

TAXONOMICAL NOTES ON MOLLISIACEOUS FUNGI—VI

The genus *Pyrenopeziza* Fuck.

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A historical review of the genus *Pyrenopeziza* Fuck. is given. It appears that *Pyrenopeziza* takes precedence over *Mollisia* (Fr.) Karst. The diagnosis of the genus is emended. A subdivision based on differences of the receptacle is attempted, and eight new sections and two subsections are proposed.

INTRODUCTION.—In the course of the study of the mollisiaceous fungi it soon appeared that asci and ascospores are of little use for the identification of the species. Measuring of the spores is helpful only in a limited number of long-spored species. The receptacle, however, shows characteristic features which may be of taxonomic value, but the variation of its elements should be interpreted very carefully, since young and old receptacles may be totally different within the same species. In *Pyrenopeziza rubi* (Fr.) Rehm for instance, when growing on its natural substratum of raspberry stems, young excipular cells may be seen to range from 4–8 μ in diameter, whereas fully developed excipular cells measure 8–15 μ (Gremmen, 1954). In *Pyrenopeziza artemisiae* (Lasch) Rehm the variability of the excipular cells may even be studied in herbarium material (Gremmen, 1955). It should also be born in mind that the excipular cells of apothecia grown in culture may differ from those of apothecia found in nature. Apothecia of *Pyrenopeziza plantaginis* Fuck. grown in vitro have excipular cells larger than those of apothecia developed on their natural medium. Similarly, ascospores produced in vitro are longer (Gremmen, 1952). However, in spite of certain limitations, the receptacle will be used largely as a basis for the following division of the genus *Pyrenopeziza*.

For the study of the present genus to be successful, it is first of all necessary to investigate such species as are known to form abundant apothecia in nature, since that alleviates the comparative study of the various developmental stages of the exciple. Species of which few apothecia can be found, should, for the time being, be avoided. Such species which Nannfeldt (1932) called "verirrt" in general defy any attempt at identification.

The following abbreviations denote institutions and private collections where material mentioned in this paper is located. BM: British Museum, Natural History, London; C: Botanical Museum, Copenhagen; G: Conservatoire et Jardin Botaniques, Genève; Grd: herbarium W. D. Graddon, Congleton; Grm: author's herbarium; H: Botanical Museum, Helsinki; K: The Herbarium, Royal Botanic Gardens, Kew; L: Rijks-herbarium, Leiden; PC: Muséum National d'Histoire Naturelle, Laboratoire de Cryptogamie, Paris; PR: Botanical Department of the National Museum, Prague; S: Naturhistoriska Riksmuseum, Stockholm; UPS: Universitetets Institution för Systematisk Botanik, Uppsala, and ZT: Institut für Spezielle Botanik der Eidgenössischen Technischen Hochschule, Zürich.

HISTORICAL REVIEW.—*Pyrenopeziza* was first used by Fuckel (1869:293), whereas the name *Mollisia* originated from Elias Fries (1822:116), who by it

indicated a tribus of his genus *Peziza*. This tribus was raised to generic rank by P. A. Karsten (1871: 15), and two sections were distinguished, viz. "Sect. I. Apothecia subiculo nullo vel minus distincto insidentia" and "Sect. II. Apothecia subiculo distincto subtomentoso insidentia *Tapesia* Fr. p.gr."

Phillips (1887) regarded *Mollisia* sensu Fr. as a good genus, dividing it in the subgenera *Niptera* Fuck., *Pyrenopeziza* Fuck., *Dilutella* Phill., *Mollisiella* Phill., *Hysteropeziza* Rabh., *Pseudopeziza* Fuck., and *Peristomialis* (without author's name). In part this scheme is based on the apothecial structure, e.g. *Niptera* being characterized by "texture rather firm; cups plane" and *Pyrenopeziza* by "texture soft; cups globose (mostly black)," but on the whole the genus is very heterogeneous.

