

NELSON'S SHARP-TAILED SPARROW

Ammodramus nelsoni

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Species Information

Taxonomy

Nelson's Sharp-tailed Sparrow and Saltmarsh Sharp-tailed Sparrow (*Ammodramus caudacutus*) were considered conspecific, as Sharp-tailed Sparrow, until 1995 (AOU 1995) when Sharp-tailed Sparrow was separated into two species based on morphological and behavioural differences (Greenlaw 1993; Rising and Avise 1993; Greenlaw and Rising 1994; Rising 1996). There are three recognized subspecies of Nelson's Sharp-tailed Sparrow. Of the three subspecies, only *A. nelsoni nelsoni* occurs in British Columbia (AOU 1957; Cannings 1998).

Two other subspecies breed in eastern North America: *A. nelsoni alterus* in saltmarshes along the coast of James Bay and Hudson Bay, and *A. nelsoni subvirgatus* along the coast of the St. Lawrence River estuary, Gaspé Peninsula, New Brunswick, Prince Edward Island, Nova Scotia, and Maine south to the Delmarva Peninsula.

Description

This sparrow has a buffy orange face (broad eyebrow and malar stripe) with grey ear coverts. The crown consists of a grey stripe bordered by dark brown lateral stripes. The upper parts are olive brown with distinct greyish or white streaking on the back and grey on the sides of the neck. The breast is ochre with darker streaks on the sides. The abdomen is white. The tail is brown and tapered. Sexes are similar. Juveniles are similar but facial markings are less distinct and the ear covert is brown, not grey.

Distribution

Global

Ammodramus nelsoni nelsoni, found in north-eastern British Columbia, ranges from southern District of Mackenzie through northern Alberta, central Saskatchewan, and southwestern Manitoba to South Dakota, Minnesota, and rarely Wisconsin. All three subspecies of Nelson's Sharp-tailed Sparrow primarily winter along the southern Atlantic and Gulf of Mexico coasts although small numbers are regularly found in appropriate habitat on the California coast (Greenlaw and Rising 1994).

British Columbia

Nelson's Sharp-tailed Sparrow is an uncommon summer visitor to the Peace Lowlands of British Columbia. Known from only 13 sites, of which five are likely only frequented on unusually wet years, it has one of the most restricted distributions of any passerine occurring in British Columbia. There are only two confirmed nesting records for British Columbia. There is one record of a fall vagrant near Vancouver (Campbell et al. 2001).

