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Studies on vernal species of *Gyromitra* and *Pseudombrophila* (syn. *Nannfeldtiella*)

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HARMAJA, H. 1979: Studies on vernal species of *Gyromitra* and *Pseudombrophila* (syn. *Nannfeldtiella*). — Ann. Bot. Fennici 16: 159—162.

Gyromitra longipes Harmaja n. sp. (Pezizales: Helvellaceae) from Finland is a close relative of *G. ambigua* (Karst.) Harmaja.

The monotypic genus *Nannfeldtiella* Eckbl. is removed from the family Sarcoscyphaceae and reduced to synonymy with *Pseudombrophila* Boud. (Pezizales: Pyronemataceae). As a result, the new combination *Pseudombrophila aggregata* (Eckbl.) Harmaja is made. '*Nannfeldtiella aggregata*' was also found to be collective and to comprise four species: *Pseudombrophila aggregata* s. str., *Pseudombrophila minor* Harmaja n. sp., *Pseudombrophila tetraspora* Harmaja n. sp., and *Pseudombrophila microtetraspora* Harmaja n. sp.

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Gyromitra longipes

Gyromitra longipes Harmaja, n. sp. (Fig. 1.) A *Gyromitra ambigua* praecipue differt pileo indistincte obtuse lobato, rugis hymenii satis distinctibus, stipite longiore areolato, apicibus paraphysium amplioribus (7.0—17.0 μm in diam.), et sporis parce brevioribus minus distincte fusiformibus. In vere semel collecta est.

Typus: Finland, prov. Pohjois-Häme, par. Virrat, Hauhuu, S of the bridge to Hakala, mixed mesic forest (approx. OMT) with mainly *Picea* and *Betula*, in marks left by tractor in soil surface, Grid 27° E: 6902:341, 22.V.1979 Ilkka Kytövuori 4179 (H).

G. longipes is closely related to *G. ambigua* (for a description of the latter, see HARMAJA 1969). It differs from the latter chiefly in the indistinctly and obtusely lobed pileus with slightly broader and more distinct folds, longer stipe in relation to pileus height, areolate stipe surface, paraphysis walls that are dark encrusted throughout, much wider paraphysis tips (7.0—17.0 μm in diam.), slightly shorter spores (20.0 — 25.0 \times 9.0—10.0 μm without apiculi), less fusiform spores, generally slightly shorter (1.0—2.0 μm) apiculi of the spores, and apparently vernal fruiting. From the *G. esculenta*

(Pers.) Fr. aggregate *G. longipes* differs mainly in the darker pileus, fairly distinctly violet stipe, much wider paraphysis tips, and clearly larger (6.0—7.5 μm) oil drops in the spores.

Pseudombrophila

The macroscopic and microscopic characters of *Nannfeldtiella aggregata* Eckbl., the type species of the monotypic genus *Nannfeldtiella* Eckbl. (ECKBLAD 1968), definitely indicate that it should be placed in *Pseudombrophila* Boud. (Pyronemataceae). My examination of the type species of the latter genus, *P. deerata* (Karst.) Seav., revealed that its spores have a persistent (finely marked) cyanophilic secondary wall, i.e. basically the same wall structure as *N. aggregata*. Cyanophilic spore markings were reported for the first time only quite recently in *P. deerata*, by SVRČEK (1978); in *N. aggregata* such markings were reported by KORF (1972). Originally the ornamentation of the latter species was claimed to be cyanophobic, but my studies confirm Korf's observation. ECKBLAD (1968) placed *N. aggregata* in the family Sarcoscyphaceae, but nothing supports such a position

