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Entoloma excentricum, Excentric Pinkgill

Assessment by: Jordal, J.



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Taxonomy

Kingdom	Phylum	Class	Order	Family
Fungi	Basidiomycota	Agaricomycetes	Agaricales	Entolomataceae

Taxon Name: Entoloma excentricum Bres.

Common Name(s):

English: Excentric PinkgillFrench: Entolome Excentré

Taxonomic Source(s):

Index Fungorum Partnership. 2019. Index Fungorum. Available at: http://www.indexfungorum.org.

Taxonomic Notes:

Entoloma excentricum Bres. is normally an easily recognizable species, both macroscopically and microscopically (Noordeloos 1992, Senn-Irlet and Wöltsche 2002). The species is described from Italy but the type does not exist (Noordeloos 1992). The taxonomic status of a few GBIF occurrences in North America is uncertain and not included here. There is hardly any evidence of European Entoloma species occurring in North America (M. Noordeloos pers. comm.). The type of Entoloma excentricum var. porphyrocephalum Noordel. & Wölfel from Germany (Noordeloos 1982) is sequenced and shown to be a separate species which will need a new name (Bálint Dima pers. comm.) and this taxon is therefore not included here. It can be separated from E. excentricum by macroscopical and microscopical characters (Noordeloos 1982, 1992).

Assessment Information

Red List Category & Criteria: Near Threatened ver 3.1

Year Published: 2019

Date Assessed: March 28, 2019

Justification:

Entoloma excentricum is a species of xerophytic, calcareous seminatural grassland and shallow soil on limestone in Europe, up to subalpine areas. The habitats are declining due to changing agricultural practices, development projects, mining and pollution (airborne nitrogen deposition). Over the distribution range we assume a total population decline of 15-30% over the last 50 years (approximately three generations: one generation is assumed to be about 17 years). Habitat quality has also become impaired and the decline in population size over this time could be even higher. This decline in habitat is ongoing and expected to continue over the next 50 years. GBIF lists 283 occurrences, while national databases sum up to about 400. The species is assumed to have a population of over 20,000 mature individuals. At a global scale (i.e. Europe) the population decline is assumed to be on average 15-30% in 50 years (past, present and future). The species meets the threshold for NT (A2c+3c+4c).

Geographic Range

Range Description:

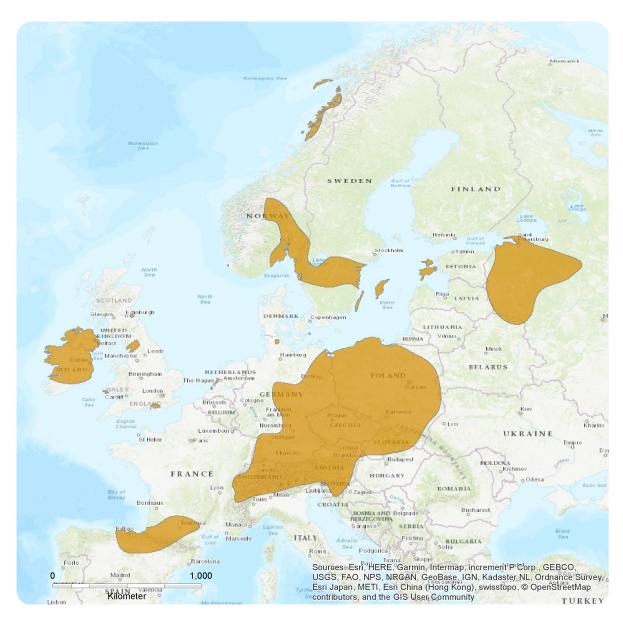
The species is with certainty only known from Europe. National databases indicate >400 occurrences in many countries from the lowlands up to subalpine areas (see also GBIF 2019), especially in calcareous areas. The eastern limit is uncertain due to lack of data.

Country Occurrence:

Native: Austria; Belgium; Czechia; Denmark; Estonia; Finland; France; Germany; Ireland; Italy; Netherlands; Norway; Poland; Russian Federation; Slovenia; Spain; Sweden; Switzerland; United Kingdom

Distribution Map

Entoloma excentricum



Range Compiled by:

Extant (resident) IUCN





The boundaries and names shown and the designations used on this map do not imply any official endorsement, acceptance or opinion by IUCN.

Population

National databases indicate >400 occurrences in European countries. Based on available information on trends in seminatural grasslands, Griffith *et al.* (2013) estimated a habitat loss of 90% over the last 75 years for the CHEG-fungi (grassland fungi of Clavariaceae, *Hygrocybe* s.l., *Entoloma* and Geoglossaceae) as a whole in Western Europe. According to the Food and Agriculture Organization of the United Nations (FAO), the area of grasslands in the EU declined by 12.8% over 13 years (1990-2003). Also other sources point to a habitat loss in seminatural grasslands of roughly 1% per year in Europe over a longer time, although the data quality is not always very good. This species also occurs on limestone with shallow soils (also called alvar) and rarely also calcareous forest, and these habitats may have a slower habitat loss. In Sweden and Austria the population is thought to be too slowly declining for threatened status on their national Red Lists. Over the whole distribution range we assume a total habitat loss and population decline of 15-30% over the last 50 years (3 generation lengths). As the habitat quality is also declining, population decline could be higher. This trend is ongoing and expected to continue in the future.