Rehm (1896) recognized in his Mollisieae the group Eumollisieae with "Apothecien von Anfang an sitzend" and the Pyrenopezizeae characterized by "Apothecien zuerst in die oberen Zellschichten eingesenkt, durch dieselben hervorbrechend und dann sitzend." The Eumollisieae are split up into (a) genera without a subiculum, comprising *Mollisia* Fr., *Niptera* Fr., *Belonidium* Mont. & Dur., and *Belonopsis* Sacc., and (b) genera with a subiculum such as *Tapesia* Pers. and *Trichobelonium* Sacc. The Pyrenopezizeae comprise the Pseudopezizeae with the genera *Pseudopeziza* Fuck., and *Fabraea* Sacc., and the Eupyrenopezizeae with *Pyrenopeziza* Fuck., *Pirottaea* Sacc. & Speg., *Beloniella* Sacc., and *Velutaria* Fuck.

Boudier (1907) mentioned in his family Mollisiacées the following genera: *Pyrenopeziza* Fuck., *Ephelina* Sacc., *Pirottaea* Sacc., *Coronellaria* Karst., *Mollisia* Fr., *Tapesia* Pers., *Niptera* Fr., *Mollisiella* Boud., and *Spilopodia* Boud. He characterized *Mollisia* as follows: "L'aspect général aplati, plus étalé, des réceptacles qui sont toujours sessiles, ..." and *Pyrenopeziza*: "Les réceptacles sont généralement noirs extérieurement avec la marge plus blanche." According to Boudier the paraphyses in *Mollisia* are filled with an oily protoplasm, lacking in *Pyrenopeziza*.

In 1912 Rehm revised the Pyrenopezizeae and the genus *Pyrenopeziza* was again discussed in detail.

Nannfeldt (1932) recognized two subfamilies in his Mollisioideae, viz. the Mollisieae and the Pyrenopezizeae. The first category dealt with the species having the "Apothecien ganz oberflächlich oder nur mit zapfen-förmiger Basis im Substrat eingesenkt," those of the second group having the "Apothecien im Substrat eingesenkt, hervorbrechend." In the former are found the genera *Haglundia* Nannf., *Belonium* Sacc., *Coronellaria* Karst., *Tapesia* Fuck., *Trichobelonium* Rehm, *Mollisia* (Fr.) Karst., and *Belonopsis* Rehm; in the latter *Pirottaea* Fuck. and *Hysteropezizella* v. Höhn.

The present author already demonstrated that it is hardly possible to delimit the genus *Pyrenopeziza* Fuck. from *Mollisia* (Fr.) Karst. merely on the basis of its erumpent behaviour during development. Nannfeldt occasionally arrived at the same conclusion (1932: 123, 156), but probably maintained the separation for practical purposes. Gremmen (1954) united both genera, assuming *Mollisia* Fr. to be the correct name. It appears, however, that *Pyrenopeziza* Fuck. was published two years prior to *Mollisia* (Fr.) Karst., so the former takes precedence. Some corrections and additions to the diagnosis previously published appear necessary.

PYRENOPEZIZA Fuck. *em.* Gremmen

Pyrenopeziza Fuck., Symb. myc. 293. 1869.

Peziza ser. III *Phialea* Trib. XI *Mollisia* Fr., Syst. myc. 2: 116. 1822. — *Mollisia* (Fr.) Karst., Myc. fenn. 1: 15. 1871. — *Mollisia* Fr. *sensu* Gremmen in *Fungus* 24:2. 1954.

Apothecia scattered or gregarious, small, ceraceous, sessile, shortly stipitate or broadly based, erumpent or superficial from the beginning, cupuliform to disciform. Receptacle even, verrucose, fimbriate or hairy. Ectal excipulum consisting of textura globulosa, i.e. of roundish, oblong or polyhedral cells which may be variously coloured or colourless; marginally with or without elongate or club-shaped, coloured or colourless cells. Hymenium variously coloured. Hypothecium colourless, undefined. Asci minute, clavate or cylindrical. Ascospores 4 or 8 per ascus, 1-celled, or 2- or 4-septate, bacilliform, cylindrical, ovoid, comma-shaped or acicular. Paraphyses filiform or lanceolate, colourless. Type species: *Peziza chailletii* Pers. (vide Nannfeldt, 1932: 137).

Already Nannfeldt distinguished certain groups in the genus *Pyrenopeziza*, one of which is "... u.a. charakterisiert durch verhältnismässig grosse, mehr oder weniger niedergedrückt ellipsoidische Apothecien, ..." A number of species were considered to belong to this group. Another group "... bildet eine Anzahl von Arten, die sämtlich auf vorjährigen Stengeln wachsen und deren Apothecien mit breiter Basis ihren Holzzylindern aufsitzen."

