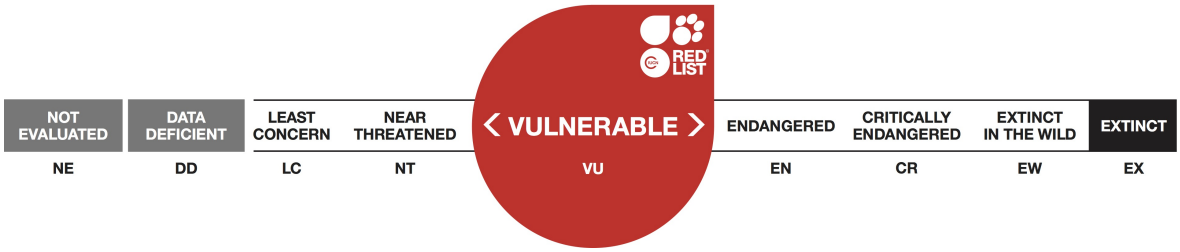
The IUCN Red List of Threatened Species™
ISSN 2307-8235 (online)
IUCN 2019: T147285942A147875649
Scope: Global
Language: English

Entoloma porphyrophaeum, Lilac Pinkgill

Assessment by: Jordal, J.



View on www.iucnredlist.org

Citation: Jordal, J. 2019. *Entoloma porphyrophaeum*. The IUCN Red List of Threatened Species 2019: e.T147285942A147875649. http://dx.doi.org/10.2305/IUCN.UK.2019-2.RLTS.T147285942A147875649.en

Taxonomy

Kingdom	Phylum	Class	Order	Family
Fungi	Basidiomycota	Agaricomycetes	Agaricales	Entolomataceae

Taxon Name: *Entoloma porphyrophaeum* (Fr.) P. Karst.

Synonym(s):

- *Agaricus porphyrophaeus* Fr.
- *Trichopilus porphyrophaeus* (Fr.) P.D. Orton

Common Name(s):

- English: Lilac Pinkgill
- French: Entolome Porphyre

Taxonomic Source(s):

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

Taxonomic Notes:

Entoloma porphyrophaeum Bres. is described from Sweden but the type does not exist (Noordeloos 1992). The taxonomic status of GBIF occurrences in N America is doubtful and not included here. There is hardly any proof of European *Entoloma* species occurring in N America (M. Noordeloos pers. comm.).

Assessment Information

Red List Category & Criteria: Vulnerable A2c+3c+4c ver 3.1

Year Published: 2019

Date Assessed: March 26, 2019

Justification:

Entoloma porphyrophaeum is a species of seminatural grasslands 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 habitat loss of 30-50% 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, strengthening the assumption of nearly 50% population decline. This decline in habitat is ongoing and expected to continue over the next 50 years. GBIF lists more than 1300 occurrences. The species is assumed to have a population of more than 20,000 mature individuals. At a global scale (i.e. Europe) the population decline is assumed to be on average 30-50% in 50 years (past, present and future). The species meets the threshold for VU (A2c+3c+4c).

Geographic Range

Range Description:

The species is with certainty only known from Europe, where it occurs in many countries from the

