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CONVENTION ON THE CONSERVATION OF EUROPEAN WILDLIFE
AND NATURAL HABITATS

Standing Committee

23rd meeting
Strasbourg, 1st-5 December 2003

**Comments on
the proposal to include 33 fungi species
to the Appendix I**

*Document prepared by
the Directorate of Culture and of Cultural and Natural Heritage*

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1. Italy / Italie

Fungi species proposed to be included in Appendix 1 of the Bern Convention

Italian position

Threatened wildlife and natural habitats are focal topics of Italian environmental policies.

Fungi have a basic role in ecosystems because they are primary agents of organic matter decomposition, indispensable to completion of biogeochemical cycles and so to reconstitution of fertility of soil; they are also involved in a wide range of symbioses with roots contributing to plants nutrition and appear to be the most important plants parasites. But no fungal species are enclosed in the Appendices of the Bern Convention.

On these bases, the Swedish proposal finds our full approval: it is worthy because it recognizes the crucial value of rare but neglected species.

However, in our opinion, it could be interesting talk over about it paying more attention to two points:

- 1) This list of fungi was born from a rigorous work based on one hand on Northern and Central European States official Red Lists, on the other hand on a few Mediterranean States unofficial ones. Because of range and rarity of habitats depend also on climatic features of a country, it could be necessary reconsidering rarity and risk of species with a more Mediterranean affinity.
- 2) Commercial use of fruitbodies: a few of edible fungi in this list use to be a source of income, and take part of folk tradition in our Country. It could be necessary to think about a sustainable use of this source.

We have decided to give an opinion only about 26 species which certainly occur in Italy: *Amanita friabilis*, *Antrodia albobrunnea*, *Boletopsis grisea*, *Boletus dupainii*, *Bovista paludosa*, *Cantharellus melanoxeros*, *Cortinarius ionochlorus*, *Entoloma bloxamii*, *Gomphus clavatus*, *Hapalopilus croceus*, *Hericium erinaceum*, *Hohenbuehelia culmicola*, *Hygrocybe calyptriformis*, *Hygrophorus purpurascens*, *Laricifomes officinalis*, *Leucopaxillus compactus*, *Lyophyllum favrei*, *Myriostoma coliforme*, *Phylloporus pelletieri*, *Podoscypha multizonata*, *Sarcodon fuligineoviolaceus*, *Sarcosphaera coronaria*, *Skeletocutis odora*, *Suillus sibiricus*, *Torrendia pulchella*, *Tricholoma colossum*.

References on species (status, risk of extinction in their own habitats, ecology, interactions with higher plants, commercial value) are according to: i) Dahlberg & Croneborg (33 threatened fungi. Complementary and revised information on candidates for listing in Appendix I of the Bern Convention. Report by Species Information Centre. April 2003), ii) Italian Basidiomycota check-list (Onofri, 2001) and its revision (questionnaires compiled by Onofri for European Council for Fungal Conservation), iii) dr. Bellù (Associazione Micologica G. Bresola) and prof. Onofri (University of Tuscia, Italy) non published data.

According to Italian Basidiomycota checklist and its revision (cit.), among the proposed species, *Boletus dupainii*, *Cantharellus melanoxeros*, *Cortinarius ionochlorus*, *Entoloma bloxamii*, *Gomphus clavatus*, *Hericium erinaceum*, *Leucopaxillus compactus*, *Myriostoma coliforme*, *Phylloporus pelletieri*, *Suillus sibiricus* and *Tricholoma colossum* do not seem to be rare or threatened but in our opinion Italy could represent an important area of conservation of some species which somewhere else are threatened.

We are positive to the Swedish proposal with some doubts about *Cortinarius ionochlorus*, a very common species within its habitat and about a few edible fungi: *Cantharellus melanoxeros*, *Gomphus clavatus* and *Suillus sibiricus*.

