The genus Fimetariella

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Abstract: The taxonomy and phylogenetic relationships of the fungal genus Fimetariella (Ascomycotina, Lasiosphaeriaceae) are discussed. A revised generic description and key are presented. Descriptions and illustrations are provided for all taxa. Fimetariella dunarum n.comb. and Fimetariella apotoma, Fimetariella brachycaulina, Fimetariella dolichopoda, Fimetariella macromischa, Fimetariella microsperma, and Fimetariella tetraspora n.spp. are proposed. A phialidic anamorph resembling Cladorrhinum is reported for E microsperma. The ascospores of the type species Fimetariella rabenhorstii are considered to possess two terminal germ pores, one large pore and one very small pore, along with several small, apparently nonfunctional pores. A key to the genera with these minor pores is included.

Key words: Fimetariella, Cladorrhinum, coprophilous, fungi, keys, taxonomy.

Introduction

In a recent paper (Krug and Scott 1994), we pointed out that Podospora Ces. and Sordaria Ces. & de Not. are quite heterogeneous genera. As various taxa were studied in detail, it became possible to segregate some of the discordant species into other genera. One of these genera was Bombardioidae Moreau in Lundq., which we recently revised (Krug and Scott 1994). Related to Bombardioidae is Fimetariella Lundq., which was erected by Lundqvist (1964) based on Sordaria rabenhorstii Niessl in Rabenh.

In establishing Fimetariella, Lundqvist (1964) utilized such criteria as ascospore orientation in the ascus, number of germ pores, variation in the number of pores, and differences in pore size. The ascospores were described as having one large pore and several smaller ones, with the spores frequently reversed as to position of the larger pore. As discussed by Krug (1989), Lundqvist (1972) modified the generic description and mentioned that the minor pores apparently were not of generic significance, although certainly they are characteristic.

In spite of the modifications to the original description by Lundqvist (1972), Fimetariella is a distinct genus as reterated by Krug (1989). In the present paper I describe a number of additional taxa that are congeneric with Fimetariella rabenhorstii but differ in a number of morphological features.

Morphology

After examining several portions of the type collection of S. rabenhorstii, I feel that the spores generally contain two terminal germ pores, with the apical one being rather small, and a number of smaller, apparently nonfunctional pores as described by Lundqvist (1964). These smaller pores were also observed in most of the other species of Fimetariella treated herein. Lundqvist (1964) emphasized the terminal position of these minor pores, although he did mention that in exceptional cases they may be positioned laterally. From my observations I believe that these pores are scattered and generally not positioned as described by Lundqvist (1964); however, this is true in some spores. These pores are also found in Bombardioidae in which they are scattered on the spore. In addition to Bombardioidae and Fimetariella, these smaller pores are also known in Periamphispora Krug (Krug 1989). In all three genera there is no evidence that these pores function in germination, although admittedly cultural data are only available for a couple of species, and even here germination experiments were not undertaken. Lundqvist (1972) also mentioned that these pores have no germinative function in Fimetariella.
In his original description and discussion, Lundqvist (1964) pointed out that the ascospores are frequently reversed as to the position of the large germ pore. He considered this phenomenon to be unique within the Ascomycetes. This spore reversal is now also known in both Bombardioidea and Periamphispora. In the additional species of Fimetariella being described, the larger pore is basal in most species, but spore reversal in the lower spores in the ascus was observed. As Lundqvist (1964) pointed out, the terms apical and basal are likely misapplications here as it is impossible to tell which is the normal and which is the reversed position. Still, this phenomenon of spore reversal is very characteristic of Fimetariella and related genera.

**Taxonomy**

**Fimetariella** Lundq., Bot. Not. 117: 239. 1964

Perithecia fimbriolate, scattered or clustered, immersed or erumpent, usually bare, subglobose to pyriform; neck fairly short, dark brown or black, bare, ostiolate; peridium pseudoparenchymatous, subcoriaceous or occasionally membranaceous, fairly opaque or occasionally semitransparent, very pale yellowish brown to dark brown, consisting of three layers of different types of cells. Asci unitunicate, nonamyloid, 4- or 8-spored, cylindrical, stipitate; apical ring indistinct, or distinct and definitely thickened, or occasionally lacking. Paraphyses abundant, filiform, hyaline, mixed with the asci. Ascospores uniseriate, one-celled, surrounded by a hyaline gelatinous sheath, ellipsoidial, rounded or somewhat attenuated at the apices, dark brown, containing two terminal germ pores with the one, typically the basal pore, frequently appearing somewhat larger, and several smaller apparently nonfunctional pores; frequently with reverse spore orientation. Anamorph phialidic, with phialides reduced to collarettes producing dry conidia.

