

Washington Status Factors

Elcode NF000HYVE9
Gname HYGROPHORUS VERNALIS
Gcomname

Number of Occurrences

A = 1 - 5

Comments This gilled mushroom fruits in the spring, often around snowbanks, at high elevations in montane areas; it is likely mycorrhizal. Castellano et al. (1999) report it from three sites in Washington's Olympic National Park and one from Siskiyou Co., California. The summary of ISMS data includes a single collection from Washington which may be one of the three cited in Castellano et al.. All known collections appear to be in the range of the northern spotted owl.

Number of Occurrences with Good Viability

U = Unknown what number of occurrences with good viability

Comments Smith's collections (Hesler and Smith 1963, Fogel n.d.) include two collections from Olympic National Park made in 1939 and one from California (misabeled as Washington on the MICH web site, Fogel n.d.) from 1941. No collection data were found for the additional collection cited by Castellano et al. (1999) but it may be the one cited in ISMS and if so is recent and the most likely to be viable now. No data on collections deposited at WTU were available to me, but additional collections should be sought there. Available data is insufficient to allow for judging this factor.

Population Size

A = 1-50 individuals

Comments Only one collection could be located that was made since 1939, but extensive herbarium searches could not be performed to look for additional material. The color photo in Castellano et al. (1999) was probably taken in the last 15 years, but whether the specimens were from the collection listed in ISMS and whether it came from one of the known sites in Washington could not be determined with the available data.

Range Extent

F = 20,000-200,000 km² (about 8,000-80,000 square miles)

Comments In Washington this species has been reported only from Olympic National Park.

Area of Occupancy

U = Unknown

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

Comments Short of using molecular tools there is no way to evaluate this factor.

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

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

Comments

Threats

E = Localized substantial threat. Threat is moderate to severe for a small but significant proportion of the population, occurrences, or area. Ecological community occurrences are directly impacted over a small area, or in a small portion of their range, but threats require a long-term recovery.

Scope Low Severity Moderate Immediacy Moderate

Comments For those sites, mostly historic, from Washington at least 2, if not all 3, are in Olympic National Park so logging is not likely to be a major threat in that area. Development (roads, parking lots, ski runs, campgrounds, etc.) are a potential threat to some of the accessible high elevation sites there.

Number of Appropriately Protected and Managed Occurrences

C = Several (4-12) occurrences appropriately protected and managed

Comments The two sites where Smith collected in Olympic National Park are protected; the locality of the solitary ISMS site is listed as being in a protected area, but I could not determine if that is a fourth site or overlaps with one of Smith's sites or whether or not it was in the Park.

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 High elevation sites, once disturbed, do not recover rapidly. This species is likely mycorrhizal with mature conifers and thus if the forest cover is lost, it is problematical whether this species would be able to re-establish itself.

Environmental Specificity

A = Very Narrow. Specialist or community with key requirements scarce.

Comments High elevation sites, once disturbed, do not recover rapidly. This species is likely mycorrhizal with mature conifers and thus if the forest cover is lost, it is problematical whether this species would be able to re-establish itself.

Other Considerations

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Grank S1 **Grank Date** 11/18/2002

Greasons

The restricted known range of this attractive mushroom to some extent reflects the restricted number of high elevation sites where snowbank fungi (ones that characteristically fruit around receding snowbanks) occur in western Washington, Oregon, and California. This region has been the site of intense mycological activity for almost 100 years so if this species was common even in its specialized habitat, more than two or three collections should be on record from Washington. Targeted field work and examination of collections at WTU may provide some useful information that could raise the species to a S2 or S3 level.

BCD Sources

New Sources

Castellano, M.A., Smith, J.A., O'Dell, T., Cazares, E., and Nugent, S. 1999. Handbook to Strategy 1 Fungal Species in the Northwest Forest Plan. Portland, Oregon: USDA Forest Service, PNWRS PNW-GTR-476.

Fogel, R. n.d. MICH Fungal Bioinformatics Project. Retrieved 2002.11 from <http://www.herb.lsa.umich.edu/Bioinformatics.htm>.

Hesler, L.R., and Smith, A.H. 1963. North American Species of *Hygrophorus*. Knoxville, TN: The University of Tennessee Press. 416. pp. (note that Castellano et al. 1999 mistakenly refer to this publication as "North American Taxa of *Hygrophorus*").

Largent, D.L. 1985. The Agaricales (Gilled Fungi) of California. 5. *Hygrophoraceae*. Eureka: Mad River Press, Inc. 208 pp.