

THE HORNWORTS AND LIVERWORTS LIST OF ROMANIA

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In this paper we present the list of hornworts and liverworts from Romania which includes our recent reports: *Frullania parvistipula*, *Haplomitrium hookeri*, *Lophozia opacifolia*, *Marsupella commutata*, *Pallavicinia lyellii*, and *Pleurocladula albescens* var. *albescens*. The species *Anthoceros agrestis* is reported as new to Romania.

Key words: *hornworts, liverworts, Romania.*

INTRODUCTION

The bryological researches made on Romanian hornworts and liverworts, in 200 years approximately, were followed by huge data storage and now the list has 219 records. The most important list, that has 200 records, was published by Mihai G. (9). New lists were recently published (2, 10).

MATERIAL AND METHODS

The nomenclature and systematic classification is in accordance with Schuster 1992 (15), Paton 1999 (12), Grolle & Long 2000 (5), Crandall-Stotler & Stotler 2000 (1) and Söderström, Urmi & Váňa 2002 (17).

For the threatened species, that are in the Red List of bryophytes in Europe, we use the following abbreviations: **K** = insufficiently known species, **R** = rare species, **V** = vulnerable species and with **E** = endangered species (4). In the paper we use the following symbols: **o** = occurrence reported but the source does not discriminate between the taxa in a complex; **?** = occurrence doubtful; **†** = endemic taxon in Europe (17).

RESULTS AND DISCUSSION

The hornworts and liverworts list of Romania has 219 records (209 species, 4 subspecies and 6 varieties). The list includes the recent reports: *Cephaloziella baumgarteni*, *C. massalongi*, *C. spinigera*, *Frullania parvistipula*, *Haplomitrium hookeri*, *Lophozia opacifolia*, *Marsupella commutata*, *Pallavicinia lyellii* and *Pleurocladula albescens* var. *albescens* (we note with * our recent reports).

In the list is presented the *Anthoceros agrestis* Paton species, new to Romania. The *Anthoceros agrestis* was identified from Tâmpesți, Neamț County, leg. & det. C. Papp (as *A. punctatus* L.), registered in Flora Romaniae Exsiccata a Herbario Universitatis Napocensis Edită, no. 3043 and revision was made by Ștefănuț S. [BUCA B1000, B1001]. The samples of *Anthoceros agrestis* were identified after the colour of spores (black) and the length of mature antheridia (85 μm).

A number of twelve species is rejected from the hornworts and liverworts list of Romania: *Calypogeia arguta* Nees et Mont., *Fossombronia foveolata* Lindb., *Gymnomitrium crenulatum* Gottsche ex Carrington, *Jungermannia jenseniana* Grolle, *Lophozia elongata* Steph., *Lophozia guttulata* (Lindb. et Arnell) Grolle, *Marchantia paleacea* Bertol., *Porella platyphylloidea* (Schwein.) Lindb., *Riccia pseudopapillosa* Levier ex Steph., *Scapania compacta* (A. Roth) Dumort., *Scapania crassiretis* Bryhn and *Scapania praetervisa* Meyl.

Phylum Anthocerotophyta (hornworts)

Class Anthocerotopsida Howe

Order Anthocerotales Limpr.

Family Anthocerotaceae Dumort.

Genera *Anthoceros* L.

1. ¹**Anthoceros agrestis* Paton (12, 15, 17: o)
2. ²*Anthoceros punctatus* L. (2, 9, 10, 17: ?)

Genera *Phaeoceros* Prosk.

3. ³*Phaeoceros carolinianus* (Michx.) Prosk. (2, 9, 10, 17)
4. ⁴*Phaeoceros laevis* (L.) Prosk. (2, 9, 10, 17)

Phylum Marchantiophyta (liverworts)

Class Marchantiopsida Stotler et Stotl.-Crand.

Subclass Marchantiidae Engl.

Order Marchantiales Limpr.

Suborder Marchantiineae H. Buch ex Schljakov

Family Aytoniaceae Cavers

¹ *Anthoceros punctatus* L. (that includes *Anthoceros agrestis* and *A. punctatus*) was reported from Broșteni, Suceava County, by Proskauer (11) and Schuster (15) sub *Aspiromitus punctatus* (L.) Schljakov.

² *Anthoceros punctatus* L. (a new check required; the past reports can be *Anthoceros agrestis* Paton).

³ *Phaeoceros carolinianus* (Michx.) Prosk. was found recently in the Piatra Craiului National Park, near Zărnești, Brașov County [BUCA B2801, B2802 and B2803]; the last report in Romania was in 1931 (25).