**Key to the species**

1. Ascii 4-spored; apical ring usually thickened (except *F. rabenhorstii*) .......................................................... 2
2. Ascii 8-spored; apical ring rather indistinct or rarely lacking (except *F. brachycaulina*) .................................. 6
3. Ascospores relatively small, less than 20 μm long .......................................................... 2
4. Ascospores larger, usually over 20 μm long .......................................................... 3
5. Ascospores ellipsoidial, 14–17 × 8–9 μm .......................................................... 6
6. Ascospores ellipsoidial to subglobose, (11–)12–13(–14) × 8–9(–11) μm .......................................................... 6
7. Peridium semitransparent, appearing almost colourless, composed of thin-walled cells; ascal stipe 25–45 μm; ascospores (30–)32–36(–38) × 17–19(–20) μm .......................................................... 6
8. Peridium thick, composed of thick-walled cells; ascal stipe (40–)60–100 μm .......................................................... 5
9. Ascospores (30–)32–40(–42) × (17–)18–21(–22) μm .......................................................... 5
10. Ascospores (40–)42–48(–50) × (21–)23–26(–27) μm .......................................................... 5
11. Ascospores (23–)24–26(–27) × (14–)15–16(–17) μm; ascal stipe 5–10 μm .......................................................... 6
12. Ascospores 12–14 × 7–8.5(–9.5) μm; ascal stipe variable, 20–100 μm .......................................................... 6

**Fimetariella apotoma** Krug, sp. nov.


**Holotypus:** In Cervi canadensis fimo lectus est, in loco 55 mi meridionali a Bozeman, apud flumen Gallatin, in Gallatinensi comitatu Montanensium finium, in imperio U.S.A., 2 Sept. 1957, Cain, TRTC 42408. In Museo Regi Ontariois Cryptogamarum herbario.

Perithecia scattered, bare, embedded, subpyriform, 600–700 × 450–550 μm; neck short, stout, subcylindrical, somewhat truncate, bare, black, distinct, about 125–150 μm long, with dark brown, thick-walled, elongated cells measuring about 8–12 × 2.5–3 μm; ostiole small, rather indistinct; peridium dark orange-brown by reflected light, subcoriaceous, appearing in surface view of angular to interlocking, thick-walled, dark yellow-brown cells measuring 5–8 × 5–6 μm. Ascii 8-spored, cylindrical. 225–250 × 20–25 μm, narrowed and truncated at the apices, tapering into a fairly short stipe measuring 15–25 μm long; apical ring rather indistinct. Paraphyses very abundant, filiform, septate, hyaline, guttulate, longer than and mixed with the asci. Ascospores obliquely uniseriate, one-celled, surrounded by a hyaline gelatinous sheath reaching a width of about 7 μm, ellipsoidial, rounded to slightly narrowed
Towards the ends, \((29-)31-34(-36) \times (16-)17-19\ \mu m\), ranging from hyaline when young to yellow-brown, finally very dark brown and opaque at maturity, with each containing a distinct basal germ pore measuring about \(2-2.5\ \mu m\) in diameter and a slightly smaller apical pore measuring about \(1.5-2\ \mu m\) in diameter.

**ETYMOLOGY:** Greek *apotomos* (αποτομος) meaning cut off, referring to the truncated apex of the ascus.


This species is characterized by the 8-spored asci, relatively short ascal stipe, and size of the ascospores. The other species with 8-spored asci, *F. brachycaulina* and *F. micro-
Figs. 9–12. *Fimetariella dolichopoda* (TRTC 42238). Fig. 9. Ascus and ascospores. Scale bar = 38 μm. Fig. 10. Perithecium. Scale bar = 180 μm. Fig. 11. Peridium in surface view. Scale bar = 22 μm. Fig. 12. Ascospores showing terminal germ pores. Scale bar = 18 μm. Figs. 13–16. *Fimetariella dunarum* (Mouton 271). Fig. 13. Ascospores showing thickened wall and terminal germ pores. Scale bar = 15.5 μm. Fig. 14. Ascus and ascospores. Scale bar = 30 μm. Fig. 15. Perithecium. Scale bar = 170 μm. Fig. 16. Cross section of peridium. Scale bar = 21 μm.

