

Improved Understanding of the Macrofungal Diversity of Mongolia: Species Richness, Conservation Status, and An Annotated Checklist

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ABSTRACT

In this study, we updated and revised the checklist of macrofungi, along with the distribution of phytogeographical regions and the regional conservation status in Mongolia. The checklist comprises 677 macrofungal species belonging to 284 genera and 119 families in the country. Based on previous studies, 18 species are currently invasive to Mongolia. In this checklist, only four species are endemic to Mongolia. Among the 677 species, the regional conservation status of 51 species was previously assessed as threatened in the country. Furthermore, we collected all available occurrence records from various sources. A total of 4733 occurrences of 655 species across Mongolia were analyzed for species richness based on a 0.5° × 0.5° grid cell size. We found the records to be unevenly distributed across Mongolia, where records from the northern and central parts dominate. Among these, we identified 43 grids with a high diversity of macrofungal species. Most of these grids did not reside inside by protected geographical areas.

ARTICLE HISTORY

Received 3 November 2023
Revised 15 December 2023
Accepted 17 December 2023

KEYWORDS

Checklist; fungi; species richness; hotspots; occurrence record; conservation

1. Introduction


Mongolia is the second largest landlocked country in the world and lies between the latitudes of 41° 35' N and 52° 09' N (1259km) and longitudes of 87° 44' E and 119° 56' E (2392km). The country covers approximately 1.6 million km², with an average elevation of 1000 m a.s.l. The elevation ranges from sea level to 4300 m a.s.l. in the Khuiten Uul Mountain in western Mongolia. The general phytogeographical region of Mongolia is divided into 16 different regions, including alpine steppe, forest, meadow steppe, typical steppe, desert steppe, and desert [1–5]. Most recently, Wesche et al. [6] defined Mongolia's vegetation as dominated by different types of steppe ecosystems that are part of the Palearctic steppe biome. It is the world's largest intact grassland, with grassland covering approximately 80% of the country's area [6–9]. Therefore, the species diversity of vascular plants, fungi, lichens, and algae is not particularly rich compared to many other Asian countries [10–12].

Macrofungi are members of Ascomycetes and Basidiomycetes with large, easily observed spore-bearing structures [13] and are considered high-value non-timber forest resources [14]. Many macrofungi are edible and rich in carbohydrates, proteins, vitamins, and minerals [14,15]. Macrofungal diversity is an important component of global diversity, and it is especially important for community diversity, an essential part of fungal diversity [13,15]. Most macrofungi play an important role in soil formation, structure, and fertility and in the improvement of various habitats [14,16–18]. Furthermore, the growth and occurrence of macrofungi are closely related to environmental factors [14,19].

Historically, Mongolian fungi have received little attention, particularly with respect to DNA barcoding, species richness (SR) and data analyses. In the past, the first Mongolian checklist of fungi comprised 36 species and was published in 1936 [20]. Later, Puncag [21,22] published checklists for 196 pathogenic fungal species belonging to 20 genera.

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 Supplemental data for this article can be accessed online at <https://doi.org/10.1080/12298093.2023.2297485>.

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More recently, the fungal checklist was updated in 2017 and included approximately 630 species from 237 genera and 88 families. Information on regional distribution was included in the checklist [10]. Approximately, 95 species have been assessed at the regional level using the IUCN categories and criteria [23]. Furthermore, several studies on fungal diversity have been conducted in small areas and mountains in the country [24–43]. Some researchers have investigated the biological activities of medicinal mushrooms in Mongolia [44,45]. Since 2017, numerous studies have been published including a new classification of fungi [46–48]. Moreover, representatives of some genera and taxa listed in the macrofungi of Mongolia have been revised in recent studies [49–52]. These studies have rendered the 2017 version of the checklist somewhat wanting, and the present study seeks to provide a complete and updated checklist of macrofungi in Mongolia, including their regional distribution. In addition, a SR analysis of macrofungi was undertaken based on georeferenced occurrence data from across the country.

2. Materials and methods

The primary species names of the fungi were based on Kherlenchimeg and Burenbaatar [10]. All species and author names were crosschecked using the Index Fungorum [53], MycoBank [54], and Fungal Names [48]. Following Kirk et al. [55] and the Index of Fungi [53], the phyla, families, genera, and species are ordered alphabetically. Fungal taxa whose taxonomy is not well established are placed under *incertae sedis*. The status of endemic and alien (invasive) fungal species was given after Kherlenchimeg and Burenbaatar [23] and Monteiro et al. [56], respectively. The phytogeographical distribution of each species was determined according to Kherlenchimeg and Burenbaatar [10]. In addition, new distribution points for phytogeographical regions are indicated by plus (+). The regional conservation status follows that of Kherlenchimeg and Burenbaatar [23].

We gathered occurrences of each species from three main sources: (i) our own field survey records, which are deposited in the herbarium of the Mongolian Academy of Science (UBA) [57], (ii) GBIF (GBIF 2021), (iii) the “Mushroom in Mongolia” project on the iNaturalist platform (<https://www.inaturalist.org/projects/mushroom-of-mongolia>; accessed on 01 January 2023), and (iv) the records of GenBank in NCBI (accessed on 30 August 2023). In case of GenBank, we found over 55 species database with collections information. A total of 4733 records – including 3182 from our collections, 886

from GBIF and GenBank, 610 from iNaturalist, and 55 from GenBank of 655 species – were collected and analyzed in this study. All data and specimens collected by the first two authors over the last 40 years were deposited in the herbarium of the Botanical Garden and Research Institution (UBA), Mongolia.

Recent research efforts have used grid cells based on the longitude and latitude of different unit sizes, typically $0.25^\circ \times 0.25^\circ$, $0.5^\circ \times 0.5^\circ$, and $1^\circ \times 1^\circ$, to analyze the spatial patterns of plant species [58,59]. In Mongolia, some researchers have published data on the SR of orchids [60] and climate change of grasslands using a $0.5^\circ \times 0.5^\circ$ grid cell size [61]. Therefore, we selected a $0.5^\circ \times 0.5^\circ$ grid cell size (approximately $50 \times 50 \text{ km}^2$) using the FishNet tool in ArcGIS 10.3 [62]. Overall, SR was calculated using the occurrence records for each species as present in or absent from each grid cell [63]. We estimated the SR for the phytogeographical regions using the 16 regions defined by Grubov [1].

We used the geographic data of the protected areas (PAs) (downloaded from the World Database on Protected Areas) to determine the extent to which species were included in the PAs. We excluded natural monuments (NM) – which are PAs in Mongolia – because they usually cover small areas and are primarily dedicated to preserving historical and cultural heritage. We also downloaded Mongolia’s general land cover from ESA WorldCover [64].

3. Results and discussion

3.1. Annotated checklist of macrofungi in Mongolia

In this study, we critically updated and revised the names of the species and genera of the Conspectus of higher fungi of Mongolia [10] based on several sources. The previous checklist included 631 species from 237 genera and 88 families in Mongolia [10]. However, after critical revision, the names of 160 species, including 45 families and 46 genera, were treated as synonyms, according to the Index Fungorum and Mycobank (Supplementary Material). Forty-seven genera and 31 families are reported for the first time from Mongolia. Among these, majority of newly noted families and genera are derived from the GenBank in NCBI. The final updated checklist of macrofungi includes 677 species belonging to 284 genera, 119 families and *Incertae sedis* from Mongolia.

Macrofungi were classified into two phyla, Ascomycota (93 species, 55 genera, and 35 families)

Table 1. Species diversity of macrofungi in Mongolia.

Phylum	Family	Genus	Species
Ascomycota	35	55	93
Basidiomycota	84	229	584
Total	119	284	677

and Basidiomycota (584 species, 229 genera, and 84 families), as shown in Table 1. The most diverse families (>20 species) were Pucciniaceae (82 species), Russulaceae (39 species), Agaricaceae (32 species), Erysiphaceae (26 species), Lycoperdaceae (25 species), and Polyporaceae (24 species). The most speciose (>15 species) genera were *Puccinia* (65 species) followed by *Russula* (22 species), *Lactarius* (16 species), *Uromyces* (16 species), and *Cortinarius* (16 species) (Figure 1).

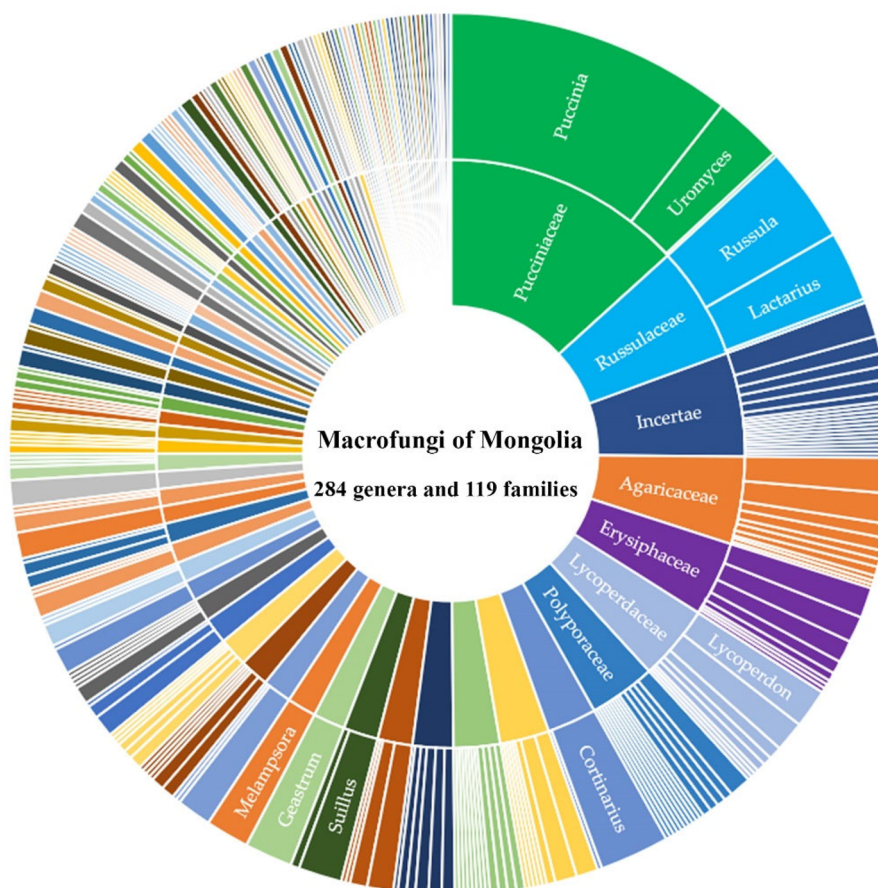
Only four species are currently categorized as endemic to Mongolia: *Entoloma mongolicum* Hauskn., Noordel. & Karasch, *Levellula papilionacearum* (Kom.) U. Braun, *Microsphaera atraphaxis* Schmiecl., and *Lycoperdon asiaticum* Kreisel, which are only distributed in the country, according to Kherlenchimeg and Burenbaatar [10].

According to Monteiro et al. [56], approximately, 18 macrofungal species are invasive to Mongolia including *Agrocybe praecox* (Pers.) Fayod, *Calbovista subsculpta* Morse ex M.T. Seidl, *Coltricia perennis*

(L.) Murrill, *Cortinarius torvus* (Fr.) Fr., *Gomphidius glutinosus* (Schaeff.) Fr., *Grifola frondosa* (Dicks.) Gray, *Gymnopilus aeruginosus* (Peck) Singer, *Laetiporus sulphureus* (Bull.) Murrill, *Leccinum aurantiacum* (Bull.) Gray, *L. scabrum* (Bull.) Gray, *Macrolepiota excoriata* (Schaeff.) Wasser, *Marasmius oreades* (Bolton) Fr., *Neolentinus lepideus* (Fr.) Redhead & Ginns, *Infundibulicybe gibba* (Pers.) Harmaja, *Panaeolus semiovatus* (Sowerby) S. Lundell & Nannf., *Russula cyanoxantha* (Schaeff.) Fr., *Suillus cavipes* (Klotzsch) A.H. Sm. & Thiers and *S. viscidus* (L.) Roussel.

3.2. Regional conservation status of fungi in Mongolia

Following Kherlenchimeg and Burenbaatar [23], approximately, 95 fungal species have been assessed at the regional level. For instance, six species were critically endangered, followed by 13 species as endangered, 32 species as vulnerable, 11 species as near threatened, and 39 species as being of the least conservational concern (Figure 2). However, most of these studies have been assessed as data deficient owing to limited information collection and field surveys. Photographs of some threatened and rare species are shown in Figure 3.