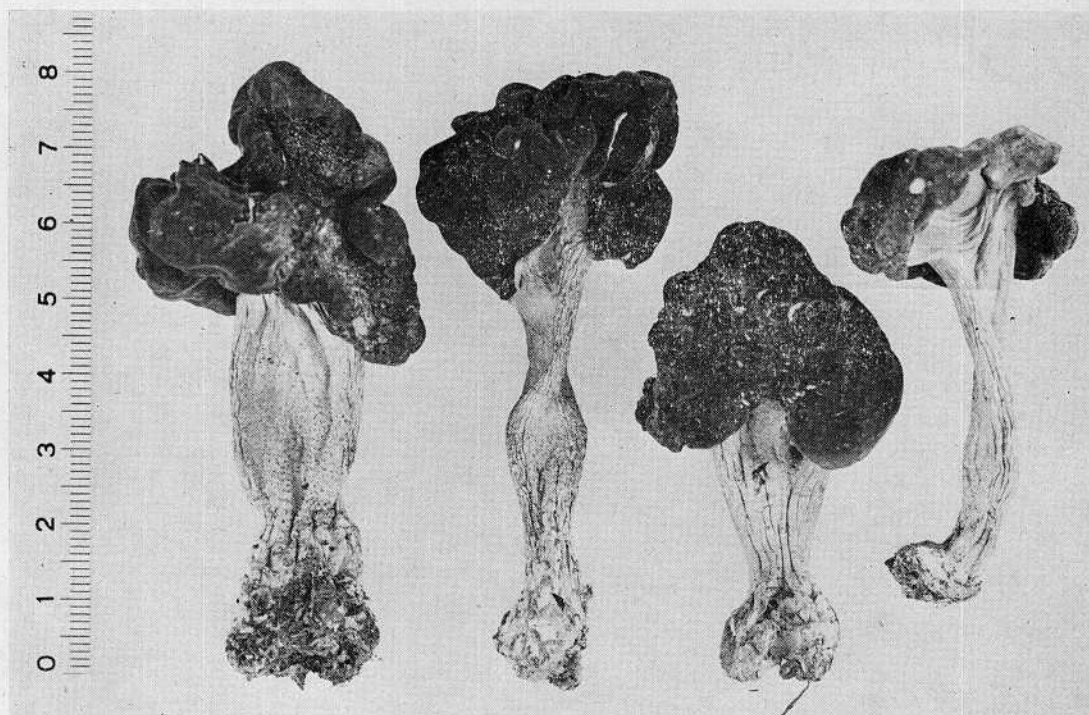


Fig. 1. *Gyromitra longipes*. Part of the dried apothecia of the type collection, $\times 1.0$. Photo: Mauri Korhonen.

(for instance, I have observed the spores to be uninucleate in the species). In summary, *Nannfeldtiella* becomes a younger synonym of the old *Pseudombrophila*. *Fimaria* Vel. may be another synonym.

What has passed as '*Nannfeldtiella aggregata*' in Fennoscandia was also found to be collective and to comprise four species: *Pseudombrophila aggregata* n. comb. (s. str.), *P. minor* n. sp., *P. tetraspora* n. sp., and *P. microtetraspora* n. sp. All of them share sessile apothecia, a persistent, cyanophilic, coarsely wrinkled secondary spore wall, similar excipulum and paraphyses, hyaline excipular hairs, vernal fruiting, and the same curious habitat ecology. Below the most important diagnostic characters of the species are given.

Pseudombrophila aggregata (Eckbl.) Harmaja, n. comb. (*Nannfeldtiella aggregata* Eckbl., N. Mag. Bot. 15: 118. 1968.).

Several specimens seen from Finland, Norway and Sweden. — Cup up to 1.0 cm in diameter,

soon expanding; hymenium dark. All eight spores of an ascus maturing. Spores $14.0\text{--}18.0 \times 6.5\text{--}8.0 \mu\text{m}$ with ornamentation, subfusiform without ornamentation, apiculi ca. $1.5 \mu\text{m}$ long. Excipular hairs sparse to fairly abundant, somewhat twisted, their walls $0.3\text{--}0.7 \mu\text{m}$ thick.

Pseudombrophila minor Harmaja, n. sp.

A *Pseudombrophila aggregata* praecipue differt apotheciis minoribus et sporis ellipsoideis brevioribus.

Typus: Finland, prov. Etelä-Häme, par. Hollola, dry heath forest, *Pinus sylvestris* plantation, among *Byssonectria* sp., Grid 27°E : 676575: 41350, 14.V.1978 Pertti Nikkari (H). Two other specimens also seen from Finland. — Cup up to 0.5 cm in diameter, soon expanding; hymenium fairly dark brown. All eight spores of an ascus maturing. Spores $12.0\text{--}14.0 \times 6.5\text{--}7.5 \mu\text{m}$ with ornamentation, ellipsoid without ornamentation, apiculi ca. $1.2 \mu\text{m}$ long. Excipular hairs rather sparse, somewhat twisted, their walls $0.25\text{--}0.5 \mu\text{m}$ thick.