*Fimetariella*, differ in possessing smaller ascospores. *Fimetariella dolichopoda* and *F. tetraspora* have spores similar in size, but the asci are 4-spored.

*Fimetariella brachycaulina* Krug & J.H. Mirza, sp. nov.  
Figs. 5–8, 35

Perithecia dispersa aut raro laxe aggregata, glabra, immersa, subpyriformia, 650–750 × 500–600 μm magna; peritheci collum breve, subcylindraceum, truncatus, glabrum, nigrum, distinctum, circa 150–175 μm longum; peridium pallide aurantiacibrunneum, subcoriaceum, 25–35 μm crassum, e stratis tribus compositum. Ascii octospori, cylindracei, 170–190 × 20–25 μm magni, in apice distincte attenuati et truncati, basin versus in stipitem 5–10 μm longum abruptissime contracti; annulum apicale distinctissimum, incrassatum. Paraphyses numerosae, filiformes, septatae, hyalinae. Ascospores primum oblique uniseriales, unicellulares, vagina hyalina gelatinosa 8 μm lata postremo circumdatae, ellipsoideae, apicibus...
by reflected light, subcoriaceous, 25-35 μm thick, appearing in surface view of angular, thick-walled, dark brown cells measuring 6-10-15 μm long; an inner layer about 4-6 layers, measuring 5-8 × 3-4(-5) μm. Ascii 8-spored, cylindrical, (210-)225-300 × 22-25 μm, narrowed and truncated at the apices, terminating very abruptly in a very short stipe measuring 5-10 μm long; apical ring very distinct, thickened. Paraphyses very abundant, filiform, septate, hyaline, guttulate, mixed with the asci. Ascospores initially obliquely uniniseriate, one-celled, surrounded by a hyaline gelatinous sheath reaching a width of about 8 μm, ellipsoidal, rounded at the ends, (23-)24-26(-27) × (14-)15-16(-17) μm, ranging from hyaline when young to yellow brown, finally very dark brown and opaque at maturity, with each containing a prominent apical germ pore measuring about 2.5-3 μm in diameter and a smaller basal pore measuring about 2 μm in diameter, frequently orientated with the larger pore directed downwards in the lower spores.

**ETYMOLOGY:** Greek brachys (β βραχύς) meaning short and kaulinos (κουλίνος) meaning made of a stem, referring to the very short stipe of the ascus.


The characteristic features of this species are the extremely short stipe of the ascus (Fig. 6), thickened and distinct ascal apical ring (Fig. 35), and size of the ascospores. The only other species with 8-spored ascii are *F. apotoma* that has larger ascospores and *F. microasperma* that differs in possessing much smaller ascospores, ascii with a variable stipe, and a thinner ascal apical ring.

**Fimetariella dolichopoda** Krug, sp.nov. Figs. 9-12, 36

Perithecia dispersed, glabra, immersa, subpyriformia, 600-750 × 400-450 μm magna; peritheciis collum breve, subcylindraceum, glabrum, atbrirubennae, distintum, circa 150-250 μm longum; peridium profunde olivaceo-brunneum, subcoriaceum, e cellulis angulatis, atbrirubens, cum parietibus crassis textum. Ascii quadrirarii, cylindracei, (210-)225-300 × 22-25 μm magni, in apice attenuati truncatique, basin versus in stipitem (40-)60-100 μm longum attenuati; annulum apicale prominentissimum, incrassassistimum. Paraphyses numerosae, filiformes, septate, hyalinae. Ascospores primum oblique uniniseriales, unicellularae, vagina hyalina gelatinosa circa 7 μm lata postrema circundatae, ellipsoidalae, in apice leviter attenuatae, (30-)32-40(-42) × (17-)18-21(-22) μm magna, primum hyalinae vel laete fulvae, maturitate confirmata atrirubennae et opacas, periferant germinale basilaris distinctum, circa 2.5-3 μm diametro crassum et foramen apicale aliquanto minus, circa 2.5-2.5 μm diametro crassum exhibentis.

**HOLOTYPUS:** In ovium fimo lectus est, in loco circa 60 mi meridionali a Bozeman, apud flumen Gallatam, in Gallateralis comitatu Montanismum finium, in imperio U.S.A., 2 Sept. 1957, Cain, TRTC 42238. In Museo Regio Ontarioensis Cryptogamarum herbario.