**Figure 1.** The species richness of genera and families of macrofungi in Mongolia.

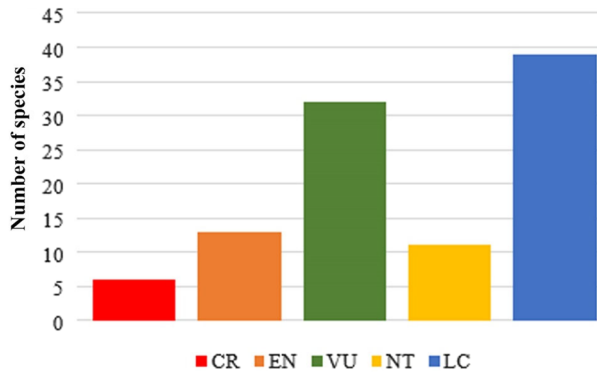


Figure 2. Regional conservation status of macrofungi in Mongolia. CR: critically endangered; EN: endangered; VU: vulnerable; NT: near threatened; LC: least concern.

3.3. Species richness of fungi in Mongolia

A total of 4733 occurrence points of approximately 655 species were analyzed for SR across Mongolia (Figure 4). Based on the collection records, about 496 species (80% of the total) had at least one collection stored in the UBA herbarium. Species richness was estimated based on 16 phytogeographical regions (Table 2). As a result, the most speciose regions were the Khentei (496 species) followed by Khuvsgul (122 species), Khangai (110 species), and the Mongolian Dauria (68 species) (Table 2). For instance, majority of fungi were distributed in the Khentei region due to the general vegetation type



Figure 3. In situ photographs of some rare and threatened species in Mongolia. (A) *Leucocalocybe mongolica*; (B) *Montagnea arenaria*; (C) *Helvella crispa*; (D) *Boletinus asiaticus*; (E) *Fomitopsis officinalis*; (F) *Auriscalpium vulgare*; (G) *Calvatia gigantea*; (H) *Hericium coralloides*; (I) *Flammulina velutipes*; (J) *Boletus edulis*; (K) *Battarrea phalloides*; (L) *Lycoperdon echinatum*; (M) *Leucopholiota lignicola*; (N) *Pholiota aurivella*; (O) *Cortinarius alboviolaceus*; (P) *Laccaria purpureobadia*; (Q) *Calocybe gambosa*; (R) *Russula paludosa*; (S) *Lichenomphalia umbellifera*; (T) *Fomes fomentarius*; (U) *Hygrocybe conica*; (V) *Thelephora terrestris*; (W) *Spathularia flavida*; (X) *Suillus grevillei*.

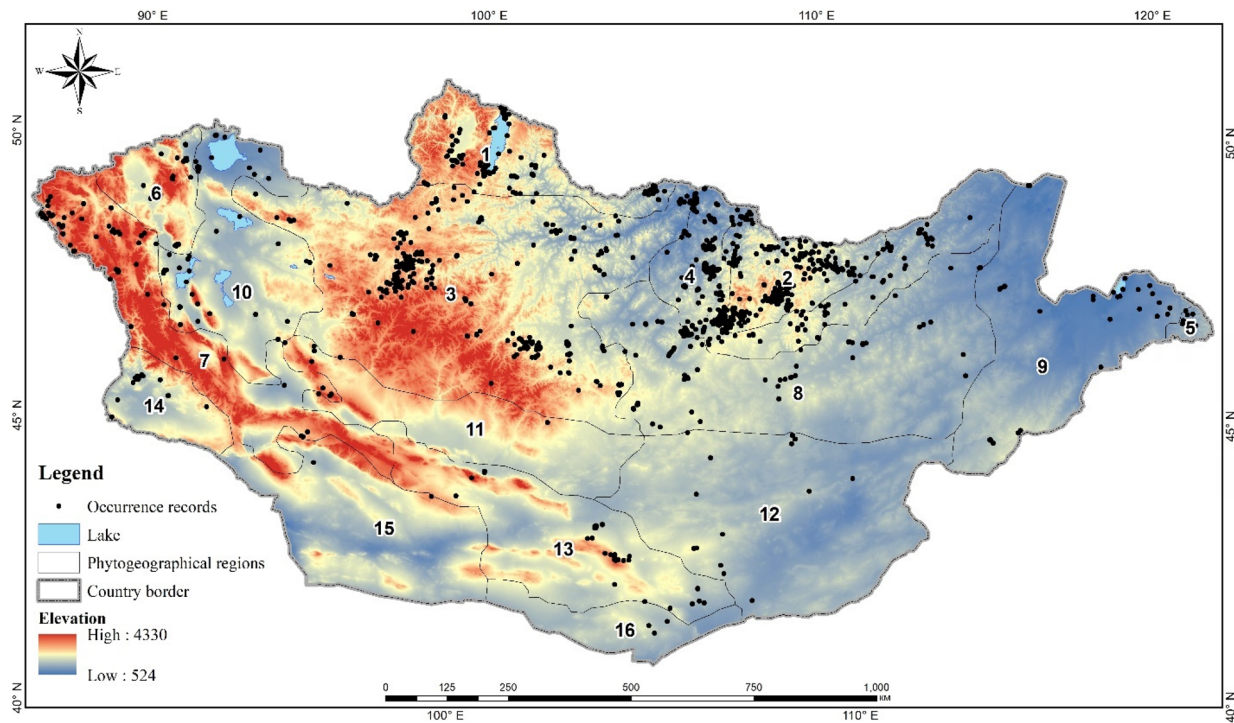


Figure 4. Occurrences of fungal species in Mongolia. The numbers indicate the phytogeographical regions of Mongolia: 1. Khuvsgul, 2. Khentei, 3. Khangai, 4. Mongolian Dauria, 5. Foothills of Great Khingan, 6. Khovd, 7. Mongolian Altai, 8. Middle Khalkha, 9. East Mongolia, 10. Depression of Great Lakes, 11. Valley of Lakes, 12. East Gobi, 13. Gobi Altai, 14. Dzungarian Gobi, 15. Transaltai Gobi, and 16. Alashan Gobi.

Table 2. The species richness of macrofungi of each phyto-geographical region in Mongolia.

Region number	Name of the phyto-geographical regions	Number of species
1	Khuvsgul	122
2	Khentei	496
3	Khangai	110
4	Mongolian Dauria	68
5	Foothills of Great Khingan	15
6	Khovd	22
7	Mongolian Altai	37
8	Middle Khalkha	3
9	East Mongolia	18
10	Depression of Great Lakes	49
11	Valley of Lakes	5
12	East Gobi	12
13	Gobi Altai	3
14	Dzungarian Gobi	3
15	Transaltai Gobi	–
16	Alashan Gobi	1

being forest steppe, including high diversity of tree species [1,3,4]. Our field surveys and extensive herbarium studies found several new locations in phyto-geographical regions. All new locations are indicated by (+) on the current checklist.

In Mongolia, SR of vascular plants and fungi has not been well studied in recent years because species occurrence data are limited or unavailable. Therefore, in this study, we gathered all available occurrence data for macrofungal species from various sources. Species richness analysis was analyzed for the first time. The majority of macrofungi were primarily

found in northern Mongolia (Figure 5(a)). Overall, 245 grids contained at least one fungal species (Figure 5(a)). Based on the SR analysis, we identified 43 grid cells with a high diversity of fungal species (Figure 5(a)). Among these, eight grids had 47–80 species, 14 grids had 25–47 and 12 grids had 13–25 species in the country (Figure 5(a)). We overlaid the high-diversity grid cells with the general land cover of Mongolia (Figure 5(b)). Most grid cells occurred in tree and grassland areas (Figure 5(b)).

Mongolia has protected 20.1% of its territory (30.27 million ha) under four categories of PAs; strictly protected areas (SPA), national parks (NP), nature reserves (NR), and NM [65]. According to Farhadinia et al. [65], Mongolian PAs will be extended in 2030, which would make Mongolia the Asian country with the largest proportion of PAs. However, the current conservation management of most PAs is primarily focused on animal species, and their habitat and plant species are also protected within the PA. The PAs should ideally fully cover the highly diverse fungal grids (Figure 5(a)). However, some SR grids were well covered by PAs, namely, the Khan Khentii SPA, Gorkhi-Terelj NP, and Bogd Khan NP in the northern part (Figure 5(a)), whereas others were not (e.g., X and Y).

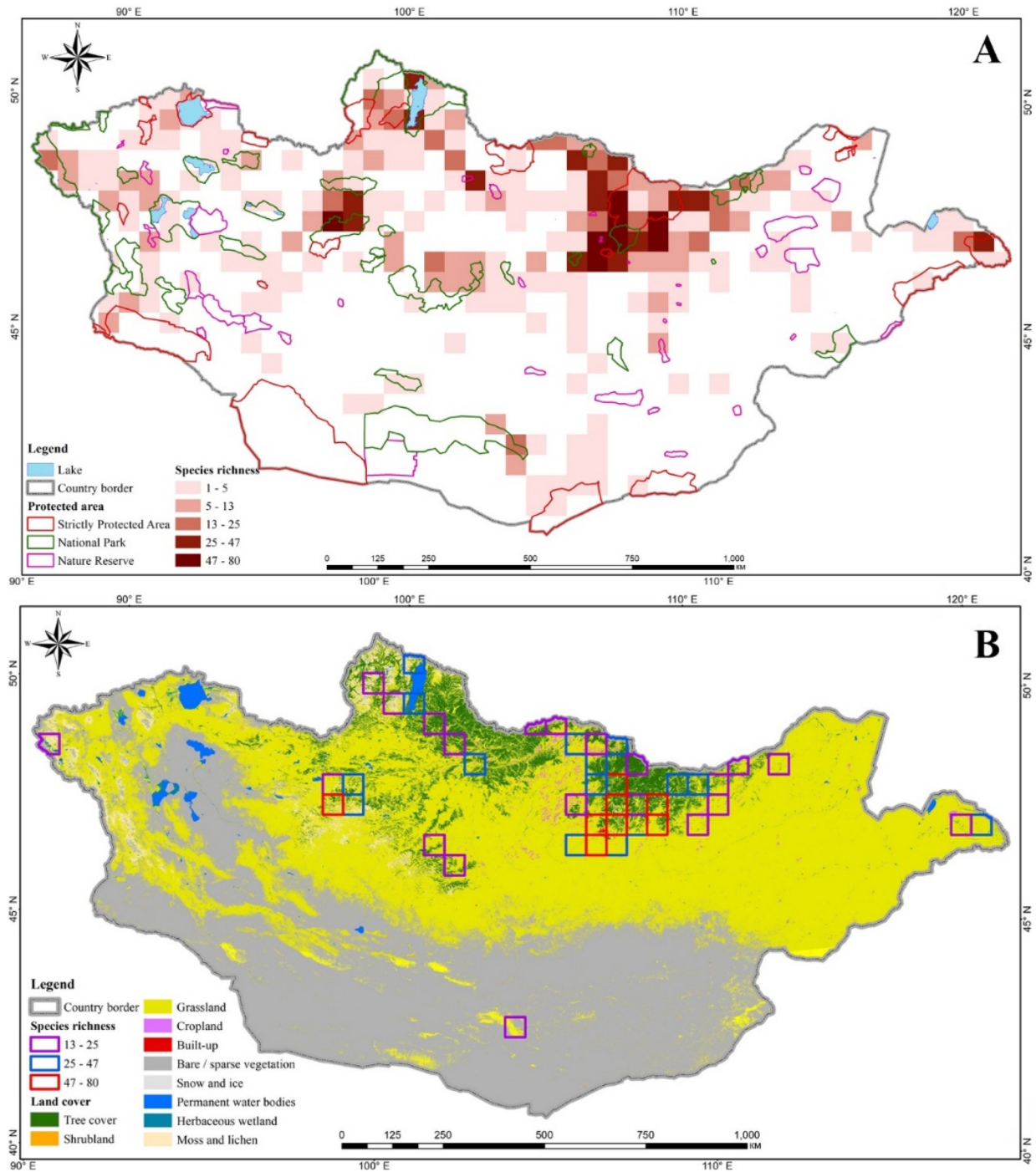


Figure 5. Species richness of macrofungi in Mongolia. (A) Species richness of macrofungi based on $0.5^\circ \times 0.5^\circ$ grid cells with protected areas; (B) selected highly diverse macrofungal grids based on the general land cover of Mongolia.

4. Conclusions

We updated the fungal diversity checklist to include 677 species belonging to 284 genera and 119 families. In addition, we determined SR using a $0.5^\circ \times 0.5^\circ$ grid cell size across Mongolia. According to these findings, 43 grids had a high diversity of macrofungi and were mostly found in the northern forest areas. We believe that our current study provides fundamental knowledge of the basic biological diversity of Mongolia.

