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16. Data on macrofungal diversity from the Danube Delta Biosphere Reserve

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Abstract: Despite de fact that the Danube Delta has a great biodiversity with more than 2300 plants and more than 4000 animals registered (http://www.ddbra.ro/rezervatia/delta-dunarii/biodiversitate), the study of macromycetes is rather scanty, and the number of macromycetes species found so far in the Reserve is 58. As a result of the mycological investigations done by the authors in 2016 May 7-8 and October 21-22 in the Danube Delta Biosphere Reserve in the Letea Forest, Caraorman Forest and at the forest district's former premises near C.A. Rosetti, the list of the recorded 130 species is presented, out of which 110 species are documented for the first time in the Danube Delta Biosphere Reserve (DDBR). The number of the macrofungi species that occur in the formentioned Reserve - including the buffer zone from Enisala - has grown to 168. Based on the red list of the romanian macromycetes (Tănase and Pop, 2005) we have found three species in the near threatened category (NT): *Helvella acetabulum*, *Morchella esculenta* and *Pluteus petasatus*, and one species in the vulnerable category (VU): *Myriostoma coliforme*. A short survey from 1932 to 2012 about the former mycological studies concerning the DDBR is presented, and the nomenclaturally updated list of the 38 species not found by us, but present in the DDBR is given.

Keywords: Danube Delta, macromycetes, biodiversity, Letea forest, Caraorman forest

INTRODUCTION

The climate of the Danube Delta is continental, it is the driest and sunniest region of Romania. The mean annual temperature is 11,0 °C -11,4 °C , with mean precipitation between 450 mm/year and 400 mm/year, decreasing from west to east (http://www.ddbra.ro/plan_manag_RBDD.php).
The vegetation of the Letea and Caraorman forests is a Swamp ash – Balkan oak forest with *Quercus robur, Quercus pedunculiflora, Ulmus laevis, Fraxinus pallisae, Fraxinus angustifolia*. Other trees that appear in these forests are *Populus alba, Populus nigra, Populus tremula*. (http://www.ddbra.ro/plan_manag_RBDD.php)

The first data about the macromycetes from the Danube Delta was published by Brândză and Solacolu in 1932 from Sulina (*Battarea phalloides,* cited after: Eliade, 1965). The next publication with species found in the Danube Delta is from 1959 by Kotlaba, with three species signaled around Tulcea (Maliuc)*: Phellinus igniarius, Trametes suaveolens, Ganoderma lucidum*. There are two more species published in 1960, one by Botezatu: *Laetiporus sulphureus* from Sfântu Gheorghe, and the other one from Letea by Eliade: *Buglossoporus quercinus*. In 1997 Pop published 40 species in total, out of which 8 species from Enisala, (three more data were reported from Enisala by Alexandri in: (Alexandri, 1932a, 1932b, 1934). In 2003 the Ancient tree forum (http://www.honeyguide.co.uk/documents/AncientTreeForumRomaniaautumn2003.pdf) reported fifteen species from the Danube Delta, with eight new species for the area, but without precise locations. In 2012 Negrean, mentioned new data about four species and two species not yet signaled at that time.

The nomenclaturally updated list of species published from DDBR without own data.
From the area of DDBR: *Abortiporus biennis* (Bull.) Singer, *Armillaria mellea* (Vahl) P. Kumm, *Cyclocybe aegerita* (V. Brig.) Vizzini as *Agrocybe aegerita*, *Hemipholiota populnea* (Pers.) Bon as *Pholiota destruens*, *Phellinus tremulae* (Bondartsev) Bondartsev & P.N. Borisov, *Pholiota alnicola* (Fr.) Singer, *Pholiota aurivella* (Batsch) P. Kumm., *Pisolithus arhizus* (Scop.) Rauschert (http://www.honeyguide.co.uk/documents/AncientTreeForumRomaniaautumn2003.pdf), *Agaricus sylvicola*