Up to now more than 200 Italian stands where *C. ionochlorus* occurs are known. This species is very common in old Mediterranean evergreen forests with *Quercus ilex* (habitat 9340). According to Dahlberg & Croneborg (cit.), 100 and 58 localities of collection are recorded after 1980 respectively for France and Spain.

About edible fungi proposed to be included in Appendix 1, we would like to let you know that *Cantharellus melanoxeros* is so common where it can occur that it is sold fresh, dry or preserved in all of the Italian administrative Regions (D.P.R. n.376 del 14-07-1995 art. 4, comma 1 e Allegato I; art. 5, comma 1; art. 9, comma 1 e allegato II. Legge Regionale dell'Umbria n. 12 del 21-02-2000 Titolo I, art. 6, comma 3 e Allegato I, tabella A). This species mycorrhizal with *Quercus* and *Fagus* within broadleaved deciduous forests on calcareous soil, it is considered rather common in Italy and very common in Northern Italy, more than 35 collecting stands are known after 1980. According to Dahlberg & Croneborg (cit.), almost all of the collections in Europe are published after 1980 with the exception of Germany (total number of localities known: 70; number of localities known after 1980: 50).

Gomphus clavatus and *Suillus sibiricus* are considered very common in Northern Italy within their alpine habitats (acidophilous *Picea* forests, *G. clavatus*; *Larix decidua*-*Pinus cembra* forests, *S. sibiricus*). Both of them are eaten with pleasure and sold regularly at the market in Southtirol. *G. clavatus* is known from more than 200 stands, it is one of the most common among the species proposed, with 940 localities known in all of Europe. About countries where this habitat mostly occurs, 100 records after 1980 are reported for Switzerland where it is not Redlisted, and 500 in France. *Suillus sibiricus* mycorrhizal with *Pinus cembra*, its distribution follows alpine *Larix decidua*- *Pinus cembra* forests. About countries where this habitat mostly occurs, 45 records after 1980 are reported for Switzerland more then 50 stands are known in Northern Italy where it is rather common and not endangered.

2. Slovakia / Slovaquie

STATEMENT and COMMENTS on the Proposal to include 33 fungi species in Appendix I of the Bern Convention

presented by

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The list of threatened macrofungi, informally introduced at the 21st meeting of the Bern Convention in 2001 as *Datasheets of threatened mushrooms of Europe, candidates for listing in Appendix I of the Convention*², was established by the European Council for Conservation of Fungi (ECCF)³. Executive Committee of the Council started a pilot mapping program of 50 European species of macrofungi which includes also those 33 fungi proposed for Bern Convention. The goal of this project is to collect all available data on the distribution and biology of selected taxa in Europe.⁴

GENERAL REMARKS

Forest-dieback and reports of lower fruit-body production of some edible mushrooms in Europe has stimulated research on fungal species and populations associated with plant communities. Current studies have documented dramatic changes in fungal communities. The most visible decrease has been recorded in the mycorrhizal fungi and among the fungi of wetlands and meadows.⁵ Truffles illustrate how drastic such a decrease can be. At the turn of the 20th century 200-300 kg truffles were collected yearly in West Slovakia, primarily of *Tuber aestivum* but also of *Tuber brumale* and *T. melanosporum*. Recently most of those species are regarded as missing or extinct.⁶

Alteration and destruction of habitats, changes of management in forestry and agriculture, and air pollution are the most frequently discussed factors leading to the decrease of fungi.⁷

They are no scientific data about direct impact of intensive harvesting on subsequent fruit-body production. Long-term research on *Cantharellus cibarius*, *Tricholoma magnivellare*, and morels, all in Oregon, USA,⁸ and on edible mushrooms in Switzerland⁹ have shown no measurable influence on mycelia or fruitbody production. Collecting seems to have had no direct impact on decline of species in Europe since edible mushrooms disappeared also from areas closed to the public as well.

In situ conservation, preservation of the widest range of habitats, and management of specific sites are the most effective means of protecting fungi. Legal protection of selected threatened species should be used as an argument for establishing nature preserves and sites of special scientific interest, and for educating the public on fungi.

