

# Washington Status Factors

**Elcode** NF00HYCA21  
**Gname** HYGROPHORUS CAERULEUS  
**Gcomname**

## Number of Occurrences

A = 1 - 5

**Comments** This distinctive gilled mushroom is grayish blue to blue or cream-colored with blue tines. Contrary to the Handbook (Castellano et al.) this species is not endemic to Oregon and Washington. It was described from Idaho (Miller 1984). Within the range of the northern spotted owl in Washington, one site was reported by Castellano et al. (1999); on the OSC web site (OSC n.d.) an additional site is listed. It remains to be determined whether these two collections are those in the ISMS database.

## Number of Occurrences with Good Viability

U = Unknown what number of occurrences with good viability

**Comments**

## Population Size

U = Unknown

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

## Range Extent

D = 1,000-5,000 km<sup>2</sup> (about 400-2,000 square miles)

**Comments** One locality is in Chelan Co. (OSC n.d.), the other in Kittitas Co. (Castellano, et al. 1999, specimen not located on FSL or OSC web sites).

## Area of Occupancy

U = Unknown

LU = Unknown

**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** too little 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** too little data to draw any conclusions

### Threats

B = Moderate and imminent threat. Threat is moderate to severe and imminent for a significant proportion (20-60%) of the population, occurrences, or area. Ecological community occurrences are directly impacted over a moderate area, either causing irreversible damage or requiring a long-term recovery.

**Scope** Moderate      **Severity** Moderate      **Immediacy** Moderate

**Comments** Most, if not all, the sites are in areas where wildfires are frequent on a historical basis. This mushroom is likely mycorrhizal with conifers. Thus changes brought about by logging, mining, fires, and development that result in the loss of trees and changes in the sites also threaten the existence of the species.

### Number of Appropriately Protected and Managed Occurrences

A = None. No occurrences appropriately protected and managed

**Comments** In Washington one site is in a LSR but not protected, the other is not protected.

### Intrinsic Vulnerability

B = Moderately Vulnerable. Species exhibits moderate age of maturity, frequency of reproduction, and/or fecundity such that populations generally tend to recover from decreases in abundance over a period of several years (on the order of 5-20 years or 2-5 generations); or species has moderate dispersal capability such that extirpated populations generally become reestablished through natural recolonization (unaided by humans). Ecological community occurrences may be susceptible to changes in composition and structure but tend to recover through natural processes given reasonable time (10-100 years).

**Comments** The degree of vulnerability under current forest practices is relatively low. However, this species occurs in areas that could undergo drastic changes due to logging and development with changes in land management policies at the Federal level,

### Environmental Specificity

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

**Comments** This species fruits in the spring (May to July depending on altitude) and has been found near melting snowbanks as well as in areas where the snow has been gone for several weeks but the ground is still moist.

### Other Considerations

**Edition** 11/17/2002      **Edauthor** Nancy S. Weber

**Grank** S1      **Grank Date** 11/26/2002

### Reasons

*Hygrophorus caeruleus* is known only from western North America where it occurs in mountainous regions roughly in an arc around the northern part of the Great Basin, an unusual distribution for a fungus. It is relatively easy to recognize when it is found; the paucity of sites is likely a reflection of true scarcity. It is known from two sites in Washington; neither of the sites are permanently protected. On the basis of the number of known sites, it would fit nicely into the S1 category but additional field work might bring the numbers up such that S2 would be the appropriate ranking.

## **BCD Sources**

### **New Sources**

1999. 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.

OSC n.d. Mycological Collections Oregon State University. Retrieved 2002.11. from <http://ocid.nacse.org/research/herbarium/myco/index.html>.