

# Spiked Saxifrage, *Saxifraga spicata*, Rediscovered in Canada After 110 Years

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*Saxifraga spicata* (*Micranthes spicata* (D. Don) Small), a large perennial showy saxifrage endemic to the unglaciated regions of Alaska and Yukon, was rediscovered after not having been seen in Canada for 110 years.

**Key Words:** Spiked Saxifrage, *Saxifraga spicata*, *Micranthes spicata*, Yukon Territory, endemism, rare vascular plant.

Stu Withers and Grant Lortie rediscovered the Spiked Saxifrage, *Saxifraga spicata* (D. Don) Small, on 15 July 2009 at Donahue Creek, Yukon Territory (63.21°N 139.51°W), near the creek's confluence with the Yukon River. This population is approximately 95 km up the Yukon River from the vicinity of the only previous Canadian collection and about 300 km (430 km by river) southeast of the next known extant population in Yukon-Charley Rivers National Park & Reserve, Alaska (University of Alaska, 2009).

It was first collected in Canada by John Berry Tarleton on an expedition to the Upper Yukon River in 1899. Tarleton spent the summer traveling from Skagway to Dawson collecting plants along the Yukon River. His collections are now housed at the New York Botanical Gardens. The exact location of this original collection remains a mystery, though we know it was collected "along mountain streams, near Indian River, August 3, 1899 (Tarleton, no. 176)." His collection was described as a new species – *Saxifraga galacifolia* Small (Britton and Rydberg 1901).

Eric Hultén in his valuable work, *Flora of Alaska and Yukon* (1941–1950), placed this new species in synonymy with *Saxifraga spicata* stating "The plant described by Small as *S. galacifolia* in no way differs from the rest."

*Saxifraga spicata* was described by David Don in 1822, from a collection made in 1778 by David Nelson, a member of Captain Cook's third voyage. It was collected on Sledge Island, Alaska on the southwest tip of the Seward Peninsula in the Bering Strait. The original collection was deposited in Sir Joseph Bank's Herbarium which is now found in the Natural History Museum (BM) in London, England (Figure 1).

Withers found fewer than 100 plants at Donahue Creek, a remote site that is only easily accessed by river, being over 100 km from the nearest road. Spiked Saxifrage grows on moist shaded stable stream banks and gravelly slopes that are usually not ice scoured, often under alders, though it is also known from moist ericaceous tundra in Alaska. It was found growing along the banks of the creek with shrubs including