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² document T-PVS (2001) 34, on-line at www.nature.coe.int/CP21/tpvs34e.htm

³ it will be presented by the Swedish Environmental Protection Agency (by the mandate of the Swedish government)

⁴ recently published in the bulletin of the Slovak Mycological Society: *Sprav. Slov. Mykol. Spol.* (26): 3-8, 2002.

⁵ Arnolds, E. 1991. Decline of ectomycorrhizal fungi in Europe. *Agric. Ecosyst. Environm.* 35: 209-244.

⁶ Lizoð, P. 1993. Decline of macrofungi in Europe: an overview. *Trans. Mycol. Soc. Rep. China* 8(3-4): 21-48.

⁷ Lizoð, P. 1995. Preserving the biodiversity of fungi. *Inoculum* 46(6): 1-4.

⁸ Norvell, L. L. 1994. The chanterelle (*Cantharellus cibarius*): a peek at productivity. In: *Dancing with an elephant, Proceedings: The business and science of special forest products*, p. 117-128, Hillsboro; Pilz, D. 1995. In lett.

⁹ Egli, S., & al. 1990. Der Einfluss des Pilzsammelns auf die Pilzflora. *Mycol. Helvet.* 3: 417-428.

NOTES ON LISTED FUNGAL SPECIES

1. *Amanita friabilis*

Very rare species in Slovakia (less than 5 records) associated with alder stands. Proposed for species protection in new regulation on threatened organisms in Slovakia.

2. *Amylocystis lapponica*

Extremely rare species in Slovakia (only one collecting site - Dobroëský prales Preserve). Proposed for habitat protection in new regulation on threatened organisms in Slovakia.

3. *Antrodia albobrunnea*

Not reported from Slovakia.

4. *Armillaria ectypa*

Not reported from Slovakia. Research focused on wetland fungi will probably result in “discovery” of this species also in Slovakia.

5. *Boletopsis grisea*

Not reported from Slovakia until now. A *Boletopsis* collection from the Borská nížina lowland may represent this species.

6. *Boletus dupainii*

Rare species annually collected in southern Slovakia. Listed in the regulation 93/1999 and proposed for species protection also in new regulation on threatened organisms in Slovakia.

7. *Bovista paludosa*

Extremely rare species associated with sphagnum-bogs in Slovakia. Reported only twice (first collection site was destroyed when the Orava dam was built).

8. *Cantharellus melanoxeros*

Not reported from Slovakia.

9. *Cortinarius ionochlorus*

Not reported from Slovakia.

10. *Entoloma bloxamii*

Extremely rare species in Slovakia (2 reports) associated with meadows and pastures.

11. *Geoglossum atropurpureum*

Not reported from Slovakia.

12. *Gomphus clavatus*

Rare edible mushroom annually collected in northern regions of Slovakia. Listed in the regulation 93/1999 and proposed for species protection also in new regulation on threatened organisms in Slovakia.

13. *Hapalopilus croceus*

Very rare species recorded only two times in southern Slovakia. Proposed for species protection in new regulation on threatened organisms in Slovakia.

14. *Haploporus odoratus*

Not reported from Slovakia.

15. *Hericium erinaceum*

Lignicolous rare species recorded several times in Slovakia. Listed in the regulation 93/1999 and proposed for species protection also in new regulation on threatened organisms in Slovakia.

16. *Hohenbuehelia culmicola*

Not reported from Slovakia.

17. *Hygrocybe calyptriformis*

Rare species recorded few times in northern Slovakia.

18. *Hygrophorus purpurascens*

Not reported from Slovakia until now. But might be overlooked or misidentified for *H. russula*.

19. *Laricifomes officinalis*

Extremely rare lignicolous species associated with old larch trees reported only twice from northern Slovakia. Proposed for species protection in new regulation on threatened organisms in Slovakia.

20. *Leucopaxillus compactus* (*L. tricolor*)

Rare edible mushroom collected few times in the Borská nížina lowland.