Author contributions

Project administration: HJC and SYO. Writing – original draft: SB. Data curation: NK, GB, and MU. Data analysis: SB, NK, GB, and ZT. Revising and editing: SB, TB, SKH, SYO, and HJC.









Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

This research was supported by the Korea National Arboretum (Grant Number: KNA1-2-42, 22-2) and Korea Basic Science Institute (National Research Facilities and Equipment Center) grant funded by the Ministry of Education (Grant No. 2023R1A6C101B022).

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Appendix 1.

Annotated checklist of macrofungi in Mongolia

The families in the checklist are alphabetically ordered: the genera, species, and subspecies are listed within them.

The regional conservation status (CS) followed by Kherlenchimeg and Burenbaatar (2022): CR – critically endangered, EN – endangered, VU – vulnerable, NT – near threatened, LC – least concern.

The regional distribution (RD) in Mongolia was based on Kherlenchimeg and Burenbaatar (2017): 1 – Khuvsgul, 2 – Khentei, 3 – Khangai, 4 – Mongolian Dauria, 5 – Foothills of Great Khingan, 6 – Khovd, 7 – Mongolian Altai, 8 – Middle Khalkha, 9 – East Mongolia, 10 – Depression of Great Lakes, 11 – Valley of Lakes, 12 – East Gobi, 13 – Gobi Altai, 14 – Dzungarian Gobi, 15 – Transaltai Gobi, and 16 – Alashan Gobi. New distributions of species in the phytogeographic regions are marked with plus (+).

Voucher specimens (V) were given mostly based on the UBA herbarium.

Alien indicates alien species in the checklists, according to Monteiro et al. [56].

I Ascomycota (35 families, 55 genera and 93 species)

1. Acarosporaceae Zahlbr. (1 genus and 1 species)

Acarospora rosulata (Th. Fr.) H. Magn. [RD: 2, 7. V: GU184115, GU184122 [66]]

2. Aplosporellaceae Slippers, Boissin & Crous (1 genus and 1 species)

Aplosporella loniceriae S. Ahmad [RD: 3. V: UBA927]

3. Aspergillaceae Link (1 genera and 3 species)

Penicillium chrysogenum Thom [RD: 6. V: MT134987 [67]]

Penicillium frei Frisvad & Samson [RD: 6. V: MT135012 [67]]

Penicillium rubens Biourge [RD: 10. V: MT134996 [67]]

4. Camarosporidiellaceae Wanas., Wijayaw., Crous & K.D. Hyde (1 genus and 1 species)

Camarosporidiella moricola (Chethana, Bulgakov & K.D. Hyde) Wanas. & K.D. Hyde [RD: 10. V: MT145331]

5. Chaetomiaceae G. Winter (1 genus and 1 species)

Botryotrichum murorum (Corda) X.Wei Wang & Samson [RD: 3, 7. V: MH857724 [68]]

6. Cordycipitaceae Kreisel (1 genus and 1 species)

Beauveria bassiana (Bals.-Criv.) Vuill. [RD: 4. V: MG640376]

7. Cucurbitariaceae Luerss. (1 genus and 1 species)

Cucurbitaria caraganae P.Karst. [RD: 4.]

8. Cudoniaceae P.F.Cannon (2 genera and 2 species)

Cudonia circinans (Pers.) Fr. [RD: 4.]

Spathularia flavida Pers. [CS: LC. RD: 1+, 2, 3. V: UBA/TK-15097]

9. Bionectriaceae Samuels & Rossman (1 genus and 1 species)

Clonostachys rosea (Link) Schroers, Samuels, Seifert & W. Gams [RD: 11. V: LC663164]

10. Didymellaceae Gruyter, Aveskamp & Verkley (1 genus and 1 species)

Didymella glomerata (Corda) Qian Chen & L. Cai [RD: 9. V: MT218413]

11. Discinaceae Benedix (1 genus and 2 species)

Gyromitra esculenta Pers. ex Fr. [RD: 2. V: UBA8577]

Gyromitra infula (Schaeff.) Quél. [RD: 2. V: UBA-B/077]

12. Drepanopezizaceae Baral (3 genera and 3 species)

Drepanopeziza populi (Lib.) Rossman & W.C.Allen [RD: 3. V: UBA-B/065]

Diplocarpon mespili (Sorauer) B. Sutton [RD: 3. V: UBA566]

Marssonina sennenii (Gonz. Frag.) Karak. [RD: 3. V: UBA-B/165]

13. Eremotheciaceae Kurtzman (1 genus and 1 species)

Eremothecium coryli (Peglion) Kurtzman [RD: 3. V: LC663180]

14. Erysiphaceae Tul. & C. Tul. (8 genera and 25 species)

Blumeria graminis (DC.) Speer [RD: 6. V: UBA682]

Erysiphe adunca (Wallr.) Fr. [RD: 2, 7. V: UBA-B/072]

Erysiphe cruciferarum Opiz ex L. Junell [RD: 2, 4, 6. V: UBA992]

Erysiphe heraclei DC. [RD: 7, 9. V: UBA987]

Erysiphe nitida (Wallr.) Rabenh. [RD: 2, 9, 10. V: UBA650]

Erysiphe polygoni DC. [RD: 7, 9. V: UBA653]

Erysiphe thumenii U. Braun [RD: 3. V: MW600378]

Erysiphe trifolii Grev. [RD: 6, 7. V: UBA661]

Golovinomyces artemisiae (Grev.) V.P. Heluta [RD: 2, 3, 10. V: UBA685]

Golovinomyces cichoracearum (DC.) V.P. Heluta [RD: 2, 10. V: UBA638]

Golovinomyces cynoglossi (Wallr.) V.P. Heluta [RD: 2, 6. V: UBA655]

Leveillula cruciferarum f. *dontostemonis* Schmied. [RD: 10. V: UBA867]

Leveillula papilionacearum (Kom.) U. Braun [RD: 6, 10.]

Leveillula plantaginis Golovin [RD: 10, 12. V: UBA1052]

Leveillula plumbaginacearum f. *statices* (Jacq.) Golovin [RD: 10, 12. V: UBA865]

Leveillula ranunculacearum f. *clematidis* (Jacq.) Golovin [RD: 12. V: UBA872]

Leveillula saxaouli (Sorokin) Golovin [RD: 12. V: UBA1054]

Leveillula taurica (Lév.) G. Arnaud [RD: 7, 9, 10. V: UBA868]

Microsphaera atraphaxis Schmied. [RD: 10. V: UBA-B/165]

Neoerysiphe galeopsidis (DC.) U. Braun [RD: 7. V: UBA684]

Phyllactinia fraxini (DC.) Fuss [RD: 2. V: UBA991]

Podosphaera clandestina (Wallr.) Lév. [RD: 2. V: UBA-B/205]

Podosphaera fuliginea (Schltldl.) U. Braun & S. Takam. [RD: 2, 7. V: UBA611]

Podosphaera fusca (Fr.) U. Braun & Shishkoff [RD: 2, 4. V: UBA-B/209]

Podosphaera macularis (Wallr.) U. Braun & S. Takam. [RD: 2, 8, 10. V: UBA603]

Podosphaera pannosa (Wallr.) de Bary [RD: 2. V: UBA618]

15. Gloniaceae E. Boehm, C.L. Schoch & Spatafora (1 genus and 1 species)

Cenococcum geophilum Fr. [RD: 2. V: MW600378]

16. Helotiaceae Rehm (1 genus and 1 species)

Hymenoscyphus fraternus (Peck) Dennis [RD: 2. V: UBA-B/129]

17. Helvellaceae Fr. (1 genus and 3 species)

Helvella crispa (Scop.) Fr. [RD: 1, 2, 3. V: UBA276]

Helvella lacunosa Afzel. [RD: 2, 3, 4. V: UBA13143]

Helvella macropus (Pers.) P. Karst. [RD: 1.]

18. Hypoxylaceae DC. (2 genera and 4 species)

Daldinia childiae J.D. Rogers & Y.M. Ju [RD: 2. V: UBA-B/061]

Daldinia concentrica (Bolton) Ces. & De Not. [RD: 2. V: UBA-B/062]

Daldinia lloydii Y.M. Ju, J.D. Rogers & F. San Martín [RD: 2. V: UBA-B/063]

Hypoxylon fragiforme (Pers.) J. Kickx f. [RD: 2. V: UBA8521]

19. Lentitheciaceae Yin. Zhang, C.L. Schoch, J. Fourn., Crous & K.D. Hyde (2 genera and 2 species)

Darksidea delta D.G. Knapp, Kovács, J.Z. Groenew. & Crous [RD: 4. V: MN515263]

Flavomyces fueleophazae D.G. Knapp, Kovács, J.Z. Groenew. & Crous [RD: 4. V: MN515261]

20. Massarinaceae Munk (1 genus and 1 species)

Helminthosporium quercinum Voglmayr & Jaklitsch [RD: 11. V: LC663163]

21. Mycosphaerellaceae Lindau (2 genera and 3 species)

Septoria betulicola Lobik [RD: 3. V: UBA-B/295]

Septoria geranii Roberge ex Desm. [RD: 4. V: UBA-B/296]

Sphaerulina westendorpii Verkley, Quaedvl. & Crous [RD: 3. V: UBA-B/300]

22. Nectriaceae Tul. & C. Tul. (2 genera and 11 species)

Fusarium armeniacum (G.A. Forbes, Windels & L.W. Burgess) L.W. Burgess & Summerell [RD: 10. V: MT135008 [67]]

Fusarium acuminatum Ellis & Everh. [RD: 3. V: LC663169 [67]]

Fusarium chlamyosporum Wollenw. & Reinking [RD: 6. V: MT134989 [67]]

Fusarium fujikuroi Nirenberg [RD: 10. V: MT135010 [67]]

Fusarium incarnatum (Desm.) Sacc. [RD: 10. V: MT145333 [67]]

