

Heritage Rank Status Factors

Elcode NF000DEFU2

Gname DESTUNTZIA FUSCA

Gcomname

Number of Occurrences

A = 1 - 5

Comments Truffles have been studied in western North America for over a hundred years. Compared to other truffles, this one is rare. It is known only from five sites in California and Oregon of which three are in the range of the northern spotted owl (Fogel and Trappe 1985, Castellano et al. 1999, OSC n.d.).

Number of Occurrences with Good Viability

U = Unknown what number of occurrences with good viability

Comments No sites are protected; there are no records of repeated finds at any of the known sites. However, many fungi fruit sporadically and detection is always a problem with truffles.

Population Size

U = Unknown

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

Range Extent

G = 200,000-2,500,000 km² (about 80,000-1,000,000 square miles)

Comments This species was described from Mendocino Co., CA (Fogel and Trappe 1985) and ranges as far south as the San Jacinto Mtns. in San Bernadino Co., CA, as far east as Sierra Co., CA, and north to Lane Co., OR.

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 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 truffles are thought to be mycorrhizal, depended on photosynthetic vascular plants for engery sources and other compounds; events and activities that reduce the vigor or eliminate the vascular plant partner(s) will have a negative impact on these fungi. Furthermore the spores of many/most truffles are dispersed by small mammals, arthropods, snails, slugs, etc. so again activites that impact these organisms will impact the fungi. Logging and development are the principale threats.

Number of Appropriately Protected and Managed Occurrences

B = Few (1-3) occurrences appropriately protected and managed

Comments One site (Trappe collection #7750) is within a "control" area of the H.J. Andrews Experimental Forest (OSC n.d.)-- located in the Willamette National Forest in Oregon--and therefore is afforded a nominal level of protection.

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 A fungus with a patchy distribution and that is rare within its range, even though it has a sizeable range, is at risk.

Environmental Specificity

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

Comments The known sites are varied. Two sites are in the coastal fog belt, and two from drier habitats in the central Sierra Nevada and San Jacinto Mtns. Just what factors are important for this species remains to be discovered.

Other Considerations

NRANK - N2. This genus is known so far only from North America; four of five species occur in western North America and two of those species occur within the range of the northern spotted owl. However, in spite of many years of truffling, very few specimens of either species have been found.

Edition 11/19/2002 **Edauthor** Nancy S. Weber

Grank G2 **Grank Date** 11/19/2002

Greasons

This truffle is endemic to California and Oregon. Although it fruits in a wide variety of habitats for a fungus with only five known sites and collections, it has been collected very rarely. All but two sites are within the range of the northern spotted owl. None of the sites are protected in any way, but there is no indication they are

threatened unless development or forest fires have occurred at the California sites outside the range of the spotted owl. The species needs to be watched, and known populations conserved.

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., and Trappe, J.M. 1985. *Destuntzia*, a new genus in the Hymenogastraceae (Basidiomycotina). *Mycologia* 77: 732- 742.