

## Heritage Rank Status Factors

**Elcode** NFSM000109  
**Gname** NEOLENTINUS ADHAERENS  
**Gcomname**

### Number of Occurrences

C = 21- 80

**Comments** NEAD is known in the literature and from herbarium collections from only 29 occurrences/collections; 25 from Europe (BPI 11-26-02; MICH 11-25-02; Pegler 1983; Boekhout 1990) and 6 from North America (Bessette & Homola 1986; Norvell 1995; Castellano et al. 1999; ISMS-ONH 2002; Boyer 11-25-02). Within the spotted owl region, NEAD is known from only 4 occurrences.

### Number of Occurrences with Good Viability

U = Unknown what number of occurrences with good viability

**Comments** Collection data is too sparse and occurrences are too spotty and rare to predict extant occurrences, frequency, occupancy, or short and long-term trends.

### 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

H = > 2,500,000 km<sup>2</sup> (greater than 1,000,000 square miles)

**Comments** A rare north temperate species, NEAD is known from England, Holland, Switzerland, and Czechoslovakia in Europe (BPI 11-26-02, MICH 11-25-02, Pegler 1983, Boekhout 1990) and from Maine (Bessette & Homola 1986), Quebec (Boyer 11-25-02), and Washington (Norvell 1995, Castellano et al. 1999, ISMS-ONH 2002 & GIS map for NEAD) in North America. In Washington it is known only from the Olympic Peninsula (the location cited for one locality was incorrect in Norvell 1998 and thus depicted falsely on the distribution map in Castellano et al. 1999).

### Area of Occupancy

U = Unknown

LU = Unknown

**Comments** Collection data is too sparse and occurrences are too spotty and rare to predict extant occurrences, frequency, occupancy, or short and long-term trends.

### 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** Collection data is too sparse and occurrences are too spotty and rare to predict extant occurrences, frequency, occupancy, or short and long-term trends.

### **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** Collection data is too sparse and occurrences are too spotty and rare to predict extant occurrences, frequency, occupancy, or short and long-term trends.

### **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].)

<b>Scope</b>	Moderate	<b>Severity</b>	Unknown	<b>Immediacy</b>	Unknown
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**Comments** The low number of known occurrences implies that the organism is very slow growing and thus particularly vulnerable to substrate removal. NEAD is found in LSOG forests on trunks and roots of conifers or (in one instance) *Fagus*. (Pegler 1983; Bessette & Homola 1986; Boekhout 1990) Whatever threatens the general habitat, microclimates, and/or substrate can imperil NEAD. 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 such as brush clearing or removal of 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 known occurrences in Europe, Maine, and Quebec are inaccessible or unknown. Within the spotted owl region of Washington, 3 of the 4 known sites lie within Olympic National Park, a permanently protected forest reserve. All three sites are within relatively close proximity to one another.

### **Intrinsic Vulnerability**

A = Highly Vulnerable. Species is slow to mature, reproduces infrequently, and/or has low fecundity such that populations are very slow (> 20 years or 5 generations) to recover from decreases in abundance; or species has low dispersal capability such that extirpated populations are unlikely to become reestablished through natural recolonization (unaided by humans). Ecological community occurrences are highly susceptible to changes in composition and structure that rarely if ever are reversed through natural processes even over substantial time periods (> 100 years).

**Comments** The low number of known occurrences implies that the organism is very slow growing and thus particularly vulnerable to substrate removal, that is of the trunks and roots that support the organism as well as other potential hosts for new individuals. It is also vulnerable to alteration of microhabitats and microclimate regimes (stream diversion, road construction, development). Since so few occurrences have been documented, its intrinsic vulnerability is unknown.

### **Environmental Specificity**

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

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

**Comments** The low number of known occurrences implies that the organism is very slow growing and thus particularly vulnerable to substrate removal. NEAD is generally found in complex LSOG forests on trunks and roots (occasionally chips or branches) of conifers and/or fagaceous species in the northern temperate zone. It forms brown cubical rot on the wood substrates. (Redhead & Ginns 1985; Bessette & Homola 1986). Its precise biological and ecological requirements are unknown.

## Other Considerations

NRANK - N2? *Neolentinus adhaerens* (Alb. & Schw. : Fr.) Redhead & Ginns *Trans act myc soc Japan* 26: 357 was also known as *Lentinus adhaerens* (Alb. & Schw. : Fr.) Fr. 1836 until 1985. The species epithet is often misspelled "adherens". Descriptions of the species are provided in Pegler (1983), Bessette & Homola (1986) and Boekhout (1990). It is universally regarded as rare, although the 10 sites within the Netherlands suggest that it may be more frequent when intensive fungal surveys are conducted in appropriate habitats.

**Edition** 11/26/2002      **Edauthor** Lorelei L Norvell

**Grank** G2G3      **Grank Date** 11/25/2002

## Greasons

NEAD is a rare north temperate species that forms brown cubical rot on wood of conifer or fagaceous trunks and roots in Europe and, very rarely, North America. The exact number of occurrences outside the northern spotted owl region are unknown, but within the region NEAD is confirmed by 4 occurrences in Washington state, 3 of which lie in currently protected forest reserves. Its unknown biology precludes estimation of population size, area of occupancy, and long-term trends. All populations are at risk to incidental catastrophic events such as wildfire and anything that removes or destroys the substrate and/or alters the environmental setting.

## BCD Sources

### New Sources

Norvell. 1998. ROD: Strategy 3 Fungal Species Evaluation (11 gilled Basidiomycete Strategy 3 species). Unpubl. report on file at the Regional Mycology Lab, Corvallis, Oregon.

Redhead & Ginns. 1985. A reappraisal of agaric genera associated with brown rots of wood. *Trans mycol soc japan* 26: 349-381.

Besette & Homola. 1986. *Mycologia* 78: 296-298.

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

MICH (Michigan Fungal Collections online database: 11-25-2002. <http://www.herb.lsa.umich.edu/combqury.htm>

ISMS-ONH. 2002. ISMS data; ONH protection extrapolations; GIS map for NEAD.

BPI (US National Collections) 11-26-02: <http://nt.ars-grin.gov/fungaldatabases/databaseframe.cfm>

Boyer. 11-25-02. Les champignons de Sept-Iles. [http://www.cegep-sept-](http://www.cegep-sept-iles.gc.ca/raymondboyer/champignons/Lentinacees.htm)

[iles.gc.ca/raymondboyer/champignons/Lentinacees.htm](http://www.cegep-sept-iles.gc.ca/raymondboyer/champignons/Lentinacees.htm)

Boekhout. 1990. 4. *Lentinus*. P 26-28 in *Flora Agaricina Neerlandica* 2. Rotterdam: Bakelma.