Revisiones Generum Obscurorum Hyphomycetum: *Helminthosporiopsis* Speg., *Stemmaria* Preuss and *Stilbomyces* Ellis & Everhart*

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The anamorph genera *Helminthosporiopsis* and *Stemmaria* are considered *nomina dubia* based on the examination of holotype specimens. The genus *Stilbomyces* is based on the hypophore of a lichen, as represented by the lectotype specimen.

Keywords: *Helminthosporiopsis, Stemmaria, Stilbomyces.*

Helminthosporiopsis Speg.

Helminthosporiopsis Speg., An. Soc. Cient. Argentina 10: 166. 1880.

Type: *H. typica* Speg., l.c. (= *Podosporium spegazzini* Sacc., Syll. Fung. 4: 628. 1886.).

Holotype specimen: ARGENTINA, Buenos Aires, Boca del Riachuelo, (on stems of) *Eryngium agavifolia* Griseb., (leg. C. Spegazzini), June 1880 (LPS 15.882).

The description of *H. typica* reads, "Stipites sparsi, subcylindracei (300–350 x 30), atri, compositi, sursum ex hyphis divergentibus (100–250 x 8–12) arboreo–ramosi; hyphae fuligineae, cylindraceae, fasciculatae, crebre septulatae, apice subhyalinae, rotundatae; conidia acrogena, fuliginea, 6–7 septulata, antice obtusissime rotundata, postice attenuato–pedicellata, subhyalina (50–70 x 10–12)." Saccardo (1886) transferred *H. typica* to *Podosporium* Schw. as *P. spegazzini* Sacc., and *Helminthosporiopsis* has been considered a synonym of *Podosporium* ever since.

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* See Seifert & Vincent, Sydowia 44 (2): 307–320. 1992.

No fungus conforming to the protologue is present on the type specimen of *H. typica*. The pencilled illustration on the packet (Fig. 1a) shows dark, obclavate, 5–7 septate conidia 50–70 x 10–12 µm, arising from unbranched, cylindrical, septate conidiophores with a rounded apex. The conidiophores are fasciculate at the base but free and divergent at the apex. No details of conidium development, or of the conidiogenous cells, are shown on the packet or described in the protologue. Therefore, it is presently impossible to confirm that conidiogenesis is tretic, as it is in *Podosporium* species (Ellis 1971).

Of the few fungi recorded on *Eryngium* spp., *H. typica* can be compared only with *Alternaria eryngii* (Pers.) Hughes & Simmons, a species that has not been redescribed in modern treatments of *Alternaria*. Based on my examination of slides from the type prepared by Hughes (1958), *A. eryngii* can be briefly described as producing brown, obclavate, dictyoseptate conidia that are 40–75 x 13–16 µm, and have 5–9 transverse septa. They arise from pigmented conidiogenous cells less than 50 µm long that emerge from a pseudoparenchymatous stroma. Although the conidia are of a similar size to those described for *H. typica*, it seems unlikely that Spegazzini would have overlooked the dictyoseptation or that he would have confused a pseudoparenchymatous stroma for a synnema. *Helminthosporiopsis*, therefore, should be considered a *nomen dubium*. It is possible that *H. typica* could be recognized based on the illustration reproduced here as Fig. 1a, however, should it be recollected on the same host.

Stemmaria Preuss

Stemmaria Preuss, Linnaea 24: 137. 1851 (see also Sturm's Deutschl. Fl. Tome 1, Bd. 6, Heft. 36: 133–134, Taf. 87).

Type: *S. globosa* Preuss, l.c.

Holotype: In foliis Pini sylvestris prope Hoyerswerda, Pinka (Germany, 1835) (B).

The protologue of *S. globosa* states, "Stipite erecto, supra scopulato, ramoso, fusco; capitulo rotundato candido, floccis sporarum simplicibus vel ramosis tecto; sporis ovatis minutis." The coloured drawing accompanying the later description in Sturm (Fig. 2a) is of a synnematous fungus with a brown stipe and a more or less globose capitulum composed of branching chains of ellipsoidal, aseptate conidia, growing on needles of *Pinus sylvestris*. No corresponding fungus occurs on the only specimen in Preuss' herbarium. The protologue, apart from the brown stipe, is suggestive of *Sphaeridium candidum* Fuckel, a common species on *Pinus sylvestris* according to Ellis

and Ellis (1985). In the absence of recognizable herbarium material and information on conidium ontogeny, however, I recommend that *Stemmaria* be regarded a *nomen dubium*.

Stemmaria aeruginosa Massee, Kew Bull. 1913: 199. 1913.

No type specimen exists in K or in NY. The diagnosis and accompanying illustration (Fig. 2b) are of a synnematous fungus about 2 mm tall, with a yellow green capitulum of chains of conidia, 7 x 4 µm, intermixed with sterile hyphae, growing on bird dung. These characters are similar to those of *Mycosylva clarkii* Tulloch (1973a), but in the absence of type material, there is no reason to adopt the older name, especially since Tulloch (1973b) herself reported on an even older name, *Stysanus amyli* Delacroix, which lacked type material. Therefore, *Stemmaria aeruginosa* should be regarded as a *nomen dubium*.

A third species was listed in Oudemans (1919) as *Stemmaria hyalopus* Karst., but this was a *lapsus calami* for *Stamnaria hyalopus* Karst. (1887).