⁴ *Phaeoceros laevis* (L.) Prosk. (a new check required, the samples can be *Phaeoceros carolinianus* (Michx.) Prosk.).

Genera *Asterella* P. Beauv.

5. ⁵*Asterella gracilis* (F. Weber) Underw. (2, 9, 10, 17)
 6. *Asterella lindenbergiana* (Corda ex Nees) Arnell (2, 9, 10, 17)
 7. *Asterella saccata* (Wahlenb.) A. Evans (2, 9, 10, 17) V

Genera *Mannia* Opiz

8. *Mannia androgyna* (L.) A. Evans (2, 9, 10, 17)
 9. *Mannia fragrans* (Balbis) Frye et L. Clark (2, 9, 10, 17)
 10. *Mannia pilosa* (Hornem.) Frye et L. Clark (2, 9, 10, 17)
 11. *Mannia triandra* (Scop.) Grolle (2, 9, 10, 17) R

Genera *Reboulia* Raddi

12. *Reboulia hemisphaerica* (L.) Raddi (2, 9, 10, 17)
Family Conocephalaceae Müll. Frib. ex Grolle

Genera *Conocephalum* Hill

13. *Conocephalum conicum* (L.) Dumort. (2, 9, 10, 17)
Family Lunulariaceae H. Klinggr.

Genera *Lunularia* Adans.

14. *Lunularia cruciata* (L.) Lindb. (2, 9, 10, 17)
Family Marchantiaceae (Bisch.) Lindl.

Genera *Bucegia* Radian

15. *Bucegia romanica* Radian (2, 9, 10, 17) R

Genera *Marchantia* L.

16. *Marchantia polymorpha* L. subsp. *polymorpha* (9, 10, 17)
 17. *Marchantia polymorpha* L. subsp. *ruderalis* Bischl. et Boisselier (17)
 18. ⁶*Marchantia polymorpha* L. subsp. *montivagans* Bischl. et Boisselier (10, 11, 12, 17)

Genera *Preissia* Corda

19. *Preissia quadrata* (Scop.) Nees (2, 10, 17)
Family Monosoleniaceae Inoue

Genera *Peltolepis* Lindb.

20. *Peltolepis quadrata* (Saut.) Müll. Frib. (9, 10, 17)
Family Cleveaceae Cavers

Genera *Athalamia* Falconer

21. *Athalamia hyalina* (Sommerf.) S. Hatt. (2, 9, 10, 17)

Genera *Sauteria* Nees

22. *Sauteria alpina* (Nees) Nees (9, 10, 17)
Suborder Corsiniineae R.M. Schust. ex Schljakov
Family Corsiniaceae Engl.

Genera *Corsinia* Raddi

⁵*Asterella gracilis* (F. Weber) Underw. (the last report from Romania was made by Radian in 1915 (14) and recently confirmed by as [BUCA B948-B952].

⁶*Marchantia polymorpha* L. subsp. *montivagans* Bischl. et Boisselier published from Romania as *Marchantia polymorpha* L. var. *alpestris* Nees (17: ?).

23. ⁷*Corsinia coriandrina* (Spreng.) Lindb. (2, 7, 14: ?)

Order Ricciales Schljakov emend. Stotler et Stotl.-Crand.

Family Oxymitraceae Müll. Frib. ex Grolle

Genera *Oxymitra* Bisch. ex Lindenb.

24. *Oxymitra incrassata* (Brot.) Sérgio et Sim-Sim (9, 10, 17)

Family Ricciaceae Reichenb.

Genera *Riccia* L.

25. *Riccia bifurca* Hoffm. (9, 10, 17)

26. *Riccia ciliata* Hoffm. (9, 10, 17)

27. *Riccia ciliifera* Link ex Lindenb. (9, 10, 17)

28. *Riccia crystallina* L. emend. Raddi (9, 10, 17)

29. *Riccia fluitans* L. (9, 10, 17)

30. *Riccia frostii* Austin (9, 10, 17) **R**

31. *Riccia glauca* L. var. *ciliaris* Warnst. (17)

32. *Riccia glauca* L. var. *glauca* (9, 10, 17)

33. *Riccia gougetiana* Durieu et Mont. (9, 10, 17)

34. *Riccia papillosa* Moris (9, 10, 17)

35. *Riccia sorocarpa* Bisch. (9, 10, 17)

36. *Riccia warnstorffii* Limpr. ex Warnst. (10, 14)

Genera *Ricciocarpos* Corda

37. *Ricciocarpos natans* (L.) Corda (9, 10, 17)

Class Jungermanniopsida Stotler et Stotl.-Crand.