(Vittad.) Peck, *Cryptomarasmius minutus* (Peck) T.S. Jenkinson & Desjardin as *Marasmius capillipes*, *Gymnopus dryophilus* (Bull.) Murrill as *Collybia dryophila*, *Gymnopus hariolorum* (Bull.) Antonín, Halling & Noordel. as *Collybia hariolorum*, *Hymenoscyphus scutula* (Pers.) W. Phillips, *Hysterium angustatum* Alb. & Schwein., *Lachnum pygmaeum* (Fr.) Bres, *Meripilus giganteus* (Pers.) P. Karst., *Mollisia cinerea* (Batsch) P. Karst., *Mollisina flava* Arendh., *Orbilia sarraziniana* Boud., *Pezizella vulgaris* (Fr.) Sacc, *Phallus impudicus* L., *Resupinatus urceolatus* (Wallr. ex Fr.) Thorn, Moncalvo & Redhead as *Stigmatolemma urceolatum*, *Schizophyllum amplum* (Lév.) Nakasone as *Auriculariopsis ampla* , *Xylodon radula* (Fr.) Ţura, Zmitr., Wasser & Spirin as *Hyphoderma radula* (Pop, 1997), *Panellus stipticus* (Bull.) P. Karst. (Negrean, 2012; Pop, 1997), *Battarrea phalloides* (Dicks.) Pers. (cited after: Eliade, 1965), *Buglossoporus quercinus* (Schrad.) Kotl. & Pouzar as *Piptoporus quercinus,* (Eliade, 1960), *Pluteus cervinus* (Schaeff.) P. Kumm (Negrean, 2012), *Trametes suaveolens* (L.) Fr., (Kotlaba, 1959).

From Enisala – buffer zone

Amanita vaginata (Bull.) Lam., *Geastrum rufescens* Pers., *Microstoma protractum* (Fr.) Kanouse, *Sarcoscypha coccinea* (Gray) Boud., *Stereum hirsutum* (Willd.) Pers., *Trametes versicolor* (L.) Lloyd , *Urnula craterium* (Schwein.) Fr., (Pop, 1997), *Battarrea phalloides* (Dicks.) Pers. (Alexandri, 1932b), *Montagnea radiosa* (Pall.) Šebek as *Montagnites radiosus* (Alexandri, 1932a), *Tulostoma obesum* Cooke & Ellis as *Tulostoma volvulatum,* (Alexandri, 1934).

MATERIALS AND METHODS

The investigations were done in 2016 in the Leta Forest and at the forest district's former premises near C.A. Rosetti on 7 May and 21 October and in the Caraorman Forest on 8 May and 22 October. Several additional data were recorded around Crişan.
The documentation was done by field notes, photographs (most of the photographs were teken in situ, in several cases ex situ), and with dried fruit bodies.

For the determination specialized literature were used: (Alessio and Rebaudengo, 1980; Bas *et al*., 1995; Breitenbach and Kränzlin, 1986-2000; Courtecuisse and Duhem, 2007; Gröger, 2006; Gröger, 2014; Jülich, 1989; Knudsen and Vesterholt, 2008; Krieglsteiner, 2000-2003; Krieglsteiner and Gminder, 2010; Kuyper, 1986; Noordeloos, 2011; Noordeloos *et al*., 2005; Stangl, 2011). For microscopic analysis a B4 Optech-Biostar microscope provided with 100× oil immersion lens was used, with the following chemicals and stains: Melzer's reagent, potassium hydroxide – aqueous solution - 3%, ammoniac - 25%, congo red/NH3.
The mycological nomenclature and the systematical division used is based on the Index Fungorum (www.indexfungorum.org).

The functional groups are given according to Arnolds *et al*.: em – ectomycorrhizal, pn – necrotrophic parasite, sc – coprophytic saprotroph, sh – lignicolous saprotroph, sk – herbicolous saprotroph, st – terrestrial saprotroph.

RESULTS AND DISCUSSIONS

The presentation of species is done as follows: the red list category (four species), (Tănase and Pop, 2005); the name of the species, the name of autors, the functional group (Arnolds *et al*., 1995), the MTB code (Pázmány, 1986), the place of occurence, the data of occurence, F (fungarium) – in the case of conserved specimens (deposited in the first author's personal collection), P (photo) – in the case of collections with photographs, in parentheses the references in the case of the twenty species already signaled from the DDBR (with *****, 2003 in the case of data from http://www.honeyguide.co.uk/documents/ AncientTreeForumRomaniaautumn2003.pdf).