Stilbomyces Ellis & Everhart

Stilbomyces Ellis & Everhart, Proc. Acad. Nat. Sci. Philadelphia 1895: 441. 1896.

Type: *S. berenice* Ellis & Everhart, l.c.

Lectotype specimen: (here designated) USA, Louisiana, Acadia Co., leg. (A. B.) Langlois no. 2396 on living bark of *Diospyros*, Sept. (17) 1894 (NY).

Morris (1963), in his compilation of the genera of synnematous hyphomycetes, included *Stilbomyces* as a synonym of *Symphyosira* Preuss. The fungus illustrated by Morris (1963) as *Symphyosira* sp. is probably *Atractilina parasitica* (Wint.) Deighton & Pirozynski (Ellis 1976). Carmichael et al. (1980) speculated that *Stilbomyces* might be a synonym of *Arthrosporium* Sacc., a genus characterized by the production of synnematous conidiomata and dry phragmoconidia on sympodially proliferating conidiogenous cells (Wang, 1972).

The protologue for *Stilbomyces* describes a *Stilbum*-like fungus with "flagelliform, nucleate conidia." Two specimens are cited in the protologue, Langlois no. 2396 and Langlois no. 2400. Both specimens contain more or less lanceolate multihyphal structures that probably correspond to the "erect stipes" described by the authors. No spores were seen on specimen no. 2400. On specimen no. 2396, acropetally developing chains of small 'spores' were seen on the stipes (Fig. 1b).

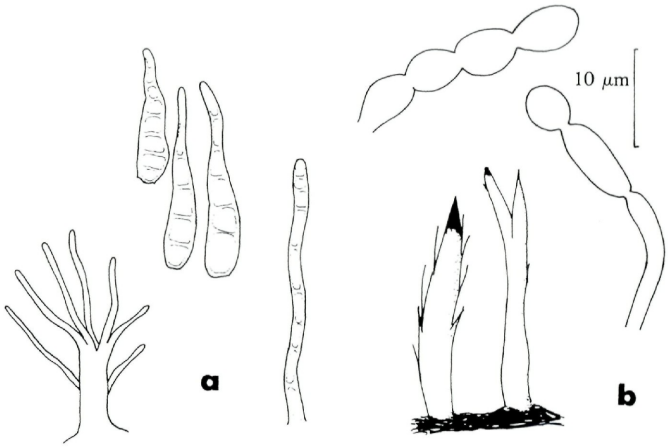

Fig. 1. – a. Copy of pencilled illustration on packet of holotype of *Helminthosporiopsis typica*, LPS 15.882. Not to scale; the conidia are marked as 50–70 x 10–12 µm on the original. The elements have been rearranged in this copy of the drawing. In the original, the conidium to the far left is shaded with cross hatching. – b. *Stilbomyces berenice*, lectotype (NY). Spore-like structures at top of hypophore.

These are no doubt the "flagelliform, nucleate conidia" described in the protologue. Because specimen no. 2396 best fits the original description, it has been designated lectotype above.

The structures represented by the name *Stilbomyces berenice* are not hyphomycetous, but are hypophores of a lichen, similar to those described for *Microspatha glauca* Karsten by Seifert (1985). Hypophores are mysterious structures produced by some genera of the Asterothyriaceae (Sérusiaux, 1984). They resemble synnemata in some respects and often produce a 'hyphal ball' containing structures that appear to be conidiogenous cells and conidia. Germination of these 'conidia', however, has not yet been observed.

The hypophores on the lectotype of *S. berenice* are 500–750 µm tall, 75–110 µm wide at the base, white to cream coloured with a yellowish or greenish tinge, sometimes black at the tip, subulate, sometimes flattened in one plane, unbranched or branched, and tough and rigid. The hyphae comprising the stipe are 2–3 µm wide, more or less parallel, have unevenly thickened walls and are hyaline individually, but yellow brown in mass. Rigid, conical aggregations of hyphae that protrude from the stipe give the hypophores a frayed appearance.

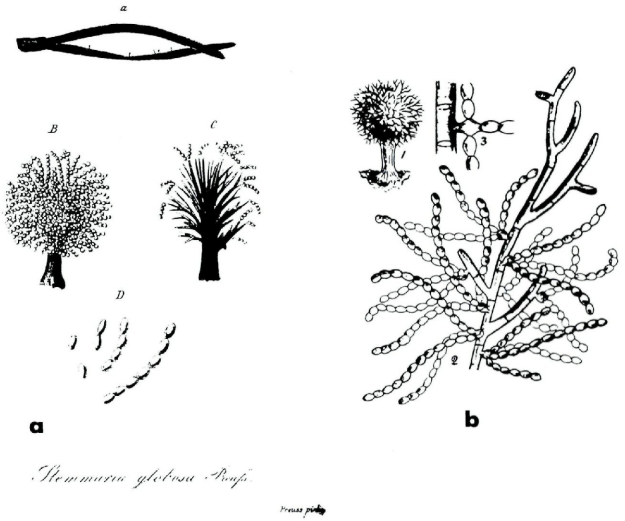

Fig. 2. – a. Preuss's illustration of *Stemmaria globosa*, reproduced from Sturm's Deutschland Flora. – b. Massee's illustration of *Stemmaria aeruginosa*, reproduced from Kew Bulletin 1913.

The 'conidia' occur only on the black tips of selected hypophores, are 4–7.5 x 3–3.5 µm, and appear to develop in unbranched, acropetal chains.

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