As appears from the following it is possible to distinguish eight sections which are mainly based on differences of the colour and structure of the receptacle.

KEY TO THE SECTIONS

- 1 a. Paraphyses filiform
 - 2 a. Receptacle even, glabrous
 - 3 a. Receptacle dark brown or red-brown
 - 4 a. Receptacle sessile on a hypostroma . . . Sectio 2. *Hypostromatina*
 - 4 b. Receptacle without a hypostroma . . . Sectio 3. *Astromatina*
 - 3 b. Receptacle differently coloured
 - 5 a. Receptacle olivaceous or greenish . . . Sectio 4. *Elaiodiscina*
brown
 - 5 b. Receptacle melleous or light brown . . . Sectio 5. *Melipeziza*
 - 2 b. Receptacle verrucose, fimbriate or hairy
 - 6 a. Receptacle verrucose
 - 7 a. Ascospores bacilliform Sectio 1. *Pyrenopeziza*, subsectio a.
 - 7 b. Ascospores ovoid Sectio 1. *Pyrenopeziza*, subsectio b.
 - 6 b. Receptacle with appendages
 - 8 a. Receptacle fimbriate Sectio 6. *Fimbriaria*
 - 8 b. Receptacle hairy Sectio 7. *Trichantina*
- 1 b. Paraphyses lanceolate Sectio 8. *Hemipirottaea*

Sectio I. PYRENOPEZIZA

Apothecia erumpentia, sessilia vel basi stipite fusca. Receptaculum verrucosum. In caulibus anni praeteriti emortuis. Sectionis species typica: *P. chailletii* (Pers.) Fuck.

Apothecia erumpent, with or without dark brown base submerged in host. Receptacle verrucose, owing to presence of groups of protruding cells. Inhabiting last year's stems. Type species: *P. chailletii* (Pers.) Fuck.

The section is divided in two subsections.

Subsectio a. **Bacillares** Gremmen, *subsect. nov.*

Ascosporae bacilliformes, unicellulares vel pluricellulares.

Ascospores bacilliform, 1- or more-celled.

1. PYRENOPEZIZA CHAILLETII (Pers.) Fuck., Symb. myc. 294. 1869.
Peziza chailletii Pers., Myc. eur. 1: 288. 1822 (basionym).
 Material: *Pyrenopeziza chailletii* Fuck. (G).
 Host: *Chaerophyllum aureum*.
2. PYRENOPEZIZA POTENTILLAE (Rostr.) Nannf. in Svensk bot. Tidskr. 22: 136. 1928.
Trochila potentillae Rostr. in Medd. om Grönl. 3: 540. 1888 (basionym).
 Material: *Trochila potentillae* Rostr., type (C).
 Host: *Potentilla nivea*.
3. PYRENOPEZIZA THALICTRI (Peck) Sacc., Syll. Disc. 360. 1889.
Peziza thalictri Peck in Ann. Rep. N.Y. State Mus. 29: 55. 1878 (basionym). — *Pyrenopeziza osiliensis* Vgr. in Bot. Not. 40. 1900. — *Beloniella osiliensis* (Vgr.) Rehm in Ber. bayr. bot. Ges. 13: 181. 1912.
 Material: no. 517, *Pyrenopeziza thalictri* (Grd).
 Host: *Thalictrum* spec.
4. PYRENOPEZIZA PYRENOCARPOIDES Rehm in Ber. bayr. bot. Ges. 13: 175. 1912.
Mollisia pyrenocarpoides (Rehm) Gremmen in Fungus 25: 9. 1955.
 Material: *Pyrenopeziza pyrenocarpoides* Rehm (S).
 Host: *Cirsium* spec.
5. **Pyrenopeziza buniadis** (Nannf.) ex Gremmen, *comb. nov.*
Mollisia buniadis Nannf. spec. nov. inedit. (basionym).
 Material: Flora suec. 1913, *Mollisia buniadis* Nannf., Uppsala, Slottsbacken, II.6. 1925, leg. J. A. Nannfeldt, type (UPS).
 Host: *Bunias orientalis*.
 Apothecia 400–500 μ diam., basi 80 μ lata. Receptaculum verrucosum, melleum, e textura globulosa. Cellulae excipuli 7–10 μ diam. Margo cellulis minutis formata. Asci 38–50 \times 5.5 μ . Ascospores 9.5–10.5 \times 2 μ , unicellulares, incoloratae. Paraphyses filiformes, incoloratae, guttulateae.
 Apothecia 400–500 μ across, with 80 μ broad base. Receptacle consisting of textura globulosa, honey-brown, verrucose owing to presence of protruding cells. Excipular cells 7–10 μ in diameter, marginally with short cell-excrecences. Asci 38–50 \times 5.5 μ . Ascospores 9.5–10.5 \times 2 μ , colourless, 1-celled. Paraphyses colourless, filiform, filled with numerous, minute guttulae.
6. PYRENOPEZIZA LYCHNIDIS (Sacc.) Rehm in Krypt. Fl. 3: 1265. 1896.
Pyrenopeziza sphaerioides (Pers.) Fuck. f. *lychnidis* Sacc., Syll. Disc. 365. 1889.
 Material: Rabenh.-Pazschke, Fgi. eur. & extraeur. 4173, *Pyrenopeziza lychnidis* Sacc. (L).
 Host: *Lychnis* spec.
7. PYRENOPEZIZA LAVATERAE E. Müller in Sydowia 9: 239. 1955.
 Material: Fgi. Pakistan 4387, *Pyrenopeziza lavaterae* E. Müll., type (ZT).
 Host: *Lavatera* spec.

