

# Washington Status Factors

**Elcode** NFSM000050  
**Gname** CRATERELLUS TUBAEFORMIS  
**Gcomname** Winter craterelle (also winter chanterelle)

## Number of Occurrences

B = 6 - 20

**Comments** 12 (Dreisbach et al. 2002) to 15 (ISMS 2002) occurrences are cited for Washington, where recent intensive fungal surveys are relatively few. Continued fungal surveys may uncover more sites. It is frequently commercially harvested from the state (Pilz et al, 2003).

## Number of Occurrences with Good Viability

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

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

**Comments** 12-15 extant occurrences are confirmed for Washington, of which 11 lie in currently protected reserves.(ISMS 2002 database modified by ONH, Dreisbach et al 2002.)

## Population Size

U = Unknown

**Comments** Records reflect only species occurrence, i.e. fruitbodies, not numbers of individuals. Genets of ectomycorrhizal fungi cannot be delimited without DNA sampling.

## Range Extent

F = 20,000-200,000 km<sup>2</sup> (about 8,000-80,000 square miles)

**Comments** *Craterellus tubaeformis* as recognized from Europe and eastern North America is considered distinct from the taxon growing on wood in ectomycorrhizal association with western hemlock in the northern spotted owl region. (Redhead 1979, Dahlman et al 2000, Trappe 2001, Pilz et al 2003). In Washington, CRTU3 has been found at one site on the northern coast of the Olympic Peninsula east to the Cascade range at the Canadian border and south in the Cascades to the Oregon border. (Dreisbach et al 2002, ISMS Database 2002 and GIS map for CRTU3).

## Area of Occupancy

U = Unknown

LU = Unknown

**Comments** Area occupancy can only be roughly approximated from fungal fruitbodies as the vegetative organism is hidden from site within the substrate; its distribution is spotty and it appears restricted to fairly complex habitats. CRTU3 is known to occur within well rotted "coarse woody debris" (Trappe 2001) and demonstrated to associate with western hemlock. (Kroppe & Trappe 1982, Trappe 2001).

## Long-term Trend in Population Size, Extent of Occurrence, Area of Occupancy, and/or Number or Condition of Occurrences

E = Relatively Stable ( $\pm 25\%$  change)



**Comments** CRTU3 requires western hemlock to thrive and also requires a decomposed woody substrate (Trappe 2001). It is vulnerable to anything that threatens the forest habitat, including drought, insect infestations, hot fires, road construction and development, and clearcutting.

## Environmental Specificity

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

**Comments** SPECIFICITY: CRTU3 is found in all aged coniferous stands in which western hemlock and well decomposed wood is present. Western hemlock has been demonstrated to be the preferred mycorrhizal partner, but CRTU3 has also been found rarely in Doug-fir monocultures in the absence of western hemlock and even more rarely in sitka spruce stands when western hemlock is present. Fruitbodies begin fruiting in late autumn and early winter and can be also found in the spring. (Trappe 2001, Pilz et al 2003). One individual has been consistently sampled over four years in Oregon from the same rotten log. (Norvell & Exeter 2003, Norvell pers comm 2002).

## Other Considerations

*Craterellus tubaeformis* as recognized from Europe has two synonyms: *Cantharellus tubaeformis* and *Cantharellus infundibuliformis*. The taxon occurring within the northern spotted region of North America and growing on wood in ectomycorrhizal association with western hemlock is thought to represent an undescribed species. It is frequently commercially harvested in Washington (Pilz et al 2003).

**Edition** 11/22/2002      **Edauthor** Lorelei L Norvell

**Grank** S4      **Grank Date** 11/22/2002

## Greasons

CRTU3 is an ectomycorrhizal fungus dependent upon the health of its symbiotic partner (*Tsuga heterophylla* -- western hemlock). CRTU3 is common (OR and possibly CA) to uncommon (WA where intensive surveys are lacking) in the northern spotted region. There are 12-15 documented extant occurrences, of which 11 lie in currently protected forest reserves. It may be endemic to the western hemlock forest zone in the PNW. The current known populations appear stable. Unprotected occurrences are threatened by road construction & development and clearcutting or heavy thinning. Moderate to light thinning is not considered a threat. All occurrences are imperiled by hot fires. Taxonomy of the endemic species is under investigation.

## BCD Sources

### New Sources

Trappe, M. 2001. The ecology of winter chanterelles (*Craterellus tubaeformis*) in western Oregon. Oregon SU MS thesis.

Kropp and Trappe, J. 1982. Ectomycorrhizal fungi of *Tsuga heterophylla*. *Mycologia* 74:479-488.

Dahlman, Danell, Spatafora. 2000. Molecular systematics of *Craterellus*: cladistic analysis of nuclear LSU rDNA sequence data. *Mycological research* 104:388-394.

Pilz, Norvell, Danell, Molina, 2003 (in final review). Ecology and management of commercially harvested chanterelle mushrooms. USDA-FS PNW-RS publication. Portland.

Redhead. 1979. A study of the sphagnicolous fleshy basidiomycetes in the eastern sections of the Canadian boreal forest. U of Toronto PhD dissertation.

Norvell & Exeter. 2003 in press. Ectomycorrhizal epigeous basidiomycete diversity in Oregon's coast montane *Pseudotsuga menziesii* forests. *New York Botanical Memoirs*.

Dreisbach, Mueller, Exeter, McFarland, Cushman. 2002. 2002 Survey and Manage Step 2 Worksheet. ISMS 2002 database and GIS map for CRTU3.