

# Breeding-season Records of the Henslow's Sparrow in the North Carolina Coastal Plain

J. MERRILL LYNCH and HARRY E. LeGRAND JR.

On 29 May 1983, while running a Breeding Bird Survey route in southeastern Martin County, N.C., Lynch heard two singing Henslow's Sparrows (*Ammodramus henslowii*) at a stop on the route. The birds were in a former pocosin that had been clear-cut and planted with Loblolly Pines (*Pinus taeda*), the pines being 2 to 8 feet in height. An abundance of grasses, sedges, and forbs were also present, along with scattered hardwood saplings. Further coverage of this site (Site 2 below) during 1983 yielded a total of four singing males. In addition, we found three singing males in 1983 at two sites (Sites 3 and 4) in northern Beaufort County, N.C.

During the summer of 1984, we searched for additional sites of Henslow's Sparrows in the North Carolina coastal plain, concentrating our search on extensive areas of cleared land in moist situations. We particularly keyed on pocosin lands that had recently been cleared of trees and had either been left fallow or had been planted in pine saplings. The observations below in 1983 and on 9 and 10 June 1984 were made by both authors, as well as by Karen Lynch (see Fig. 1). Observers of other records are cited.

## LOCATION, POPULATION SIZE, AND HABITAT

### *Site 1—Martin County*

Location: Southeastern Martin County, on SR 1538, 1.8 to 2.0 miles NE of the intersection with NC 171.

Population: Six singing birds on southeastern side of road on 9 June 1984, four in the southern part of this field and two in the northern part (at stop 5 on the Jamesville Breeding Bird Survey route); two singing in southern part on 23 June 1984 (LeGrand and Eloise Potter).

Habitat: A clear-cut pocosin (75+ acres); a young Loblolly Pine plantation, with pines now 2 to 8 feet high; dense ground cover of mixed grasses, sedges, and forbs, ranging from 1 to 5 feet high.

### *Site 2—Martin County*

Location: Southeastern Martin County, on SR 1538, approximately 1.0 mile S of the intersection with SR 1545.

Population: Four singing birds in 1983, from 29 May to late June; two singing birds in 1984, on 9 June.

Habitat: Same as at Site 1 (75+ acres).

### *Site 3—Beaufort County*

Location: Junction of Barber 1 Road and Shady Lane (private roads of a timber company) in extreme northern Beaufort County.

Population: Two singing birds noted on 2 June 1983.

Habitat: Similar to Sites 1 and 2 (50 acres), but with pines shorter in height, no more than 5 feet tall.

*Site 4—Beaufort County*

Location: Junction of Shady Lane and Corey Road (private roads) in extreme northern Beaufort County.

Population: One singing bird noted on 2 June 1983.

Habitat: Clear-cut pocosin (20 acres); Cane (*Arundinaria gigantea*) 1.5 to 4+ feet high the predominant vegetation, in addition to various grasses and forbs; only a few scattered hardwood saplings and shrubs, but essentially no pines present.

*Site 5—Beaufort County*

Location: Junction of J & W Tram Road and Baker Road (private roads) in north-central Beaufort County, about 6 air miles NE of Washington. Sites 1 through 5 are in Hall Swamp pocosin, where Lynch (1982) did not find Henslow's Sparrows in April and May 1981.

Population: Four singing birds on 9 June 1984.

Habitat: Clear-cut pocosin (50+ acres); similar to Sites 1 through 3, but with more hardwood saplings among the pine saplings.

*Site 6—Beaufort County*

Location: Voice of America site A; extreme northwestern Beaufort County on the northeastern side of the intersection of SR 1001 and SR 1414 at Leggetts Crossroads.

Population: Eight singing birds on 9 June 1984; 20 singing birds on 23 June 1984 (LeGrand and Potter).

Habitat: Cleared pocosin maintained in an early successional stage by mowing, or possibly by burning (3000+ acres); grasses, sedges, forbs, and low saplings of various densities, generally less than 3 feet high; very few pines. Yellow Pitcher Plants (*Sarracenia flava*) are common in certain wet spots in this extensive cleared area (2.0 by 2.3 miles).

*Site 7—Beaufort County*

Location: Along SR 1414, approximately 2.5 miles SE of Leggetts Crossroads in extreme northwestern Beaufort County.

Population: One singing bird on 23 June 1984 (LeGrand and Potter).

Habitat: A clear-cut area, possibly a former pocosin, planted in Loblolly Pine saplings mainly 6 to 12 feet high; typical cover of herbaceous plants among the pines. This site was the most "heavily wooded" of those described here.

*Site 8—Pitt County*

Location: Voice of America site C; central Pitt County on the eastern side of SR 1212, about 6 air miles due W of Greenville.