Subsectio b. **Ovoideae** Gremmen, *subsect. nov.*

Ascosporae ovoideae vel formam commatis aemulantes, unicellulares.

Ascospores ovoid or comma-shaped, 1-celled.

8. PYRENOPEZIZA NIGRELLA Fuck., Symb. myc. Nachtr. 3: 30. 1871.
Material: *Pyrenopeziza nigrella* Fuck. (G).
Host: *Succisa pratensis*.
9. PYRENOPEZIZA LYTHRI Fautr. in Rev. myc. 14: 3. 1892.
Material: Rabenh.-Pazschke, Fgi. eur. & extraeur. 4470, *Pyrenopeziza lycopodis* f. *lythri* Rehm (L).
Host: *Lythrum salicaria*.
10. PYRENOPEZIZA LINI (Rostr.) Petr. & Syd. in Ann. myc. 22: 356. 1924.
Laestadia lini Rostr. in Bot. Tidsskr. 28: 217. 1907 (basionym).
Material: *Pyrenopeziza lini* (Rostr.) Petr. & Syd. (ZT).
Host: *Linum viscosum*.
11. PYRENOPEZIZA BUBÁKII Klika in Ann. myc. 24: 136. 1926.
Material: Krypt. exs. 955, *Mollisia atrocineria* sensu Nannfeldt (L).
Host: *Dipsacus* spec.

Sectio 2. **Hypostromatina** Gremmen, *sect. nov.*

Apothecia ex hypostromate fusco distincto exeuntia, ceterum iis sectionis *Astromatinae* simillima. In ramulis emortuis lignoque putrido. Sectionis species typica: *P. caespiticia* (Karst.) Gremmen.

Apothecia formed on well-developed dark brown hypostroma, in other respects resembling those of section *Astromatina*. Inhabiting dead branches or decayed wood. Type species: *P. caespiticia* (Karst.) Gremmen.

12. **Pyrenopeziza caespiticia** (Karst.) Gremmen, *comb. nov.*
Peziza caespiticia Karst., Mon. Pez. 159. 1869 (basionym). — *Mollisia caespiticia* (Karst.) Karst., Myc. fenn. 1: 188. 1871.
Material: *Peziza caespiticia* Karst., type (H).
Host: *Sambucus*.
13. **Pyrenopeziza caesia** (Fuck.) Gremmen, *comb. nov.*
Niptera caesia Fuck. in Jahrb. Nass. Ver. Nat. 25/26: 335. 1871 (basionym). — *Mollisia caesia* (Fuck.) Sacc., Syll. Disc. 340. 1889.
Material: *Niptera caesia* Fuck., type (G).
Host: *Fagus*, *Salix*, *Tilia*.

