



British Columbia's Coast Region Species and Ecological Communities of Conservation Concern

SOUTH COAST CONSERVATION PROGRAM

Protecting and Restoring at Risk species and Ecological Communities on BC's South Coast

SPECIES PROFILE: : Sharp-tailed Snake (*Contia tenuis*), Family Dipsadidae "Rear-Fanged Snakes"

Status Global: G5 Provincial: S1S2 SARA: 1-Endangered BC List: Red

Contia tenuis: A member of the family Dipsadidae ("Rear-Fanged Snakes"), also referred to as "Sharptail Snake, Brown Snake, Oregon Worm Snake" and "Pacific Brown Snake." Recent DNA analysis has identified there are actually 2 species for the genus *Contia* in western North America, the more widely distributed *C. tenuis* and *C. longicaudae* (found only in California and Oregon). The species scientific name "*tenuis*" means slender or thin. This reclusive species spends much of its life under cover and is the only egg-laying (oviparous) species of snakes in Coastal BC.



Sharp-tailed Snake

Characteristics (things to look for)



Ventral scales

Adult length 20-45 cm. A small, smooth-scaled snake, the body is the thickness of a pencil. The 15 rows of scales distributed around the dorsal part of the body range from reddish along the back to grey along the sides. Adults have an indistinct, dark lateral stripe that terminates in a dark line across each eye of the blunt nosed head. Belly scales are light grey to a greenish-blue with a sharp black bar lining each ventral scale ("scute"), giving the snake a characteristic black and white pattern on the ventral area. Juveniles are a distinctly solid brick-red with yellowish-brown lateral lines. On adults and juveniles the dorsal scales near the tail are uniformly red, terminating in a small sharp "spur" that divides the anal plate and from which the species derives its name.



Tail "not spur"

Looks like (Similar)

The tail spur, divided anal plate, smooth scales and distinct black and white pattern on the belly make Sharp-tailed Snake difficult to confuse with other snake species such as Garter Snake. Northwestern Garter Snake is likely the only species that could be mistaken for Sharp-tailed Snake, especially in densely vegetated conditions. Northwestern Garter Snake can range from reddish-brown to grey with combinations of pale, red and broken, black, lateral and dorsal stripes. They also have a dark line across each eye. However Garter Snakes as whole are highly active above ground during certain times of the day and exploit a number of habitats, while Sharp-tailed Snake, usually nocturnal in late summer, is fossorial (sub-surface) and typically found under cover of downed wood or in areas with abundant debris cover in the understory.



Northwestern Garter Snake
(juvenile)

Habitat

This species is found in woodland and forest openings in Coastal Douglas-fir, Garry oak, and Arbutus stands on Vancouver Island and adjacent islands as well as the Interior Douglas-fir transition area of the South Coast around Pemberton. Sharp-tailed Snake also occasionally utilize habitats adjacent to grass meadows. This species is considered to live most of the time underground (fossorial). Individuals have been found along south-facing rocky slopes, gardens, and forest openings. Rocky south-facing slopes provide oviposition sites, thermoregulation and wintering/hibernation sites. Availability of egg-laying sites with thermal regulation properties are very important for the development of young snakes. Cover types include cavities in decomposing downed wood (lower right), leaf litter, talus and similar forms of cover. They require habitat at close proximity of moist foraging areas such as seepages and forest edges. There is evidence of seasonal habitat shifts, with the snakes moving to forest edges in early summer, and to rocky openings in spring and fall. Movement was found confined within 30 m wide areas. On the Sunshine Coast this species dens communally with other snake species.

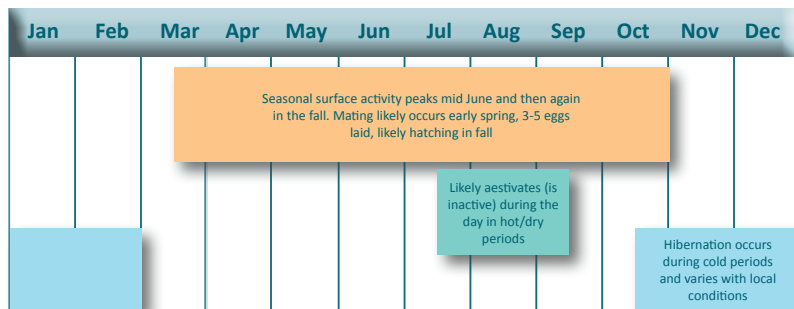


Diet

Sharp-tailed Snake is believed to feed primarily on slugs, including native (e.g. Tail-droppers) and introduced species (e.g. Chocolate Arion Slug). Sharp-tailed Snake have long teeth, which may help in securing and swallowing this type of prey.

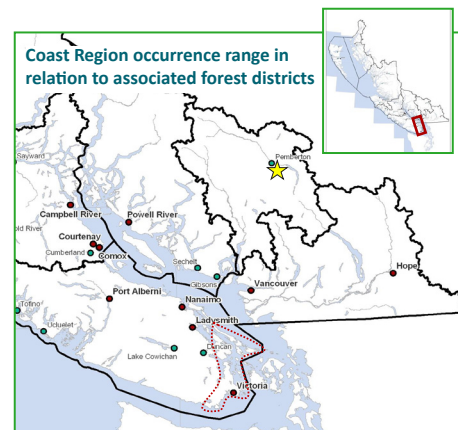
Life Cycle

Little is known regarding actual reproductive timing. Period of hibernation varies with local conditions. Sharp-tailed Snake were found to be active during all months of the year on Vancouver Island. Eggs are likely laid in rock crevices or between plant roots, nest sites may be communal. Hatchlings may take 3 or more years to mature.