Population: Two singing birds on 10 June 1984; four singing birds on 23 June 1984 (LeGrand and Potter).

Habitat: Cleared land, but perhaps not a former pocosin (600+ acres); somewhat drier than other sites; closely mowed field of dense grasses and forbs 0.5 to 1.0 foot high with a few scattered Red Maple (*Acer rubrum*) saplings up to 2 feet tall. Other sections of this cleared area (1.25 by 0.75 miles) contain taller shrubs and saplings (2 to 3 feet high), but no Henslow's Sparrows were found there.

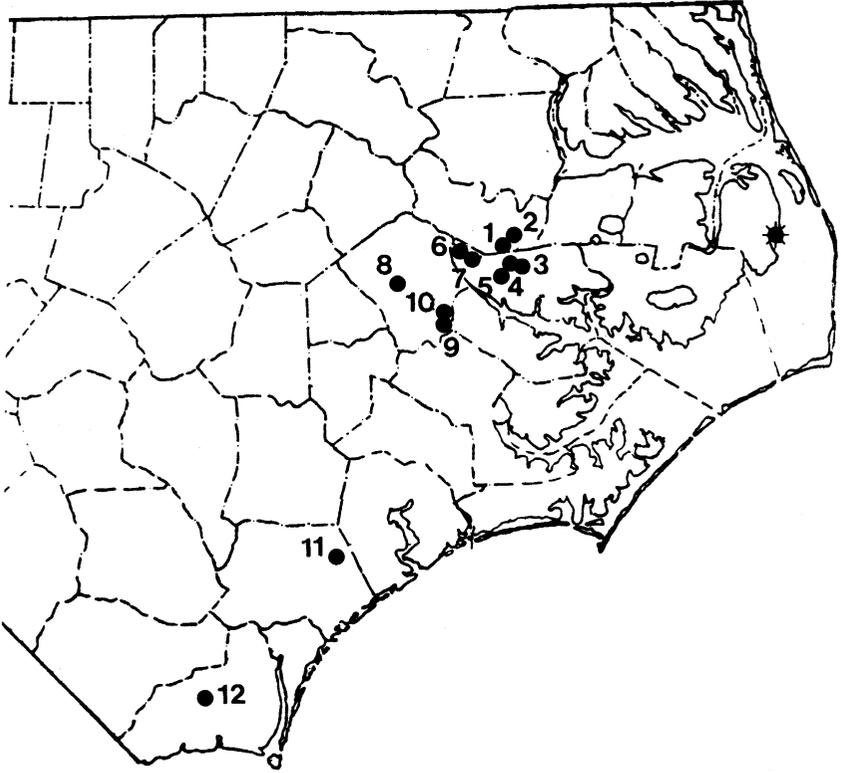


Fig. 1. Breeding-season distribution of the Henslow's Sparrow in eastern North Carolina. The numbered dots refer to sites where the authors found singing Henslow's Sparrows. The starred dot is the location of Burleigh's sighting in 1934 (see text).

*Site 9—Pitt County*

Location: Voice of America site B; extreme southeastern Pitt County; E of SR 1785, approximately 5 air miles NE of Shelmerdine.

Population: Six singing birds on 10 June 1984.

Habitat: Essentially identical to Site 6, but slightly drier (2000+ acres; 2.0 by 1.5 miles); clearing maintained by mowing, or possibly by burning.

*Site 10—Pitt County*

Location: Along a timber company road 0.5 mile N of Voice of America site B, in extreme southeastern Pitt County.

Population: One singing bird on 10 June 1984.

Habitat: Similar to Sites 1 through 3 (20 acres); a clear-cut pocosin with Loblolly Pine saplings planted in rows; saplings 4 to 6 feet tall over dense grasses and forbs.

#### Site 11—Pender County

Location: Northeastern Pender County, just off SR 1532, about 3 miles SE of Maple Hill.

Population: Four singing birds on 18 August 1984 (LeGrand).

Habitat: Longleaf Pine (*P. palustris*) savannah (100+ acres), which is intentionally burned by the owners every few years to maintain the rather open nature of the habitat for wildflower diversity; pines mostly under 25 feet high and scattered through the habitat; pocosin adjacent to savannah on all sides.

#### Site 12—Brunswick County

Location: East side of NC 211 in Green Swamp, about 8.5 air miles N of Supply, in Brunswick County.

Population: Four singing birds on 3 June 1984 (LeGrand); two singing on 28 July 1984 (LeGrand and Ricky Davis).

Habitat: Clear-cut pocosin of well over 2000 acres; similar in appearance to Sites 1 through 3, being planted in rows of Loblolly Pine saplings now 4 to 8 feet high, with a thick cover of herbaceous plants.