Sectio 3. **Astromatina** Gremmen, *sect. nov.*

Receptaculum fuscum vel ferrugineum, cellulis globosis vel piriformibus vel papillatis. Sectioni *Hypostromatinae* simillima, sed hypostromate nullo. In caulibus anni praeteriti ramulisque emortuis. Sectionis species typica: *P. revincta* (Karst.) Gremmen.

Receptacle dark brown or red-brown, excipular cells globular, pear-shaped or papillate. Resembling section *Hypostromatina*, but hypostroma lacking. Inhabiting last year's stems, and decaying branches. Type species: *P. revincta* (Karst.) Gremmen.

14. **Pyrenopeziza revincta** (Karst.) Gremmen, *comb. nov.*
Peziza revincta Karst., Mon. Pez. 157. 1869 (basionym). — *Mollisia revincta* (Karst.) Rehm in Krypt. Fl. **3**: 1264. 1896.
 Material: *Peziza revincta* Karst., type (H).
 Host: *Rubus*, *Ulmaria*, *Epilobium*, and various Compositae.
15. **Pyrenopeziza benesuada** (Tul.) Gremmen, *comb. nov.*
Peziza benesuada Tul. in Bot. Zeit. **11**: 55. 1853 (basionym). — *Mollisia benesuada* (Tul.) Phill., Man. Brit. Disc. 174. 1887.
 Material: Flora suec. 9452, *Mollisia* cf. *benesuada* (UPS).
 Host: *Alnus* spec.
16. **Pyrenopeziza adenostylidis** (Rehm) Gremmen, *comb. nov.*
Mollisia adenostylidis Rehm in Krypt. Fl. **3**: 526, 1896 (basionym).
 Material: Rehm, Ascom. 49, *Mollisia adenostylidis* Rehm (S).
 Host: *Adenostyles* spec.
17. **Pyrenopeziza arundinacea** (DC.) Gremmen, *comb. nov.*
Xyloma arundinacea DC., Fl. France **6**: 162. 1815 (basionym). — *Mollisia arundinacea* (DC.) Phill., Man. Brit. Disc. 177. 1887.
 Material: Rabenh. 423, *Peziza cinerea* Batsch (L).
 Host: *Phragmites communis*.
- Sectio 4. **Elaiodiscina** Gremmen, *sect. nov.*
- Receptaculum olivaceum vel virido-fuscum. In caulibus anni praeteriti emortuis. Sectionis species typica: *P. carduorum* Rehm.
 Receptacle olivaceous or brownish green. Inhabiting last year's stems. Type species: *P. carduorum* Rehm.
18. **PYRENOPEZIZA CARDUORUM** Rehm in Winter, Diag. u. Notiz. zu Rehm's Ascom. 562. 1872.
Niptera carduorum (Rehm) Winter in Krypt. Fl. **3**: 555. 1896. — *Ephelina carduorum* (Rehm) Rehm in Ber. bayr. bot. Ges. **13**: 183. 1912. — *Mollisia carduorum* (Rehm) Gremmen in Fungus **25**: 5. 1955.
 Material: Rehm, Ascom. 68, *Pyrenopeziza carduorum* Rehm, type (S).
 Host: *Cirsium* spec.
19. **Pyrenopeziza pastinacae** (Nannf.) Gremmen, *comb. nov.*
Mollisia pastinacae Nannf. in Nova Acta Reg. Soc. Sci. Ups. ser. 4. **8** (2): 127. 1932 (basionym).
 Material: Flora suec. 1906, *Mollisia pastinacae* Nannf., isotype (UPS).
 Host: *Pastinaca*, *Anthriscus*, *Bidens*, *Cirsium*, *Heracleum*, *Angelica*.
20. **PYRENOPEZIZA URTICICOLA** (Phill.) Boud., Disc. d'Eur. 135. 1907.
Mollisia urticicola Phill., Man. Brit. Disc. 177. 1887 (basionym).
 Material: no. 1109, *Mollisia urticicola* Phill., teste J. A. Nannfeldt (Grd).
 Host: *Urtica dioica*.
21. **Pyrenopeziza depressuloides** (Gremmen) Gremmen, *comb. nov.*
Mollisia depressuloides Gremmen in Fungus **25**: 9. 1955 (basionym).