Ascomycota
Helvellaceae

1. NT *Helvella acetabulum* (L.) Quél., st, MTB0643: Letea forest, 2016.05.07. F, P. MTB0942: Caraorman forest, 2016.05.08. F, P. (Pop, 1997).
2. *Helvella fusca* Gillet, st, MTB0643: C.A. Rosetti, 2016.05.07. F, P.
3. *Helvella lacunosa* Afzel., st, MTB0942: Caraorman forest, 2016.05.08. F.

4. *Helvella leucopus* Pers., st, MTB0743: C.A. Rosetti, 2016.05.07. F, P. MTB0942: Caraorman forest, 2016.05.08. F, P. (Pop, 1997).
5. *Helvella solitaria* P. Karst., st, MTB0643: Letea forest, 2016.05.07. F, P. MTB0942: Caraorman forest, 2016.05.08. F, P.

Morchellaceae

6. NT *Morchella esculenta* (L.) Pers., st, MTB0643: Letea forest, 2016.05.07. MTB0942: Caraorman forest, 2016.05.08. (Pop, 1997).

Pezizaceae

7. *Peziza fimeti* (Fuckel) E.C. Hansen, sc, MTB0643: Letea forest, 2016.05.07. on dung, F, P.

Basidiomycota

Agaricaceae

8. *Agaricus arvensis* Schaeff., st, MTB0942: Caraorman forest, 2016.10.22.
9. *Agaricus pequinii* (Boud.) Konrad & Maubl., st, MTB0942: Caraorman forest, 2016.10.22. F, P.
10. *Agaricus semotus* Fr., st, MTB0643: Letea forest, 2016.10.21. F, MTB0942: Caraorman forest, 2016.10.22.
11. *Bovista plumbea* Pers., st, MTB0942: Caraorman forest, 2016.05.08. F, P.
12. *Coprinus comatus* (O.F. Müll.) Pers., st, MTB0842: Crişan, 2016.05.07. P. 2016.10.21. MTB0743: C.A. Rosetti, 2016.05.07, 2016.10.21, MTB0643: Letea forest, 2016.05.07, 2016.10.21, MTB0642: Letea forest, 2016.10.21. MTB0942: Caraorman forest, 2016.05.08, 2016.10.22.
13. *Lepiota subincarnata* J.E. Lange, st, MTB0942: Caraorman forest, experimental plantation, 2016.10.22, F, P.
14. *Lycoperdon lividum* Pers., st, MTB0942: Caraorman forest, 2016.10.22. on soil, F. (Pop, 1997) as *Lycoperdon spadiceum.*
15. *Lycoperdon pratense* Pers., st, MTB0942: Caraorman forest, 2016.10.22. F.
16. *Macrolepiota excoriata* (Schaeff.) Wasser, st, MTB0743: C.A. Rosetti, 2016.10.21. F, P, MTB0643: Letea forest, 2016.10.22. MTB0942: Caraorman forest, 2016.10.22.

Amanitaceae

17. *Amanita citrina* Pers., em, MTB0942: Caraorman forest, 2016.10.22. (*****, 2003).
18. *Amanita pantherina* (DC.) Krombh., em, MTB0643: Letea forest, 2016.05.07. MTB0942: Caraorman forest, 2016.10.22.
19. *Amanita phalloides* (Vaill. ex Fr.) Link, em, MTB0942: Caraorman forest, 2016.10.22. (*****, 2003).
20. *Amanita verna* (Bull.) Lam., em, MTB0942: Caraorman forest, 2016.10.22.

Auriculariaceae

21. *Auricularia auricula-judae* (Bull.) Quél., pn, MTB0743: C.A. Rosetti, 2016.05.07. on fallen branches, P. MTB0942: Caraorman forest, 2016.10.22.
22. *Auricularia mesenterica* (Dicks.) Pers., sh, MTB0942: Caraorman forest, 2016.05.08., 2016.10.22. on fallen branches, P.
23. *Exidia glandulosa* (Bull.) Fr., sh, MTB0743: C.A. Rosetti, 2016.05.07. P.

Auriscalpiaceae

24. *Artomyces pyxidatus* (Pers.) Jülich, sh, MTB0643: Letea forest, 2016.10.21. on *Populus alba*. MTB0942: Caraorman forest, 2016.10.22. on wood.