### BEHAVIOR

All of the birds tallied on our survey were singing individuals, presumably on territory. No other evidence of breeding, such as the carrying of food, was observed, though we have little doubt that the birds were nesting. Essentially all of our survey was conducted from roads at the edges of these sites. We spent virtually no time within the fields searching for nests or fledglings because our aim was to census as many areas of suitable habitat as possible to determine the extent of the range of the species. Henslow's Sparrows were noted singing from dawn to early afternoon (the period of our survey), even on days when temperatures approached 90°F. This species is noted for its nocturnal singing (see Graber 1968), but we were not present at suitable habitat before dawn.

Unlike the closely related Grasshopper Sparrow (*A. savannarum*), which often sings from exposed perches such as fences, we never saw a Henslow's sing from a fence or an exposed snag in the fields. Several birds did sing from the tops of pine and deciduous saplings, and a bird at Site 11 sang from a bare pine branch 15 feet above ground; but such singing was not common. Rather, most birds that we saw singing were perched either in the middle of a sapling or clinging to the stalk of a herbaceous plant. In fact, we were unable to see more than two-thirds of the Henslow's Sparrows heard singing, despite the "openness" of the habitats.

Henslow's Sparrows are notoriously gregarious in their breeding behavior. Whether the birds we noted formed loose colonies in these fields is debatable. It is true that most fields contained several birds, but the birds seemed to be dispersed somewhat randomly, or perhaps even uniformly, in these fields.

There were relatively few other bird species noted in the same habitats with the Henslow's Sparrows. Eastern Meadowlarks (*Sturnella magna*) were the primary associate, being found at essentially all of the 12 sites. Common Yellowthroats (*Geothlypis trichas*) were present at most sites, and Field Sparrows (*Spizella pusilla*) were noted at half of the sites. Lesser associates were Red-winged Blackbird (*Agelaius phoeniceus*), Prairie Warbler (*Dendroica discolor*), Indigo Bunting (*Passerina cyanea*), and Yellow-breasted Chat (*Icteria virens*).

## HABITAT — OVERVIEW

All of the Henslow's Sparrow sites located during our survey are in heavily disturbed, early successional habitats except for the population in a fire-maintained Longleaf Pine savannah (Site 11). With the exception of Site 11, the structure and composition of the vegetation communities are similar.

The eleven sites containing disturbed habitats are all in an early successional stage as a result of clear-cutting. Each site is composed of a dense ground cover of various species of grasses, sedges, herbs, and ferns, with scattered shrubs and saplings 2 to 8 feet in height. Excluding the Voice of America sites, the disturbed sites are within commercial timber areas where preparations have been completed for managed Loblolly Pine plantations. At each of these commercial plantations, the pines are 1 to 4 years old and have not yet overtopped and shaded out the dense ground-cover vegetation. At the Voice of America sites, the dense ground cover is maintained in a permanent early successional stage by mowing, burning, or using both means.

The most frequent and dominant herbs and grasses at these sites include Dog Fennel (*Eupatorium capillifolium*), Cane, and broomsedges (*Andropogon* sp.). Most sites also contain a number of typical pocosin plants such as Virginia Chain Fern (*Woodwardia virginica*), Bracken Fern (*Pteridium aquilinum*), Colicroot (*Aletris farinosa*), various sundews (*Drosera* sp.), Crow Poison (*Zigadenus densus*), and Yellow Pitcher Plant. In addition to Loblolly Pine, the most common shrubs and saplings are Sweet Bay (*Magnolia virginiana*) and Red Maple.

The soils underlying the sites are generally fine sandy or silty loams that are poorly drained and have a seasonal high water table at or near the surface. Soils include the Rains, Lynchburg, Coxville, Nahunta, Byars, and Leaf series (U.S. Soil Conservation Service 1974).

## DISCUSSION

The discovery of presumably breeding Henslow's Sparrows in the North Carolina coastal plain is notable on several accounts. First, the species had not been reported breeding in the state in several decades, and there had been no records suggesting nesting since summer reports in Ashe County in 1959 and 1960 (Hurt 1959, 1960). Second, nearly all summer records for North Carolina were for the piedmont (Pearson et al. 1959, Potter et al. 1980), with the only breeding-season record for the coastal plain being one bird heard singing by Thomas Burleigh at Stumpy Point, Dare County, on 20 July 1934 "from the edge of a wide stretch of open and slightly marshy meadow" (Burleigh 1937). Third, this is the first published account of the species summering and presumably breeding within its winter range, except for a disjunct breeding population at Houston, Texas (Webster 1974). Fourth, the habitats involved—mostly various types of clear-cut pocosins—have apparently not been previously reported for the species during the breeding season. Henslow's Sparrows typically breed in "weedy prairies and meadows, and neglected grassy fields and pasturelands, which are often dotted with low shrubs or bushes" (Graber 1968, p. 779). The species prefers wet situations, and it also breeds in marsh borders (see Hamel et al. 1982). Thus, the habitats reported in this paper generally contain the key features usually present in typical breeding habitat—thick herbaceous cover, a scattering of shrubs or saplings, and a moist setting.