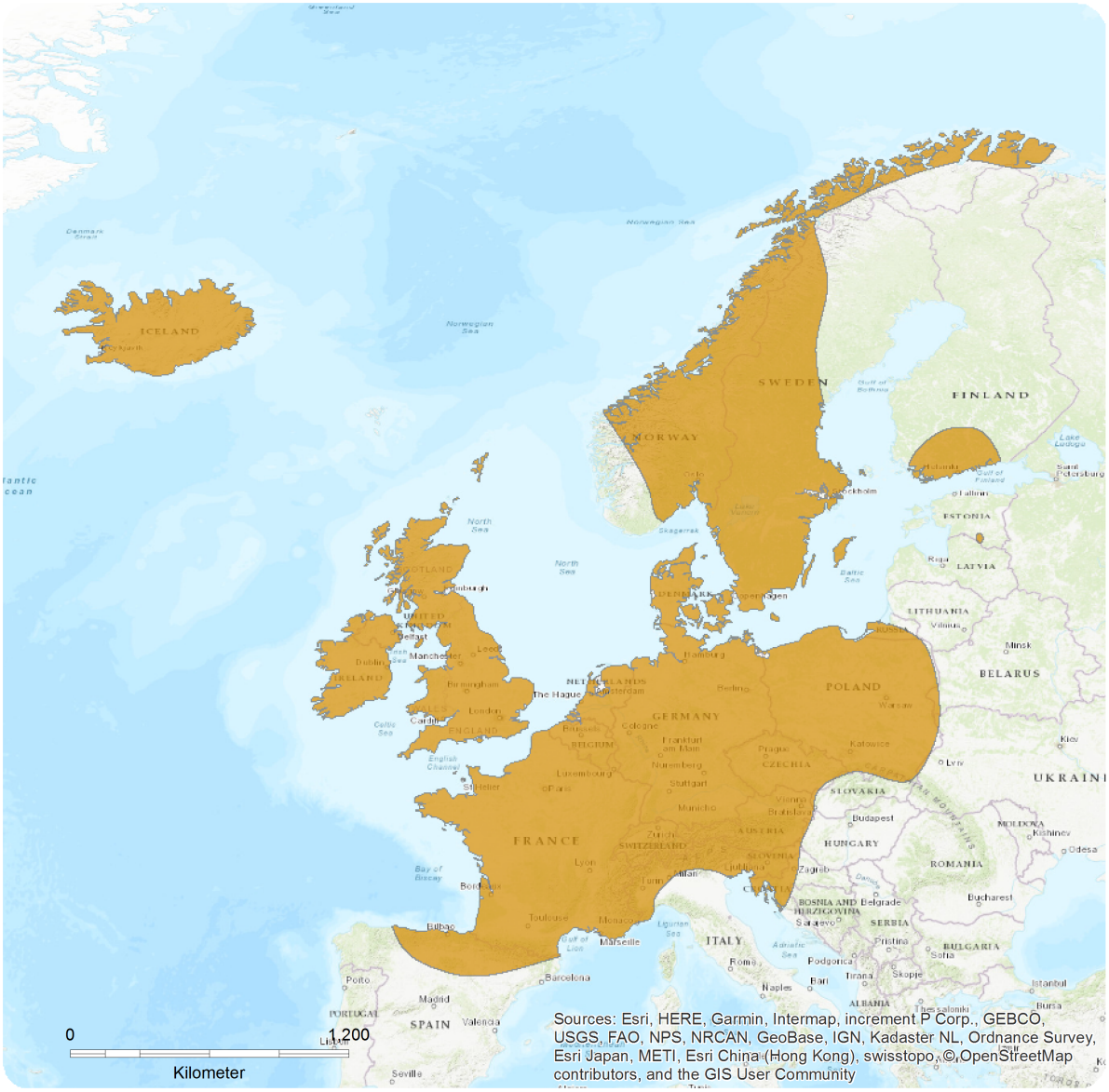
lowlands up to subalpine areas (see also GBIF 2019), especially in the northwestern part (UK and Scandinavia). The eastern limit is uncertain due to lack of data.

Country Occurrence:

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

Distribution Map

Entoloma porphyrophaeum

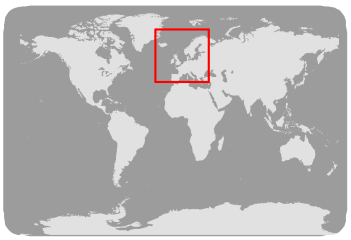


Range

Extant (resident)

Compiled by:

IUCN



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

http://dx.doi.org/10.2305/IUCN.UK.2019-2.RLTS.T147285942A147875649.en

Population

According to GBIF (2019) there are >1300 occurrences from Europe. 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. Over the whole distribution range we assume a total habitat loss and population decline of 30-50% over the last 50 years. As the habitat quality is also declining, population decline could be higher. Much of European grasslands have bad habitat quality. This trend is ongoing and expected to continue in the future.

Current Population Trend: Decreasing

Habitat and Ecology **(see Appendix for additional information)**

Entoloma porphyrophaeum grows in mycologically rich but nutrient-poor semi-natural grasslands. Semi-natural grasslands are rapidly disappearing due to changes in land use (see Threats). It is found from sea level up to subalpine (and sometimes also alpine) areas in Scandinavia and in the Alps. The nutrient strategy is unknown. In Norway, most localities of the species are in seminatural grasslands (N=100; 91% in seminatural grasslands, and 9% in forests; Jordal *et al*. 2016), and similar patterns are found in other countries. The fruit bodies are short-lived (weeks), but the mycelium is suspected to be long-lived; >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. 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. Also in some places changed land use with the construction of roads, industrial areas, settlements etc. Decline is expected to continue, as at least the areas of seminatural grasslands are of little economic importance in modern agriculture. Most CHEG grasslands (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

http://dx.doi.org/10.2305/IUCN.UK.2019-2.RLTS.T147285942A147875649.en

areas than today.

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.

Bibliography

Artsdatabanken. 2015. Rødliste for arter [2015 Red List of Norwegian Species online database]. Available at: https://www.artsdatabanken.no/Rodliste.

Atlas grzybów Polski. 2019. Mushrooms and Fungi of Poland. Available at: https://www.grzyby.pl/index.html. (Accessed: March 2019).

FinBIF. 2018. Finnish Biodiversity Information Facility/FinBIF. Finnish Museum of Natural History Luomus, Helsinki. Available at: http://tun.fi. (Accessed: 6 March 2018).

Food and Agricultural Organisation of the United Nations. 2006. FAO Statistical Yearbook – FAOSTAT.

