

Heritage Rank 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, in montane forests. 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 indicates that an additional collection has been made in Washington. All known collections appear to be in the range of the northern spotted owl. Only one collection could be located that was made since 1941, 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.

Number of Occurrences with Good Viability

A = No (A- or B- ranked) occurrences with good viability

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

Comments The three early collections cited in Hesler and Smith (1963) date from 1939 and 1941; the California collection was made in 1941 (Fogel, n.d.). 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

U = Unknown

Comments This can not be determined; records reflect only species presence.

Range Extent

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

Comments The range of this species extends from Olympic National Park in Washington to Mt. Shasta in California.

Area of Occupancy

U = Unknown

LU = Unknown

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

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 insufficient data to draw any conclusions

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 insufficient data to draw any conclusions

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. Logging and development are also potential threats to the California population if it is extant.

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 as is the third collection mentioned by Castellano et al. (1999); the locality of the solitary ISMS site is listed as being in a protected area, but I could not determine if that is a site or overlaps with one of these three sites. The California site is probably not protected.

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

NRANK - N2.

Edition 11/18/2002 Edauthor Nancy S. Weber

Grank G2

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. If this species was common, even in its specialized habitat, more than three collections in nearly 40 years would be known of it. The lack of sites in Oregon is something that should challenge mushroomers to seek this species around Mt. Hood and the high cascades and to see if they can fill in the blank.

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*").