- Fusarium oxysporum* Schldl. [RD: 10. V: MT135004 [67]]
Fusarium proliferatum (Matsush.) Nirenberg ex Gerlach & Nirenberg [RD: 10. V: MT145334 [67]]
Fusarium redolens Wollenw. [RD: 10. V: MT134968 [67]]
Fusarium sporotrichioides Sherb. [RD: 9. V: MT218410]
Fusarium tricinctum (Corda) Sacc. [RD: 3. V: MT135002 [67]]
Nectria cinnabarina (Tode) Fr. [RD: 2, 3. V: UBA-B/185]
23. Orbiliaceae Nannf. (1 genus and 1 species)
Orbilia concoloris Baral & G. Marson [RD: 7. V: KT222352]
24. Pezizellaceae Rehm (1 genus and 1 species)
Calycina citrina (Hedw.) Gray [RD: 1.]
25. Physciaceae Zahlbr. (1 genus and 1 species)
Rinodina trevisanii (Hepp) Körb. [RD: 3. V: KX015702 [69]]
26. Pichiaceae Zender [as 'Pichiaceae'], Bull. (1 genus and 1 species)
Candida boidinii C. Ramírez [RD: 3. V: MT079141 [70]]
27. Plectosphaerellaceae W. Gams, Summerb. & Zare (2 genera and 2 species)
Chordomyces antarcticus Bilanenko, Georgieva & Grum-Grzhim. [RD: 13. V: KJ443240 [71]]
Sodiomyces alkalinus Grum-Grzhim., Debets & Bilanenko [RD: 13. V: JX158415 [71]]
28. Pleosporaceae Nitschke (1 genus and 5 species)
Alternaria alternata (Fr.) Keissl. [RD: 6. V: MT134992 [67]]
Alternaria dauci (J.G. Kühn) J.W. Groves & Skolko [RD: 3. V: LC663173]
Alternaria solani Sorauer [RD: 3. V: MT135014 [67]]
Alternaria tenuissima (Kunze) Wiltshire [RD: 10. V: MT134997 [67]]
Alternaria thalictrigena K. Schub. & Crous [RD: 11. V: LC663181]
29. Pneumocystaceae O.E. Erikss. (1 genus and 1 species)
Pneumocystis carinii P. Delanoë & Delanoë [RD: 2. V: KT020899]
30. Rhizinaceae Bonord. (1 genus and 1 species)
Rhizina undulata Fr. [RD: 1. V: UBA-B/292]
31. Rhytismataceae Chevall. (1 genus and 1 species)
Rhytisma lonicerae Henn. [RD: 3. V: UBA-B/293]
32. Saccharomycetaceae Luerss. (5 genera and 5 species)
Dekkera anomala M.T. Sm. & Grinsven [RD: 2. V: OQ557938 [72]]
Issatchenkia orientalis Kudryavtsev [RD: 2. V: MG833867]
Kazachstania unispora (A. Jörg.) Kurtzman [RD: 2. V: KY103683]
Kluyveromyces marxianus (E.C. Hansen) Van der Walt [RD: 2. V: MT079142 [72]]
Saccharomyces cerevisiae (Desm.) Meyen [RD: 8. V: MT079140 [72]]
33. Sclerotiniaceae Whetzel (1 genus and 1 species)
Botrytis cinerea Pers. [RD: 4. V: MG640477]
34. Sporormiaceae Munk (1 genus and 1 species)
Preussia lignicola (W. Phillips & Plowr.) Krays [RD: 11. V: LC663166]
35. Xylariaceae Tul. & C. Tul. (1 genus and 1 species)
Poronia punctata (L.) Fr. [RD: 3. V: UBA21164]
- II Basidiomycota** (84 families, 229 genera and 584 species)
1. Agaricaceae Chevall. (10 genera and 32 species)
Agaricus aridicola Geml, Geiser & Royle ex Mateos, J. Morales, J.A. Muñoz, Rey & C. Tovar [RD: 10.]
Agaricus arvensis Schaeff. [CS: LC. RD: 2, 4. V: UBA84142]
Agaricus bernardii Quel. [RD: 2, 4+. V: UBA22012]
Agaricus campestris L. [RD: 1, 2, 4, 11+. V: UBA84184]
Agaricus silvicolae-similis Bohus & Locsmandi [CS: LC. RD: 2, 4. V: UBA8740]
Agaricus sylvaticus Schaeff. [RD: 2, 3. V: UBA12122]
Agaricus praerimosus Peck [CS: EN. RD: 2, 6, 7. V: UBA8764]
Agaricus xanthodermus Genev. [CS: VU. RD: 2, 5. V: UBA8766]
Battarrea phalloides (Dicks.) Pers. [CS: VU. RD: 8, 12. V: UBA19001]
Chlorophyllum agaricoides (Czern.) Vellinga [CS: EN. RD: 2, 9, 10.]
Coprinus comatus (O.F.Mull.) Pers. [RD: 2, 3, 4. V: UBA154]
Coprinus vosoustii Pilát [CS: EN. RD: 9, 13. V: UBA8138]
Disciseda arida Velen. [RD: 2.]
Disciseda bovista (Klotzsch) Henn. [RD: 2. V: UBA171/8127]
- Disciseda candida* (Schwein.) Lloyd [RD: 1.]
Lepiota clypeolaria (Bull.) P. Kumm. [RD: 2.]
Lepiota cristata (Bolton) P. Kumm. [RD: 2. V: UBA16/8154]
Lepiota erminea (Fr.) P. Kumm. [RD: 2. V: UBA18048]
Macrolepiota excoriata (Schaeff.) Wasser [Alien. RD: 1, 2, 3. V: UBA/TK-15103]
Macrolepiota procera (Scop.) Singer [CS: VU. RD: 2.]
Montagnea arenaria (DC.) Zeller [CS: CR. RD: 4+, 6, 10. V: UBA1102]
Montagnea haussknechtii Rabenh. [RD: 7, 12+, 16+. V: UBA18014]
Schizostoma laceratum (Ehrenb. ex Fr.) Lév. [CS: EN. RD: 2.]
Tulostoma brumale Pers. [RD: 2.]
Tulostoma cineraceum Long [RD: 2.]
Tulostoma cretaceum Long [RD: 2.]
Tulostoma evanescens Long & S. Ahmad [RD: 2.]
Tulostoma fimbriatum Fr. [CS: NT. RD: 2, 10+. V: UBA-X/11005]
Tulostoma kotlabae Pouzar [RD: 2.]
Tulostoma melanocyclum Bres. [CS: VU. RD: 2.]
Tulostoma pulchellum Sacc. [RD: 2. V: KU518954 [50]]
Tulostoma striatum G. Cunn. [RD: 2. V: KU518958 [50]]
2. Amanitaceae E.-J. Gilbert (1 genus and 6 species)
Amanita alba Lam. [RD: 2. V: UBA820819]
Amanita crocea (Quel.) Singer [RD: 2. V: UBA102/8167]
Amanita muscaria (L.) Lam. [CS: VU. RD: 2, 3. V: UBA/TK-15050]
Amanita pantherina (DC.) Krombh. [RD: 3. V: UBA00122-X]
Amanita phalloides (Vaill. ex Fr.) Link [RD: 2. V: UBA08123-B]
Amanita vaginata (Bull.) Lam. [CS: VU. RD: 1, 2. V: UBA8560]
3. Amylocorticiaceae Jülich (2 genera and 2 species)
Plicaturopsis crispa (Pers.) D.A.Reid [RD: 2. V: UBA01021]
Amylocorticium cremeoisabellinum (Litsch.) Spirin & Zmitr. [RD: 2.]
4. Anthracoideaceae Denchev (4 genera and 5 species)
Orphanomyces arcticus (Rostr.) Savile [RD: 6, 10. V: UBA-B/037]
Cintractia fischeri (P. Karst.) Liro [RD: 4. V: UBA-B/034]
Anthracoidea caricis (Pers.) Bref. [RD: 6, 10. V: UBA560]
Anthracoidea elyinae (Syd.) Kukkonen [RD: 7. V: UBA-B/006]
Schizonella melanogramma (DC.) J. Schröt. [RD: 7. V: UBA-B/294]
5. Auriculariaceae Fr. (3 genera and 5 species)
Auricularia auricula-judae (Bull.) Quél. [CS: VU. RD: 1, 2. V: UBA81006]
Auricularia mesenterica (Dicks.) Pers. [RD: 2. V: UBA81123]
Exidia glandulosa (Bull.) Fr. [RD: 2. V: UBA-B/059]
Exidia saccharina Fr. [RD: 2. V: UBA-B/060]
Pseudohydnum gelatinosum (Scop.) P. Karst. [RD: 2. V: UBA21072]
6. Auriscalpiaceae Maas Geest. (2 genera and 2 species)
Auriscalpium vulgare Gray [CS: EN. RD: 2. V: UBA08125-B]
Lentinellus vulpinus (Sowerby) Kühner & Maire [CS: LC. RD: 2. V: UBA8566]
7. Bolbitiaceae Singer (1 genus and 1 species)
Conocybe tenera (Schaeff.) Kühner [RD: 2. V: UBA42/8163]
8. Boletaceae Chevall. (5 genera and 8 species)
Boletus edulis Bull. [RD: 2. V: UBA15051]
Chalciporus piperatus (Bull.) Bataille [CS: EN. RD: 2. V: UBA247]
Leccinum aurantiacum (Bull.) Gray [Alien. CS: VU. RD: 2. V: UBA0817]
Leccinum holopus (Rostk.) Watling [CS: VU. RD: 1, 2, 3. V: UBA12153-X]
Leccinum scabrum (Bull.) Gray [Alien. CS: NT. RD: 1, 2. V: UBA20262-26]
Leccinum versipelle (Fr. & Hók) Snell [RD: 1, 2. V: UBA14051-X, LE202267]
Tylophilus felleus (Bull.) P. Karst. [RD: 2.]
Xerocomus subtomentosus (L.) Quel. [RD: 2. V: UBA8757]
9. Bondarzewiaceae Kotl. & Pouzar (1 genus and 1 species)
Laurilia sulcata (Burt) Pouzar [RD: 2. V: UBA-B/137]
10. Botryobasidiaceae Jülich (1 genus and 1 species)
Botryobasidium candicans J. Erikss. [RD: 2. V: UBA-B/014]
11. Cerrenaceae Miettinen, Justo & Hibbett (1 genus and 1 species)
Cerrena unicolor (Bull.) Murrill [RD: 2. V: UBA82192]