Pseudombrophila t...
A *Pseudombrop...*
apotheciis maio...
maturitate, spo...
valde contortis

Typus: Finlan...
Hindsby-Myras...
mesic heath fore...
road, among *By...*
398, 20.V.1979...
additional speci...
Norway and Sw...
8.V.1970 B. Gil...
2.5 cm in diam...
long time; hyn...
fairly pale brow...
eight spores of an...
disintegrating at...
 $24.5 \times 7.5\text{--}10.$
fusiform without



Fig. 2. *Pseudombrophila* the type collection w

Pseudombrophila tetraspora Harmaja, n. sp. (Fig. 2.)
A *Pseudombrophila aggregata* plurimum differt
apotheciis maioribus, ascibus cum 4 sporis in
maturitate, sporis maioribus, et pilis excipuli
valde contortis tunica crassiora.

Typus: Finland, prov. Uusimaa, par. Sipoo,
Hindsby-Myras, Lillhagen-Mosabacka, mixed
mesic heath forest, in a small abandoned forest
road, among *Byssonectria* sp., Grid 27° E: 6692:
398, 20.V.1979 Reima Saarenoksa (H). Several
additional specimens also seen from Finland,
Norway and Sweden (Bohuslän, Västerlanda,
8.V.1970 B. Gilsenius, p.p.; H). — Cup up to
2.5 cm in diameter, remaining cupulate for a
long time; hymenium fairly dark brown to
fairly pale brown. Only four of the original
eight spores of an ascus maturing, the remainder
disintegrating at an early stage. Spores 19.0—
24.5 × 7.5—10.0 μm with ornamentation, sub-
fusiform without ornamentation, apiculi ca. 2.0

μm long. Excipular hairs very abundant, very
twisted, their walls 0.5—1.0 μm thick. The
species is related to *P. guldeniae* Svrček.

Pseudombrophila microtetraspora Harmaja, n. sp.
A *Pseudombrophila tetraspora* praecipue differt
apotheciis minoribus et sporis ellipsoideis mino-
ribus.

Typus: Norway, prov. Akershus, Nannestad,
Tømte, among *Byssonectria aggregata*, *P. aggregata*
and *P. tetraspora*, 31.V.1970 Sigmund Sivertsen
& Gro Gulden, p.p. (H). — Cup up to ca. 0.5
cm (and more?) in diameter; hymenium fairly
dark brown. Only four of the original eight
spores of an ascus maturing, the remainder
disintegrating at an early stage. Spores 12.5—
15.0 × 6.2—7.0 μm with ornamentation,
ellipsoid without ornamentation, apiculi ca.
1.0 μm long. Excipular hairs very abundant,
very twisted, their walls 0.6—1.2 μm thick.



Fig. 2. *Pseudombrophila tetraspora*, fresh *in situ*, in about natural size. The rest of the same group as from which the type collection was taken (leg. M. Korhonen 2607 & R. Saarenoksa 22.V.1979, H). Photo: Mauri Korhonen.

References

- ECKBLAD, F.-E. 1968: The genera of the operculate Discomycetes. A re-evaluation of their taxonomy, phylogeny and nomenclature. — *N. Mag. Bot.* 15: 1–191.
- HARMAJA, H. 1969: A neglected species, *Gyromitra ambigua* (Karst.) Harmaja, n. comb., and *G. infula* s. str. in Fennoscandia. — *Karstenia* 9: 13–19.
- KORF, R. P. 1972: Synoptic key to the genera of the Pezizales. — *Mycologia* 64: 937–994.
- SVRČEK, M. 1978: A taxonomic revision of Velenovský's types of operculate Discomycetes (Pezizales) preserved in National Museum, Prague. — *Sborn. Nár. Muz. Praze* 32 B: 115–194 (pls. 1–8).

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