Forest regions and districts

Northern Interior: Peace

Ecoprovinces and ecoregions

BOP: PEL, KIP

Biogeoclimatic units

BWBS: mw1

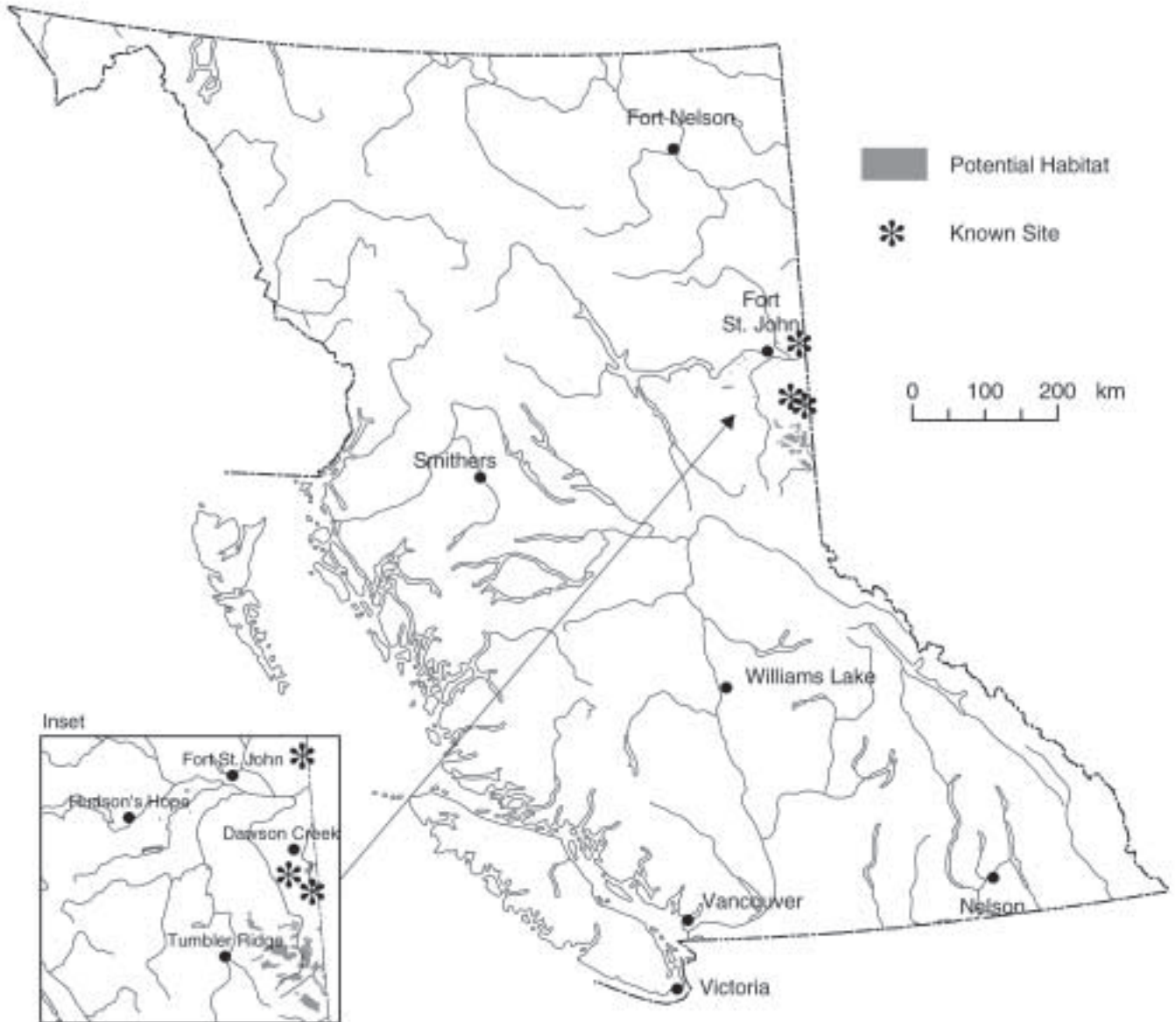
Broad ecosystem units

LL, LS, WL

Elevation

690–800 m (Campbell et al. 2001).

Nelson's Sharp-tailed Sparrow (*Ammodramus nelsoni*)



Note: This map represents a broad view of the distribution of potential habitat used by this species. The map is based on several ecosystem classifications (Ecoregion, Biogeoclimatic and Broad Ecosystem Inventory) as well as current knowledge of the species' habitat preferences. This species may or may not occur in all areas indicated.

Life History

Very little is known about the specifics of Nelson's Sharp-tailed Sparrow biology within British Columbia, therefore most of the following information is inferred from studies outside the province.

Diet and foraging behaviour

During the breeding season, adults feed primarily on insects, spiders, amphipods, molluscs, and other invertebrates. This diet may be supplemented with seeds (Greenlaw and Rising 1994).

Reproduction

No pair bonds are formed. A dominant male may breed with more than one female. It is generally believed that the female alone builds the nest, incubates the eggs, and apparently provides all parental care although males have been observed bringing food to the nest (Greenlaw and Rising 1994; M. Phinney, pers. comm.). Clutches contain four or five eggs; eggs are incubated for about 11 days; nestlings fledge after about 10 days and fledglings remain dependent on the female for another 2–3 weeks (Semenchuk 1992; Baicich and Harrison 1997). One brood is probably produced annually; however, restarts after nest failure have been documented (Greenlaw and Rising 1994). In British Columbia, based on two nest records, the calculated occurrence of nests with eggs or young is between 27 June and 17 July (Campbell et al. 2001). Adults and young probably leave nesting grounds and begin migration shortly after young are independent (Greenlaw and Rising 1994; Campbell et al. 2001).

Site fidelity

This species is believed to regularly use seven of the known sites in British Columbia.

Home range

Males are non-territorial, and establish large, overlapping home ranges. Females establish smaller home ranges than males, which may overlap with other females. In good habitat, active nests may be located within metres of one another (Greenlaw and Rising 1994).

Migration and dispersal

Nelson's Sharp-tailed Sparrow is a migratory songbird. Birds apparently move directly to the breeding grounds upon arrival in the province in spring. Although movements in British Columbia are poorly documented, the earliest spring record is 8 June and the latest fall record is 12 September.

Habitat

Structural stage

2: herb

Important habitats and habitat features

Nesting

Grassy areas within wetlands, usually near-dead or living willows (*Salix* spp.) are used. Wetlands with persistent grasses and patches of willows or other emergent vegetation are important nesting habitat (Greenlaw and Rising 1994). In British Columbia, this sparrow has been found in marshes at the edge of woodland lakes, between creeks and wet meadows, and on willow covered islets on lakes. In wet years it may also use smaller wetlands. Only two nests have been found in British Columbia. Both were in clumps of tall, dry grass, one directly over water and the other near a water channel (Campbell et al. 2001). Known breeding sites in British Columbia are larger (>5 ha) W1 class hydrophytic wetlands, but smaller (1–5 ha) wetlands are also likely used, especially in wet years.

It is likely that the availability of suitable wetlands is the most significant limiting factor influencing Nelson's Sharp-tailed Sparrow distribution and abundance.

Foraging

Birds probably feed exclusively within the nesting habitat, therefore feeding and nesting habitat requirements are the same.

Wintering

This species winters in coastal saltmarsh habitat (Greenlaw and Rising 1994).

Migration

Habitat requirements unknown. The use of transitional habitats during migration in British Columbia has not been documented (Campbell et al. 2001).