12. Clavariadelphaceae Corner (1 genus and 1 species)
Clavariadelphus ligula (Schaeff.) Donk [RD: 3. V: UBA82260]
13. Coleosporiaceae Dietel (3 genera and 6 species)
Coleosporium aconiti Thüm. [RD: 3. V: UBA396]
Coleosporium cimicifugatum Thüm. [RD: 2. V: UBA378]
Coleosporium ligulariae Thüm. [RD: 4. V: UBA-B/048]
Coleosporium tussilaginis (Pers.) Lévl. [RD: 2.]
Rossmatomyces pyrolae (Rostr.) Aime & McTaggart [RD: 2, 4.]
Chrysoomyxa rhododendri (DC.) de Bary [RD: 4. V: UBA-B/036]
14. Coniophoraceae Ulbr. (1 genus and 3 species)
Coniophora arida (Fr.) P. Karst. [RD: 2.]
Coniophora olivacea (Fr.) P. Karst. [RD: 2.]
Coniophora puteana (Schumach.) P. Karst. [RD: 2.]
15. Corticiaceae Herter (1 genus and 1 species)
Lyomyces pruni (Lasch) Riebesehl & Langer [RD: 2. V: UBA76130]
16. Cortinariaceae Singer (2 genera and 17 species)
Aureonarius callisteus (Fr.) Niskanen & Liimat. [RD: 2. V: UBA8650]
Cortinarius alboviolaceus (Pers.) Zawadzki [CS: VU. RD: 2. V: UBA8584]
Cortinarius bivelus (Fr.) Fr. [RD: 1, 2.]
Cortinarius caeruleus (Schaeff.) Fr. [RD: 2. V: UBA85140]
Cortinarius casimiri (Velen.) Huijsman [RD: 1, 2. V: UBA160/8121]
Cortinarius chrysolitus Kauffman [RD: 2. V: UBA8/8126]
Cortinarius claricolor (Fr.) Fr. [RD: 2. V: UBA85118]
Cortinarius collinitus (Sowerby) Gray [RD: 2.]
Cortinarius gentilis (Fr.) Fr. [CS: LC. RD: 2.]
Cortinarius fulvescens Fr. [RD: 2. V: UBA22/8124]
Cortinarius hinnuleus Fr. [RD: 2. V: UBA8144]
Cortinarius latus (Pers.) Fr. [RD: 1.]
Cortinarius mucosus (Bull.) J. Kickx f. [RD: 2. V: UBA8774]
Cortinarius privignoides Rob. Henry [RD: 2. V: UBA85/107]
Cortinarius scandens Fr. [RD: 2. V: UBA8716]
Cortinarius torvus (Fr.) Fr. [Alien. RD: 1, 2. V: UBA/TK-15065]
Cortinarius trivialis J.E. Lange [RD: 2, 4. V: UBA82248]
17. Crepidotaceae Singer (1 genus and 1 species)
Crepidotus mollis (Schaeff.) Staud. [RD: 2. V: UBA91/8141]
18. Cronartiaceae Dietel (1 genus and 2 species)
Cronartium pini (Willd.) Jorst. [RD: 4. V: UBA-B/056]
Cronartium ribicola J.C. Fisch. [RD: 2, 10. V: UBA-B/057]
19. Cyphellaceae Burnett (1 genus and 1 species)
Chondrostereum purpureum (Pers.) Pouzar [RD: 2.]
20. Dacrymycetaceae J. Schröt. (1 genus and 1 species)
Dacrymyces chrysospermus Berk. & M.A. Curtis [RD: 2.]
21. Entolomataceae Kotl. & Pouzar (2 genera and 2 species)
Clitocella popinalis (Fr.) Kluting, T.J. Baroni & Bergemann [RD: 2. V: UBA55/8166]
Entoloma mongolicum Hauskn., Noordel. & Karasch [Endemic. RD: 7. V: MB#521961]
22. Fomitopsidaceae Jülich (7 genera and 10 species)
Antrodia heteromorpha (Fr.) Donk [RD: 2.]
Neoantrodia serialis (Fr.) Audet [RD: 2.]
Daedalea xantha (Fr.) A. Roy & A.B. De [RD: 2.]
Fomitopsis betulina (Bull.) B.K. Cui, M.L. Han & Y.C. Dai [RD: 2. V: UBA21007]
Fomitopsis officinalis (Vill.) Bondartsev & Singer [CS: EN. RD: 1, 2, 3, 4, 14+. V: UBA19002]
Fomitopsis pinicola (Sw.) P. Karst. [CS: LC. RD: 1, 2. V: UBA20130-17]
Pycnoporellus fulgens (Fr.) Donk [RD: 2. V: UBA20111-12]
Rhodofomes cajanderi (P. Karst.) B.K. Cui, M.L. Han & Y.C. Dai [CS: LC. RD: 2.]
Rhodofomes roseus (Alb. & Schwein.) Kotl. & Pouzar [RD: 2.]
Antrodia sinuosa (Fr.) P. Karst. [RD: 2.]
23. Gasterosporiaceae Pilát (1 genus and 2 species)
Gastrosporium asiaticum Dörfelt & Bumžaa [RD: 2.]
Gastrosporium simplex Mattir. [RD: 2.]
24. Geastraceae Corda (1 genus and 11 species)
Geastrum corollinum (Batsch) Hollós [RD: 12. V: UBA-B/095]
Geastrum deylii Pilát [CS: CR. RD: 12. V: UBA-B/096]
Geastrum elegans Vittad. [RD: 2. V: UBA8763]
Geastrum fimbriatum Fr. [RD: 3. V: UBA-B/099]
Geastrum floriforme Vittad. [RD: 2. V: UBA-B/100]
Geastrum huneckii Dörfelt [RD: 12. V: UBA-B/101]
Geastrum hungaricum Hollós [CS: EN. RD: 3. V: UBA-B/102]
Geastrum kotlabae V.J. Staněk. [CS: EN. RD: 2. V: UBA170/8129]
Geastrum minimum Schwein. [CS: VU. RD: 7. V: UBA18055]
Geastrum striatum DC. [RD: 3. V: UBA-B/105]
Geastrum sibiricus Pilát. [RD: 1. V: UBA-B/106]
25. Gloeophyllaceae Jülich (2 genera and 5 species)
Gloeophyllum abietinum (Bull.) P. Karst. [RD: 2.]
Gloeophyllum protractum (Fr.) Imazeki [RD: 2. V: UBA92/05]
Gloeophyllum sepiarium (Wulfen) P. Karst. [RD: 2. V: UBA8691]
Gloeophyllum trabeum (Pers.) Murrill [RD: 2. V: UBA85122]
Neolentinus lepideus (Fr.) Redhead & Ginns [Alien. CS: LC. RD: 1, 2, 14+. V: UBA2089-9]
26. Gomphaceae Donk (2 genera and 3 species)
Ramaria botrytis (Pers.) Bourdot [RD: 4. V: UBA13187]
Ramaria flava (Schaeff.) Quél. [CS: LC. RD: 2, 3. V: UBA13126]
Phaeoclavulina eumorpha (P. Karst.) Giachini [RD: 2. V: UBA84166]
27. Gomphidiaceae Maire ex Jülich (2 genera and 4 species)
Chroogomphus rutilus (Schaeff.) O.K. Mill. [CS: LC. RD: 2, 5. V: UBA13116, LE202296]
Gomphidius glutinosus (Schaeff.) Fr. [Alien. RD: 2, 5. V: UBA/TK-15063]
Gomphidius maculatus (Scop.) Fr. [RD: 2. V: UBA84112]
Gomphidius roseus (Fr.) Oudem. [CS: EN. RD: 2. V: UBA8638]
28. Grifolaceae Jülich (1 genus and 1 species)
Grifola frondosa (Dicks.) Gray [Alien. CS: LC. RD: 2. V: UBA/TK-15007]
29. Hericiaceae Donk (2 genera and 3 species)
Hericium coralloides (Scop.) Pers. [CS: VU. RD: 2, 4. V: UBA20239-26]
Hericium cirrhatum (Pers.) Nikol. [CS: LC. RD: 2. V: UBA137/035]
Laxitextum bicolor (Pers.) Lentz [RD: 2.]
30. Hydniaceae Chevall. (3 genera and 3 species)
Hydnum repandum L. [RD: 2. V: UBA-B/127]
Cantharellus cibarius Fr. [RD: 2. V: UBA-B/034]
Clavulina cinerea (Bull.) J. Schröt. [RD: 1, 2. V: UBA20234-26]
31. Hydnangiaceae Gäum. & C.W. Dodge (1 genus and 6 species)
Laccaria amethystina Cooke [RD: 2, 3, 4. V: UBA8454]
Laccaria echinospora (Speg.) Singer [RD: 4.]
Laccaria laccata (Scop.) Cooke [CS: LC. RD: 1, 2, 3. V: UBA18140, LE202263]
Laccaria proxima (Boud.) Pat. [RD: 2, 5. V: UBA2034-5]
Laccaria purpureobadia D.A. Reid [CS: VU. RD: 2. V: LE202293, UBA13120]
Laccaria montana Singer [CS: EN. RD: 2. V: UBA8408]
32. Hygrophoraceae Lotsy (8 genera and 17 species)
Arrhenia discorosea (Pilát) Zvyagina, A.V. Alexandrova & Bulynk. [RD: 2. V: KC207893 [73]]
Arrhenia epichysium (Pers.) Redhead, Lutzoni, Moncalvo et Vilgalys [RD: 2. V: UBA8424]
Ampulloclitocybe clavipes (Pers.) Redhead, Lutzoni, Moncalvo et Vilgalys [RD: 2. V: UBA59/8159]
Chrysomphalina chrysophylla (Fr.) Clemenson [RD: 2. V: UBA8409]
Cuphophyllum virgineus (Wulfen) Kovalenko [RD: 1, 2. V: UBA14123-X]
Gliophorus psittacinus (Schaeff.) Herink [RD: 2. V: UBA82145]
Hygrocybe acutoconica (Clem.) Singer [RD: 1, 2, 4. V: UBA8566]
Hygrocybe coccinea (Schaeff.) Kumm. [RD: 2. V: UBA14069]
Hygrocybe conica (Schaeff.) P. Kumm. [RD: 1, 2, 5. V: UBA856a]
Hygrocybe miniata (Fr.) P. Kumm. [RD: 1.]
Hygrophorus camarophyllus (Alb. & Schwein.) Dumeé, Grandjean & Maire [RD: 1, 2. V: UBA871/305]
Hygrophorus eburneus (Bull.) Fr. [RD: 2. V: UBA8651]
Hygrophorus hypothejus (Fr.) Fr. [RD: 2. V: UBA8636]
Hygrophorus lucorum Kalchbr. [RD: 2, 3. V: UBA85135]

- Hygrophorus speciosus* Peck [RD: 2. V: LE202287]
Lichenomphalia alpina (Britzelm.) Redhead, Lutzoni, Moncalvo & Vilgalys [RD: 1. V: UBA18126]
Lichenomphalia umbellifera (L.) Redhead, Lutzoni, Moncalvo & Vilgalys [CS: LC. RD: 1, 2. V: UBA21025]
33. Hygrophoropsidaceae Kühner (1 genus and 1 species)
Hygrophoropsis aurantiaca (Wulfen) Maire [RD: 2, 3. V: LE202271]
34. Hymenochaetaceae Donk (12 genera and 16 species)
Coltricia cinnamomea (Jacq.) Murrill [RD: 2. V: UBA8616/2]
Coltricia perennis (L.) Murrill [Alien. RD: 1, 2, 3, 5. V: UBA/TK-15090]
Fomitiporia robusta (P. Karst.) Fiasson & Niemelä [RD: 2.]
Fuscoporia ferruginosa (Schr.) Murrill [RD: 2.]
Hymenochaete cruenta (Pers.) Donk [RD: 2.]
Inonotus obliquus (Fr.) Pilát [CS: CR. RD: 2. V: UBA20154-20]
Inocutis rheades (Pers.) Fiasson & Niemelä [RD: 2. V: UBA2045-5]
Onnia circinata (Fr.) P. Karst. [RD: 2. V: UBA-B/188]
Onnia tomentosa (Fr.) P. Karst. [RD: 2. V: UBA84143]
Phellinus chrysoloma (Fr.) Donk [RD: 2. V: UBA-B/194]
Phellinus igniarius (L.) Quél. [CS: LC. RD: 2. V: UBA20108-13]
Coniferiporia weirii (Murrill) L.W. Zhou & Y.C. Dai [RD: 2.]
Phellopilus nigrolimitatus (Romell) Niemelä, T. Wagner & M. Fisch. [RD: 2. V: UBA-B/196]
Porodaedalea pini (Brot.) Murrill [RD: 1, 2. V: UBA-B/215]
Porodaedalea laricis (Jacz. ex Pilát) Niemelä [RD: 2. V: UBA-B/214]
Xanthoporia radiata (Sowerby) Tura, Zmitr., Wasser, Raats & Nevo [RD: 2. V: UBA-B/366]
35. Hymenogastraceae Vittad. (3 genera and 7 species)
Gymnopilus aeruginosus (Peck) Singer [Alien. CS: LC. RD: 2, 4. V: UBA85124]
Gymnopilus liquiritiae (Pers.) P. Karst. [RD: 2. V: UBA8743]
Gymnopilus penetrans (Fr.) Murrill [RD: 3. V: UBA8548]
Psilocybe coronilla (Bull.) Noordel. [RD: 1.]
Hebeloma crustuliniforme (Bull.) Quél. [RD: 2. V: UBA8466]
Hebeloma mesophaeum (Pers.) Quél. [RD: 1, 2. V: UBA84171]
Hebeloma spoliatum (Fr.) Gillet [RD: 2. V: UBA345/811]
36. Hyphodermataceae Jülich (1 genus and 1 species)
Hyphoderma setigerum (Fr.) Donk [RD: 2.]
37. Hyphodontiaceae R.T. Moore (1 genus and 4 species)
Hyphodontia alutaria (Burt) J. Erikss. [RD: 2. V: UBA-B/130]
Hyphodontia curvispora J. Erikss. & Hjortstam [RD: 2. V: UBA-B/131]
Hyphodontia pallidula (Bres.) J. Erikss. [RD: 2. V: UBA-B/132]
Hyphodontia spathulata (Schr.) Parmasto [RD: 2. V: UBA-B/133]
38. Incrustoporiaceae Jülich (1 genus and 2 species)
Tyromyces kmetii (Bres.) Bondartsev & Singer [RD: 4. V: UBA174/011]
Tyromyces lacteus (Fr.) Murrill [RD: 2. V: UBA85123]
39. Inocybaceae Jülich (3 genera and 7 species)
Inocybe asterospora Quél. [RD: 2. V: UBA84125]
Inocybe brunnea Quél. [RD: 2. V: UBA85104]
Inocybe dulcamara (Pers.) P. Kumm. [CS: LC. RD: 2. V: UBA8436]
Inocybe grammata Quél. [RD: 2. V: UBA82178]
Inocybe posterula (Britzelm.) Sacc. [RD: 1.]
Inosperma maculatum (Boud.) Matheny & Esteve-Rav. [RD: 1. V: UBA18007]
Pseudosperma rimosum (Bull.) Matheny & Esteve-Rav. [RD: 2. V: UBA20156-20]
40. Irpicaceae Spirin & Zmitr. (4 genera and 4 species)
Vitreoporus dichrous (Fr.) Zmitr. [RD: 2.]
Meruliopsis taxicola (Pers.) Bondartsev [RD: 2.]
Irpex lacteus (Fr.) Fr. [RD: 2. V: UBA84207]
Trametopsis cervina (Schwein.) Tomšovský [RD: 2. V: UBA108/033]
41. Ischnodermataceae Jülich (1 genus and 1 species)
Ischnoderma benzoinum (Wahlenb.) P. Karst. [RD: 2.]
42. Laetiporaceae Jülich (2 genera and 2 species)
Laetiporus sulphureus (Bull.) Murrill [Alien. CS: VU. RD: 1, 2, 3, 4. V: UBA20203-24]
Phaeolus schweinitzii (Fr.) Pat. [RD: 1, 2.]
43. Lycoperdaceae F. Berchtold & J. Presl (8 genera and 25 species)
Apioperdon pyriforme (Schaeff.) Vizzini [RD: 2. V: UBA-B/160]
Bovista aestivalis (Bonord.) Demoulin [RD: 2. V: UBA-B/015]
Bovista fusca Lév. [RD: 2. V: UBA-B/016]
Bovista lycoperdoides (Cooke) S. Ahmad [RD: 2. V: UBA-B/017]
Bovista nigrescens Pers. [RD: 2. V: UBA-B/018]
Bovista paludosa Lév. [CS: VU. RD: 2. V: UBA-B/019]
Bovista plumbea Pers. [CS: LC. RD: 1. V: UBA-B/020]
Bovista pusilla (Batsch) Pers. [RD: 2.]
Bovistella utrififormis (Bull.) Demoulin & Rebriv [CS: VU. RD: 1, 2, 4. V: UBA08147]
Calbiovista subsculpta Morse ex M.T. Seidl [Alien. CS: NT. RD: 2, 3. V: UBA-B/024]
Calvatia cyathiformis (Bosc) Morgan [RD: 2. V: AJ486963 [74]]
Calvatia gigantea (Batsch) Lloyd [CS: VU. RD: 1, 2, 5. V: UBA-B/026]
Calvatia tatrensis Hollós [RD: 2. V: UBA-B/029]
Calvatia turneri (Ellis & Everh.) Demoulin & M. Lange [RD: 2. V: UBA-B/030]
Gastropila fragilis (Lév.) Homrich & J.E. Wright [RD: 2.]
Langermannia pachyderma (Peck) Kreisel [RD: 2.]
Lycoperdon asiaticum Kreisel [RD: 2. V: UBA-B/150]
Lycoperdon echinatum Schaeff. [RD: 1. V: UBA-B/151]
Lycoperdon excipuliforme (Scop.) Pers. [RD: 2. V: UBA-B/152]
Lycoperdon molle Pers. [CS: VU. RD: 1, 2. V: UBA-B/154]
Lycoperdon nigrescens Pers. [RD: 2. V: UBA-B/156]
Lycoperdon perlatum Pers. [CS: NT. RD: 1, 2. V: UBA-B/157]
Lycoperdon umbrinum Pers. [RD: 1, 2. V: UBA-B/162]
Lycoperdon lividum Pers. [RD: 4. V: UBA-B/153]
Lycoperdon pratense Pers. [RD: 2.]
44. Lyophyllaceae Jülich (4 genera and 6 species)
Calocybe carnea (Bull.) Donk [RD: 2. V: UBA82184]
Calocybe gambosa (Fr.) Donk [RD: 2.]
Calocybe naucoria (Murrill) Singer [RD: 2. V: UBA8544]
Lyophyllum decastes (Fr.) Singer [RD: 2. V: LE202256]
Myochromella inolens (Fr.) V. Hofst., Cléménçon, Moncalvo & Redhead [RD: 2. V: UBA8489]
Ossicaulis lignatilis (Pers.) Redhead & Ginns [RD: 2. V: UBA14156-X]
45. Marasmiaceae Roze ex Kühner (1 genus and 3 species)
Marasmius oreades (Bolton) Fr. [Alien. CS: NT. RD: 1, 2, 3, 4. V: UBA20111-14]
Marasmius siccus (Schwein.) Fr. [RD: 2. V: UBA20261-26]
Marasmius wynneae Berk. & Broome [RD: 2.]
46. Melampsoraceae Dietel (1 genus and 10 species)
Melampsora caprearum Thüm. [RD: 10. V: UBA0347]
Melampsora epitea Thüm. [RD: 3. V: UBA-B/166]
Melampsora euphorbiae (Ficinus & C. Schub.) Castagne [RD: 3, 7, 10. V: UBA-B/167]
Melampsora laricis-pentandrae Kleb. [RD: 3. V: UBA0363]
Melampsora laricis-populina Kleb. [RD: 3. V: UBA-B/169]
Melampsora lini (Ehrenb.) Thüm. [RD: 2, 3. V: UBA-B/170]
Melampsora magnusiana G.H. Wagner [RD: 2. V: UBA-B/171]
Melampsora salicina Desm. [RD: 2, 3. V: UBA-B/172]
Melampsora stelleriae Teich [RD: 3. V: UBA-B/176]
Melampsora populnea (Pers.) P. Karst. [RD: 3.]
47. Meruliaceae Rea (2 genera and 2 species)
Phlebia tremellosa (Schr.) Nakasone & Burds. [RD: 2.]
Sarcodontia spumea (Sowerby) Spirin [RD: 2.]
48. Microbotryaceae R.T. Moore (1 genus and 3 species)
Microbotryum bistortarum (DC.) Vánky [RD: 3. V: UBA-B/180]
Microbotryum scorzonerae (Alb. & Schwein.) G. Deml & Prillinger [RD: 3. V: UBA-B/181]
Microbotryum silenes-inflatae (DC. ex Liro) G. Deml & Oberw. [RD: 3. V: UBA-B/182]
49. Mycenaceae Overeem (3 genera and 9 species)
Mycena epipterygioides A. Pearson [RD: 2. V: UBA20105-12]
Mycena galericulata (Scop.) Gray [CS: LC. RD: 1, 2, 4. V: UBA20116-12]
Mycena laevigata (Lasch) Gilletv [RD: 1, 2. V: UBA8927]
Mycena maculata P. Karst. [RD: 2. V: UBA8515]

