information on the separation of juvenile Sharp-tailed and Le Conte’s sparrows on the breeding grounds.

c. Grasshopper Sparrow in juvenile plumage (see also Figure 8). Juveniles can migrate in this plumage, although reports of juveniles south of the breeding grounds are rare. The median stripe, hind collar, and upperparts are generally much more subdued than in Le Conte’s Sparrow, with less buffy tones. Note also the scaled rather than streaked appearance to the upperparts and the less distinct facial features, without a prominent supercilium or eyeline and with a large blackish patch at the rear of the auriculæ. Adults are generally buffer in coloration and thus might resemble juvenile Le Conte’s Sparrow more closely, but the upperparts and face pattern are the same as in juvenile Grasshopper, and the breast is unstreaked.

d. Henslow’s Sparrow in juvenile plumage. This plumage is very similar to basic plumage. Birds in this plumage are found from June to August on the breeding grounds and therefore should not overlap in timing and range with juvenile Le Conte’s Sparrow. Both juvenile and basic-plumaged Henslow’s Sparrows show olive rather than buffy tones to the plumage. Note the diagnostic face pattern; birds in first basic dress also have distinct malar streaks which juvenile Le Conte’s lack.

e. Baird’s Sparrow in juvenile plumage (see also Figure 9). Again, note that the median stripe, hind collar, and upperparts are poorly defined in relation to those of Le Conte’s Sparrow. An eyeline is lacking in juvenile Baird’s, but note the distinct malar streaks and the characteristics of the auricular patch, with a well-defined lower edge and prominent spots at the rear corners. As with Grasshopper Sparrow, the upperparts are scaled in appearance rather than boldly streaked as in juvenile Le Conte’s. Many but not all juvenile Baird’s Sparrows migrate in this plumage.

Seaside Sparrow (not illustrated). Juveniles occur only on the breeding grounds from June to August and therefore should not overlap in timing and range with juvenile Le Conte’s Sparrows. They are larger overall, larger-billed, and darker above, and thus do not resemble juvenile Le Conte’s Sparrows.

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Literature Cited


