Heritage Rank Status Factors

Elcode NFSM000110

Gname NEOLENTINUS KAUFFMANII

Gcomname

Number of Occurrences

D = 81 - 300

Comments The number of occurrences in Japan, Alaska and Canada are unknown, but should exceed 100 or more (Redhead & Ginns 1985; Redhead 1989; DAVFP 11-26-02; Norvell 2002 pers comm). 31 occurrences of NEKA3 are known from California, Oregon, and Washington. Continued fungal surveys may uncover more sites. (Redhead & Ginns 1985; Redhead 1989; Norvell 1995; Castellano et al. 1999; ISMS-ONH 2002)

Number of Occurrences with Good Viability

U = Unknown what number of occurrences with good viability

Comments No data are available on the number of occurrences in Japan, Alaska, or Canada. Within the northern spotted owl region in the United States, at least 31 occurrences are believed extant of which 17 lie in currently protected reserves.

Population Size

U = Unknown

Comments Records reflect only species occurrence, i.e. fruitbodies, not numbers of individuals. Fungal genets cannot be delimited without DNA sampling.

Range Extent

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

Comments Amphiberingean with an Asian-North American west coast distribution (Redhead 1989), Neolentinus kauffmanii ranges from Japan and the Queen Charlotte Islands and the Alaskan panhandle in North America south to northern California. (Redhead 1989 Redhead & Ginns 1985; Norvell 1995; Castellano et al. 1999, ISMS Database 2002 and GIS map for Neolentinus kauffmanii).

Area of Occupancy

U = Unknown

LU = Unknown

Comments Area of occupancy cannot be approximated from fungal fruitbodies as the vegetative organism is hidden from site within the substrate. Saprophytic fungi have spotty distributions that are tied to the presence of appropriate substrates.

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

E = Relatively Stable (±25% change)

Comments Neolentinus kauffmanii is obligately saprophytic on Sitka spruce (Picea sitchensis). It should remain stable over the long-term as long as Picea sitchensis is maintained in natural forest settings. Removal of fallen Sitka spruce logs and coarse woody debris or destruction of spruce habitat will imperil the species. It has a somewhat patchy distribution, with most occurrences found in late-successional/old-growth habitats. Individuals reproduce by spore dispersal and mycelial interactions with other individuals. Longevity of individuals and populations is unknown (Norvell 2002 pers comm).

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

E = Stable. Population, range, area occupied, and/or number or condition of occurrences unchanged or remaining within ±10% fluctuation

Comments Neolentinus kauffmanii is obligately saprophytic upon living and fallen Sitka spruce. It appears most commonly in late-successional/old-growth spruce forests. Incidental catastrophic events and/or removal/destruction of the substrate and standing spruce trees could imperil the fungus at a site. Current occurrences are somewhat rare, but 17 lie in protected reserves. Two occurrences in the Cascade Head Experimental Forest in Oregon were recently affirmed as extant. The species is inferred to be stable over the short term (Norvell 1995).

Threats

H = Unthreatened. Threats if any, when considered in comparison with natural fluctuation and change, are minimal or very localized, not leading to significant loss or degradation of populations, occurrences, or area even over a few decades' time. (Severity, scope, and/or immediacy of threat considered Insignificant.)

Scope Insignificant Severity Unknown Immediacy Low

Comments Neolentinus kauffmanii is obligately saprophytic on Sitka spruce. It is commonly found in late-successional/old-growth forests on living and fallen spruce wood. Whatever threatens living spruce and the general forest setting can imperil a Neolentinus kauffmanii population. All populations are at risk to incidental catastrophic events, such as hot fires, and unmonitored human interference. Unprotected occurrences are at risk from logging activities that remove and/or destroy spruce logs and coarse woody debris (Norvell pers comm 2002).

Number of Appropriately Protected and Managed Occurrences

U = Unknown whether any occurrences are appropriately protected and managed

Comments Data on protected occurrences outside the US northern spotted owl region are unavailable. Within the US, ISMS-ONH (2002) based on historical data supplied by Norvell (1995) lists 17 known sites in protected reserves: 10 in permanent protected reserves and 7 in late-successional reserves. The opening of late-successional and/or riparian reserves to logging, road construction, or development, could decrease the protected sites to 10. It is not known whether any of the protected sites are being specifically managed for Neolentinus kauffmanii.

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 Neolentinus kauffmanii is obligately saprophytic on Sitka spruce and presumably vulnerable to the removal or destruction of the living tree or fallen spruce. It is also vulnerable to alteration of microhabitats and microclimate regimes as a result of logging activities, stream diversion, road construction, and/or development.

Environmental Specificity

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

Comments Neolentinus kauffmanii is an obligate saprophyte (or possible slow-growing parasite) on Picea sitchensis that produces a brown cubical (or pocket) rot in living and fallen spruce trees. It is traditionally found in late-succesional/old-growth spruce rainforests in coastal regions. (Bier & Nobles 1946, Redhead & Ginns 1985, Redhead 1989).

Other Considerations

NRANK - N4. OTHER: Neolentinus kauffmanii (Smith) Redhead & Ginns Trans myc soc Japan 26: 357 1985 is also sometimes known as Lentinus kauffmanii AHSmith in Bier & Nobels Can J Res, Sect C 24: 118. 1946.

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Grank G4 **Grank Date** 11/26/2002

Greasons

Neolentinus kauffmanii is an obligate saprophyte on Sitka spruce with an amphiberingean distribution and is known from Japan and the west Pacific coast of North America. Data on occurrences outside the U.S. northern spotted owl region are unavailable, but within the region Neolentinus kauffmanii is not uncommon and is probably stable. Of the 31 known sites, 17 occur on currently protected forest reserves. All populations are at risk to incidental catastrophic events such as wildfire and anything that removes or destroys the living and/or fallen Sitka spruce trees.

BCD Sources

New Sources

REFERENCES: Redhead & Ginns. 1985. A reappraisal of agaric genera associated with brown rots of wood. Trans mycol soc japan 26: 349-381. ALSO Redhead. 1989. A biogeographical overview of the Canadian mushroom flora. Can. J. Bot. 67: 3003-3062. ALSO Norvell. 1995. ROD: Strategy 1 Fungal Species Evaluation (30 gilled & nongilled Basidiomycete species). Unpubl. report on file at the Regional Mycology Lab, Corvallis, Oregon. ALSO Castellano et al. 1999. Handbook to Strategy 1 fungal species in the Northwest Forest Plan. USDA-FS PNWRS PNW-GTR-476. ALSO ISMS-ONH. 2002. ISMS data; ONH protection extrapolations; GIS map for NEKA13. ALSO DAVFP: Pacific Forestry Center Herbarium DATE searched: http://www.pfc.cfs.nrcan.gc.ca/biodiversity/herbarium/searchbyfungus_e.html ALSO Bier & Nobles. 1946. Brown pocket rot of Sitka spruce. Can J Res Sect C 24: 115-120.