21. *Lyophyllum favrei*

Not reported from Slovakia.

22. *Myriostoma coliforme*

Rare species recorded few times in the Podunajská nížina lowland. Proposed for both species and habitat protection in new regulation on threatened organisms in Slovakia.

23. *Phylloporus pelletieri*

Rare species in Slovakia collected annually in the Borská nížina lowland and the Malé Karpaty Mts. Listed in the regulation 93/1999 and proposed for species protection also in new regulation on threatened organisms in Slovakia.

24. *Podoscypha multizonata*

Extremely rare species in Slovakia associated with old oak trees (western Slovakia).

25. *Pycnoporellus alboluteus*

Extremely rare species reported only from the Dobroëský prales Preserve. Proposed for species protection in new regulation on threatened organisms in Slovakia.

26. *Sarcodon fuligineoviolaceus*

The species was described by C. Kalchbrenner from the region of Spiš (northern Slovakia) but it has not been reported from that time (missing/extinct in Slovakia).

27. *Sarcosoma globosum*

This peculiar discomycete species was collected only twice in 1965 and never been re-collected. (missing/extinct in Slovakia). Proposed for species protection in new regulation on threatened organisms in Slovakia.

28. *Sarcosphaera coronaria*

Rare species on calcareous soils recorded several times in Slovakia. Proposed for species protection in new regulation on threatened organisms in Slovakia.

29. *Skeletocutis odora*

Very rare species recorded only few times in Slovakia (Štiavnické vrchy Mts., Kremnické vrchy Mts., Dobroňský prales Preserve).

30. *Suillus sibiricus*

Extremely rare species in Slovakia recorded only one time from the Belianske Tatry Mts. Listed in the regulation 93/1999 and proposed for species protection also in new regulation on threatened organisms in Slovakia.

31. *Torrendia pulchella*

Not reported from Slovakia.

32. *Tricholoma colossus*

Not reported from Slovakia.

33. *Tulostoma niveum*

Not reported from Slovakia.

CONCLUSIONS AND RECOMMENDATIONS

According to my expertise and knowledge I recommend that

- the representative of Slovak republic should vote for inclusion of 33 fungal species to the Appendix 1 of the Bern Convention,
- the environmental agencies should preferably protect habitats of threatened fungi in Slovakia,
- the Ministry of Environment should support the European project of the mapping of endangered fungi,
- the Slovak State agency for Protection of Nature should continue, in co-operation with mycologists, gathering data on fungal taxa included to the Red list of threatened fungi.

3. Switzerland / Suisse

Commentaires de la Suisse

Le Gouvernement suisse a reçu la proposition de liste des espèces de champignons à inclure éventuellement dans l'Annexe I de la convention, accompagnée d'un document d'information excellent.

Cette liste semble identique à celle présentée l'an dernier à la réunion du Comité permanent de décembre 2002, au cours de laquelle le représentant de la Suisse avait demandé que l'on écarte de cette liste une espèce comestible relativement abondante. Elle figure toujours sur la liste. Il s'agit de *Gomphus clavatus*, la chanterelle violette.

- Cette espèce est relativement fréquente en Suisse et sa "fréquence" augmente encore ces dernières années.
- Elle est comestible et vendue sur les marchés
- L'acceptation d'une mesure d'interdiction absolue de récolte par les "cueilleurs mycophages" sera très difficile à obtenir (pas d'effets concrets!).
- On ne connaît pas la nature des menaces qui pèsent sur cette espèce. Les pratiques forestières suisses actuelles ne semblent pas avoir eu des effets négatifs sur les populations de chanterelles violettes.
- L'abondance d'engrais et de substances fertilisantes joue évidemment sur ces champignons à mycorhizes, qui y sont sensibles.

Néanmoins, il est contreproductif pour la protection des champignons d'intégrer cette espèce particulière dans l'Annexe des plantes strictement protégées de l'Annexe I de la Convention.

Message électronique reçu de M. Raymond Pierre Lebeau le 7 octobre 2003