Material: no. 807, *Mollisia depressuloides* Gremmen, type (Grm).
Host: *Arctium* spec.

22. PYRENOPEZIZA DIGITALINA (Phill.) Sacc., Syll. Disc. 358. 1889.

Mollisia digitalina Phill., Man. Brit. Disc. 190. 1887 (basionym).

Material: no. 1434, *Mollisia digitalina* Phill. (Grm).

Host: *Digitalis purpurea*.

Sectio 5. **Melipeziza** Gremmen, *sect. nov.*

Receptaculum cellulis melleis vel phaeis formatum, margine cellulis elongatis, hyalinis vel subhyalinis. In caulibus anni praeteriti emortuis. Sectionis species typica: *P. leucostoma* (Karst.) Nannf.

Receptacle melleous or light brown, its margin with colourless or pale coloured elongate cell-protuberances. Inhabiting last year's stems. Type species: *P. leucostoma* (Karst.) Nannf.

23. PYRENOPEZIZA LEUCOSTOMA (Karst.) Nannf. in Nova Acta Reg. Soc. Sci. Ups. ser. 4. 8 (2): 153. 1932.

Trochila leucostoma Karst. in Not. Sällsk. Fauna Fl. fenn. 2: 245. 1870 (basionym). — *Mollisia leucostoma* (Karst.) Karst., Myc. fenn. 1: 203. 1871. — *Niptera leucostoma* (Karst.) Sacc., Syll. Disc. 483. 1889.

Material: *Niptera leucostoma* Karst., type (H).

Host: *Artemisia* spec.

24. PYRENOPEZIZA GALII-VERI (Karst.) Sacc., Syll. Disc. 356. 1889.

Mollisia galii-veri Karst., Myc. fenn. 1: 203. 1871 (basionym).

Material: Flora suec. 1988, *Pyrenopeziza galii-veri* (Karst.), (UPS).

Host: *Galium verum*.

25. PYRENOPEZIZA COMPRESSULA Rehm in Krypt. Fl. 3: 618. 1896.

Material: Rehm, Ascom. 69, *Pyrenopeziza compressula* Rehm f. 4 spored, type (S).

Host: *Galeopsis tetrahit*.

26. PYRENOPEZIZA CHAMAENERII Nannf. in Svensk bot. Tidskr. 22: 134. 1928.

Peziza ebuli Karst., Mon. Pez. 160. 1869. — *Mollisia chamaenerii* (Nannf.) Gremmen in Fungus 26: 33. 1956.

Material: *Peziza ebuli* Karst., type (H).

Host: *Epilobium* spec.

27. PYRENOPEZIZA ERYNGII Fuck., Symb. myc. 294. 1869.

Material: Rabenh., Fgi. eur. 1614, *Pyrenopeziza eryngii* Fuck. (L).

Host: *Eryngium campestre*.

28. PYRENOPEZIZA SOLIDAGINIS (Karst.) Schröt. in Cohn, Krypt. Fl. Schles. 3 (2): 114. 1893.

Mollisia solidaginis Karst., Rev. Mon. 173. 1885 (basionym). — *Peziza subatra* Cke. & Peck in 28th Ann. Rep. N.Y. State Mus. 66-67. 1876. — *Mollisia atrata* var. *megalospora* Ell. & Ev., North Am. Fgi. ser. 2, 2625, 1891.

Material: no. 1088, *Pyrenopeziza solidaginis* (Karst.) Schröt., neotype, (UPS).

Host: *Solidago virgaurea*.

