

Heritage Rank Status Factors

Elcode IMGAS59070
Gname HEMPHILLIA PANTHERINA
Gcomname PANTHER JUMPING-SLUG

Number of Occurrences

A = 1 - 5

Comments Hemphillia pantherina is known from a single location in the Lewis River Drainage, Gifford Pinchot National Forest, Skamania County, Washington (Branson, 1975).

Number of Occurrences with Good Viability

B = Very few (1-3) occurrences with good viability

Comments Hemphillia pantherina is likely the rarest of the described gastropods in the Western United States. Branson (1975) described the species from a single specimen found in 1973. Dr. Timothy Pearce claims to have relocated it at the type locality (no number given), but it has not been found at any other location (Terrence Frest, personal communication in Burke et al., 1999).

Population Size

A = 1-50 individuals

Comments Only one specimen has been documented, although T. Frest has been told (by T. Pearce) that the species was found again at the type locality (Frest and Johannes, 1996).

Range Extent

B = 100-250 km² (about 40-100 square miles)

Comments Known from a single site near the Lewis River, Skamania County, Washington. It is suspected throughout the Cascade Range of western Washington, from the Snoqualmie watershed to the Columbia Gorge (Kelley et al., 1999).

Area of Occupancy

A = <0.4 km² (less than about 100 acres)

LA = <4 km (less than about 2.5 miles)

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Long-term Trend in Population Size, Extent of Occurrence, Area of Occupancy, and/or Number or Condition of Occurrences

U = Unknown. Long-term trend in population, range, area occupied, or number or condition of occurrences unknown

Comments

Short-term Trend in Population Size, Extent of Occurrence, Area of Occupancy, and/or Number or Condition of Occurrences

E = Stable. Population, range, area occupied, and/or number or condition of occurrences unchanged or remaining within $\pm 10\%$ fluctuation

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Threats

A = Substantial, imminent threat. Threat is moderate to severe and imminent for most (> 60%) of the population, occurrences, or area. Ecological community occurrences are directly impacted over a widespread area, either causing irreversible damage or requiring long term recovery

Scope High Severity High Immediacy High

Comments Any site disturbance that alters the habitat characteristics within the vicinity of this population locality might be detrimental to the species' survival (Burke et al., 1999).

Number of Appropriately Protected and Managed Occurrences

A = None. No occurrences appropriately protected and managed

Comments

Intrinsic Vulnerability

A = Highly Vulnerable. Species is slow to mature, reproduces infrequently, and/or has low fecundity such that populations are very slow (> 20 years or 5 generations) to recover from decreases in abundance; or species has low dispersal capability such that extirpated populations are unlikely to become reestablished through natural recolonization (unaided by humans). Ecological community occurrences are highly susceptible to changes in composition and structure that rarely if ever are reversed through natural processes even over substantial time periods (> 100 years).

Comments Nearly all of the terrestrial gastropods in the Pacific Northwest, including the Hephillia, are hermaphroditic, having both male and female organs. Self-fertilization has been demonstrated in some species, although cross-fertilization is probably the norm (Burke et al., 1999).

Environmental Specificity

B = Narrow. Specialist or community with key requirements common.

C = Moderate. Generalist or community with some key requirements scarce.

Comments The known site of Hemphillia pantherina was in deep forest floor litter near a stream. Its habitat is assumed to be similar to that of other Hemphillia (Kelley et al., 1999). The species was found beneath deep forest litter near a creek crossing in the Gifford Pinchot National Forest (Branson, 1975). No other specific habitat or ecological information is available (Burke et al., 1999).

Other Considerations

NRANK: N1

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Reasons

Very limited number of occurrences with restricted range.

BCD Sources

New Sources

Branson, B.A. 1975. *Hemphillia pantherina*, a new arionid slug from Washington. *The Veliger* 18(1): 93-94.

Burke, T.E., J.S. Applegarth, and T.R. Weasma. 1999. Management recommendations of survey and manage terrestrial mollusks. Ver. 2.0. Report submitted to USDI Bureau of Land Management, Salem, Oregon, October 1999. Unpaginated.

Frest, T.J. and E.J. Johannes. 1996b. Taxonomic report for ROD mollusk species. Report to U.S.D.I Bureau of Land Management, Oregon State Office and Salem District Office, Portland, Oregon, contract order number 1422H952-P5-4298. 55 pp.

Kelley, R., S. Dowlan, N. Duncan, and T. Burks. 1999. Field Guide to Survey and Manage Terrestrial Mollusk Species from the Northwest Forest Plan. Bureau of Land Management, Oregon State Office, Portland, Oregon. 114 pp.