Bolbitiaceae

25. *Conocybe rickenii* (Jul. Schäff.) Kühner, sc, MTB0743: C.A. Rosetti, 2016.05.07. on dung, F.
26. *Panaeolus papilionaceus* (Bull.) Quél., sc, MTB0743: C.A. Rosetti, 2016.05.07. on dung. MTB0942: Caraorman forest, 2016.05.08. on dung.
27. *Panaeolus subfirmus* P. Karst., sc, MTB0743: C.A. Rosetti, 2016.10.21. on dung, F, P.

Boletaceae

28. *Leccinum duriusculum* (Schulzer ex Kalchbr.) Singer, em, MTB0643: Letea forest, 2016.10.21. MTB0942: Caraorman forest, 2016.05.08., 2016.10.22. under *Populus alba,* P. (Pop, 1997).
29. *Suillellus luridus* (Schaeff.) Murrill, em, MTB0942: Caraorman forest, 2016.05.08.

Fistulinaceae

30. *Fistulina hepatica* (Schaeff.) With., pn, MTB0643: Letea forest, on living *Quercus sp*. 2016.10.21. P. (Pop, 1997; *****, 2003)

Fomitopsidaceae

31. *Laetiporus sulphureus* (Bull.) Murrill, pn, MTB0842: Crişan – Dunărea Veche, 2016.05.07. on living *Salix sp*. Canalul Litcov, 2016.05.08. on living *Salix sp*. MTB0643: Letea forest, 2016.10.21. on living *Quercus sp*. MTB0942: Caraorman forest, 2016.05.08. on living *Fraxinus sp.* P, 2016.10.22. (Pop, 1997; Negrean, 2012) and as *Griphola sulphurea* (Botezatu, 1960)

32. *Postia subcaesia* (A. David) Jülich, sh, MTB0942: Caraorman forest, 2016.10.22. on decomposing branches, F, P.

Ganodermataceae

33. *Ganoderma adspersum* (Schulzer) Donk, pn, MTB0643: Letea forest, 2016.05.07. on *Quercus sp*, F.
34. *Ganoderma applanatum* (Pers.) Pat., pn, MTB0643: Letea forest, on wood, 2016.10.21. F.
35. *Ganoderma lucidum* (Curtis) P. Karst., pn, MTB0942: Caraorman forest, on roots of living *Quercus sp*. 2016.10.22. F, P. (Kotlaba, 1959; Pop, 1997; Negrean, 2012; *****, 2003)
36. *Ganoderma resinaceum* Boud., pn, MTB0842: Crişan – Dunărea Veche, 2016.05.07. on living *Salix sp*. F. MTB0643: Letea forest, 2016.10.21. on living *Quercus sp*. F. (*****, 2003)

Geastraceae

37. *Geastrum fimbriatum* Fr., st, MTB0942: Caraorman forest, experimental plantation, 2016.10.22. under *Pinus sp*. F.
38. *Geastrum fornicatum* (Huds.) Hook., st, MTB0643: C.A. Rosetti, 2016.10.21. F, P.
39. *Geastrum striatum* DC., st, MTB0643: C.A. Rosetti, 2016.10.21. F, P.
40. VU *Myriostoma coliforme* (Dicks.) Corda, st, MTB0643; Letea forest, 2016.10.21. F, P.

Gloeophyllaceae

41. *Neolentinus cyathiformis* (Schaeff.) Della Maggiora & Trassinelli, sh, MTB0643: Letea forest, 2016.05.07., 2016.10.21 on wood. MTB0942: Caraorman forest, 2016.05.08., 2016.10.22. on *Populus alba* and *Fraxinus sp*. P.

Hydnangiaceae

42. *Laccaria laccata* (Scop.) Cooke, em, MTB0942: Caraorman forest, 2016.05.08. F, P.
43. *Laccaria tortilis* (Bolton) Cooke, em, MTB0942: Caraorman forest, 2016.05.08. F, P.

