

Heritage Rank Status Factors

Elcode IMGAS62030
Gname PROPHYSAON COERULEUM
Gcomname BLUE-GRAY TAILDROPPER

Number of Occurrences

B = 6 - 20

Comments 6-20 occurrences. See Frest and Johannes (2000).

Number of Occurrences with Good Viability

C = Few (4-12) occurrences with good viability

Comments 10 sites with good viability in Jefferson, Skamania, King, and Lewis Counties, Washington; and Coos, Curry, Josephine, Jackson, Lane, and Douglas Counties, Oregon (Frest and Johannes, 2000; table 7)

Population Size

U = Unknown

Comments Appears relatively common in southwestern Oregon, but rare elsewhere (Frest and Johannes, 2000).

Range Extent

E = 5,000-20,000 km² (about 2,000-8,000 square miles)

Comments Puget Trough, south through the western Cascade Range of Washington, Oregon, and northern California. It is also suspected to occur on the east slope of the Cascade Range (Kelley et al., 1999). Extends from the Willamette River Valley, Oregon, to Olympia, Washington; also Benton, Clackamas, and Multnomah Counties, Oregon; Thurston and King Counties, Washington (Frest and Johannes, 2000). Note a coeruleum like form (possibly another species) exists in the middle Klamath drainage in Siskiyou County, extending the potential range into California (Frest and Johannes, 2000).

Area of Occupancy

D = 20-100 km² (about 5,000-25,000 acres)

E = 100-500 km² (about 25,000-125,000 acres)

LD = 200-1,000 km (about 125-620 miles)

LE = 1,000-5,000 km (about 620-3,000 miles)

Comments Recent live sites are in Jefferson, Lewis, Skamania, and King counties, Washington; Coos, Curry, Josephine, Jackson, Lane, and Douglas Counties, Oregon (Frest and Johannes, 2000). Absence from immediately adjoining northwestern California is puzzling.

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

D = Declining. Decline of 10-30% in population, range, area occupied, and/or number or condition of occurrences

Comments Not found recently by Branson (1977; 1980). Most previously recorded sites are now in urban areas. Declining over most of its wide range, except in southwestern Oregon (Frest and Johannes, 2000).

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 Moderate Immediacy Moderate

Comments Logging and agricultural expansion occurs in almost all known range; grazing and urbanization have extirpated most historic sites (Frest and Johannes, 2000).

Number of Appropriately Protected and Managed Occurrences

B = Few (1-3) 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 Experienced massive habitat loss, though fairly common in southwestern Oregon (Frest and Johannes, 2000).

Environmental Specificity

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

D = Broad. Generalist or community with all key requirements common.

Comments Found in a wide range of moist and mixed conifer forests. In open or dry areas, it is usually located in sites with relatively higher shade and moisture levels than those of the general forest habitat. It is typically found in moist plant communities, such as big-leaf maple and sword-fern. This slug is usually associated with leaf and needle litter, wood chips from decomposing logs, mosses, and is known to browse on mycorrhizal fungi species. Fecal analysis in spring of 1998 showed fungal hyphal fragments and structures associated with mycorrhizal fungi root attachment. Spores of hypogeous fungi were also found (Kelley et al., 1999).

Other Considerations

NRANK: N4. Recent DNA work by Wilke and Davis (2000) suggests the possibility of a morphometric radiation of this species; though it is likely this species may represent several subspecific taxa in southwestern Oregon (Frest and Johannes, 2000). Listing here reflects the potential for multiple subspecies in Oregon to be split out at a future date (Frest and Johannes, 2000).

Edition 11/27/2002 **Edauthor** Cordeiro, J.
Grank G4 **Grank Date** 11/27/2002

Greasons

Potentially may represent several subspecies in southwestern Oregon, each with restrictive ranges and occurrences in need of evaluation.

BCD Sources

New Sources

- Branson, B.A. 1977. Freshwater and terrestrial Mollusca of the Olympic Peninsula, Washington. *The Veliger*, 19(3): 310-330.
- Branson, B.A. 1980. Collections of gastropods from the Cascade Mountains of Washington. *The Veliger*, 23(2): 171-176.
- Frest, J.T. and E.J. Johannes. 2000. A baseline survey of southwestern Oregon, with emphasis on the Rogue and Umpqua River drainages. Year 2000 Report prepared for Oregon Natural Heritage Program, Portland, Oregon. 403 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. prepared for Oregon Natural Heritage Program, Portland, Oregon. 403 pp.
- Furnish, J., T. Burke, T. Weasma, J. Applegarth, N. Duncan, R. Monthey, and D. Gowan. 1997. Survey protocol for terrestrial mollusk species from the Northwest Forest Plan. Draft Version 2.0. Report to the USDI Bureau of Land Management, Salem, Oregon, October 29, 1997. Unpaginated.
- Furnish, J.L. and R. Monthey. 1999. Management recommendations for aquatic mollusks. Ver. 2.0. Report submitted to USDI Bureau of Land Management, Salem, Oregon, December 1998. Unpaginated.
- McGraw, R., N. Duncan, and E. Cazares. 2002. Fungi and other items consumed by the blue-gray taidropper slug (*Prophysaon coeruleum*) and the papillose taidropper slug (*Prophysaon dubium*). *The Veliger*, 45(3): 261-264.
- Wilke, T. and G.M. Davis. 2000. DNA analysis of mollusk species in Oregon: molecular phylogeny, taxonomy, and population structure of *Prophysaon coeruleum* (Gastropoda: Arionidae). National Fish and Wildlife Foundation, Project No. 99-299. 8 pp.