

Stowe, Andrew (2006). "Ecology of the Nelson's Sharp-tailed Sparrow (*Ammodramus nelsoni*) and the Saltmarsh Sharp-Tailed Sparrow (*Ammodramus caudacutus*): Determining Vocal Repertoires and Assessing Effects of Social Cues on Trends in Singing Behavior". Honors Theses.

Following their recognition as separate species in 1995, the Nelson's Sharp-tailed Sparrow (*Ammodramus nelsoni*) and the Saltmarsh Sharp-tailed Sparrow (*Ammodramus caudacutus*) were identified as species of high conservation priority in Northeastern United States. To improve our understanding of Sharp-tailed Sparrow ecology, I studied these birds' vocalization types during the breeding season (May-August) at Atkin's Bay Marsh, in Phippsburg, Maine. Vocalization types, including a previously undocumented Saltmarsh Sharp-tailed Sparrow song, we recorded. This new song is analogous to the Primary Song of the Nelson's Sharp-Tailed Sparrow and may be a Saltmarsh Sharp-tailed Sparrow Primary Song. Along with environmental factors (tide, temperature, and weather), the nesting stage, singing rate, and behavioral context of singing were noted during 15 minute point-count observations at 7 sampling stations distributed evenly across the marsh. Inter-sexual interactions caused increased singing rates among Nelson's Sharp-tailed Sparrows, and intrasexual cues had a strong impact on the singing behavior of Saltmarsh Sharp-tailed Sparrows. Overall, Saltmarsh Sharp-tailed Sparrows appear to have lost all vocally-associated, functional territorial behaviors, while the vocal behavior of Nelson's Sharp-tailed Sparrows appears to be heavily influenced by retained territoriality.