Conservation and Management

Status

The Nelson's Sharp-tailed Sparrow is on the provincial *Red List* in British Columbia. It is considered *Not at Risk* in Canada (COSEWIC 2002).

Summary of ABI status in BC and adjacent jurisdictions (NatureServe Explorer 2002)

BC	AB	MT	NWT	WA	Canada	Global
S2B, S3B S2N		S1B, S2N	S?	S?	N5B	G5

Trends

Population trends

No population trend data are available for British Columbia. To date only 13 sites are known. This sparrow's extremely secretive habits make populations difficult to assess and there are no data for breeding population density for this species (Greenlaw and Rising 1994). In general, population data are also sparse throughout the species range; however, prairie birds apparently occur in local, scattered groups that may consist of only a small number of birds (Semenchuk 1992; Siddle 1992; C. Siddle field notes).

Habitat trends

At least one historic site in British Columbia has been drained making it unsuitable for this species while, outside of the province, the Nelson's Sharp-tailed Sparrow has also been extirpated from parts of its range due to habitat loss (Greenlaw and Rising 1994; Campbell et al. 2001).

Threats

Population threats

This species has an extremely small, localized population in British Columbia which may increase its risk of extirpation. There have been only two breeding records in British Columbia. Based on available information, there are estimated to be fewer than 50 birds known from only 13 sites in British Columbia.

Habitat threats

The primary threat to this species habitat in British Columbia is the loss of wetland nesting habitat. Wetlands are vulnerable to change from any activity that impacts water level, water quality, or the surrounding vegetation. Significant changes in water levels can result from intensive forestry activity. Trampling of marsh vegetation by livestock, or use of machinery along wetland edges could also negatively impact habitat quality by crushing grasses and shrubs. Agriculture practices can also affect both water level and quality through draining, infilling, or pesticide or herbicide spraying. Flooding wetland habitats to enhance habitat for other species can be detrimental to Nelson's Sharp-tailed Sparrows, at least in the short term. Nesting habitat can also be disturbed by domestic animals or human activities such as recreation.

Elsewhere, the species as a whole is vulnerable because it overwinters in localized, concentrated groups in threatened coastal saltmarsh habitat (Greenlaw and Rising 1994).

Legal Protection and Habitat Conservation

The Nelson's Sharp-tailed Sparrow, its nests, and its eggs are protected from direct persecution in Canada by the *Migratory Birds Convention Act*. In British Columbia, the same are protected under the provincial *Wildlife Act*.

Nesting sites are currently conserved in Boundary Lake Ecological Reserve and Nature Trust land (McQueen's Slough). Ducks Unlimited also

maintains some wetland habitats. On Crown land conservation of habitat may be partially addressed by the wetlands and lakes management recommendations and the range use guidelines for riparian areas. For small wetlands (class W3), the riparian guidelines may not be sufficient to protect nesting habitat.

Identified Wildlife Provisions

Wildlife habitat area

Goal

Maintain suitable nesting habitat.

Feature

Establish WHAs at known breeding sites or sites with high suitability nesting habitat.

Size

At least 1 ha but will depend on site-specific factors such as size of the wetland and extent of riparian vegetation.

Design

For wetlands <5 ha, the WHA should include the wetland and surrounding emergent and riparian areas. For wetlands >5 ha, the WHA should include 5 ha around the nesting area and include surrounding riparian vegetation.

General wildlife measure

Goals

1. Minimize trampling of marsh vegetation by livestock.
2. Minimize damage to vegetation structure.
3. Maintain important structural components (i.e., willow species, emergent vegetation).
4. Maintain hydrological conditions and water quality.
5. Maintain WHA in a properly functioning condition.

Measures

Access

- Do not construct roads or trails.

Harvesting and silviculture

- Do not harvest.

Pesticides

- Do not use pesticides.

Range

- Control livestock grazing (i.e., timing distribution and level of use). Fencing may be required by the statutory decision maker.
- Maintain shrub community (willow). Limit browse utilization by livestock to no more than 10%.
- Do not place livestock attractants within WHA.

Recreation

- Do not establish recreation sites or trails.

Additional Management Considerations

Within the breeding range of this species (Peace Lowland and Kiskatinaw Plateau ecosections), timber harvest adjacent to W1 wetlands should be within the retention levels suggested for this region in the results based code, but higher retention levels should be considered in RMAs adjacent to known breeding wetlands or WHAs established for this species.

Seismic explorations which cross wetlands suitable for, or known to be used by, Nelson's Sharp-tailed Sparrow, should be planned in such a way that damage to vegetation structure is minimized, and during times that will not disturb the species.

Protect wetlands from drainage.

Maintain hydrological wetland characteristics (i.e., avoid building roads or culverts that could impact water flow into wetland).

Minimize negative impacts on water quality, water levels, or structure of emergent vegetation.

Maintain at least a 10 m reserve zone around small wetlands (<5 ha) with persistent grasses and patches of willows.

Information Needs

1. Inventory of wetlands >1 ha near known nesting wetlands.

Cross References

Sandhill Crane, Short-eared Owl

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Personal Communications

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