Foreningen til svampekundskabens fremme. 2019. Danmarks svampeatlas. Available at: https://svampe.databasen.org/. (Accessed: 2019).

GBIF. 2019. Global Biodiversity Information Facility (GBIF) data portal. Collection of online herbarium specimens. Available at: http://data.gbif.org.

German Mycological Society. 2019. Pilzen Deutschlands. Available at: http://www.pilze-deutschland.de/.

Gozdarski Institut Slovenije. 2019. Boletus informaticus. Available at: https://www.zdravgozd.si/bi_index.aspx.

Griffith, G.W., Gamarra, J.P., Holden, E.M., Mitchel, D., Graham, A., Evans, D.A. et al. 2013. The international conservation importance of welsh 'waxcap' grasslands. *Mycosphere* 4: 969–984.

IUCN. 2019. The IUCN Red List of Threatened Species. Version 2019-2. Available at: www.iucnredlist.org. (Accessed: 04 July 2019).

Janssen J.A.M., Rodwell J.S., García Criado M., Gubbay S., Haynes T., Nieto A., Sanders N., Landucci F., Loidi J., Ssymank A., Tahvanainen T., Valderrabano M., Acosta A., Aronsson M., Arts G., Attorre F., Bergmeier E., Bijlsma R.-J., Bioret F., Biţă-Nicolae C., Biurrun I., Calix M., Capelo J., Čarni A., Chytrý M., Dengler J., Dimopoulos P, Essl F., Gardell H., Gigante D., Giusso del Galdo G., Hájek M., Jansen F., Jansen J., Kapfer J., Mickolajczak A., Molina J.A., Molnár Z., Paternoster D., Piernik A., Poulin B., Renaux B., Schaminée J.H.J., Šumberová K., Toivonen H., Tonteri T., Tsiripidis I., Tzonev R. & Valachovič M. 2017. *European Red List of Habitats*. Publications Office of the European Union, Luxembourg.

Jordal, J.B., Evju, M., and Gaarder, G. 2016. Habitat specificity of selected grassland fungi in Norway. *Agarica* 37: 5-32.

NBN. 2019. NBN Atlas. UK National Biodiversity Network (NBN) Internet Atlas. National Biodiversity Network, Nottingham Available at: http://www.nbn.org.uk/. (Accessed: 2019).

NMV. 2019. Verspreidingsatlas Paddenstoelen. Available at: https://www.verspreidingsatlas.nl. (Accessed: 2019).

Noordeloos, M.E. 1982. Studies in *Entoloma* 1-5. *Int. J. Myc. Lich.* 1(2): 49-60.

Noordeloos, M.E. 1992. *Entoloma s.l.* Giovanna Biella, Saronno, Italy.

Österreichische Mykologische Gesellschaft. 2019. Datenbank der Pilze Österreichs. Available at: http://austria.mykodata.net/Taxa_0.aspx.

SLU. ArtDatabanken. Available at: http://artfakta.artdatabanken.se.

Swiss Federal Institute for Forest, Snow and Landscape Research. 2019. SwissFungi. Available at: https://swissfungi.wsl.ch/de.html. (Accessed: 2019).

Tkalčec, Z., Mešić, A. and Matočec, N. 2008. The Red List of Plants and Animals of the Republic of Croatia. (Accessed: January 2018).

Citation

Jordal, J. 2019. *Entoloma porphyrophaeum*. The IUCN Red List of Threatened Species 2019: e.T147285942A147875649. http://dx.doi.org/10.2305/IUCN.UK.2019-2.RLTS.T147285942A147875649.en

Disclaimer

To make use of this information, please check the Terms of Use.

External Resources

For Images and External Links to Additional Information, 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	-	-	-
1. 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	-	-	-
4. Transportation & service corridors -> 4.1. Roads & railroads	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
2. Land/water management -> 2.3. Habitat & natural process restoration
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)

http://dx.doi.org/10.2305/IUCN.UK.2019-2.RLTS.T147285942A147875649.en

Research Needed
1. Research -> 1.1. Taxonomy
1. Research -> 1.2. Population size, distribution & trends
2. Conservation Planning -> 2.2. Area-based Management Plan
3. Monitoring -> 3.4. Habitat trends

Additional Data Fields

Habitats and Ecology
Generation Length (years): 17

http://dx.doi.org/10.2305/IUCN.UK.2019-2.RLTS.T147285942A147875649.en

The IUCN Red List Partnership

The IUCN Red List of Threatened Species™ is produced and managed by the IUCN Global Species Programme, the IUCN Species Survival Commission (SSC) and The IUCN Red List Partnership.

The IUCN Red List Partners are: Arizona State University; BirdLife International; Botanic Gardens Conservation International; Conservation International; NatureServe; Royal Botanic Gardens, Kew; Sapienza University of Rome; Texas A&M University; and Zoological Society of London.