Subclass Metzgeriidae Barthol.-Began

***Order** Haplomitriales H. Buch ex Schljakov

***Family** Haplomitriaceae Dedecek

***Genera** *Haplomitrium* Nees

38. *Haplomitrium hookeri* (Sm.) Nees (2, 18) **R**

Order Blasiales (R.M. Schust.) Stotler et Stotl.-Crand.

Family Blasiaceae H. Klinggr.

Genera *Blasia* L.

39. *Blasia pusilla* L. (2, 9, 10, 17)

Order Fossombroniales Schljakov emend. Stotler et Stotl.-Crand.

Suborder Fossombroniineae R.M. Schust. ex Stotler et Stotl.-Crand.

Family Fossombroniaceae Hazsl.

Genera *Fossombronia* Raddi

40. *Fossombronia pusilla* (L.) Nees (2, 9, 10, 17)

41. *Fossombronia wondraczekii* (Corda) Lindb. (2, 9, 10, 17)

Suborder Pelliineae R.M. Schust. ex Schljakov emend. Stotler et Stotl.-Crand.

Family Pelliaceae H. Klinggr.

Genera *Pellia* Raddi

⁷*Corsinia coriandrina* (Spreng.) Lindb., was reported from Romania, Cerna Valley (11).

42. *Pellia endiviifolia* (Dicks.) Dumort. (2, 9, 10, 17)

43. *Pellia epiphylla* (L.) Corda (2, 9, 10, 17)

44. *Pellia neesiana* (Gottsche) Limpr. (9, 10, 17)

Order Metzgeriales Schljakov emend. Stotler et Stotl.-Crand.

Suborder Pallaviciniineae R.M. Schust. emend. Stotler et Stotl.-Crand.

Family Pallaviciniaceae Mig.

***Genera** *Pallavicinia* Gray

45. ⁸**Pallavicinia lyellii* (Hook.) Carruth. (2, 20) V

Genera *Moerckia* Gottsche

46. *Moerckia blyttii* (Moerch) Brockm. (2, 9, 10, 17)

47. *Moerckia hibernica* (Hook.) Gottsche (2, 9, 10, 17)

Suborder Metzgeriineae R.M. Schust. ex Schljakov

Family Aneuraceae H. Klinggr.

Genera *Aneura* Dumort.

48. *Aneura pinguis* (L.) Dumort. (2, 9, 10, 17)

Genera *Riccardia* Gray

49. *Riccardia chamedryfolia* (With.) Grolle (2, 9, 10, 17)

50. *Riccardia incurvata* Lindb. (2, 9, 10, 17: †)

51. *Riccardia latifrons* (Lindb.) Lindb. (2, 9, 10, 17)

52. *Riccardia multifida* (L.) Gray (2, 9, 10, 17)

53. *Riccardia palmata* (Hedw.) Carruth. (2, 9, 10, 17)

Family Metzgeriaceae H. Klinggr.

Genera *Apometzgeria* Kuwah.

54. *Apometzgeria pubescens* (Schränk) Kuwah. (2, 9, 10, 17)

Genera *Metzgeria* Raddi

55. *Metzgeria conjugata* Lindb. (2, 9, 10, 17)

56. *Metzgeria fruticulosa* (Dicks.) A. Evans (2, 9, 10, 17)

57. *Metzgeria furcata* (L.) Dumort. (2, 9, 10, 17)

Subclass Jungermanniiidae Engl. emend. Stotler et Stotl.-Crand.

Order Lepicoleales Stotler et Stotl.-Crand.

Suborder Ptilidiineae R.M. Schust.

Family Ptilidiaceae H. Klinggr.

Genera *Ptilidium* Nees

58. *Ptilidium ciliare* (L.) Hampe (2, 9, 10, 17)

59. *Ptilidium pulcherrimum* (Weber) Vain. (2, 9, 10, 17)

Suborder Lepidolaenineae R.M. Schust.

Family Trichocoleaceae Nakai

Genera *Trichocolea* Dumort.

60. *Trichocolea tomentella* (Ehrh.) Dumort. (2, 9, 10, 17)

Order Jungermanniales H. Klinggr. emend. Stotler et Stotl.-Crand.

⁸*Pallavicinia lyellii* (Hook.) Carruth. was recent reported from Romania, Arpașu de Sus, Sibiu County [BUCA B931](20).

Suborder Herbertineae R.M. Schust.

Family Pseudolepicoleaceae Fulford et J. Taylor

Genera *Blepharostoma* (Dumort.) Dumort.