Range

Found from central California through Oregon and generally east of the Cascades in Washington. The populations in northern Oregon, throughout Washington and BC are disjunct. In 2008 the species was rediscovered on the San Juan Islands (Turtleback Mountain, Orcas Island) filling a distribution gap between Washington and BC. There are approximately 8-10 populations in BC found on the southeastern tip of Vancouver Island. Other populations occur on adjacent Gulf Islands (South and North Pender Island and Saltspring Island). The first occurrence for the South Coast, from the Pemberton area was confirmed in 2011. An occurrence north of Kamloops in the Southern Interior from the 1964 remains unconfirmed.



Threats

- Localized extirpations due to small population size, small home range, and limited dispersal abilities and distribution in areas undergoing rapid development and habitat loss/alteration.
- Vehicle mortality, population fragmentation, and constraints in seasonal movement due to roadways that cut through core habitat areas. Road building may remove key habitat features such as overwintering, oviposition and refuge sites.
- Direct mortality and sub-lethal impacts from application of pesticides to control slugs.
- Reduced prey availability and direct mortality and injuries from vegetation maintenance (e.g. mowing, weed control) and compaction from recreation activities (ATV and mountain bikes).
- Predation by feral and free ranging domestic pets (e.g. dogs and cats) as well as increased vulnerability to ground foraging birds that benefit from human settlement and fragmented environments (e.g. Northwestern Crow).

Conservation/ Management

Apply conservation and management objectives as set-out in the “Recovery Strategy for the Sharp-tailed Snake (*Contia tenuis*) in British Columbia”. Integrate objectives, recommendations and assessment methods found in “Best Management Practices for Amphibians and Reptiles in Urban and Rural Environments in British Columbia.” Inventory and monitoring resources include standardized methods (Resource Information Standards Committee) # 38 Inventory Methods for Snakes (Version 2.0), “Suitability of Amphibians and Reptiles for Translocation”. For further details on conservation and management objectives for this species, please consult the above noted resources, references provided or contact provincial and federal agencies.

This species is listed under the Federal Species At Risk Act (SARA) and is subject to protections and prohibitions under the BC Wildlife Act. Habitat for this species may also be governed under provincial and federal regulations including the Fish Protection Act and Federal Fisheries Act as well as Regional and local municipal bylaws.

Sources

BC Conservation Data Centre. 2015 [Internet] [Updated January 28, 2011] Conservation Status Report: *Contia Tenuis*. BC Ministry of Environment. - BC Ministry of Environment. 2015. Recovery plan for the Sharp-tailed Snake (*Contia tenuis*) in British Columbia. Prepared by the Sharp-tailed Snake Recovery Team. BC Ministry of Environment, Victoria, BC. 42pp. - Resources Inventory Branch 1998. [Internet] Inventory Methods for Snakes version 2.0. Standards for Components of British Columbia's Biodiversity No. 38. - California Reptiles and Amphibians [Internet] [2010]. *Contia tenuis* - Sharp-tailed Snake. - Center for North American Herpetology. 2010. [Internet] *Contia* genus. - COSEWIC. [Internet] [November 2009] Species at Risk Registry, *Contia tenuis*. - Engelstoft, Christian and Kristiina Ovaska. 2004. Habitat Restoration for the Endangered Sharp-tailed Snake. Proceedings of the Species at Risk 2004 Pathways to Recovery Conference. Victoria (BC). - Feldman Chris R and Richard F. Hoyer. 2010. A New Species of Snake in the Genus *Contia* (Squamata: Colubridae) from California and Oregon. - The American Society of Ichthyologists and Herpetologists. Copeia Vol. 2010, No.2: pp. 254-267. - Garry Oak Ecosystems Recovery Team. 2003. Species at Risk in Garry Oak and Associated Ecosystems in British Columbia *Contia tenuis*. Victoria (BC). - NatureServe Explorer An Online Encyclopedia of Life [Internet] [updated February 2010]. *Contia tenuis*. - O'Donnell, Ryan P. and Doug McCutchen. 2008. A Sharp-tailed Snake (*Contia tenuis*) in the San Juan Islands: Western Washington's First Record in 58 Years. *Northwestern Naturalist* 89:107–109. - Ovaska, K, S. Lennart, C Engelstoft, L. Matthias, E. Wind and J. MacGarvie. 2004. Best Management Practices for Amphibians and Reptiles in Urban and Rural Environments in British Columbia. Ministry of Water Land and Air Protection, Ecosystems Standards and Planning, Biodiversity Branch. Victoria (BC). - Proulx, Gilbert et al. 2003. A Field Guide to Species at Risk in the Coast Forest Region of British Columbia. Published by International Forest Products and BC Ministry of Environment. Victoria (BC). - Reptiles of BC. [Internet] [2010] Sharp-tailed Snake *Contia tenuis*.

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Every effort has been made to ensure content accuracy. Comments or corrections should be directed to the South Coast Conservation Program: info@sccp.ca. Content updated December 2015.

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