

**MASSARIOSPHAERIA FRIDAE,  
A NEW FRESHWATER ASCOMYCETE**

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A new species of *Massariosphaeria*, hereby proposed as *M. fridae*, is found on submerged stems of *Alisma plantago-aquatica*.

While collecting fungi, an unknown species of *Massariosphaeria* was found. It differs from all other species in that genus by the combination of 4-celled ascospores and its freshwater habitat (Cai et al., 2003).

The ascomata were studied in tap water (crush mounts).

**Massariosphaeria fridae** M. Spooren, *spec. nov.* — Figs. 1–3

Ascomata gregaria, erumpentia, ostiolo papillato, (sub)globosa  $\pm 500 \mu\text{m}$  diam., lignum ramorum rubescentia. Paries externus niger, rubescend, e cellulis cubicis,  $5 \mu\text{m}$  diam., seriatis compositus; paries internus pseudoparenchymaticus, hyalinus rubidus. Pseudoparaphyses numerosae, hyalinae, tantum juvenes rubrae, septatae, ramosae, anastomosantes,  $1 \mu\text{m}$  latae. Asci cylindrici, bitunicati, 8-sporei,  $125\text{--}130 \times 9 \mu\text{m}$ , spora totam longitudinem occupantes. Ascosporeae biseriatae, fusiformes, utrinque rotundatae, conicae, hyalinae, (1–)3 septatae, cellula media magis constricta, crassitunicata, spora maturae stramineae, granulatae, juvenes nonnumquam tunica mucida investitae  $25\text{--}28 \times 6\text{--}7 \mu\text{m}$ .

Habitat ad caules mortuos submersos *Alismatis plantaginis-aquaticae*.

Typus: L 0537613. Eindhoven, Acht, 23-6-2004.

Ascomata gregarious, erumpent, papillate, ostiolate, sphaeroid,  $\pm 500 \mu\text{m}$  in diameter, staining substrate red. Peridium membranaceous, outer peridium black, with red tinge, composed of rows of cubical cells  $5 \mu\text{m}$  wide. Inner peridium pseudoparenchymatic, hyaline with red tinge. Pseudoparaphyses numerous, hyaline, red when young,