Perithecia scattered or occasionally loosely clustered, bare, embedded, subpyriform, 600-750 × 400-450 μm; neck short, subcylindrica, somewhat truncate, bare, black, distinct, about 150-175 μm long, with dark yellow-brown, wall-thickened, elongated cells measuring 8-12 × 2-3 μm; ostiole small, quite indistinct; peridium light orange-brown by reflected light, subcoriaceous, 25-35 μm thick, appearing in surface view of irregular to angular cells, consisting of three layers, an outer layer about 3-4 cells thick, of quadrate to oblong, thick-walled, dark brown cells measuring 3-5 × 2-4 μm, a middle layer about 6-8 cells thick, of elongated, thin-walled, pale yellow-brown cells measuring 10-15 × 1.5-2 μm, and an inner layer about 4-6 cells thick, of elongated, thin-walled, hyaline cells measuring 10-15(-20) × (3.5-)4.5-5 μm. Ascii 8-spored, cylindrical, 170-190 × 20-25 μm, distinctly narrowed and truncated at the apices, terminating very abruptly in a very short stipe measuring 5-10 μm long; apical ring very distinct, thickened. Paraphyses very abundant, filiform, septate, hyaline, guttulate, mixed with the asci. Ascospores initially obliquely uniniseriate, one-celled, surrounded by a hyaline gelatinous sheath reaching a width of about 8 μm, ellipsoidal, rounded at the ends, (23-)24-26(-27) × (14-)15-16(-17) μm, ranging from hyaline when young to yellow brown, finally very dark brown and opaque at maturity, with each containing a prominent apical germ pore measuring about 2.5-3 μm in diameter and a smaller basal pore measuring about 2 μm in diameter, frequently orientated with the larger pore directed downwards in the lower spores.

**ETYMOLOGY:** Greek dolichos (δολίχος) meaning long and podos (ποδός) meaning foot, referring to the very long stipe of the ascus.


This species is characterized by the 4-spored asci with prominent, thickened apical ring (Fig. 36), the extremely long ascal stipe, and the ascal spore size. *Fimetariella tetraspora* also has 4-spored asci with similar spore size but differs in possessing an almost hyaline peridium and shorter ascal stipe. In *F. dunarum* the spores are larger and the apical ring thinner.

**Fimetariella dunarum** (Mouton) Krug, comb.nov. Figs. 13-16, 37


= *Pleurage dunarum* (Mouton) Kunze, Rev. Genera Plant. 3(2): 505. 1898
Figs. 17–20. *Fimetariella macromischa* (TRTC 51750). Fig. 17. Ascus and ascospores. Scale bar = 33 μm. Fig. 18. Perithecium. Scale bar = 235 μm. Fig. 19. Ascospores showing thickened wall around germ pores with one spore in end view showing germ pore. Scale bar = 9 μm. Fig. 20. Cross section of peridium. Scale bar = 19 μm. Figs. 21–25. *Fimetariella microsperma* (TRTC 32615). Fig. 21. Cross section of peridium. Scale bar = 21 μm (outer layer) and 12 μm (inner layers). Fig. 22. Phialide and conidia. Scale bar = 11 μm. Fig. 23. Perithecium. Scale bar = 125 μm. Fig. 24. Asci and ascospores. Scale bar = 22 μm. Fig. 25. Ascospores. Scale bar = 14 μm.