Hymenochaetaceae

44. *Fomitiporia robusta* (P. Karst.) Fiasson & Niemelä, pn, MTB0643: Letea forest, 2016.10.21. on *Quercus sp*.
45. *Fuscoporia torulosa* (Pers.) T. Wagner & M. Fisch., pn, MTB0643: Letea forest, 2016.10.21. on Quercus sp. F. MTB0942: Caraorman forest, 2016.05.08. F. 2016.10.22. F, P.
46. *Inocutis tamaricis* (Pat.) Fiasson & Niemelä, pn, MTB0742: Canalul Dovnica – 2016.05.07. on *Tamarix cf. ramosissima*. F, P.
47. *Inonotus hispidus* (Bull.) P. Karst., pn, MTB0643: C.A. Rosetti, 2016.10.21. on *Ulmus sp*. F. MTB0643: Letea forest, 2016.05.07. on *Crataegus monogyna*, F. 2016.10.21. on *Fraxinus sp*. MTB0942: Caraorman forest, 2016.10.22. on *Fraxinus sp*.
48. *Phellinus igniarius* (L.) Quél., pn, MTB0842: Canalul Litcov 2016.05.08. on *Salix sp*. P. MTB0643: Letea forest, 2016.10.21. on *Fraxinus sp*. (Kotlaba, 1959; Pop, 1997; Negrean, 2012; *****, 2003)

Hymenogastraceae

49. *Gymnopilus junonius* (Fr.) P.D. Orton, pn, MTB0643: Letea forest, 2016.10.21. on *Quercus sp*. F, P. MTB0942: Caraorman forest, 2016.10.22. on *Quercus sp*. P. (Negrean, 2012)
50. *Gymnopilus penetrans* (Fr.) Murrill, pn, MTB0942: Caraorman forest, 2016.05.08. o*n wood, F,* P.
51. *Hebeloma collariatum* Bruchet, em, MTB0643: Let*ea forest,* 2016*.10.21. F.*
52. *Hebeloma mesophaeum* (Pers.) Quél., em, MTB0942: Caraorman forest, in *Populus* plantation 2016.10.22. F.
53. *Hebeloma sinapizans* (Paulet) Gillet, em, MTB0942: Caraorman forest, 2016.10.22.

Inocybaceae

54. *Crepidotus calolepis* (Fr.) P. Karst., sh, MTB0643: Letea forest, 2016.10.21. on wood.
55. *Crepidotus cesatii* (Rabenh.) Sacc., sh, MTB0942: Caraorman forest, 2016.10.22. on wood. F, P.
56. *Crepidotus mollis* (Schaeff.) Staude, sh, MTB0643: Letea forest, 2016.10.21. on wood.
57. *Inocybe arenicola* (R. Heim) Bon, em, MTB0942: Caraorman forest, 2016.10.22. F.
58. *Inocybe dulcamara* (Pers.) P. Kumm., em, MTB0942: Caraorman forest, 2016.05.08. F, P. 2016.10.22. F.
59. *Inocybe dunensis* P.D. Orton, em, MTB0942: Caraorman forest, 2016.05.08. F, P.
60. *Inocybe fulva* (Bon) Jacobsson & E. Larss., em, MTB0643: Letea forest, 2016.10.21. F, P. MTB0942: Caraorman forest, 2016.10.22. F, P.
61. *Inocybe fuscidula* Velen., em, MTB0643: Letea forest, 2016.05.07. F. MTB0942: Caraorman forest, 2016.05.08. F.
62. *Inocybe geophylla* (Bull.) P. Kumm., em, MTB0942: Caraorman forest, 2016.05.08. F, P.
63. *Inocybe godeyi* Gillet, em, MTB0942: Caraorman forest, 2016.05.08. F, P. 2016.10.22.
64. *Inocybe heimii* Bon, em, MTB0942: Caraorman forest, experimental plantation, 2016.10.22. under *Pinus sp*. F, P.
65. *Inocybe langei* R. Heim, em, MTB0942: Caraorman forest, 2016.05.08. F, P.

66. *Inocybe pruinosa* R. Heim, em, MTB0643: Letea forest, 2016.05.07. F. (Pop, 1997) as *Inocybe halophila*.
67. *Inocybe pusio* P. Karst., em, MTB0643: Letea forest, 2016.05.07. F, P. MTB0942: Caraorman forest, 2016.05.08. F, P.
68. *Inocybe rimosa* (Bull.) P. Kumm., em, MTB0643: Letea forest, 2016.05.07. F. MTB0942: Caraorman forest, 2016.05.08. F.
69. *Simocybe centunculus* (Fr.) P. Karst., sh, MTB0643: Letea forest, 2016.10.21. MTB0942: Caraorman forest, 2016.05.08. F, 2016.10.22. on fallen branches, F, P.
70. *Simocybe sumptuosa* (P.D. Orton) Singer, sh, MTB0942: Caraorman forest, 2016.05.08. F.

