

Heritage Rank Status Factors

Elcode NFSM000186
Gname TRICHOLOMA VENENATUM
Gcomname

Number of Occurrences

A = 1 - 5
B = 6 - 20

Comments There are at least 5 occurrences of *Tricholoma venenatum* reported from North America. (Atkinson 1908; Kauffman 1918; Ammirati et al. 1985; Ovrebo 1980; Norvell 1995; Shanks 1997; Castellano 1999; New York Botanical Garden specimens database -- accessed 11-21-02; SFSU Sierra Nevada collections database accessed 11-21-02).

Number of Occurrences with Good Viability

U = Unknown what number of occurrences with good viability

Comments The number of extant occurrences is not known.

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

U = Unknown

Comments The species was originally described from New York (Atkinson 1908) and has been also confirmed for Michigan, Massachusetts, and New York, associated with hardwoods in all cases. (Kauffman 1918, Ovrebo 1980, Ammirati et al. 1985,). One collection from a coniferous forest in the Olympic Peninsula (Castellano et al 1999) is believed to represent a pale variant of *T. pardinum* by Norvell (1995) and thus excluded here (Norvell 2002 pers comm). Norvell (1995) examined SFSU herbarium collections thought to represent TRVE8 in California and confirmed that they were very close to *T. venenatum* but suggested that further investigation is advised as they might better represent an undescribed species (Norvell 2002 pers comm), For purposes of this evaluation they are treated as TRVE8. No reports of TRVE9 are present on the ISMS Database 2002or GIS map.

Area of Occupancy

U = Unknown

LU = Unknown

Comments Occupancy is highly spotty and cannot be extrapolated for this organism, which appears restricted to fairly complex environments and about which too much is unknown. (Norvell pers comm 2002)

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 current status of the historical populations within its type range (northeastern North America) is not known. Thus no trends can be predicted for that region. The SFSU checklist of collections of the coniferous associated *Tricholoma venenatum* shows that it has been collected every year from 1995 to 2000. That/those population/s may be regarded as stable.

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 The current status of the historical populations within its type range (northeastern North America) is not known. Thus no trends can be predicted for that region. The SFSU checklist of collections of the coniferous associated *Tricholoma venenatum* shows that it has been collected every year from 1995 to 2000. That/those population/s may be regarded as stable.

Threats

U = Unknown. The available information is not sufficient to assign degree of threat as above. (Severity, scope, and immediacy are all unknown, or mostly [two of three] unknown or not assessed [null].)

Scope	Unknown	Severity	Unknown	Immediacy	Unknown
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Comments Whatever threatens the extant forest will threaten *Tricholoma venenatum*, as it is regarded as ectomycorrhizal. Most historical collections of TRVE have been collected from hardwood forests in northeastern North America. Those collected from the Sierra Nevada coniferous forests are probably relatively stable unless their associated tree partners are threatened by hot fires, road construction or other development, and clearcutting.

Number of Appropriately Protected and Managed Occurrences

U = Unknown whether any occurrences are appropriately protected and managed

Comments The number of protected and managed occurrences is unknown.

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 Ectomycorrhizal fungal vulnerability is linked to that of the symbiotic partner (here hardwoods in northeastern North America and possibly conifers in the California Sierra Nevada). (Ovrebo 1980, Ammirati et al. 1985, Shanks 1997, Castellano 1999). It is vulnerable to anything that threatens the forest habitat, including hot fires, road construction and development, and clearcutting.

Environmental Specificity

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

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

Comments TRVE is generally found in hardwood forests in northeast North America where it forms symbiotic partnerships with unknown deciduous tree spp and possibly in Sierra Nevada coniferous forests with members of the Pinaceae. Its precise biological and ecological requirements are unknown. If the western occurrence/s do represent *T. venenatum*, the species has a disjunct distribution. It appears RARE wherever it is found.

Other Considerations

NRANK - NU. *Tricholoma venenatum* has no known synonyms. The occurrence reported from the Olympic Peninsula (Castellano et al. 1999) is believed to represent a pale form of *T. pardinum* by Norvell (1995, 2002 pers com). The Sierra Nevada occurrences (Shanks 1997, Castellano 1999), which Norvell believes may represent a new species (2002 pers comm), are ectomycorrhizally associated with members of the Pinaceae.

Edition 11/21/2002 **Edauthor** Lorelei L Norvell

Grank GUQ **Grank Date** 11/21/2002

Reasons

The taxonomy of *Tricholoma venenatum* still needs resolution., Norvell (1995, 2002 pers comm) considers the report of the species in Washington (FEMAT 1994, Castellano 1999) to be taxonomically incorrect and the Sierra Nevada, Shasta County California reports (FEMAT 1994, Shanks 1997, Castellano 1999, SFSU Sierra Nevada checklist 11-21-02) to represent either TRVE8 or an undescribed species. The current status of all collections is unknown, and given the taxonomic indecision, at least on the part of the ranking author, it is considered best to not rank this taxon for the time being. Wherever it is found, however, it may be locally abundant, but generally rare and spotty in distribution.

BCD Sources

New Sources

Norvell . 1995. ROD: Strategy 1 Fungal Species Evaluation (30 gilled and non-gilled Basidiomycete Strategy 1 species). Unpubl. report on file at the Regional Mycology Lab in in Corvallis, Oregon.

Castellano et al. 1999. Handbook to Strategy 1 Fungal Species in the Northwest Forest Plan. USDA-FS PNWRS PNW-GTR-476.

Shanks. 1997. Agaricales of California. 11. *Tricholoma*. Mad River Press.

Ovrebø. 1980. A taxonomic study of the genus *Tricholoma* (Agaricales) in the Great Lakes Region. University of Toronto PhD dissertation.

SFSU Sierra Nevada collections: http://www.mycena.sfsu.edu/courses/agaricsiz_list.html.

NY Botanical Garden Collections: <http://scisun.nybg.org>:

8890/searchdb/owa/wwwspecimen.search_list?taxon=Tricholoma+venenatum+G.+F.+Atk.++++&projcode=FU
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Ammirati, Traquair, Horgen. 1985. Poisonous mushrooms of the northern United States and Canada. University of Minnesota Press.

Atkinson, 1908. Botanical Gazette 46: 461-462.