- Mycena plumbea* P. Karst. [RD: 2. V: UBA84129]
Panellus stipticus (Bull.) P. Karst. [RD: 2.]
Xeromphalina campanella (Batsch) Kühner & Maire [CS: LC. RD: 2, 3, 5. V: UBA12045, LE202254]
Xeromphalina caudicinalis (Fr.) Kühner & Maire [RD: 2. V: UBA08159]
Xeromphalina tenuipes (Schwein.) A.H. Sm. [RD: 2. V: UBA08160]
50. Omphalotaceae Bresinsky (6 genera and 10 species)
Collybiopsis ramealis (Bull.) Mills. [RD: 2. V: UBA82257]
Gymnopus dryophilus (Bull.) Murrill [CS: LC. RD: 1, 2, 4, 5. V: UBA82200]
Gymnopus hariolorum (Bull.) Antonin, Halling & Noordel. [RD: 2. V: UBA84/134]
Gymnopus impudicus (Fr.) Antonin, Halling & Noordel. [RD: 1, 2. V: UBA57/8150]
Marasmiellus tricolor (Alb. & Schwein.) Singer [RD: 2. V: UBA56/8157]
Mycetinis scorodonius (Fr.) A.W. Wilson & Desjardin [RD: 2. V: UBA51/8156]
Paragymnopus perforans (Hoffm.) J.S. Oliveira [RD: 2. V: UBA891/325]
Rhodocollybia butyracea (Bull.) Lennox [RD: 2. V: UBA20159-21]
Rhodocollybia prolixa (Fr.) Antonin & Noordel [RD: 2. V: UBA816/350]
Rhodocollybia maculata (Alb. et Schwein.) Singer [RD: 2. V: UBA15102]
51. Panaceae Miettinen, Justo & Hibbett (1 genus and 3 species)
Panus conchatus (Bull.) Fr. [RD: 2.]
Panus neostrigosus Drechsler-Santos & Wartchow [RD: 2, 4. V: UBA/TK-15040]
Panus rudis Fr. [CS: LC. RD: 4. V: UBA20120-15]
52. Peniophoraceae Lotsy (2 genera and 2 species)
Gloiothele citrina (Pers.) Ginns & G.W. Freeman [RD: 2. V: UBA-B/107]
Peniophora septentrionalis Laurila [RD: 2. V: UBA-B/191]
53. Phallaceae Corda (1 genus and 1 species)
Colus giganteus Dörfelt & Bumžaa [RD: 1.]
54. Phanerochaetaceae Jülich (4 genera and 4 species)
Ceriporiopsis mucida (Pers.) Gilb. & Ryvarden [RD: 2.]
Phlebiopsis gigantea (Fr.) Jülich [RD: 2.]
Bjerkandera adusta (Willd.) P. Karst. [RD: 2. V: UBA2012-3]
Hapalopilus rutilans (Pers.) Murrill [RD: 2.]
55. Phragmidiaceae Corda (3 genera and 7 species)
Phragmidium acuminatum (Fr.) Cooke [RD: 4. V: UBA-B/197]
Phragmidium andersonii Shear [RD: 3. V: UBA-B/198]
Phragmidium fusiforme J. Schröt. [RD: 2. V: UBA489]
Phragmidium potentillae (Pers.) P. Karst. [RD: 2, 3. V: UBA522]
Phragmidium tuberculatum Jul. Müll. [RD: 7, 9. V: UBA525]
Trachyspora alchemillae (Pers.) Fuckel [RD: 10. V: UBA-B/307]
Xenodochus carbonarius Schltld. [RD: 2. V: UBA-B/367]
56. Phyllotopsidaceae Locquin ex Olariaga, Huhtinen, Læssøe, J.H. Petersen & K. Hansen (1 genus and 1 species)
Phyllotopsis nidulans (Pers.) Singer [RD: 4. V: UBA01122]
57. Physalacriaceae Corner (3 genera and 3 species)
Armillaria mellea (Vahl) P. Kumm. [RD: 2, 4. V: UBA01095-X]
Cylindrobasidium evolvens (Fr.) Jülich [RD: 2, 4.]
Flammulina velutipes (Curtis) Singer [RD: 2. V: UBA08158]
58. Pleurotaceae Kühner (2 genera and 7 species)
Hohenbuehelia petaloides (Bull.) Schulzer [RD: 2. V: UBA85149]
Pleurotus calyptratus (Lindblad ex Fr.) Sacc. [RD: 2.]
Pleurotus citrinopileatus Singer [RD: 2.]
Pleurotus cornucopiae (Paulet) Quéf. [RD: 2. V: UBA08152]
Pleurotus dryinus (Pers.) P. Kumm. [CS: VU. RD: 2. V: UBA21003]
Pleurotus ostreatus (Jacq.) P. Kumm. [CS: NT. RD: 1, 2, 4. V: UBA/TK-15066]
Pleurotus pulmonarius (Fr.) Quéf. [RD: 1, 2. V: UBA08157]
59. Pluteaceae Kotl. & Pouzar (2 genera and 7 species)
Pluteus cervinus (Schaeff.) P. Kumm. [RD: 2. V: UBA20244-26]
Pluteus hongoi Singer [RD: 2. V: KJ009567 [74].]
Pluteus leucoborealis Justo, E.F. Malysheva, Bulyonk. & Minnis [RD: 2. V: KJ009743 [74].]
Pluteus pellitus (Pers.) P. Kumm. [RD: 1. V: UBA20259-26]
Pluteus petasatus (Fr.) Gillet [RD: 2. V: KJ009721 [74].]
Pluteus velutinus C.K. Pradeep, Justo & K.B. Vrinda [RD: 2. V: KX216341 [75].]
Volvopluteus gloiocephalus (DC.) Vizzini, Contu & Justo [RD: 2. V: UBA8713]
60. Polyporaceae Fr. ex Corda (15 genera and 24 species)
Podofomes mollis (Sommerf.) Gorjón [RD: 2. V: UBA21/026]
Cerioporus squamosus (Huds.) Quéf. [RD: 2.]
Cerioporus varius (Pers.) Zmitr. & Kovalenko [RD: 1.]
Daedaleopsis confragosa (Bolton) J. Schröt. [CS: LC. RD: 2. V: UBA15099]
Daedaleopsis tricolor (Bull.) Bondartsev & Singer [CS: LC. RD: 2. V: UBA08149]
Dichomitus squalens (P. Karst.) D.A. Reid [RD: 2.]
Diplomitoporus flavescens (Bres.) Domański [RD: 2.]
Fomes fomentarius (L.) Fr. [CS: NT. RD: 1, 2, 3, 4, 5+. V: UBA2059-5]
Lentinus tigrinus (Bull.) Fr. [RD: 2. V: AF516518]
Lentinus brumalis (Pers.) Zmitr. [RD: 2.]
Lenzites betulinus (L.) Fr. [RD: 2. V: UBA84240]
Neofavolus suavissimus (Fr.) J.S. Seelan, Justo & Hibbett [RD: 2. V: UBA8628]
Poriella subacida (Peck) C.L. Zhao [RD: 2.]
Picipes melanopus (Pers.) Zmitr. & Kovalenko [RD: 2. V: UBA84199]
Picipes badius (Pers.) Zmitr. & Kovalenko [RD: 2.]
Pycnoporus cinnabarinus (Jacq.) P. Karst. [RD: 2. V: UBA20111-12]
Trametes hirsuta (Wulfen) Lloyd [RD: 2. V: UBA08148]
Trametes ochracea (Pers.) Gilb. & Ryvarden [RD: 2. V: UBA84206]
Trametes pubescens (Schumach.) Pilát [CS: LC. RD: 2. V: UBA08162]
Trametes trogii Berk. [RD: 2. V: UBA82262]
Trametes versicolor (L.) Lloyd [CS: LC. RD: 2. V: UBA20152-20]
Cyanosporus caesius (Schrad.) McGinty [RD: 2.]
Ganoderma appplanatum (Pers.) Pat. [CS: VU. RD: 2. V: UBA2021-3]
Ganoderma lucidum (Curtis) P. Karst. [CS: CR. RD: 2. V: UBA20122-14]
61. Psathyrellaceae Vilgalys, Moncalvo & Redhead (4 genera and 5 species)
Coprinellus micaceus (Bull.) Vilgalys, Hopple et Jacq. Johnson [CS: LC. RD: 1, 2. V: UBA20106-13]
Coprinopsis atramentaria (Bull.) Redhead, Vilgalys et Moncalvo [CS: LC. RD: 4. V: UBA01131]
Coprinopsis spilospora (Romagn.) Redhead, Vilgalys & Moncalvo [RD: 1. V: UBA1372]
Parasola plicatilis (Curtis) Redhead, Vilgalys & Hopple [RD: 2. V: UBA20265-26]
Candolleomyces candolleanus (Fr.) D. Wächt. & A. Melzer [RD: 2.]
62. Pucciniaceae Chevall. (3 genera and 82 species)
Aecidium rubiae Dietel [RD: 4. V: UBA-B/002]
Puccinia acetosae (Schumach.) Körn. [RD: 2. V: UBA-B/193]
Puccinia acroptili P. Syd. & Syd. [RD: 4. V: UBA-B/220]
Puccinia actaeae-agropyri E. Fisch. [RD: 3. V: UBA-B/221]
Puccinia aegopodii (Schumach.) Link [RD: 2. V: UBA-B/222]
Puccinia agrostidis Plowr. [RD: 7, 10. V: UBA-B/223]
Puccinia albulensis Magnus [RD: 2. V: UBA-B/224]
Puccinia alternans Arthur [RD: 3. V: UBA-B/225]
Puccinia angelicae (Schumach.) Fuckel [RD: 7. V: UBA-B/226]
Puccinia asparagi DC. [RD: 9. V: UBA-B/227]
Puccinia atrofusca (Dudley & C.H. Thomps.) Holw. [RD: 2. V: UBA-B/228]
Puccinia behenis G.H. Otth [RD: 2, 3, 9. V: UBA-B/229]
Puccinia bistortae (F. Strauss) DC. [RD: 1, 2, 3, 6, 11. V: UBA-B/230]
Puccinia brachypodii G.H. Otth [RD: 6. V: UBA-B/232]
Puccinia bupleuri F. Rudolphi [RD: 2, 3, 6. V: UBA-B/233]