Marasmiaceae

71. *Crinipellis scabella* (Alb. & Schwein.) Murrill, sk(sh), MTB0942: Caraorman forest, 2016.10.22. on grass stem, F.
72. *Marasmius epiphyllus* (Pers.) Fr., sk(sh), MTB0942: Caraorman forest, 2016.10.22. on fallen leaves, F.
73. *Marasmius oreades* (Bolton) Fr., sk, MTB0743: C.A. Rosetti, 2016.05.07. MTB0942: Caraorman forest, 2016.05.08.

Mycenaceae

74. *Mycena galericulata* (Scop.) Gray, sh, MTB0942: Caraorman forest, on decomposing wood, 2016.10.22.
75. *Mycena inclinata* (Fr.) Quél., sh, MTB0643: Letea forest, 2016.10.21. F.

Omphalotaceae

76. *Gymnopus aquosus* (Bull.) Antonín & Noordel., st, MTB0643: Letea forest, 2016.05.07. F.

Paxillaceae

77. *Paxillus involutus* (Batsch) Fr., em, MTB0643: Letea forest, 2016.10.21.

Phanerochaetaceae

78. *Byssomerulius corium* (Pers.) Parmasto, sh, MTB0942: Caraorman forest, on fallen twigs, 2016.10.22.

Physalacriaceae

79. *Strobilurus stephanocystis* (Kühner & Romagn. ex Hora) Singer, sh, MTB0743: C.A. Rosetti 2016.05.07. on *Pinus nigra* cone, F.

Pleurotaceae

80. *Pleurotus calyptratus* (Lindblad ex Fr.) Sacc., sh, MTB0942: Caraorman forest, 2016.05.08. on *Populus alba*, F, P.
81. *Pleurotus ostreatus* (Jacq.) P. Kumm., pn, MTB0643: Letea forest, 2016.10.21. on wood. MTB0942: Caraorman forest, 2016.10.22.
82. *Pleurotus pulmonarius* (Fr.) Quél., pn, MTB0942: Caraorman forest, 2016.10.22.

Pluteaceae

83. *Pluteus cinereofuscus* J.E. Lange, st, MTB0942: Caraorman forest, 2016.10.22. F.
84. *Pluteus ephebeus* (Fr.) Gillet, st(sh), MTB0942: Caraorman forest, 2016.10.22. F.
85. *Pluteus nanus* (Pers.) P. Kumm., sh(st), MTB0643: Letea forest, 2016.05.07. F, P.
86. NT *Pluteus petasatus* (Fr.) Gillet, sh, MTB0643: Letea forest, 2016.05.07. (Pop, 1997)
87. *Pluteus romellii* (Britzelm.) Sacc., sh, MTB0743: C.A. Rosetti, 2016.05.07. MTB0643: Letea forest, 2016.05.07. MTB0942: Caraorman forest, 2016.05.08. F, P.

Polyporaceae

88. *Daedaleopsis confragosa* (Bolton) J. Schröt., pn, MTB0942: Caraorman forest, 2016.10.22. on wood. (Pop, 1997)
89. *Daedaleopsis tricolor* (Bull.) Bondartsev & Singer, sh, MTB0942: Caraorman forest, 2016.10.22. on fallen branches.
90. *Fomes fomentarius* (L.) Fr., pn, MTB0743: C.A. Rosetti, 2016.10.21. on *Robinia pseudoacacia*, MTB0643: Letea forest, 2016.05.07. on *Populus alba*, 2016.10.21. on *Fraxinus sp.* (Pop, 1997; *****, 2003)
91. *Lentinus arcularius* (Batsch) Zmitr., sh, MTB0743: C.A. Rosetti, 2016.05.07. MTB0643: Letea forest, 2016.05.08. MTB0942: Caraorman forest, 2016.05.08. (Pop, 1997) as *Polyporus arcularius,* Enisala - buffer zone.
92. *Lentinus tigrinus* (Bull.) Fr., sh, MTB0842, Crişan – Dunărea Veche, 2016.05.07. MTB0643: Letea forest, 2016.05.07. on *Salix sp*. 2016.10.21. MTB0942: Caraorman forest, 2016.05.08. on *Salix sp*. 2016.10.22. (Pop, 1997)
93. *Trametes hirsuta* (Wulfen) Lloyd, sh(pn), MTB0643: Letea forest, 2016.10.21. on dead *Fraxinus sp*.
94. *Trametes pubescens* (Schumach.) Pilát, sh, MTB0743: C.A. Rosetti, 2016.05.07. on wood, F.