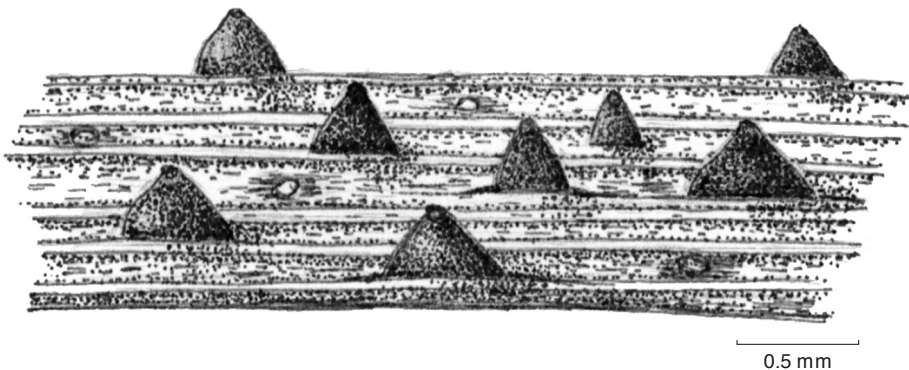
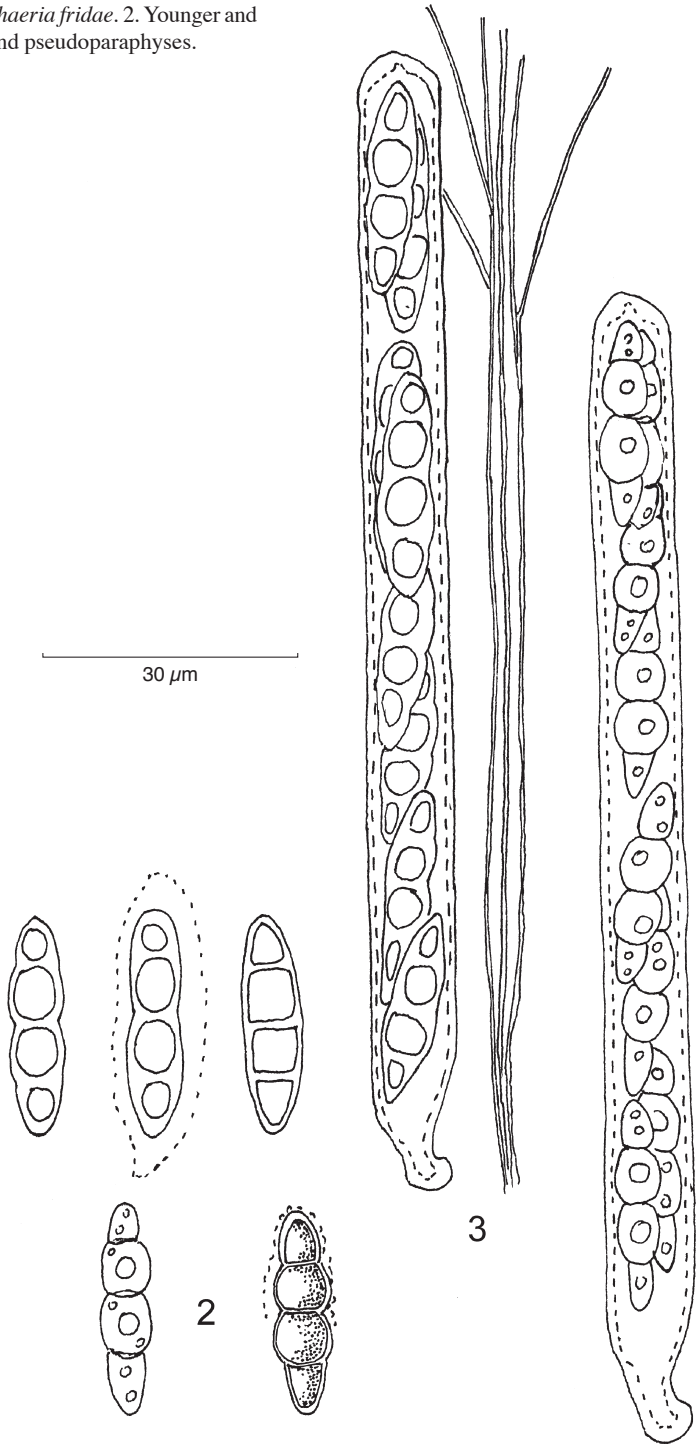


Fig. 1. *Massariosphaeria fridae*. Ascomata.

Figs. 2, 3. *Massariosphaeria fridae*. 2. Younger and older spores; 3. asci and pseudoparaphyses.



later without colour; septate, branched and anastomosing, 1  $\mu\text{m}$  wide. Asci 125–130  $\times$  9  $\mu\text{m}$ , cylindrical, bitunicate, with 8 ascospores. Spores occupy the whole ascus. Ascospores biseriolate, fusiform with rounded conical ends, 3-septate, when young sometimes with 1 or 2 additional septae, strongly constricted at the middle septum; with the two middle-most cells enlarged; when young spores sometimes with a sheath, 25–28  $\times$  6–7  $\mu\text{m}$ ; when old straw-coloured and rough.

Habitat — On submerged dead stalks of *Alisma plantago-aquatica*.

Etymology — Thanks to Mrs. Fridi Liebrechts-Bax.

Collection examined. Netherlands: Eindhoven, Acht, 23-6-2004, L.0537613.

*Massariosphaeria* is characterised by the fruit bodies with a sclerotised ostiole and its round to slit-like porus filled with hyaline periphyses. The ascospores have a thick mucilaginous sheath and are straw-coloured and with granulate contents when older. The ascomata have a red pigment and stain the substrate red. Some strains, however, do not stain the substrate, and it is possible that this is also the case with *M. fridae*. They are phragmo- and dictyosporous (Crivelli, 1983; Leuchtmann, 1984), all with more than 5 transverse septa. Leuchtmann (1987) describes a 3-septate species from alpine plants.

*Massariosphaeria* is positioned in the Lophiostomataceae (Kirk et al., 2001).

*Massariosphaeria fridae* is characterised by a combination of 3-septate ascospores and its freshwater habitat. The species ejaculates under water a slimy mass of hyaline spores and was accompanied by *Phomatospora berkeleyi*, a species known for its facultative aquatic habitat, and a species of *Hymenoscyphus*.

#### ACKNOWLEDGEMENT

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