

SPECIES AT RISK FACTSHEET FOR WARTY JUMPING SLUG

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<http://onh.eugraph.com/molluscs/wjs/index.html>

English name Warty Jumping Slug

Scientific name *Hemphillia glandulosa*

Family Arionidae

Risk status

Canada: COSEWIC: Special Concern

Canadian Species at Risk Act: Special Concern

Elsewhere: Oregon – unranked (S?); Washington – unranked (S?)

State monitoring as species of concern

Range/Known distribution

Warty jumping slugs may be found in suitable habitats in the Puget Sound Region, from the Coast Range of northwestern Oregon into British Columbia; and in the western Washington Cascades and west to the Pacific Coast and Olympic peninsula in Washington (Wainwright and Duncan, 2005). In Canada, the species is found only in the more northern extremity of Southern Vancouver Island in British Columbia, although none have been sighted north of Nanaimo despite there being records of distribution in the interior and along the west coast (Wainwright and Duncan, 2005).

Field Description

The warty jumping slug is a species of air-breathing land slug, a terrestrial pulmonate gastropod mollusk in the family Arionidae. It is a rather small, 12 to 30 mm long, broad-bodied, light brown – whitish grey slug with or without dark spots. It has a blue-gray head and tentacles with light-colored flanks and can be identified by a distinct dorsal hump, with papillae “warts” on its visceral yellowish shell plate which is visible through a slit in the mantle. This slug is different from other *Hemphillia* due to its wide body and large mantle with dense papillae (Forsyth, 2004).

Habitat

H. glandulosa lives in moist coniferous, deciduous and mixed forests; under logs, vegetation, and leaf litter (Forsyth 2004). It prefers forested stands 35-80 years old, as well as coarse woody debris and riparian sites in low to middle elevations. The base of sword fern plants are very popular among warty jumping slugs (COSEWIC, 2003).

Life History

Warty jumping slugs mature within one year and few live longer than that. They mate in the fall and eggs are deposited in late fall/early winter.

Why the species is at risk

In Canada, the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) and the Canadian Species at Risk Act have both listed the warty jumping slug as a species of special concern due to its small range as well as the potential for population isolation due to habitat loss, fragmentation or modification. As a result of degradation, the species may no longer be able to occupy a site or the population density may be reduced to the point where individuals have difficulty interacting. Predation and competition from exotic and introduced mollusks are also a consideration (Wainwright and Duncan, 2005). Logging, as well as residential and recreational development, continue to modify habitats throughout the species' range on Vancouver Island (COSEWIC, 2013).

What can be done to help this species

- 1.) The range of Warty Jumping-slug coincides with an area of B.C. that has an extensive logging history. Forest management practices such as pre-commercial thinning, pruning, removal of select tree species, fertilization practices, patch-size harvesting, and clearcut harvesting, likely have detrimental effects on populations of Warty Jumping-slug. Large coarse woody debris (habitat for *H. glandulosa*) may be in short supply in intensively managed forests. (Ministry of Environment, 2012). Incorporating sustainable forest management practices, such as variable retention, to leave coarse woody debris (ie. nurse logs and snags) in the forest for at least one rotation would be advisable.

- 2.) Loss of mature and old-growth forest habitats as a result of urbanization and other developments was identified as a main threat to Warty Jumping-slug (COSEWIC 2003). In Victoria, limiting construction in well-liked recreational areas such as the Galloping Goose Trail and East Sooke Regional Park would be helpful (Ministry of Environment, 2012).
- 3.) Being mindful when engaging in activities like hiking and cycling within areas known to house warty jumping slugs would likely result in less soil compaction and alteration of habitat (Ministry of Environment, 2012).
- 4.) Limiting the use of herbicides in roadside verges where many gastropods are known to dwell would reduce mortality among warty jumping-slugs (Ministry of Environment, 2012).
- 5.) Managing invasive gastropods found in warty jumping-slug habitat would reduce competition and allow the warty jumping slug to maintain its full range (Ministry of Environment, 2012).
- 6.) Addressing knowledge gaps (habitat requirements, range extent within Vancouver Island) for the warty jumping slug would ensure protection for locations and habitats of the warty jumping slug (Ministry of Environment, 2012).

Works Cited

COSEWIC. (2003). Assessment and Status Report on the Warty Jumping Slug. Ottawa: Environment Canada.

COSEWIC. (2013). COSEWIC status appraisal summary on the Warty Jumping-slug *Hemphillia glandulosa* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xx pp.
http://publications.gc.ca/collections/collection_2013/ec/CW69-14-2-36-2013-eng.pdf

Forsyth, R. G. (2004). Land Snails of British Columbia.. Royal British Columbia Museum Handbook. iv, 188 pp.. Victoria: Royal BC Museum.

Ministry of Environment. (2012). Management Plan for the Warty Jumping Slug (*Hemphillia Glandulosa*) in British Columbia. British Columbia: Ministry of Environment.
<http://a100.gov.bc.ca/pub/eirs/finishDownloadDocument.do?subdocumentId=9002>

Wainright, M. and Duncan, N. (2005). Conservation Assessment for the Four Species of the Genus *Hemphillia*. USDA Forest Region 6 and USDI Bureau of Land Management. Oregon and Washington. <http://www.blm.gov/or/plans/surveyandmanage/files/ca-ig-hemphillia-4sp-2005-11-01.pdf>