95. *Trametes trogii* Berk., pn, MTB0643: Letea forest, 2016.05.07. F, MTB0942: Caraorman forest, 2016.05.08. on wood, F.

Psathyrellaceae

96. *Coprinellus disseminatus* (Pers.) J.E. Lange, sh, MTB0643: Letea forest, 2016.10.21. MTB9042: Caraorman forest, 2016.10.22.
97. *Coprinellus micaceus* (Bull.) Vilgalys, Hopple & Jacq. Johnson, sh, MTB0743: C.A. Rosetti, 2016.05.07. MTB0643: Letea forest, 2016.10.21. MTB0942: Caraorman forest, 2016.10.22. F.
98. *Coprinopsis atramentaria* (Bull.) Redhead, Vilgalys & Moncalvo, sh, MTB0643: Letea forest, 2016.10.21. P.
99. *Coprinopsis nivea* (Pers.) Redhead, Vilgalys & Moncalvo, sc, MTB0743: C.A. Rosetti, 2016.05.07. on dung, F. MTB0942: Caraorman forest, 2016.05.08. on dung, F.
100. *Coprinopsis pseudonivea* (Bender & Uljé) Redhead, Vilgalys & Moncalvo, sc, MTB0743: C.A. Rosetti, 2016.10.21. on dung, F, P.
101. *Cystoagaricus silvestris* (Gillet) Örstadius & E. Larss., sh, MTB0942: Caraorman forest, 2016.05.08. on wood, F, P.
102. *Parasola auricoma* (Pat.) Redhead, Vilgalys & Hopple, sh, MTB0643: Letea forest, 2016.05.07. MTB0942: Caraorman forest, 2016.05.08.
103. *Psathyrella ammophila* (Durieu & Lév.) P.D. Orton, st, MTB0942: Caraorman forest, 2016.10.22. in sand dunes, F, P.
104. *Psathyrella candolleana* (Fr.) Maire, sh, MTB0643: Letea forest, 2016.05.07., 2016.10.21.
105. *Psathyrella hirta* Peck, sc, MTB0643: Letea forest, 2016.10.21. on dung, F, P.
106. *Psathyrella melanthina* (Fr.) Kits van Wav., sh, MTB0643: Letea forest, 2016.10.21. on fallen branches F, P. MTB0942: Caraorman forest, 2016.05.08. F, P. 2016.10.22.

Russulaceae

107. *Lactarius controversus* Pers., em, MTB0942: Caraorman forest, 2016.10.22.
108. *Lactarius evosmus* Kühner & Romagn., em, MTB0942: Caraorman forest, 2016.10.22. F.

Schyzophyllaceae

109. *Schizophyllum commune* Fr., sh, MTB0643: Letea forest, 2016.05.07., 2016.10.21. (Pop, 1997).

Stereaceae

110. *Stereum subtomentosum* Pouzar, sh, MTB0643: Letea forest, 2016.10.21.

Strophariaceae

111. *Agrocybe dura* (Bolton) Singer, st, MTB0743: C.A. Rosetti, 2016.05.07. P.
112. *Agrocybe pediades* (Fr.) Fayod, st, MTB0743: C.A. Rosetti, 2016.05.07. MTB0643; Letea forest, 2016.10.21. F, MTB0942: Caraorman forest, 2016.10.22. on dung, F, P.
113. *Leratiomyces laetissimus* (Hauskn. & Singer) Borovička, Stříbrný, Noordel., Gryndler & Oborník, st, MTB0942: Caraorman forest, 2016.10.22. F.
114. *Pholiota limonella* (Peck) Sacc*.,* pn, MTB0743: C.A. Rosetti, 2016.10.21. F. MTB0643: Letea forest, 2016.10.21. on *Acer negundo* F, P.
115. *Protostropharia luteonitens* (Fr.) Redhead, sc, MTB0942: Caraorman forest, 2016.10.22. on dung, F.
116. *Protostropharia semiglobata* (Batsch) Redhead, Moncalvo & Vilgalys, sc, MTB0743: C.A. Rosetti, 2016.05.07. F, MTB0643: Letea forest, 2016.05.07. MTB0942: Caraorman forest, 2016.05.08. 2016.10.22. F, P. All collections on dung.
117. *Psilocybe subviscida* (Peck) Kauffman, st, MTB0942.05.08. On dung, F, P.