- Puccinia calcitrapae* DC. [RD: 2, 7. V: UBA-B/234]
Puccinia carthami Corda [RD: 2, 3. V: UBA-B/235]
Puccinia chrysanthemi Roze [RD: 2, 3, 4. V: UBA-B/238]
Puccinia cicutae Thüm. [RD: 2. V: UBA-B/239]
Puccinia crici-oleracei Pers. [RD: 3. V: UBA-B/241]
Puccinia coronata Corda [RD: 10.]
Puccinia crepidis-sibiricae Lindr. [RD: 2. V: UBA-B/242]
Puccinia dioicae Magnus [RD: 7, 10. V: UBA-B/243]
Puccinia drabae F. Rudolphi [RD: 6, 7. V: UBA-B/244]
Puccinia elymi Westend. [RD: 2, 7. V: UBA-B/245]
Puccinia gentianae (F. Strauss) Link [RD: 2, 3. V: UBA-B/246]
Puccinia graminis Pers. [RD: 2, 3. V: UBA-B/247]
Puccinia gymnandrae Tranzschel [RD: 10. V: UBA-B/248]
Puccinia haleniae Arthur & Holw. [RD: 2, 3. V: UBA-B/249]
Puccinia hemerocallidis Thüm. [RD: 2. V: UBA-B/250]
Puccinia hieracii (Röhl.) H. Mart. [RD: 2, 3. V: UBA-B/251]
Puccinia hordei G.H. Otth [RD: 3. V: UBA-B/252]
Puccinia hutchinsiae Dietel [RD: 7. V: UBA1911]
Puccinia iridis Wallr. [RD: 3, 9, 12. V: UBA0067]
Puccinia lactucarum P. Syd. [RD: 7, 10. V: UBA6416]
Puccinia lasiagrostis Tranzschel [RD: 7, 12. V: UBA-B/255]
Puccinia longissima J. Schröt. [RD: 3. V: UBA-B/256]
Puccinia magnusiana Körn. [RD: 7, 10. V: UBA0026]
Puccinia melasmioides Tranzschel [RD: 2. V: UBA-B/258]
Puccinia menthae Pers. [RD: 2, 10. V: UBA0293]
Puccinia minussensis Thüm. [RD: 2. V: UBA0237]
Puccinia montana Fuckel [RD: 2. V: UBA-B/261]
Puccinia nitidula Tranzschel [RD: 2, 3. V: UBA0082]
Puccinia opizii Bubák [RD: 2. V: UBA0004]
Puccinia passerinii J. Schröt. [RD: 10. V: UBA-B/264]
Puccinia permixta Syd. & P. Syd. [RD: 1, 2. V: UBA0068]
Puccinia phlomidis Thüm. [RD: 2. V: UBA0201]
Puccinia poarum Nielsen [RD: 2. V: UBA6420]
Puccinia polygoni-amphibii Pers. [RD: 2, 9, 10. V: UBA2328]
Puccinia porri (Sowerby) G. Winter [RD: 2. V: UBA6202]
Puccinia suaveolens (Pers.) Rostr. [RD: 2, 3.]
Puccinia recondita Roberge ex Desm. [RD: 2, 10.]
Puccinia ribesii-caricis Kleb. [RD: 4. V: UBA6308]
Puccinia schirajewskii Tranzschel [RD: 2.]
Puccinia scorzonerae (Schumach.) Juel [RD: 2. V: UBA0070]
Puccinia septentrionalis Juel [RD: 10. V: UBA6425]
Puccinia serpylli Lindr. [RD: 3. V: UBA-B/277]
Puccinia stipae-sibiricae S. Ito [RD: 3. V: UBA-B/278]
Puccinia stipina Tranzschel ex Kleb. [RD: 2, 3, 10. V: UBA7615]
Puccinia striiformis Westend. [RD: 2, 10.]
Puccinia subcircinata Ellis & Everh. [RD: 2. V: UBA-B/280]
Puccinia swertiae G. Winterv [RD: 7. V: UBA0081]
Puccinia tanacetii DC. [RD: 2. V: UBA6426]
Puccinia turgenica Schmied. [RD: 6. V: UBA0029]
Puccinia vaginatae Juel [RD: 10. V: UBA6427]
Puccinia variabilis Grev. [RD: 10. V: UBA-B/285]
Uromyces cytisi J. Schröt. [RD: 3. V: UBA738]
Uromyces dactylidis G.H. Otth [RD: 2. V: UBA729]
Uromyces fischeri-eduardi Magnus [RD: 3. V: UBA693]
Uromyces geranii (DC.) G.H. Otth & Wartm. [RD: 2. V: UBA749]
Uromyces glycyrrhizae (Rabenh.) Magnus [RD: 7. V: UBA-B/340]
Uromyces hedysari-obscuri (DC.) Carestia & Picc. [RD: 3, 6. V: UBA0700]
Uromyces lapponicus Lagerh. [RD: 3, 7. V: UBA727]
Uromyces limonii (DC.) Lév. [RD: 2, 3. V: UBA733]
Uromyces pisi-sativi (Pers.) Liro [RD: 3, 12. V: UBA699]
Uromyces polygalae Grove [RD: 9. V: UBA695]
Uromyces polygoni-avicularis (Pers.) G.H. Otth [RD: 2, 6. V: UBA721]
Uromyces salsolae Rabenh. [RD: 9. V: UBA701]
Uromyces striatus J. Schröt. [RD: 3. V: UBA-B/354]
Uromyces trifolii (R. Hedw.) Lév. [RD: 2. V: UBA-B/355]
Uromyces valerianae (Schumach.) Fuckel [RD: 4. V: UBA-B/250]
Uromyces viciae-fabae (Pers.) J. Schröt. [RD: 2, 3, 9, 10. V: UBA-B/357]
63. Pucciniastraceae Gäum. ex Leppik (3 genera and 5 species)
Thekopsora areolata (Fr.) Magnus [RD: 4. V: UBA-B/302]
Pucciniastrum agrimoniae (Dietel) Tranzschel [RD: 3, 4. V: UBA-B/287]
Pucciniastrum epilobii (Pers.) G.H. Otth [RD: 3. V: UBA0120]
Pucciniastrum pyrolae (J.F. Gmel.) J. Schröt. [RD: 3. V: UBA-B/289]
Melampsoridium betulinum (Pers.) Kleb. [RD: 3, 10. V: UBA-B/179]
64. Raveneliaceae Leppik (1 genus and 1 species)
Triphragmium ulmariae (DC.) Link [RD: 2.]
65. Repetobasidiaceae Jülich (1 genus and 1 species)
Peniophorella pubera (Fr.) P. Karst. [RD: 2.]
66. Rickenellaceae Vizzini (1 genus and 1 species)
Cotylidia pannosa (Sowerby) D.A. Reid [RD: 2. V: UBA887/321]
67. Russulaceae Lotsy (3 genera and 39 species)
Lactarius albocarneus Britzelm. [RD: 2. V: UBA20227-24]
Lactarius aurantiacus (Pers.) Gray [RD: 1, 2. V: UBA20230-25]
Lactarius decipiens Quel. [RD: 2. V: UBA888/322]
Lactarius deliciosus (L.) Gray [CS: VU. RD: 1, 2. V: UBA18104]
Lactarius flexuosus (Pers.) Gray [RD: 2. V: UBA8772]
Lactarius musteus Fr. [RD: 2. V: UBA85127]
Lactarius necator (Bull.) Pers. [RD: 2.]
Lactarius pallidus Pers. [RD: 2.]
Lactarius pubescens Fr. [CS: LC. RD: 1, 2. V: UBA20232-26]
Lactarius resimus (Fr.) Fr. [RD: 1, 2.]
Lactarius rufus (Scop.) Fr. [RD: 1, 2. V: UBA85138]
Lactarius subdulcis (Pers.) Gray [RD: 2, 3.]
Lactarius uvidus (Fr.) Fr. [RD: 2.]
Lactarius torminosus (Schaeff.) Pers. [CS: NT. RD: 1, 2, 3. V: UBA20246-26]
Lactarius trivialis (Fr.) Fr. [RD: 2.]
Lactarius vietus (Fr.) Fr. [RD: 2. V: UBA819/353]
Lactifluus pergamenus (Sw.) Kuntze [RD: 2.]
Russula aeruginea Lindbl. ex Fr. [CS: NT. RD: 2. V: UBA8714]
Russula albonigra (Krombh.) Fr. [RD: 2. V: UBA20118-14]
Russula alutacea (Fr.) Fr. [RD: 2. V: UBA20113-14]
Russula chloroides (Krombh.) Bres. [RD: 2.]
Russula claroflava Grove [RD: 2.]
Russula cyanoxantha (Schaeff.) Fr. [Alien. RD: 2. V: UBA20188-23]
Russula decolorans (Fr.) Fr. [RD: 2. V: UBA8750]
Russula delicata Fr. [RD: 1, 2.]
Russula emetica (Schaeff.) Pers. [CS: NT. RD: 1, 2. V: UBA/TK-15053]
Russula exalbicans (Pers.) Melzer & Zvára [RD: 1, 2.]
Russula fragilis Fr. [CS: LC. RD: 2. V: UBA18087]
Russula risigallina (Batsch) Sacc. [RD: 2.]
Russula nitida (Pers.) Fr. [RD: 2. V: UBA8715]
Russula ochroleuca Fr. [RD: 2.]
Russula paludosa Britzelm. [CS: VU. RD: 2.]
Russula puellaris Fr. [RD: 2. V: UBA82250]
Russula queletii Fr. [RD: 2. V: UBA60/818]
Russula sanguinaria (Schumach.) Rauschert [RD: 1, 2. V: UBA20233-27]
Russula vesca Fr. [RD: 2.]
Russula vinosa Lindblad [RD: 2.]
Russula virescens (Schaeff.) Fr. [RD: 2.]
Russula xerampelina (Schaeff.) Fr. [RD: 2. V: UBA82201]
68. Schizophyllaceae Quél. (1 genus and 1 species)
Schizophyllum commune Fr. [RD: 2, 3. V: UBA2066-6]
69. Schizoporaceae Jülich (1 genus and 2 species)
Xylodon brevisetus (P. Karst.) Hjortstam & Ryvarden [RD: 2. V: UBA-B/368]
Xylodon flaviporus (Berk. & M.A. Curtis ex Cooke) Riebesehl & Langer [RD: 2. V: UBA-B/369]
70. Sebacinaceae K. Wells & Oberw. (1 genus and 1 species)
Ditangium cerasi (Schumach.) Costantin & L.M. Dufour [RD: 2.]
71. Serpulaceae Jarosch & Bresinsky (1 genus and 2 species)
Serpula lacrymans (Wulfen) J. Schröt. [RD: 2. V: UBA01152]
Serpula himantioides (Fr.) P. Karst. [RD: 2.]
72. Sporidiobolaceae Kobayasi (1 genus and 1 species)