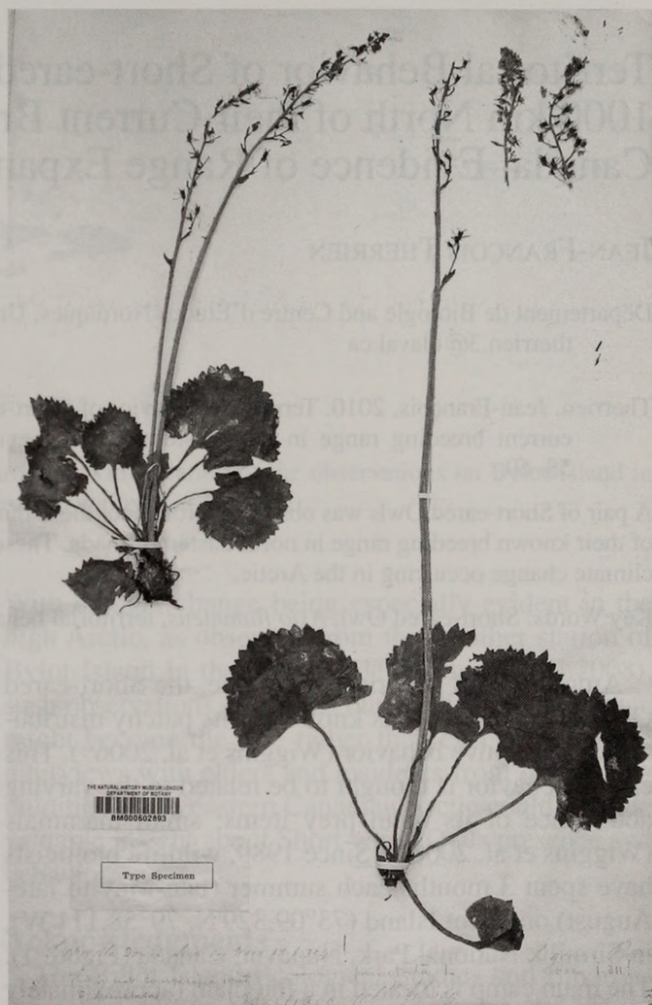


FIGURE 1. Holotype of *Saxifraga spicata* D. Don. Courtesy of the Natural History Museum (BM) London, England.

*Alnus viridis*, *Viburnum edule*, *Rosa acicularis*, and *Ribes hudsonianum* and herbs such as *Aquilegia brevistyla*, *Galium boreale*, *Equisetum arvense*, and *Mertensia paniculata*. Spiked Saxifrage can grow 70 cm tall (Cody, 1996), has cream to yellow flowers about 1 cm across and rounded, serrated, hairy leaves up to 15 cm broad.



Though it had not been seen in over 100 years, botanists had not given up hope of rediscovering it. The plant is uncommon but not particularly rare in Alaska. There are still many areas of suitable habitat to search in Yukon and future surveys may reveal further populations. The collections will be housed at Agriculture and Agri-Food Canada (DAO) and B. A. Bennett (personal herbarium).

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## Territorial Behavior of Short-eared Owls, *Asio flammeus*, at more than 1000 km North of their Current Breeding Range in Northeastern Canada: Evidence of Range Expansion?

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A pair of Short-eared Owls was observed throughout the summer of 2008 showing territorial behavior more than 1000 km north of their known breeding range in north-eastern Canada. These observations might be related to high lemming densities and/or climate change occurring in the Arctic.

Key Words: Short-eared Owl, *Asio flammeus*, territorial behavior, range expansion.

Among North American Strigidae, the Short-eared Owl, *Asio flammeus*, is known for its patchy distribution and irruptive behavior (Wiggins et al. 2006\*). This erratic behavior is thought to be related to the varying abundance of its main prey items: small mammals (Wiggins et al. 2006\*). Since 1989, wildlife biologists have spent 3 months each summer (late-May to late-August) on Bylot Island (73°09.329'N, 79°58.111'W), in Sirmilik National Park, Nunavut, Canada (Figure 1). The main camp is located in a flat plain (approximately 70 km<sup>2</sup>) which would appear, at first glance, to provide excellent habitat for nesting Short-eared Owls. Low elevation and a relatively dense cover of grasses, forbs and shrubs are the main features of the area. Lepage et al. (1998) published a complete list of the bird species seen on Bylot Island and adjacent Baffin Island, and recorded the species which are known to breed there. Before 2008, the only owl known from Bylot Island was the Snowy Owl and, even it, was only seen in years of high lemming abundance (Gauthier et al. 2004).

In 2008, two adult Short-eared Owls (most probably male and female given their slight but apparent dif-

ference in size and color) were observed at the start of the field season (4 June). Both birds were often seen from a distance throughout the summer. Both were hooting, mobbing and displaying territorial behavior as we walked toward a specific area. Both owls were also seen showing similar behaviors against adult Arctic Foxes (*Vulpes lagopus*) on many occasions. However, no nest or signs of young were found during our three visits to the core area. Short-eared Owl's nests are known to be well-camouflaged and hard to find. Moreover, a breeding pair of Arctic Foxes had their den within 250m of the area defended by the owls. The foxes might have destroyed the nest, if any, before we were able to spot it. Both male and female owls were seen until 12 August, our last visit to the area before camp closure. Seven regurgitated food pellets were found in the area occupied by the Short-eared Owls and were analyzed. Collared (*Dicrostonyx groenlandicus*) and Brown (*Lemmus sibiricus*) lemmings constituted respectively 63% and 37% of the 8 preys identified in the pellets. Lemming abundance was high in the study area in 2008, resulting in the presence of numerous Snowy



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