Suillaceae

118. *Suillus collinitus* (Fr.) Kuntze, em, MTB0942: Caraorman forest, experimental plantation, 2016.10.22. under *Pinus sp*. F, P.

Tremellaceae

119. *Tremella mesenterica* Retz., sh, MTB0942: Caraorman forest, 2016.05.08., 2016.10.22. On fallen twigs.

Tricholomataceae

120. *Clitocybe augeana* (Mont.) Sacc., st, MTB0743: C.A. Rosetti, 2016.05.07. On compost heaps, F.
121. *Clitocybe rivulosa* (Pers.) P. Kumm., st, MTB0942: Caraorman forest, 2016.10.22. F.
122. *Collybia cookei* (Bres.) J.D. Arnold, st(pn?), MTB0942: Caraorman forest, 2016.10.22. F.
123. *Lepista sordida* (Schumach.) Singer, st, MTB0743: C.A. Rosetti, 2016.05.07. MTB0643: Letea forest, 2016.05.07., 2016.10.21. MTB0942: Caraorman forest, 2016.05.08. P.
124. *Leucopaxillus paradoxus* (Costantin & L.M. Dufour) Boursier, st, MTB0942: Caraorman forest, 2016.10.22 F, P.
125. *Melanoleuca polioleuca* (Fr.) Kühner & Maire var. *friesii* (Bres.) Gminder, st, MTB0643: Letea forest, 2016.05.07. F, MTB0942: Caraorman forest, 2016.05.08. F. 2016.10.22. F.

126. *Tricholoma populinum* J.E. Lange, em, MTB0942: Caraorman forest, 2016.10.22. F, P.
127. *Tricholoma scalpturatum* (Fr.) Quél., em, MTB0643: Letea forest, 2016.05.07. P. MTB0942: Caraorman forest, 2016.05.08., 2016.10.22.
128. *Tricholoma terreum* (Schaeff.) P. Kumm., em, MTB0942: Caraorman forest, experimental plantation, 2016.10.22. under *Pinus sp*.

Tubariaceae

129. *Tubaria dispersa* (L.) Singer, st, MTB0643: Letea forest, 2016.05.07. under *Crateagus monogyna*.
130. *Tubaria furfuracea* (Pers.) Gillet, sh(st), MTB0643: Letea forest, 2016.05.07. MTB0942: Caraorman forest, 2016.05.08. F.

CONCLUSIONS

The 130 species with a total of 211 records include many species with few if any data in the romanian literature. These include arenicolous species: *Helvella leucopus, Inocybe arenicola, Inocybe dunensis, Inocybe heimii, Inocybe pruinosa, Psathyrella ammophila*. Coprophilous species: *Peziza fimeti, Panaeolus subfirmus, Coprinopsis pseudonivea, Psathyrella hirta, Protostropharia luteonitens, Psilocybe subviscida*. Terricolous species: *Helvella fusca, Agaricus pequinii, Lepiota subincarnata, Geastrum fornicatum, Myriostoma coliforme, Hebeloma collariatum, Inocybe fulva, Inocybe langei, Pluteus cinereofuscus, Leratiomyces laetissimus, Leucopaxillus paradoxus*. Lignicolous species: *Fuscoporia torulosa, Inocutis tamaricis, Simocybe sumptuosa, Pleurotus calyptratus, Cystoagaricus silvestris, Psathyrella melanthina*.

The total number of species recorded from the two forests included in strictly protected areas are 64 species in Letea Forest and 101 species in Caraorman Forest.

Based on the data we collected in four days, only general conclusions could be drawn, but it is certain that the Danube Delta Biosphere Reserve is just as valuable in the mycological point of view as in all other aspects, and further systematic studies will increase the species number considerably.

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