

## STATUS OF HENSLOW'S SPARROWS DURING WINTER IN COASTAL MISSISSIPPI

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The Henslow's Sparrow (*Ammodramus henslowii*) winters along the Atlantic and Gulf coasts of the southeastern United States (American Ornithologists' Union 1983, Root 1988). However, the combination of apparent low densities and furtive behavior make it difficult to assess the precise winter distribution and abundance of this species (Hyde 1939, Root 1988). In coastal Mississippi, Henslow's Sparrows are considered "rare" to "extremely rare" winter visitors with no more than 15 total observations (Toups and Jackson 1987). Christmas counts in coastal Mississippi rarely report this species, and Hyde (1939:23) described Mississippi as lying outside the "region of abundance" on the winter range.

As part of a study of bird communities in coastal pine savannas, we have had the opportunity to quantify the occurrence of Henslow's Sparrows during winter in coastal Mississippi. Our work suggests the Henslow's Sparrow is far more common in fire-maintained savannas and open woodlands than existing records suggest; at some of our savanna study sites Henslow's Sparrows were among the most common winter residents. The purpose of this paper is to clarify the status and habitat use of Henslow's Sparrows in coastal Mississippi.

We also report measurement data for Henslow's Sparrows wintering in coastal Mississippi.

*Study site.*-- Between 20 November 1994 and 25 February 1995, we regularly censused nine 25-ha (500 m x 500 m) study plots on the Mississippi Sandhill Crane National Wildlife Refuge, Jackson County, Mississippi. The refuge harbors some of the best remaining examples of coastal pine savanna in the United States (Frost et al. 1986). These savannas are characterized by a sparse overstory of pines (mostly longleaf pine, *Pinus palustris*, and slash pine, *P. elliotii*) and an open herbaceous understory (mostly grasses and sedges). Our study plots were located on sites ranging from open (nearly treeless) savannas to thicker woodlands with woody plants (*Ilex*, *Smilax*, etc.) Encroaching on the herbaceous understory. All sites were characterized by moist to wet soil and were burned at approximately 3-year intervals. Time since burning ranged from 1 month to 3 years on our nine study plots.

We censused sites weekly by walking an irregular transect for one hour within the boundaries of the 25-ha study plots. This method allowed us to measure relative abundance for each species (individuals/plot/hour) and to assess *minimum* density on the study plots. Walking an irregular route over a fixed time period gave us the flexibility to pursue furtive, grass-dwelling birds that point counts or fixed transects did not provide.

In addition to regular censusing, we used mist nets to capture Henslow's Sparrows for banding on selected study plots during January and February 1995. For each individual we measured unflattened wing chord and tail length to the nearest 0.5 mm with a ruler, tarsus length and culmen length to the nearest 0.1 mm with dial calipers, and body mass to the nearest 0.5 g with a Pesola spring scale (Table 1).

## Results

We recorded this species on 6 (67%) of our 9 study sites at the crane refuge during the winter of 1994-95. The only sites where Henslow's Sparrows did not occur were sites that had been burned within the previous 2-3 months. On the six sites where they occurred (all burned 1-3 years earlier), maximum

counts of Henslow's Sparrows (individuals/plot/hour) ranged from 1-9 (mean = 3.7). Although these data suggest that Henslow's Sparrows are far more common than birding and Christmas Count records indicate, our banding results showed that even our censuses were underestimates of their true abundance. We banded Henslow's Sparrows on three of the six plots on which they occurred. At our Simm's Road site (where we recorded a maximum of 9 Henslow's Sparrows during weekly censuses), we banded 16 individuals in just over five hours of netting. At the Headquarters site (maximum of 7 birds on weekly counts) we banded 10 Henslow's Sparrows in about three hours. On the Church site (maximum census of 3 birds) we banded 7 Henslow's in about 2.5 hours. We banded 33 Henslow's Sparrows on the refuge (Table 1), suggesting that, at best, we were recording only 42-70% of them at a given site.

Table 1. Standard measurements of 33 Henslow's Sparrow's captured at the Mississippi Sandhill Crane National Wildlife Refuge, Jackson Co., Mississippi, January-February 1995.

	Wing Chord (mm)	Tail (mm)	Tarsus (mm)	Culmen (mm)	Body Mass (g)
Mean	52.2	48.8	16.7	13.0	7.4
SE	0.33	0.36	0.15	0.16	0.07
Range	46-55	45-54	14-18	11.5-15.5	6.6-8.2
CV	3.6%	4.1%	5.2%	6.9%	5.2%

### Discussion

Our results highlight the difficulty of using traditional sources of data (birding records, Christmas Bird Count data) to assess the status of furtive species such as the Henslow's Sparrow. For example, 1994-95, the Henslow's Sparrow was not recorded on the Christmas Bird Count that includes our study sites. Adequate monitoring of Henslow's Sparrows will require intensive field

work directed specifically at pine savannas, despite the fact that these savannas have low bird diversity in winter. Although this field work yields few species per unit time, it has the potential to clarify the status of Henslow's Sparrows wintering in Mississippi as well as that of other little known species such as the Yellow Rail (*Coturnicops noveboracensis*).

Pine savannas seemed to become suitable for Henslow's Sparrows in the winter following that in which they are burned (prescribed burning on the crane refuge takes place in the non-growing season). Henslow's Sparrows then appeared to inhabit savannas until encroachment of woody vegetation eliminated the herbaceous understory (approximately three to five years after burning) or until the savanna was burned again. In coastal Mississippi, Henslow's Sparrows seem dependent on a narrow "window" of habitat availability created by fire. However, other open habitats such as power-line corridors may offer suitable habitat as well. Overall, our work suggests that the Henslow's Sparrow is an uncommon winter resident in coastal Mississippi, but that it is locally common in suitable habitat.

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