29. **PYRENOPEZIZA RUBI** (Fr.) Rehm *in* Krypt. Fl. 3: 611. 1896.
Excipula rubi Fr., Syst. myc. 2: 190. 1822 (basionym). — *Mollisia rubi* (Fr.) Karst., Rev. Mon. 136. 1885.
 Material: Rabenh., Herb. myc. 2, 305, *Peziza phacidiodides* Fr. (L).
 Host: *Rubus* spec.
30. **PYRENOPEZIZA MILLEGRANA** Boud., Disc. d'Eur. 133. 1907.
Mollisia millegrana (Boud.) Nannf. *in* Nova Acta Reg. Soc. Sci. Ups. ser. 4. 8 (2): 127. 1932.
 Material: Flora suec. 4315, *Mollisia millegrana* (Boud.) Nannf. (UPS).
 Host: *Ulmaria*.
31. **PYRENOPEZIZA ARCTII** (Phill.) Nannf. *in* Nova Acta Reg. Soc. Sci. Ups. ser. 4. 8 (2): 142. 1932.
Peziza arctii Phill. *in* Proc. Bristol Nat. Soc. N.S. 4: 58. 1883 (basionym). — *Mollisia arctii* (Phill.) Phill., Man. Brit. Disc. 183. 1887. — *Belonium arctii* (Phill.) Sacc., Syll. Disc. 495. 1889. — *Belonidium arctii* (Phill.) Masec, Brit. Fung. Fl. 4: 225. 1895.
 Material: *Peziza arctii* Phill., type (BM).
 Host: *Arctium* spec.
32. **PYRENOPEZIZA EBULI** (Fr.) Sacc., Syll. Disc. 360. 1889.
Peziza atrata var. *ebuli* Fr., Syst. myc. 2: 148. 1822 (basionym). — *Mollisia ebuli* (Fr.) Karst., Myc. fenn. 1: 202. 1871.
 Material: Rehm, Ascom. 656-b, *Mollisia ebuli* (Fr.) Karst. (S).
 Host: *Sambucus ebulus*.
33. **PYRENOPEZIZA PLANTAGINIS** Fuck., Symb. myc. 294. 1870.
Mollisia plantaginis (Fuck.) Phill., Man. Brit. Disc. 183. 1887. — *Peziza atrata* var. *foliicola* Desm. *in* Ann. Sci. Nat. sér. 2, Bot. 368-369. 1843.
 Material: Desm. Crypt. Fr. Sér. 1, 1313, *Peziza atrata* var. *foliicola* Desm. (K).
 Host: *Plantago lanceolata*.
34. **Pyrenopeziza pulveracea** (Fuck.) Gremmen, *comb. nov.*
Peziza pulveracea Fuck., Symb. myc. 297. 1870 (basionym). — *Mollisia pulveracea* (Fuck.) Rehm *in* Krypt. Fl. 3: 532. 1896.
 Material: Fgi. rhen. 2191, *Peziza pulveracea* Fuck., type (G).
 Host: *Ulmaria*.
35. **Pyrenopeziza polygoni** (Lasch) Gremmen, *comb. nov.*
Peziza polygoni Lasch *in* Klotzsch, Herb. viv. myc., *in* Rabenh., Herb. myc. 1842 (basionym). — *Mollisia polygoni* (Lasch) Rehm *in* Krypt. Fl. 3: 527. 1896.
 Material: Rehm, Ascom. 70, *Niptera polygomi* Rehm (L).
 Host: *Polygonum amphibium*.
36. **PYRENOPEZIZA PETIOLARIS** (A. & S. ex Fr.) Nannf. *in* Nova Acta Reg. Soc. Sci. Ups. ser. 4. 8 (2): 158. 1932.
Hysterium petiolare A. & S., Consp. Fung. Nisk. 59. 1805; *ex* Fr., Syst. myc 2: 593. 1823 (basionym). — *Trochila petiolaris* (A. & S. ex Fr.) Rehm *in* Krypt. Fl. 3: 132. 1896. — *Mollisia petiolaris* (A. & S. ex Fr.) Gremmen *in* Fungus 24: 9. 1954.
 Material: no. 9700, *Mollisia petiolaris* (A. & S. ex Fr.) Gremmen (L).
 Host: *Acer* spec.

37. *Pyrenopeziza mollisioides* (Sacc. & Br.) Petr. in Ann. myc. **38**: 159. 1940.

Phacidium mollisioides Sacc. & Br. in Rev. myc. **7**: 210. 1885 (basionym).

Material: Sydow, Myc. germ. 3533, *Pyrenopeziza mollisioides* (Sacc. & Br.) Petr. (L).

Host: *Euphorbia palustris*.

38. *Pyrenopeziza stellata* (Le Gal) Gremmen, *comb. nov.*

Mollisia stellata Le Gal in Rev. de Myc. **4**: 60. 1939 (basionym).