61. *Blepharostoma trichophyllum* (L.) Dumort. subsp. *trichophyllum* (2, 9, 10, 17)

Suborder Lophocoleineae Schljakov

Family Geocalyceae H. Klinggr.

Genera *Chiloscyphus* Corda

62. *Chiloscyphus pallescens* (Ehrh. ex Hoffm.) Dumort. var. *pallescens* (2, 9, 10, 17)
 63. *Chiloscyphus pallescens* (Ehrh. ex Hoffm.) Dumort. var. *fragilis* (A. Roth) Müll. Frib. (2, 10, 17)
 64. *Chiloscyphus polyanthos* (L.) Corda var. *polyanthos* (2, 9, 10, 17)
 65. *Chiloscyphus polyanthos* (L.) Corda var. *rivularis* (Schrad.) Gottsche et al. (2, 10, 17)

Genera *Geocalyx* Nees

66. *Geocalyx graveolens* (Schrad.) Nees (2, 9, 10, 17)

Genera *Harpanthus* Nees

67. *Harpanthus flotoviănus* (Nees) Nees (2, 9, 10, 17)
 68. *Harpanthus scutatus* (F. Weber et D. Mohr) Spruce (2, 9, 10, 17)

Genera *Lophocolea* (Dumort.) Dumort.

69. *Lophocolea bidentata* (L.) Dumort. var. *bidentata* (2, 9, 10, 17)
 70. *Lophocolea bidentata* (L.) Dumort. var. *rivularis* (Raddi) Warnst. (2, 17)
 71. *Lophocolea heterophylla* (Schrad.) Dumort. (2, 9, 10, 17)
 72. *Lophocolea minor* Nees (2, 9, 10, 17)

Family Plagiochilaceae (Jörg.) Müll. Frib. et Herzog

Genera *Pedinophyllum* (Lindb.) Lindb.

73. *Pedinophyllum interruptum* (Nees) Kaal. (2, 9, 10, 17)

Genera *Plagiochila* (Dumort.) Dumort.

74. *Plagiochila asplenioides* (L. emend. Taylor) Dumort. (2, 9, 10, 17)
 75. *Plagiochila porelloides* (Torrey ex Nees) Lindenb. (2, 9, 10, 17)

Suborder Lepidoziineae R.M. Schust.

Family Calypogeiaceae (Müll. Frib.) Arnell

Genera *Calypogeia* Raddi

76. *Calypogeia azurea* Stotler et Crotz (2, 9, 10, 17)
 77. *Calypogeia fissa* (L.) Raddi (2, 9, 10, 17)
 78. *Calypogeia integristipula* Steph. (2, 10)
 79. *Calypogeia muelleriana* (Schiffn.) Müll. Frib. (2, 9, 10, 17)
 80. *Calypogeia neesiana* (C. Massal. et Carestia) Müll. Frib. (2, 9, 10, 17)
 81. *Calypogeia sphagnicola* (Arnell et J. Perss.) Warnst. et Loeske (2, 9, 10, 17)
 82. *Calypogeia suecica* (Arnell et J. Perss.) Müll. Frib. (2, 9, 10, 17)

Family Lepidoziaceae Limpr.

Genera *Bazzania* Gray

83. *Bazzania flaccida* (Dumort.) Grolle (2, 9, 10, 17)

84. *Bazzania tricrenata* (Wahlenb.) Lindb. (2, 9, 10, 17)

85. *Bazzania trilobata* (L.) Gray (2, 9, 10, 17)

Genera *Kurzia* G. Martins

86. *Kurzia pauciflora* (Dicks.) Grolle (2, 9, 10, 17)

Genera *Lepidozia* (Dumort.) Dumort.

87. *Lepidozia reptans* (L.) Dumort. (2, 9, 10, 17)

Suborder Cephaloziineae Schljakov

Family Cephaloziaceae Mig.

Genera *Cephalozia* (Dumort.) Dumort.