Perithecia loosely clustered to somewhat scattered, bare, embedded to slightly erumpent, subpyriform to slightly ampulliform, 475–500 × 400–450 μm; neck short, dome-shaped, somewhat truncate, bare, very dark brown, distinct, about 100–125 μm long, with dark brown, thick-walled, elongated cells measuring 5–8 × 1.5–2.5 μm; ostiole small, very prominent; peridium dark yellowish brown by reflected light, very coriaceous, 20–30 μm thick, appearing in surface view of interlocking cells, consisting of three layers, an outer layer about 8–10 cells thick, of oblong, thick-walled, dark brown cells measuring 5–6 × 2–3 μm, a middle layer about 6–8 cells thick, of oblong, thin-walled, hyaline cells measuring 6–8 × 1–1.5 μm, and an inner layer about 2–3 cells thick, of elongated, thin-walled, hyaline cells measuring 10–12(–15) × 1.5–2 μm. Asci 4-spored or very rarely 5-spored, cylindrical, 200–220 × 25–30(–35) μm, distinctly narrowed and truncated at the apices, tapering into a very long stipe measuring (50–)60–70 μm long; apical ring very distinct, considerably thickened. Paraphyses very abundant, filiform, septate, hyaline, guttulate, longer than and mixed with the asci. Ascospores initially obliquely uniseriate, one-celled, surrounded by a hyaline gelatinous sheath reaching a width of about 6 μm, ellipsoidal, narrowed towards the ends, (40–)42–48(–50) × (21–)23–26(–27) μm, ranging from hyaline when young to yellow-brown, finally very dark brown and opaque at maturity, with each containing a prominent basal germ pore measuring about 2.5–3 μm in diameter and a slightly
smaller apical pore measuring about 2 µm in diameter, usually orientated with the large pore directed upwards in the uppermost spore.

**ETYMOLOGY:** Latinized from *dune*, referring to the location of the type collection.


The 4-spored asci, dark peridium, and very large size of the ascospores are the diagnostic features. *Fimetariella dolichopoda* and *F. tetraspora* also have fairly large ascospores but smaller than in *F. danarum*. The more pronounced apical ring in *F. dolichopoda* and the semitransparent, almost colourless peridium in *F. tetraspora* are additional distinguishing characteristics for these taxa.

**Fimetariella macromischa** Krug, sp.nov.  Figs. 17–20  
Perithecia dispera aut raro laxe aggregata, glabra, ex immersi ad erumpentioinem positionem pertinente, subpyriformia, 550–650 × 400–450 µm magna; peritheciis collum breve, conicum, glabrum, nigrum, distinctum, circa 135–175 µm longum; peridium atrbrunneum, subdolichopoda, 35–45 µm crassum, e stratis tribus compositum. Asci quadrispori, cylindracei, (110–)120–150(–155) × 10–12 µm magni, in apicis anguste rotundati, basin versus in stipitem (65–)70–80(–100) µm longum abruptius contracti; annulo apicale parvum, leviter incrassatum. Paraphyses numerosae, filiformes, septatae, hyalinae. Ascosporae primum oblique uniseriales, unicellulares, vagina hyalina gelatinosa circa 2–3 µm lata circumdatae, ellipsoidae vel subgloboseae, in apicibus rotundatis, (11–)12–13(–15) × 8–9(–11) µm magnae, primum pallide vel laete fulvae, maturitate confirmata atrbrunneae et opacae, foramen germinale basi- bare, included to slightly erumpent, subpyriform, 550–650 × 400–450 µm; neck short, conical, stout, bare, black, distinct, about 135–175 µm long, with yellow-brown, slightly thick-walled, elongated cells measuring 8–12 × 2–3 µm; ostiole small, rather indistinct; peridium dark brown by reflected light, subdolichopoda, 35–45 µm thick, appearing in surface view of angular to somewhat interlocking cells, consisting of three layers, an outer layer about 2–4 cells thick, of quadrates to oblong, thick-walled, dark brown cells measuring 10–15 × 5–7 µm, a middle layer about 2–3 cells thick, of elongated, thin-walled, hyaline

**Fimetariella microspora** Krug & J.H. Mirza, sp.nov.  Figs. 21–25  
= *Fimetariella corsicana* Lundq., in herb. (UPS)  
Perithecia dispera, levia, denudata, e semisuperficiali ad erumpentem positionem pertinente, ovoida, 390–500 × 310–375 µm magna; peritheciis collum breve, tholiforme, nigrum, distinctum, papillis praedum; peridium brunneum, subdolichopoda, 30–35 µm crassum, e stratis tribus compositum. Ascii octospori, cylindracei, 115–185 × 9.5–12.5 µm magni, in apicibus rotundatis, basin versus in stipitem 60–100 µm longum attenuati; annulo apicale indistinctissimum. Paraphyses numerosae, filiformes, septatae, hyalinae. Ascosporae oblique uniseriales, unicellulares, vagina hyalina gelatinosa 5 µm lata postremo circumdatae, ellipsoidae, apicibus rotundatis sed saepius attenuatoiribus, 12–14 × (7–)7.5–9(–9.5) µm magnae, primum hyalinae vel fulvibrunneae, maturitate confirmata atrbrunneae et opacae, foramen germinale distinctum, circa 2 µm diametro crassum et foramen apicale minus exhistibene.