Material: *Mollisia stellata* Le Gal, type (PC).

Host: *Dahlia* spec.

39. *Pyrenopeziza nannfeldtii* Petr. in Ann. myc. **38**: 368. 1940.

Mollisia nannfeldtii (Petr.) Gremmen in Ber. Schweiz. bot. Ges. **66**: 158. 1956.

Material: no. 1221, *Mollisia nannfeldtii* (Petr.) Gremmen (Grm).

Host: *Laserpitium*, *Siler*.

Sectio 6. *Fimbriaria* Gremmen, *sect. nov.*

Receptaculum cellulis lateralibus minutis, fimbriatis, incoloratis formatum. In caulibus anni praeteriti emortuis. Sectionis species typica: *P. artemisiae* (Lasch) Rehm.

Receptacle laterally provided with minute, fimbriate, colourless cell-excrecences. Inhabiting last year's stems. Type species: *P. artemisiae* (Lasch) Rehm.

40. *Pyrenopeziza artemisiae* (Lasch) Rehm in Krypt. Fl. **3**: 616. 1896.

Peziza artemisiae Lasch in Rabenh. Handb. **1**: 344. 1844 (basionym). — *Mollisia artemisiae* (Lasch) Gremmen in Fungus **25**: 2. 1955.

Material: *Peziza artemisiae* Lasch, type (L).

Host: *Artemisia* spec.

41. *Pyrenopeziza clavata* (Gremmen) Gremmen, *comb. nov.*

Mollisia clavata Gremmen in Fungus **24**: 5. 1954 (basionym).

Material: Sydow, Myc. germ. 3147, *Mollisia minutella* (Sacc.) Rehm, type (L).

Host: *Rubus*, *Epilobium*.

42. *Pyrenopeziza tormentillae* (Vel.) Gremmen, *comb. nov.*

Tapesia tormentillae Vel., Mon. Disc. 136. 1934 (basionym).

Material: Herb. Velenovský, 149476, *Tapesia tormentillae* Vel., type (PR).

Host: *Tormentilla* spec.

43. *Pyrenopeziza lycopincola* (Rehm) Gremmen, *comb. nov.*

Mollisia lycopincola Rehm in Hedwigia **27**: 166. 1888 (basionym).

Material: Rehm, Ascom. 910, *Mollisia lycopincola* Rehm, type (S).

Host: *Lycopus europaeus*.

Sectio 7. *Trichantina* Gremmen, *sect. nov.*

Receptaculum in margine et latere pilis septatis, fuscis instructum. In caulibus anni praeteriti emortuis. Sectionis species typica: *P. escharodes* (B. & Br.) Rehm.

Receptacle marginally as well as laterally provided with brown, septate hairs. Inhabiting last year's stems. Type species: *P. escharodes* (B. & Br.) Rehm.

This group forms a transition to the genus *Tapesia* Fuck.

44. **PYRENOPEZIZA ESCHARODES** (B. & Br.) Rehm in Krypt. Fl. 3: 612. 1896.

Peziza escharodes B. & Br. in Ann. Mag. nat. Hist. ser. 4. 7: 433. 1871 (basionym). — *Lachnella escharodes* (B. & Br.) Phill., Man. Brit. Disc. 262. 1887. — *Mollisia escharodes* (B. & Br.) Gremmen in Fungus 24: 5. 1954.

Material: *Peziza escharodes* B. & Br., type (BM).

Host: *Rubus* spec.

Sectio 8. **Hemipirottaea** Gremmen, *sect. nov.*

Apothecia paraphysibus lanceolatis instructa. In caulibus anni praeteriti emortuis. Sectionis species typica: *P. lanceolata* (Gremmen) Gremmen.

Apothecia with characteristic lanceolate paraphyses. Inhabiting last year's stems. Type species: *P. lanceolata* (Gremmen) Gremmen.

This section is intermediate between the section *Astromatina* and the genus *Pirottaea* Sacc.

45. **Pyrenopeziza lanceolata** (Gremmen) Gremmen, *comb. nov.*

Mollisia lanceolata Gremmen in Fungus 26: 35. 1956 (basionym).

Material: no. 690, *Mollisia lanceolata* Gremmen, type (Grm).

Host: *Ulmaria*.

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