88. *Cephalozia ambigua* C. Massal. (2, 9, 10, 17)

89. *Cephalozia bicuspidata* (L.) Dumort. var. *bicuspidata* (2, 9, 10, 17)

90. *Cephalozia bicuspidata* (L.) Dumort. var. *lammersiana* (Huebener) Breidl. (2, 9, 10, 17)

91. *Cephalozia catenulata* (Huebener) Lindb. (2, 9, 10, 17)

92. *Cephalozia connivens* (Dicks.) Lindb. (2, 9, 10, 17)

93. *Cephalozia lacinulata* J.B. Jack ex Spruce (2, 9, 10, 17) V

94. *Cephalozia leucantha* Spruce (2, 9, 10, 17)

95. *Cephalozia loitlesbergeri* Schiffn. (2, 9, 10, 17)

96. *Cephalozia lunulifolia* (Dumort.) Dumort. (2, 9, 10, 17)

97. *Cephalozia pleniceps* (Austin) Lindb. (2, 9, 10, 17)

Genera *Cladopodiella* H. Buch

98. *Cladopodiella fluitans* (Nees) H. Buch (2, 9, 10, 17)

Genera *Nowellia* Mitt.

99. *Nowellia curvifolia* (Dicks.) Mitt. (2, 9, 10, 17)

Genera *Odontoschisma* (Dumort.) Dumort.

100. *Odontoschisma denudatum* (Mart.) Dumort. (2, 9, 10, 17)

101. *Odontoschisma sphagni* (Dicks.) Dumort. (2, 9, 10, 17)

Genera *Pleurocladula* Grolle

102. **Pleurocladula albescens* (Hook.) Grolle var. *albescens* (2, 10, 19)

103. *Pleurocladula albescens* (Hook.) Grolle var. *islandica* (Nees) Söderström et Váňa (2, 9, 10, 17)

Family Cephaloziellaceae Douin

Genera *Cephaloziella* (Spruce) Schiffn.

104. ⁹*Cephaloziella baumgarteni* Schiffn. (16)

105. *Cephaloziella divaricata* (Sm.) Schiffn. (2, 9, 10, 17)

106. *Cephaloziella elachista* (J.B. Jack ex Gottsche et Rabenh.) Schiffn. (2, 9, 10, 17) K

107. *Cephaloziella elegans* (Heeg) Schiffn. (2, 9, 10, 17) K

108. *Cephaloziella hampeana* (Nees) Schiffn. (2, 9, 10, 17)

⁹*Cephaloziella baumgarteni* Schiffn. was reported by Smets L. from Grohot, Bulzeștii de Sus [BR; Smets 7692] and Gârda de Sus [CL; Smets 8616, 8672], *conf.* Plămadă E. (16);

109. ¹⁰*Cephaloziella massalongi* (Spruce) Müll. Frib. (8) **R**

110. *Cephaloziella rubella* (Nees) Warnst. (2, 9, 10, 17)

111. ¹¹*Cephaloziella spinigera* (Lindb.) Warnst. (7)

Suborder Antheliineae R.M. Schust. ex Stotler et Stotl.-Crand.

Family Antheliaceae R.M. Schust.

Genera *Anthelia* (Dumort.) Dumort.

112. *Anthelia julacea* (L.) Dumort. (2, 9, 10, 17)

113. *Anthelia juratzkana* (Limpr.) Trevis. (2, 9, 10, 17)

Suborder Jungermanniineae R.M. Schust. ex Stotler et Stotl.-Crand.

¹²**Family Lophoziaceae** Cavers

Genera *Anastrepta* (Lindb.) Schiffn.

114. *Anastrepta orcadensis* (Hook.) Schiffn. (2, 9, 10, 17)

Genera *Anastrophyllum* (Spruce) Steph.

115. *Anastrophyllum hellerianum* (Nees ex Lindenb.) R.M. Schust. (2, 9, 10, 17)

116. *Anastrophyllum michauxii* (F. Weber) H. Buch (2, 9, 10, 17)

117. *Anastrophyllum minutum* (Schreb.) R.M. Schust. (2, 9, 10, 17)

118. *Anastrophyllum saxicola* (Schreb.) R.M. Schust. (2, 9, 10, 17)

Genera *Barbilophozia* Loeske

119. *Barbilophozia attenuata* (Mart.) Loeske (2, 9, 10, 17)

120. *Barbilophozia barbata* (Schmidel ex Schreb.) Loeske (2, 9, 10, 17)

121. *Barbilophozia floerkei* (F. Weber et D. Mohr) Loeske (2, 9, 10, 17)

122. *Barbilophozia hatcheri* (A. Evans) Loeske (2, 9, 10, 17)

123. *Barbilophozia kunzeana* (Huebener) Müll. Frib. (2, 9, 10, 17)

124. *Barbilophozia lycopodioides* (Wallr.) Loeske (2, 9, 10, 17)

125. *Barbilophozia quadriloba* (Lindb.) Loeske (2, 9, 10, 17)

Genera *Gymnocolea* (Dumort.) Dumort.

