
Sharp-tailed Snake Stewardship Initiatives

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Extended Abstract: In Canada, the endangered sharp-tailed snake (*Contia tenuis*) is known from only a few localities on the southern Gulf Islands and southern Vancouver Island, British Columbia. These areas are heavily modified, and the human population continues to increase at a rapid rate. Because most of the known localities of the sharp-tailed snake are on private lands, stewardship by landowners is essential for the survival of the species. Potential habitat also exists on publicly-owned lands, including the Gulf Islands National Park Reserve and lands managed by the Department of National Defence and the Canadian Coast Guard within the Capital Regional District. Stewardship and protection of sharp-tailed snake habitats within these lands is also important.

The goals of the stewardship efforts initiated by the Sharp-tailed Snake Recovery Team are to (1) educate the public, landowners, and resource managers about habitat management practices that are beneficial to the species, (2) encourage the establishment of conservation covenants on private lands, (3) restore habitat at selected sites, (4) train landowners to monitor populations, and (5) locate possible undiscovered populations so that appropriate protection measures can be applied. To contribute to these goals, we developed and delivered a multi-media presentation to gardening, natural history, and conservation groups in areas with sharp-tailed snake habitat. The main goal was to increase awareness of the species and its habitats, and to provide residents with information on how to identify the species. To date, we have delivered seven presentations (on Galiano, Mayne, Pender, Saltspring, and Vancouver Islands), which were attended by a total of 209 persons. Outreach materials included a Species at Risk brochure, a 'snake-friendly' landscaping and gardening pamphlet, and a resource sheet. This approach has been successful in establishing landowner contacts on the Gulf Islands where we have been invited to visit many private properties with potential habitat for the sharp-tailed snake. To locate snakes, we placed artificial cover objects at the most likely sites and instructed landowners in how to inspect them, and we provided the landowners with an identification key. We then verified the identification of snakes from photographs provided by the landowner. This approach has resulted in the confirmation of two new sites on Saltspring Island, and has also provided opportunities for habitat restoration, which has been initiated at four sites. Landowners are involved in monitoring

¹NatureServe Explorer (version 4.0, July 2004) lists *Contia tenuis* as the sharptail snake.

the use of the restored habitat by snakes (see Engelstoft and Ovaska 2005). In addition to providing us with access to private properties, the workshop participants have become sharp-tailed snake ‘ambassadors’ in their communities, raising awareness of the species and conservation needs. At one site on Pender Island, the establishment of a conservation covenant to protect sharp-tailed snake habitat is in progress.

To locate undiscovered sharp-tailed snake populations on public lands, we first assessed habitat suitability from maps and air photos, then conducted field surveys. In 2002, Parks Canada commissioned a habitat assessment for the sharp-tailed snake within the Gulf Islands National Park Reserve. The assessment entailed delineating small openings in the forest canopy and on south-facing slopes on air photos and orthomaps. We then visited these areas and rated each polygon for habitat suitability. Fifteen polygons were identified as high suitability habitat for the sharp-tailed snake (Table 1). Other federal lands (Department of National Defence, Canadian Coast Guard) in the Capital Region District were assessed in 2003 using the same approach. In an attempt to find the sharp-tailed snake, we installed artificial cover objects in 37 locations with suitable habitat. One new sharp-tailed snake population was discovered, on a Department of National Defence property on southern Vancouver Island. Resource managers of this site have been advised about protection needs for the species.

Table 1. Area (ha) of assessed sharp-tailed snake habitat rated as high, moderate, and low suitability on federal lands in the Capital Region District.

<i>Property</i>	<i>Habitat Suitability</i>		
	<i>High</i>	<i>Moderate</i>	<i>Low</i>
Gulf Islands National Park Reserve	13.2	69.0	92.5
Fort Rodd Hill Heritage Site	0	0.8	0.4
Department of National Defence lands	43.8	25.2	46.0
Coast Guard properties	3.4	0	4.6
Total	60.4	95.0	143.5

References

- Engelstoft, C., and K. Ovaska. 2005. Habitat restoration for the endangered sharp-tailed snake. In T.D. Hooper, editor. Proceedings of the species at risk 2004 pathways to recovery conference. March 2-6, 2004, Victoria, British Columbia. Species at Risk 2004 Pathways to Recovery Conference Organizing Committee, Victoria, British Columbia.