Current Population Trend: Decreasing

Habitat and Ecology (see Appendix for additional information)

Entoloma excentricum grows in dry and calcareous, mycologically rich but nutrient-poor semi-natural grasslands and limestone/chalk with shallow soil (alvar). Semi-natural grasslands are rapidly disappearing due to changes in land use (see Threats). It is found from sea up to subalpine areas in Scandinavia and in the Alps (up to 1950 m). The nutrient strategy is unknown. The fruit bodies are short-lived (weeks), but the mycelium is suspected to be longlived; >50-100 years.

Systems: Terrestrial

Use and Trade

The species is not known to be used.

Threats (see Appendix for additional information)

Habitat destruction and abandonment are the main threats to seminatural grasslands including the dry and calcareous ones. The most important process is probably overgrowing due to ceased grazing/mowing of old seminatural grasslands as part of intensification of agriculture. Further modern cultivation methods like use of fertilizers, pesticides and ploughing are also threats, as is airborne nitrogen deposition. Also in some places changed land use with the construction of roads, industrial areas, settlements etc. The latter factors can also influence localities on limestone with shallow soils, which can also be subject to mining. Decline is expected to continue, as at least the areas of seminatural grasslands are of little economic importance in modern agriculture. Most grasslands suitable for CHEGfungi (see Population) are among types assessed as VU, EN or CR in the EU Red List of habitats (Janssen et al. 2016).

Conservation Actions (see Appendix for additional information)

The habitats should be protected against destruction due to intensification of agriculture or development plans. The maintaining of seminatural grasslands demands yearly grazing or mowing. If grazing by heavy animals destroys part of the soil, light animals like sheep should be recommended.

Habitat conservation by governmental support to traditional agricultural practices is most important, this exists in many countries to maintain extensive agricultural areas, and should be extended to larger areas than today. Mining and development projects should be avoided. It would be beneficial to also protect areas of its alvar habitat as nature reserves.

Further ecological research is needed to clarify the nutrient strategy of grassland *Entoloma* species. Management plans are needed. Habitat trends should be monitored.

Credits

Assessor(s): Jordal, J.

Reviewer(s): Ainsworth, A.M. & Mešić, A.

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External Resources

For <u>Images and External Links to Additional Information</u>, please see the Red List website.

Appendix

Habitats

(http://www.iucnredlist.org/technical-documents/classification-schemes)

Habitat	Season	Suitability	Major Importance?
4. Grassland -> 4.4. Grassland - Temperate	-	Suitable	-

Threats

(http://www.iucnredlist.org/technical-documents/classification-schemes)

Threat	Timing	Scope	Severity	Impact Score
1. Residential & commercial development -> 1.1. Housing & urban areas	Ongoing	-	-	-
Residential & commercial development -> 1.2. Commercial & industrial areas	Ongoing	-	-	-
2. Agriculture & aquaculture -> 2.3. Livestock farming & ranching -> 2.3.3. Agro-industry grazing, ranching or farming	Ongoing	-	-	-
3. Energy production & mining -> 3.2. Mining & quarrying	Ongoing	-	-	-
4. Transportation & service corridors -> 4.1. Roads & railroads	Ongoing	-	-	-
6. Human intrusions & disturbance -> 6.1. Recreational activities	Ongoing	-	-	-
9. Pollution -> 9.5. Air-borne pollutants -> 9.5.1. Acid rain	Ongoing	-	-	-

Conservation Actions Needed

(http://www.iucnredlist.org/technical-documents/classification-schemes)

Conservation Actions Needed		
1. Land/water protection -> 1.1. Site/area protection		
1. Land/water protection -> 1.2. Resource & habitat protection		
2. Land/water management -> 2.1. Site/area management		
4. Education & awareness -> 4.3. Awareness & communications		
6. Livelihood, economic & other incentives -> 6.4. Conservation payments		

Research Needed

(http://www.iucnredlist.org/technical-documents/classification-schemes)

Research Needed

- 1. Research -> 1.2. Population size, distribution & trends
- 1. Research -> 1.3. Life history & ecology
- 2. Conservation Planning -> 2.2. Area-based Management Plan
- 3. Monitoring -> 3.4. Habitat trends

Additional Data Fields

Distribution

Upper elevation limit (m): 1950

Habitats and Ecology

Generation Length (years): 17

The IUCN Red List Partnership



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