126. *Gymnocolea inflata* (Huds.) Dumort. subsp. *inflata* (2, 9, 10, 17)

127. *Gymnocolea inflata* (Huds.) Dumort. subsp. *acutiloba* (Schiffn.) R.M. Schust. et Damsh. ex Söderström et Váňa (2, 9, 10, 17)

Genera *Jamesoniella* (Spruce) F. Lees

128. *Jamesoniella autumnalis* (DC.) Steph. (2, 9, 10, 17)

¹³**Genera** *Leiocolea* (Müll. Frib.) H. Buch

129. *Leiocolea badensis* (Gottsche) Jörg. (2, 9, 10, 17)

130. *Leiocolea bantriensis* (Hook.) Jörg. (2, 9, 10, 17)

131. *Leiocolea collaris* (Nees) Schljakov (9, 10, 17)

132. *Leiocolea gillmanii* (Austin) A. Evans (2, 9, 10, 17)

133. *Leiocolea heterocolpos* (Thed. ex Hartm.) H. Buch (2, 9, 10, 17)

¹⁰*Cephaloziella massalongi* (Spruce) Müll. Frib was reported by Jakab G. from Harghita Mountains (8);

¹¹*Cephaloziella spinigera* (Lindb.) Warnst. was reported by Jakab G. from Săpânciora (7).

¹²Crandall-Stotler B. & Stotler R.E., in Shaw & Goffinet 2000, include Lophoziaceae Family to Jungermanniaceae Family (1).

¹³We treat *Leiocolea* separate genera from *Lophozia* genera (1, 10, 17).

134. *Leiocolea turbinata* (Raddi) H. Buch (2, 9, 10, 17)

Genera *Lophozia* (Dumort.) Dumort.

135. *Lophozia ascendens* (Warnst.) R.M. Schust. (9, 10, 17) **R**

136. *Lophozia bicrenata* (Schmidel ex Hoffm.) Dumort. (2, 9, 17)

137. *Lophozia excisa* (Dicks.) Dumort. (2, 9, 10, 17)

138. *Lophozia incisa* (Schrad.) Dumort. (2, 9, 10, 17)

139. *Lophozia longidens* (Lindb.) Macoun (2, 9, 10, 17)

140. *Lophozia longiflora* (Nees) Schiffn. (2, 9, 10, 17)

141. *Lophozia obtusa* (Lindb.) A. Evans (2, 9, 10, 17)

142. ¹⁴**Lophozia opacifolia* Culm. ex Meyl. (21)

143. *Lophozia sudetica* (Nees ex Huebener) Grolle (2, 9, 10, 17)

144. *Lophozia ventricosa* (Dicks.) Dumort. (2, 9, 10, 17)

145. *Lophozia wenzelii* (Nees) Steph. (2, 9, 10, 17)

Genera *Tritomaria* Schiffn. ex. Loeske

146. *Tritomaria exsecta* (Schmidel) Loeske (2, 9, 10, 17)

147. *Tritomaria exsectiformis* (Breidl.) Loeske (2, 9, 10, 17)

148. *Tritomaria polita* (Nees) Jörg. (2, 9, 10, 17)

149. *Tritomaria quinqueidentata* (Huds.) H. Buch. (2, 9, 10, 17)

150. *Tritomaria scitula* (Taylor) Jörg. (2, 9, 10, 17)

Family Jungermanniaceae Rchb.

Genera *Jungermannia* L.

151. *Jungermannia atrovirens* Dumort. (2, 9, 10, 17)

152. *Jungermannia borealis* Damsh. et Váňa (2, 9, 10, 17)

153. *Jungermannia caespiticia* Lindenb. (2, 9, 10, 17)

154. *Jungermannia confertissima* Nees (2, 9, 10, 17)

155. *Jungermannia exsertifolia* Steph. subsp. *cordifolia* (Dumort.) Váňa (2, 9, 10, 17)

156. *Jungermannia gracillima* Sm. (2, 9, 10, 17)

157. *Jungermannia hyalina* Lyell (2, 9, 10, 17)

158. *Jungermannia leiantha* Grolle (2, 9, 10, 17)

159. *Jungermannia obovata* Nees (2, 9, 10, 17)

160. *Jungermannia polaris* Lindb. (2, 9, 10, 17)

161. *Jungermannia pumila* With. (2, 9, 10, 17)

162. *Jungermannia sphaerocarpa* Hook. (2, 9, 10, 17)

163. *Jungermannia subelliptica* (Lindb. ex Kaal.) Levier (2, 9, 10, 17)

164. ¹⁵*Jungermannia subulata* A. Evans (2, 6, 10, 17) **R**

Genera *Mylia* Gray

165. *Mylia anomala* (Hook.) Gray (2, 9, 10, 17)

¹⁴*Lophozia opacifolia* Culm. ex Meyl. was recent reported from Romania, Bucegi Mountains, Hornul Mare, Braşov County, leg. & det. Ştefănuţ S., conf. T.L. Blockeel [BUCA B945] (21);

¹⁵*Jungermannia subulata* A. Evans reported from Romania, Harghita County, Vlăhiţa (Olohfalu) [W] and Lueta Valley [W] (6).