- Rsshodotorula mucilaginos* (A. Jörg.) F.C. Harrison [RD: 2. V: MF927643]
73. Steccherinaceae Parmasto (1 genus and 1 species)
Steccherinum ochraceum (Pers. ex J.F. Gmel.) Gray [RD: 2. V: UBA143/018]
74. Stereaceae Pilát (2 genera and 5 species)
Aleurodiscus amorphus (Pers.) J. Schröt. [RD: 2.]
Stereum hirsutum (Willd.) Pers. [CS: LC. RD: 2, 4. V: UBA134/025]
Stereum ochraceoflavum (Schwein.) Sacc. [RD: 2. V: UBA867/301]
Stereum sanguinolentum (Alb. & Schwein.) Fr. [RD: 2. V: UBA20238-26]
Stereum subtomentosum Pouzar [RD: 2. V: UBA149a/022]
75. Strophariaceae Singer & A.H. Sm. (6 genera and 14 species)
Agrocybe ochracea Nauta [RD: 2. V: JN684773]
Agrocybe pediades (Fr.) Fayod [RD: 2, 4. V: UBA49/8165, LE202270 [75]]
Agrocybe praecox (Pers.) Fayod [Alien. RD: 1, 2. V: UBA83222]
Deconica coprophila (Bull.) P. Karst. [RD: 1.]
Deconica merdaria (Fr.) Noordel. [RD: 1.]
Hypholoma capnoides (Fr.) P. Kumm. [RD: 2. V: UBA08163, LE202253]
Hypholoma fasciculare (Huds.) P. Kumm. [RD: 2. V: UBA20160-21, LE202269]
Hypholoma lateritium (Schaeff.) P. Kumm. [RD: 2, 3. V: UBA16/8143, LE202252]
Pholiota aurivella (Batsch) P. Kumm. [CS: VU. RD: 2, 4. V: UBA08159]
Pholiota conissans (Fr.) M.M. Moser [RD: 2. V: LE202282]
Pholiota squarrosa (Vahl) P. Kumm. [RD: 2, 4, 5. V: LE202286]
Protostropharia luteonitens (Fr.) Redhead [RD: 2. V: UBA8739]
Protostropharia semiglobata (Batsch) Redhead, Moncalvo, Vilgalys [RD: 1, 3. V: UBA/TK-15041]
Stropharia aeruginosa (Curtis) Quel. [CS: LC. RD: 2. V: UBA82258]
76. Suillaceae Besl & Bresinsky (3 genera and 13 species)
Boletinus asiaticus Singer [CS: EN. RD: 2, 3. V: UBA20205-24]
Boletinus spectabilis (Peck) Murrill [CS: EN. RD: 2. V: UBA85137]
Psiloboletinus lariceti (Singer) Singer [RD: 2. V: MK940818 [76]]
Suillus americanus (Peck) Snell [RD: 1, 2. V: UBA85136]
Suillus bovinus (Pers.) Roussel [RD: 1, 2. V: UBA8759]
Suillus cavipes (Klotzsch) A.H. Sm. & Thiers [Alien. RD: 2, 3. V: UBA/TK-15068, LE202251]
Suillus flavidus (Fr.) J. Presl. [CS: VU. RD: 1, 2. V: UBA812/346, LE202251a]
Suillus granulatus (L.) Roussel [CS: LC. RD: 1, 4, 5. V: UBA20187-23]
Suillus grevillei (Klotzsch) Singer [CS: VU. RD: 1, 2, 3, 4. V: UBA20214-24]
Suillus luteus (L.) Roussel [RD: 1, 2, 4. V: UBA8613]
Suillus tridentinus (Bres.) Singer [RD: 1, 2. V: UBA813/347]
Suillus variegatus (Sw.) Richon & Roze [CS: CR. RD: 1, 2. V: UBA8603]
Suillus viscidus (L.) Roussel [Alien. CS: VU. RD: 1, 2, 5, 14+. V: UBA19007]
77. Thelephoraceae Chevall. (2 genera and 3 species)
Thelephora palmata (Scop.) Fr. [RD: 2. V: UBA8104]
Thelephora terrestris Ehrh. ex Fr. [CS: LC. RD: 2. V: UBA85146]
Tomentella terrestris (Berk. & Broome) M.J. Larsen [RD: 2.]
78. Tilletiaceae J. Schröt. (1 genus and 4 species)
Tilletia caries (DC.) Tul. & C. Tul. [RD: 2. V: UBA-B/303]
Tilletia laevis J.G. Kühn [RD: 2. V: UBA-B/304]
Tilletia menieri Har. & Pat. [RD: 4. V: UBA-B/305]
Tilletia poae Nagorny [RD: 2.]
79. Tranzscheliaceae Aime & McTaggart (1 genus and 2 species)
Tranzschelia pruni-spinosae (Pers.) Dietel [RD: 3. V: UBA-B/308]
Tranzschelia pulsatillae (Opiz) Dietel [RD: 2, 3. V: UBA-B/309]
80. Tremellaceae Fr. (2 genera and 2 species)
Phaeotremella foliacea (Pers.) Wedin, J.C. Zamora & Millanes [RD: 2. V: UBA-B/193]
Tremella mesenterica Retz. [RD: 2. V: UBA8530]
81. Tricholomataceae R. Heim ex Pouzar (3 genera and 10 species)
Aspropaxillus giganteus (Sowerby) Kühner & Maire [CS: VU. RD: 2, 3, 4.]
Leucopaxillus tricolor (Peck) Kühner [CS: VU. RD: 1.]
Tricholoma album (Schaeff.) P. Kumm. [RD: 2. V: UBA20209-24]
Tricholoma atosquamosum Sacc. [RD: 2. V: UBA8632]
Tricholoma equestre (L.) P. Kumm. [RD: 2. V: UBA8637]
Tricholoma portentosum (Fr.) Quel. [RD: 1, 2. V: UBA821/355]
Tricholoma psammopus (Kalchbr.) Quel. [RD: 2. V: UBA8494]
Tricholoma sulphureum (Bull.) P. Kumm. [RD: 2. V: UBA85117]
Tricholoma terreum (Schaeff.) P. Kumm. [CS: VU. RD: 2, 5. V: UBA85102]
Tricholoma triste (Scop.) Quel. [RD: 2. V: UBA8664]
82. Tubariaceae Vizzini (1 genus and 1 species)
Tubaria furfuracea (Pers.) Gillet [RD: 1. V: UBA21042]
83. Urocystidaceae Begerow, R. Bauer & Oberw. (1 genus and 4 species)
Urocystis agropyri (Preuss) A.A. Fisch. Waldh. [RD: 2, 7. V: UBA0686]
Urocystis sorosporioides Körn. ex Fuckel [RD: 10. V: UBA-B/324]
Urocystis tritici Körn. [RD: 2. V: UBA-B/325]
Urocystis violae (Sowerby) A.A. Fisch. Waldh. [RD: 3. V: UBA0743]
84. Ustilaginaceae Tul. & C. Tul. (4 genera and 12 species)
Mycosarcoma maydis (DC.) Bref. [RD: 7. V: UBA-B/184]
Tranzscheliella hypodytes (Schltdl.) Vánky & McKenzie [RD: 3, 12. V: UBA-B/310]
Tranzscheliella otophora Lavrov [RD: 7. V: UBA-B/311]
Tranzscheliella williamsii (Griffiths) Dingley & Versluys [RD: 4. V: UBA-B/312]
Tranzscheliella reverdattoana (Lavrov) Ying M. Li, R.G. Shivas & L. Cai 2017 [RD: 6, 7.]
Sporisorium destruens (Schltdl.) Vánky [RD: 2. V: UBA445]
Ustilago agrestis Syd. [RD: 2, 7, 10. V: UBA435]
Ustilago avenae (Pers.) Rostr. [RD: 2, 3, 6. V: UBA459]
Ustilago bullata Berk. [RD: 2. V: UBA432]
Ustilago helictotrichi Schmied. [RD: 2. V: UBA0431]
Ustilago hordei (Pers.) Lagerh. [RD: 2. V: UBA0440]
Ustilago nuda (C.N. Jensen) Kellerm. & Swingle [RD: 4, 7, 10. V: UBA0479]
Incertae sedis (Agaricales) (15 genera and 29 species)
Clitocybe augeana (Mont.) Sacc. [RD: 2. V: UBA84102]
Clitocybe fasciculata H.E. Bigelow & A.H. Sm. [CS: VU. RD: 2, 3, 4. V: UBA18085]
Clitocybe fragrans (With.) P. Kumm. [RD: 2, 3. V: UBA15/8151]
Clitocybe obsoleta (Batsch) Quel. [RD: 2, 3. V: UBA105/8169]
Clitocybe phyllophila (Pers.) P. Kumm. [RD: 2. V: UBA82225]
Clitocybe rivulosa (Pers.) P. Kumm. [RD: 2, 3. V: UBA18060]
Clitocybe stipitata Murrill [RD: 2. V: UBA131/8130]
Clitocybe vibecina (Fr.) Quel. [RD: 2. V: UBA85106]
Collybia cirrhata (Schumach.) Quel. [RD: 4. V: UBA85/144]
Crucibulum laeve (Huds.) Kambly [RD: 3.]
Cystoderma amianthinum (Scop.) Fayod [RD: 3. V: UBA20206-24]
Cystodermella cinnabarina (Alb.et. Schw.) Harmaja [RD: 2. V: UBA/TK-15072]
Cystodermella granulosa (Batsch) Harmaja [RD: 1, 2, 4. V: UBA20210-24]
Cystodermella terryi (Berk. & Broome) Bellù [RD: 2.]
Delicatula integrilla (Pers.) Fayod [RD: 2. V: UBA82185]
*Infundibulicybe geotrop*a (Bull.) Harmaja [RD: 2, 3. V: UBA84144]
Infundibulicybe gibba (Pers.) Harmaja [Alien. CS: NT. RD: 1, 2, 3, 4. V: UBA20116-14]
Lepista panaeolus (Fr.) P. Karst. [RD: 2.]
Leucocalocybe mongolica (S. Imai) X.D. Yu & Y.J. Yao [Subendemic. CS: CR. RD: 1, 2, 3. V: UBA21021]
Leucocortinarius bulbiger (Alb. et Schwein.) Singer [CS: VU. RD: 2. V: UBA8644]
Leucocybe candicans (Pers.) Vizzini, P. Alvarado, G. Moreno & Consiglio [RD: 2. V: UBA872/307]
Leucopholiota lignicola (P. Karst.) Harmaja [CS: VU. RD: 2. V: UBA18036]

- Megacollybia platyphylla* (Pers.) Kotl. et Pouzar [RD: 2. V: UBA82239]
- Melanoleuca cognata* (Fr.) Konrad & Maubl. [RD: 2. V: LE220256]
- Melanoleuca grammopodia* (Bull.) Murrill [RD: 2. V: UBA8563]
- Melanoleuca strictipes* (P. Karst.) Jul. Schäff. [RD: 2, 3. V: UBA8453, LE220257]
- Panaeolus papilionaceus* (Bull.) Quel. [RD: 1, 2, 4. V: UBA0185-X]
- Panaeolus semiglobatus* (Murrill) Sacc. & Trotter [CS: LC. RD: 2. V: UBA2083-10]
- Panaeolus semiovatus* (Sowerby) S. Lundell & Nannf. [Alien. RD: 1, 2, 3, 4. V: UBA/TK-15024]
- Incertae sedis (Helotiales) (1 genus and 1 species)
- Scytalidium sphaerosporum* Sigler & Kang [RD: 9. V: MT218400]
- Incertae sedis (Hymenochaetales) (2 genera and 5 species)
- Trichaptum abietinum* (Dicks.) Ryvarden [RD: 2. V: UBA82179]
- Trichaptum bifforme* (Fr.) Ryvarden [CS: LC. RD: 2, 4, 5. V: UBA/TK-15099]
- Trichaptum fuscoviolaceum* (Ehrenb.) Ryvarden [RD: 1, 2. V: UBA8633]
- Trichaptum laricinum* (P. Karst.) Ryvarden [RD: 2.]
- Sidera lenis* (P. Karst.) Miettinen [RD: 2. V: UBA-B/297]
- Incertae sedis (Hypocreales) (1 genus and 1 species)
- Emericellopsis alkalina* Bilanenko [RD: 9. V: KC987150 [71]]
- Incertae sedis (Pleosporales) (2 genera and 2 species)
- Paraphoma chrysanthemicola* (Hollós) Gruyter, Aveskamp & Verkley [RD: 10. V: MT145330 [67]]
- Periconia macrospinosa* Lefebvre & Aar.G. Johnson [RD: 2. V: MN515279 [50]]
- Incertae sedis (Polyporales) (1 genus and 1 species)
- Phanerodontia magnoliae* (Berk. & M.A. Curtis) Hjortstam & Ryvarden [RD: 2.]
- Incertae sedis (Trechisporales) (1 genus and 1 species)
- Trechispora mollusca* (Pers.) Liberta [RD: 2. V: UBA-B/307]
- Incertae sedis (Sordariomycetes) (1 genus and 1 species)
- Thyronectria berolinensis* (Sacc.) Seaver [RD: 2. V: JF832623 [77]]