**HOLOTYPUS:** In Cervi canadensis fimo lectus est, apud Chancellor Mountain Camp, in Yoho National Park, in Brit-
brown by reflected light, subcoriaceous, 30–35 μm thick, consisting of three layers, an outer layer about 4–5 cells thick, of quadrato to angular, thick-walled, dark brown cells measuring 8–10(−12) × 5–6 μm, a middle layer about 2–3 cells thick, of elongate to oblong, thin-walled, hyaline cells measuring 8–12(−15) × 2.5–3 μm, and an inner layer about 5–6 cells thick of elongated, thin-walled, hyaline cells measuring 20–25 × 1–2 μm. Ascii 8-spored, cylindrical, 115–185 × 9.5–12.5 μm, rounded at the apices, terminating in a stipe of rather variable length measuring 20–100 μm long; apical ring quite indistinct. Paraphyses very abundant, filiform, septate, hyaline, longer than and mixed with the asci. Ascospores obliquely uniseriate, one-celled, surrounded by a hyaline gelatinous sheath reaching a width of about 5 μm, ellipsoidal, rounded at the ends but frequently somewhat narrowed, 12–14 × 7–8.5(−9.5) μm, ranging from hyaline when young to yellow-brown, finally dark brown and opaque at maturity, with each containing a distinct basal germ pore about 2 μm, and a much smaller apical pore (often visible only after bleaching), frequently orientated with the larger pore directed upwards in the lower spores. Phialides abundant, hyaline, reduced to collarettes on short-celled aerial hyphae. Conidia one-celled, ovoid, smooth, hyaline, dry, 3–4 × 2–3 μm.

ETYMOLOGY: Greek mikros (μικρος) meaning small and sperma (σπέρμα) meaning seed, referring to the small size of the ascospores.


The diagnostic features of F. microsperma are the small ascospore size (Fig. 25), indistinct apical germ pore, 8-spored asci, and the variable length of the stipe. In other species with 8-spored asci the spores are much larger. The only other species with such small spores is F. macromischa, but this taxon has 4-spored asci and somewhat subglobose spores. The two germ pores can usually be detected in most species under standard illumination, but in F. microsperma the apical pore is so minute that the spores must be bleached to readily observe it.

In the European collections, the ascospores are slightly wider with a spore width of about 8.5–9.5 μm, more tapered towards the apices, contain a more distinct apical pore, and the ascus stipe is more constant in length. These minor variations in morphology would appear to be insignificant taxonomically, being merely reflections of differences in the populations.

The only other species of Fimetariella for which cultural information is available is F. rabenhorstii that was cultured by Udagawa (1980). He reported broadly spreading, darkly pigmented colonies with submerged mycelium, which is consistent with the observations provided by Krug and Scott (1994) for B. bombardioidea (Auersw. in Niessl) Moreau in the related genus Bombardioida. Cultural data were also provided by Moreau (1953) for B. stercoris (DC.:Fr.) Lundq. that he referred to as a 4-spored form of Sordaria bombardioidea Auersw. in Niessl. On cornmeal agar, Moreau (1953) obtained a dense growth of white, fibrous, superficial mycelium, which compares favourably with the observations for F. microsperma.

The anamorph in F. microsperma (Fig. 22) consists of reduced phialides in the form of collarettes for which Arx and Gams (1967) introduced the term pleurophialide. This state reminds one of Cladorrhinum & Marchal that was reported by Arx and Gams (1967) as the anamorph for Apiosordaria verruculosa (Jensen) Arx & Gams. In Bombardioida bombardioides, Krug and Scott (1994) observed an anamorph consistent with Angulimaya Subram. & Lodha. No anamorph was reported by Udagawa (1980) for F. rabenhorstii, although he observed chlamydospores.