166. *Mylia taylorii* (Hook.) Gray (2, 9, 10, 17)

Genera *Nardia* Gray

167. ¹⁶*Nardia breidleri* (Limpr.) Lindb. (2, 3, 10)

168. *Nardia geoscyphus* (De Not.) Lindb. (2, 9, 10, 17)

169. *Nardia insecta* Lindb. (2, 10, 17)

170. *Nardia scalaris* Gray (2, 9, 10, 17)

Family Gymnomitriaceae H. Klinggr.

Genera *Gymnomitrium* Corda

171. *Gymnomitrium concinatum* (Lightf.) Lindb. (2, 9, 10, 17)

172. *Gymnomitrium coralloides* Nees (2, 9, 10, 17)

Genera *Marsupella* Dumort.

173. ^{17*}*Marsupella commutata* (Limpr.) Bernet (23)

174. *Marsupella boeckii* (Austin) Kaal. (2, 9, 10, 17)

175. *Marsupella brevissima* (Dumort.) Grolle (2, 9, 10, 17)

176. *Marsupella emarginata* (Ehrh.) Dumort. subsp. *emarginata* (2, 9, 10, 17)

177. *Marsupella emarginata* (Ehrh.) Dumort. subsp. *aquatica* (Lindenb.) Meyl. (2, 10, 17)

178. *Marsupella funckii* (F. Weber et D. Mohr) Dumort. (2, 9, 10, 17)

179. *Marsupella ramosa* Müll. Frib. (9, 10, 17: †)

180. *Marsupella sphacelata* (Gieseke et Lindenb.) Dumort. (2, 9, 10, 17)

181. *Marsupella sprucei* (Limpr.) Bernet. (9, 10, 17)

Family Scapaniaceae Mig.

Genera *Diplophyllum* (Dumort.) Dumort.

182. *Diplophyllum albicans* (L.) Dumort. (2, 9, 10, 17)

183. *Diplophyllum obtusifolium* (Hook.) Dumort. (2, 9, 10, 17)

184. *Diplophyllum taxifolium* (Wahlenb.) Dumort. (2, 9, 10, 17)

Genera *Scapania* (Dumort.) Dumort.

185. *Scapania aequiloba* (Schwägr.) Dumort. (2, 9, 10, 17)

186. *Scapania apiculata* Spruce (9, 10, 17)

187. *Scapania aspera* Bernet et M. Bernet (9, 10, 17)

188. ¹⁸*Scapania brevicaulis* Taylor (6, 18) **K**

189. *Scapania calcicola* (Arnell et J. Perss.) Ingham (9, 10, 17)

190. *Scapania curta* (Mart.) Dumort. (2, 9, 10, 17)

191. *Scapania cuspiduligera* (Nees) Müll. Frib. (2, 9, 17)

192. ¹⁹*Scapania glaucocephala* (Taylor) Austin (2, 3, 9, 10)

193. *Scapania gracilis* Lindb. (9, 10, 17)

194. *Scapania helvetica* Gottsche (9, 10, 17)

¹⁶*Nardia breidleri* (Limpr.) Lindb. was reported from Romania (3), but later reject in earlier source (17).

¹⁷ *Marsupella commutata* (Limpr.) Bernet was reported from Urlea Lake, Făgăraș Mountains (23).

¹⁸*Scapania brevicaulis* Taylor (published by Ștefureac T. sub *Scapania degenii* Schiffn. ex Müll. Frib.) (24).

¹⁹The sample of *Scapania glaucocephala* (Taylor) Austin was checked by Düll R. (3).

