Heritage Rank Status Factors

Elcode NF00HECR13

Gname HELVELLA CRASSITUNICATA

Gcomname

Number of Occurrences

C = 21- 80

Comments Dark gray-brown cups each supported by a short to distinct stalk that is white or nearly so and appears to be made of rounded folds of tissue are characteristic of this species which fruits in late summer at moderate to high elevations below tree line. Twenty-two locations are in the ISMS summary of locations, the list of collections has about 27 entries for this species. Collection dates are not available so I had no way of telling if data from the herbarium search (Weber 1995) was included. Abbott and Currah (1997) list 5 sites from British Columbia, 1 from Alaska, and 6 from Washington including those cited by Weber (1975)

Number of Occurrences with Good Viability

D = Some (13-40) occurrences with good viability

Comments Mt. Rainier National Park, the type locality, is protected and is the source of oaver half of the collections in the ISMS data base. Those sites are likely to remain suitable for the fungus.

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 This species has been documented so far from Alaska, British Columbia east into the Canadian Rockies, the Olympic Mountains in Washington, and the Oregon and Washington Cascades. Possibly present in the Colorado Rockies but specimens await study to confirm the identification.

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 The species seems to fruit at medium to high elevations, and high latitudes thus global warming could affect its ability to persit in the warmer parts of its range.

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 This species appears to tolerate mild disturbance such as well-established hiking paths but not large-scale disturbance such as logging, mining, and construction. However, these activities, with the possible exception of construction of ski runs and associated facilities are unlikely to occur in most of its habitats.

Threats

D = Moderate, non-imminent threat. Threat is moderate to severe but not imminent for a significant portion of the population, occurrences, or area.

Scope	Moderate	Severity	Moderate	Immediacy	Low

Comments This species is probably mycorrhizal so any event that results in reduced vigor of the photosynthetic partner or its removal is likely to stress the fungus as well; I've not see it in severely disturbed sites, but it is often found along hiking paths. Once the forest is gone or severely damaged, decades probably elapse before the habitat will again be right for this species.

Number of Appropriately Protected and Managed Occurrences

D = Many (13-40) occurrences appropriately protected and managed

Comments Sixteen sites are from G1/2 areas and one is from a LSR in Oregon, current protected but perhaps not for long. Some of the Canadian sites are in Provincial Parks and may also be 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 Probably mycorrhizal and thus dependent on the photosynthetic partner in the symbiosis for energy-rich compounds. Thus any factors, e.g., logging, construction, fires, landslides, that affect the vigor of the photosyntetic partner or remove it are likely to have a negative impact on the fungus.

Environmental Specificity

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

Comments This species is characteristic of moderately high elevations in the zone with true firs and mountain hemlock, and in drier or at least well-drained sites. This species seems to tolerate mild disturbance such as well-established hiking paths but not large-scale disturbance such as logging, mining, and construction. However, these activities, with the possible exception of construction of ski runs and associated facilities are unlikely to occur in most of its habitats

Other Considerations

NRANK - N3. This species was described from Mt. Rainier National Park, now established as the place with the greatest population density of any in its range. It is one of several species in the genus characteristic of high elevations and or high latitudes and is the only one, so far, uniquely North American. It may also occur in the Colorado Rocky mountains

Edition 11/24/2002 **Edauthor** Nancy S. Weber

Grank G3 **Grank Date** 11/24/2002

Greasons

This cup-fungus is characteristic of montane forests in the higher portions of the Cascades of Oregon and Washington; it also occurs in the Olympic Mountains and in British Columbia and Alaska. Thus it is truly a western species. Only in one place, Mt. Rainier National Park, does it seem to be abundant. It is seldom common enough for one to see many fruitings on an afternoon walk and it fruits irregularly; however, careful searching may reveal more sites. The species needs to be watched and more of the sites conserved.

BCD Sources

New Sources

Abbott and Currah 1997 Abbott, S.P., and Currah, R.S. 1997. The Helvellaceae: Systematic revision and occurrence in northern and northwestern North America. Mycotaxon 62: 1-125.

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.

Weber, N.S. 1975. Notes on western species of Helvella. I. Beih. Nova Hedwigia 51: 25-38.

Weber, N.S. 1995. Report on FEMAT Strategey 1 epigeous discomycetes. Submitted to the the USDA Forest Service. 251 pp