Fimetariella rabenhorstii (Niessl in Rabenh.) Lundq., Bot. Not. 117: 239. 1964

= Sordaria rabenhorstii Niessl in Rabenh., Hedwigia, 11: 180. 1872, and Fungi Europaei Exsicc. 1528. 1872

= Hypocorpa rabenhorstii (Niessl in Rabenh.) Sacc., Syll. Fung. 1: 245. 1882

= Pleurage rabenhorstii (Niessl in Rabenh.) Kunze, Rev. Genera Plant 3(2): 505. 1898

Perithecia scattered or loosely clustered, bare, semi-immersed to erumpent, subglobose to ovoid, 500–600 × 300–420 μm; neck very short, dome-shaped to conical, covered with small papillae, black; ostiole very small, indistinct; peridium brown by reflected light, subcoriaceous, 25–30 μm thick, appearing in surface view of angular to interlocking cells, consisting of three layers, an outer layer about 2–3 cells thick, of short-elongate to somewhat quadratic, thick-walled, dark brown cells measuring 6–10 × 2–4 μm, a middle layer about 5–6 cells thick, of elongated, thin-walled, hyaline cells measuring 12–18 × 3–4 μm, and an inner layer about 1–2 cells thick, of short-elongate, thin-walled, hyaline cells measuring 5–8 × 1–2 μm. Ascii 4-spored, cylindrical, 110–160 × 10–11 μm, rounded and thickened at the apices, terminating in a fairly long stipe measuring 40–90 μm long; apical ring very indistinct or sometimes apparently lacking. Paraphyses abundant, filiform, broader towards the base but not constricted, septate, hyaline, longer than and mixed with the asci. Ascospores obliquely or vertically uniseriate, one-celled, surrounded by a rather narrow hyaline gelatinous sheath, ellipsoidal, somewhat narrowed towards the ends, 14–17 × 8–9 μm, ranging from hyaline when young to yellow-brown, finally dark brown and opaque at maturity, with each containing a prominent basal germ pore about 1–1.5 μm in diameter and a much smaller apical pore (often visible only after bleaching), frequently orientated with the larger pore directed upwards in the lower spores.

ETYMOLOGY: Latinized, from the name of the German mycologist, L. Rabenhorst.

Figs. 34–38. Ascus apical rings. Fig. 34. Fimetariella apotoma (TRTC 42408). Ascus with rather indistinct ring (arrow). Scale bar = 16 μm. Fig. 35. Fimetariella brachycaulina (TRTC 39641). Mature ascus with distinct, thickened ring. Scale bar = 17 μm. Fig. 36. Fimetariella dolichopoda (TRTC 42238). Young ascus with thickened ring. Scale bar = 17 μm. Fig. 37. Fimetariella dunarum (Mouton 271). Young ascus with distinct, thickened ring. Scale bar = 23.5 μm. Fig. 38. Fimetariella tetraspora (Lqt 16549). Mature ascus with prominent ring. Note broad upper flange (arrow) in this collection. Scale bar = 13.5 μm.


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ostiole small, rather indistinct; peridium light yellowish brown by reflected light, semitransparent, membranaceous, 15–25 μm thick, appearing in surface view of very small, angular to interlocking, thin-walled, hyaline cells measuring 5–8 × 2–4 μm. Ascii 4-spored, or rarely 5- and 6-spored, cylindrical, 190–230 × 22–25 μm, narrowed and truncated at the apices, tapering into a fairly long stipe measuring 25–45 μm long; apical ring very prominent, somewhat thickened. Paraphyses very abundant, filiform, septate, 25–45 mm of Kecskemet, Filophaza, roe deer dung in sand dunes brown by reflected light, semitransparent, membranaceous, ostiole small, rather indistinct; peridium light yellowish brown by reflected light, semitransparent, membranaceous, 15–25 μm thick, appearing in surface view of very small, angular to interlocking, thin-walled, hyaline cells measuring 5–8 × 2–4 μm. Ascii 4-spored, or rarely 5- and 6-spored, cylindrical, 190–230 × 22–25 μm, narrowed and truncated at the apices, tapering into a fairly long stipe measuring 25–45 μm long; apical ring very prominent, somewhat thickened. Paraphyses very abundant, filiform, septate, 25–45 mm of Kecskemet, Filophaza, roe deer dung in sand dunes brown by reflected light, semitransparent, membranaceous, ostiole small, rather indistinct; peridium light yellowish brown by reflected light, semitransparent, membranaceous, 15–25 μm thick, appearing in surface view of very small, angular to interlocking, thin-walled, hyaline cells measuring 5–8 × 2–4 μm. Ascii 4-spored, or rarely 5- and 6-spored, cylindrical, 190–230 × 22–25 μm, narrowed and truncated at the apices, tapering into a fairly long stipe measuring 25–45 μm long; apical ring very prominent, somewhat thickened. Paraphyses very abundant, filiform, septate, 25–45

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**References**