195. *Scapania irrigua* (Nees) Nees (2, 9, 10, 17)
 196. *Scapania mucronata* H. Buch (9, 10, 17)
 197. *Scapania nemorea* (L.) Grolle (2, 9, 10, 17)
 198. *Scapania paludicola* Loeske et Müll. Frib. (9, 10, 17)
 199. *Scapania paludosa* (Müll. Frib.) Müll. Frib. (9, 10, 17)
 200. *Scapania scandica* (Arnell et H. Buch) Macvicar (9, 10, 17)
 201. *Scapania subalpina* (Nees ex Lindenb.) Dumort. (2, 9, 10, 17)
 202. *Scapania uliginosa* (Sw. ex Lindenb.) Dumort. (2, 9, 17)
 203. *Scapania umbrosa* (Schrad.) Dumort. (2, 9, 10, 17)
 204. *Scapania undulata* (L.) Dumort. (2, 9, 10, 17)
 205. *Scapania verrucosa* Heeg (9, 10, 17) **R**

Order Porellales (R.M. Schust.) Schljakov emend. Stotler et Stotl.-Crand.

Suborder Porellineae R.M. Schust.

Family Porellaceae Cavers

Genera *Porella* L.

206. *Porella arboris-vitae* (With.) Grolle (2, 9, 10, 17)
 207. *Porella baueri* (Schiffn.) C.E.O. Jensen (9, 10, 17)
 208. *Porella cordaeana* (Huebener) Moore (2, 9, 10, 17)
 209. *Porella platyphylla* (L.) Pfeiff. (2, 9, 10, 17)

Suborder Jubulineae (Spruce) Müll. Frib.

²⁰**Family** Frullaniaceae Lorch (5)

Genera *Frullania* Raddi

210. *Frullania dilatata* (L.) Dumort. (2, 9, 10, 17)
 211. *Frullania fragilifolia* (Taylor) Gottsche et al. (2, 9, 10, 17: †)
 212. *Frullania jackii* Gottsche (2, 9, 10, 17)
 213. ²¹**Frullania parvistipula* Steph. **E** (22)
 214. *Frullania tamarisci* (L.) Dumort. (9, 10, 17)

Family Lejeuneaceae Casares-Gil

Genera *Cololejeunea* (Spruce) Schiffn.

215. *Cololejeunea calcarea* (Lib.) Schiffn. (2, 9, 10, 17)
 216. *Cololejeunea rossettiana* (C. Massal.) Schiffn. (2, 9, 10, 17)

Genera *Lejeunea* Lib.

217. *Lejeunea cavifolia* (Ehrh.) Lindb. (2, 9, 10, 17)

Order Radulales (R.M. Schust.) Stotler et Stotl.-Crand.

Family Radulaceae (Dumort.) Müll. Frib.

Genera *Radula* Dumort.

218. *Radula complanata* (L.) Dumort. (2, 9, 10, 17)
 219. *Radula lindenbergiana* Gottsche et C. Hartm. (9, 10, 17)

²⁰In Crandall-Stotler & Stotler 2000 (1) the *Frullania* species are under Jubulaceae family.

²¹*Frullania parvistipula* Steph. was recent reported from Romania, the Great Gorges of Dâmbovița river, near Rucăr, Argeș county, leg. & det. Ștefănuț S., conf. R. Schumacker [BUCA B943 and B944] (22);

TAXONS REJECTED FROM THE HORNWORTS AND LIVERWORTS LIST OF ROMANIA

1. *Calypogeia arguta* Nees et Mont. was reported from Romania but unconfirmed (2).
2. *Gymnomitrium crenulatum* Gottsche ex Carrington was reported from Romania but unconfirmed (2).
3. *Jungermannia jenseniana* Grolle was reported from Romania but later reject (2, 9,10)
4. *Fossombronina foveolata* Lindb. was misincluded in Dihoru's list (2);
5. *Lophozia elongata* Steph. (*Lophozia excisa* (Dicks.) Dumort. var. *cylindracea* (Dumort.) Müll. Frib. is not synonym to *Lophozia elongata* Steph.) (2, 10).
6. *Lophozia guttulata* (Lindb. et Arnell) Grolle (is synonym to *Lophozia longiflora* (Nees) Schihhn.) (2, 9, 10, 17).
7. *Marchantia paleacea* Bertol., was reported from Romania but later reject in earlier source (13).
8. *Porella platyphylloidea* (Schwein.) Lindb. (is synonym to *Porella platyphylla* (L.) Pfeiff.) (2, 9, 10, 17).
9. *Riccia pseudopapillosa* Levier ex Steph. (is synonym to *Riccia papillosa* Moris) (10).
10. *Scapania compacta* (A. Roth) Dumort. was reported from Romania but later reject in earlier source (2, 13).
11. *Scapania crassiretis* Bryhn was reported from Romania but later reject (13).
12. *Scapania praetervisa* Meyl. was reported from Romania (7), but probably it was misidentified.

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