Henslow's Sparrows breed primarily in the north-central and northeastern United States, south to Virginia. Though occasional Henslow's appear in Virginia in summer over much of the state, nearly all breeding birds are restricted to the northern coast at Saxis and the extreme northern piedmont in Loudoun County (Larner 1979), at the Dulles Airport. The Henslow's Sparrows in Martin, Pitt, and Beaufort Counties are approximately 150 miles south of the nearest known breeding sites in northern Virginia. The "outpost" in Brunswick County extends the summer range southward another 90 miles. Elevations of the newly discovered locations range from 25 feet above sea level in Pender County (Site 11) to 85 feet at Site 6 in Pitt County, with most sites being 40 to 50 feet above sea level.

It is interesting to note that we found no Grasshopper Sparrows at any of the 12 sites. Grasshopper Sparrows are known to breed locally throughout much of the North Carolina coastal plain, particularly at sites where grassy fields are maintained. Airports and extensive, minimally grazed pastures seem to be preferred sites. In fact, on 10 June 1984 we found a colony of Grasshopper Sparrows at the Pitt County-Greenville Airport, only 5 air miles NE of a Henslow's Sparrow colony (Site 8). Although habitat at the two sites appeared similar, tall forbs and shrubs dominated Site 8 whereas various grasses were the dominant vegetation at the airport. The soils at the Grasshopper Sparrow colony were much sandier and better drained than the soils underlying the Henslow's Sparrow sites.

North Carolina's pocosins have been disappearing at an alarming rate, owing generally to clearing of vegetation, mainly by timber companies for pine plantations and by large-scale agricultural operations. Though the destruction of pocosin habitats has been detrimental to most pocosin species, particularly forest birds (Lynch 1982), it has been favorable to the Henslow's Sparrow and other early successional species. However, the rapid growth of the pine saplings that are planted in most of the clear-cuts limits the suitable habitat for the birds to just several years, as these sparrows presumably abandon the fields when the pines begin to reach 8 or 10 feet in height. Thus, most of the sites listed here will be unsuitable for Henslow's in a few years, though undoubtedly other sites will become available each year as the pine plantations are harvested and replanted in rotation. It is fortunate that Henslow's Sparrows are present on the three Voice of America sites, because these antenna fields are likely to be kept in suitable grass-shrub habitat by regular mowing.

Undoubtedly, the breeding range of the Henslow's Sparrow is much more widespread in the North Carolina coastal plain than reported here. Except for portions of southern Washington County, we have not searched for the species in counties other than the ones listed above. Large areas of disturbed pocosins lie to the east of the sites reported here, and it is very likely that suitable habitat exists in counties such as Hyde and Dare. We hope that other observers will search for Henslow's Sparrows in locations and habitats such as those described in this paper and that further evidence of breeding will be forthcoming.

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- The Nature Conservancy, Southeast Regional Office, P.O. Box 270, Chapel Hill, N.C. 27514; North Carolina Natural Heritage Program, Department of Natural Resources and Community Development, P.O. Box 27687, Raleigh, N.C. 27611.*

## CORRECTIONS

In the spring 1984 issue of *The Chat*, the authors of "The genus *Sula* in the Carolinas: An Overview of the Phenology and Distribution of Gannets and Boobies in the South Atlantic Bight" inadvertently omitted two acknowledgments. William Post of The Charleston Museum reviewed a field note by J. Christopher Haney that was later combined with a manuscript written by David S. Lee, senior author of the joint paper (*Chat* 48:29-45). Dr. Post sent Haney's Masked Booby photograph to George E. Watson, of the National Museum of Natural History, who kindly confirmed the identity of the bird.

In the Winter 1985 issue, there are several errors that are in no way the fault of the authors. The caption at the top of page 5 should have read "TABLE 1, Continued." On page 9, the continental maps are correctly placed, but three of the four state maps are in the wrong places. The state map in Figure 3 (Northern Saw-whet Owl) is that of the Black-capped Chickadee (note open circles for former breeding range). The state map in Figure 4 (Black-capped Chickadee) is that of the Hermit Thrush (three nesting sites known in North Carolina). The state map in Figure 5 (Hermit Thrush) is that of the Northern Saw-whet Owl.