Macrospora FUCKEL (Pleosporales) and related anamorphs

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Macrospora FUCKEL is held distinct from *Pleospora* RABENH. and *Pyrenophora* FR. in this study of the type *M. scirpicola* (DC.) FUCKEL, of a related anamorph placed in *Nimbya* gen. anamorph. nov., and of *N. scirpicola* (FUCKEL) comb. nov., *N. juncicola* sp. nov., *N. heteroschemos* (FAUTREY) comb. nov., *N. gomphrenae* (TOGASHI) comb. nov., and *N. caricis* sp. nov.

Macrospora FUCKEL (1870) is one of the few 19th Century genus names that, by the author's original though self-questioning ("?") intention, incorporated both a distinctive, named ascus state and a distinctive, named conidial state. The genus is a member of the Pyrenophoraceae, in the sense of BARR (1979, 1987) and in accord with my own understanding of the current literature on the morphology of typical Pyrenophoraceae and Pleosporaceae and their anamorphs. The spelling, gender, and ascomycetous nature of *Macrospora* FUCKEL are sufficient to prevent the name from being confused with the similar *Macrosporium* FRIES (= *Alternaria* NEES, Hyphomycetes). (For precedent on maintaining similar but non-homonymous spellings, see ICBN (1983) Art. 64.2, Ex. 9, e. g., *Peponia* and *Peponium*.)

Macrospora is typified by *M. scirpicola* (DC.) FUCKEL; the holotype of the basionym *Sphaeria scirpicola* DC. bears a very few large ascomata with ascospores morphologically similar to those of typical Pyrenophoraceae but not of typical Pleosporaceae.

FUCKEL originally (1870, p. 140) used *"M. [acrospora] Scirpi"* as the name of the type species, but this is considered to have been merely an oversight, in that FUCKEL referred directly to *"Sphaeria S. fr. Elench. II. p. 108"* [= *S. [phaeria] scirpicola"* (FRIES, 1828)], which in turn referred indirectly to *"S[phaeria] Scirpicola . . . Dec. Fr. 2. p. 309"* [= *Sphaeria scirpicola* DE CANDOLLE, in LAMARCK & DE CANDOLLE (1805)]. FUCKEL recognized his error and promptly published the correct *Macrospora scirpicola* (DC.) FUCKEL (1871).

Macrospora FUCKEL has been listed as a synonym of *Pyrenophora* FR. (VON ARX & MÜLLER, 1975); and SIVANESAN, 1984), who, however, lapsed in assigning the type of *Macrospora, M. scirpicola* (DC.)

FUCKEL, to *Pleospora* RABENH.). CRIVELLI (1983) implied synonymy of *Macrospora* and *Pleospora* by treating *M. scirpicola* as a *Pleospora*.

As for the anamorph of *Macrospora scirpicola,* FUCKEL collected a fungus that he called *Sporidesmium scirpicola* FUCKEL in his personal herbarium of *Nassau's Flora* and distributed portions of it as no. 78 of his *Fungi rhenani exsiccati* (1863). The printed exsiccatum label with description serves as valid publication of the name. The part of the specimen retained by FUCKEL is excellent (holotype G (EGS 37–156)); another portion examined as a slide preparation (isotype IMI ex K (EGS 17–018) is of the same fungus. [Standard *Index Herbariorum* abbreviations (HOLMGREN & al., 1981) are used throughout this paper; "EGS" numbers refer to related permanent slides, drawings, and notes in my files, which eventually will be deposited elsewhere.]

FUCKEL used the anamorph name again in 1870 (*Symbolae Mycologicae,* p. 140) for the *"Fungus conidiophorus. (?) Sporidesmium Scirpicola"* associated with a *"Fungus ascophorus. Sphaeria S. [cirpicola]* FR."; he suggested this anamorph-teleomorph association as the basis for a new genus *Macrospora* FUCKEL, as noted above.

The anamorph, occurring as a sparse growth on dry culms of *"Scirpus lacustris,"* has pale, narrowly elongate-obclavate, transversely distoseptate and euseptate conidia that gradually taper apically. Its name has passed in and out of four different genera in the course of taxonomic treatments of the past 100 years, viz., *Sporidesmium, Clasterosporium, Cercospora,* and *Alternaria.* My notes on the isotype of the anamorph recall a consensual conversation with K. PIROZYNSKI and B. SUTTON about 25 years ago to the effect that there was no published genus suitable for the species at that time, and that it and a few similar anamorphs might best be consolidated under a new genus name. My opinion on the point has not changed, although I have in the past wavered toward using an expanded concept of *Drechslera* to accomodate these anamorphs, a possibility also considered but rejected by CRIVELLI (1983) in his work on *Pleospora* and related genera.

The following synonymies and descriptions summarize my opinion that species of *Macrospora* FUCKEL merit handling within a distinct genus, as do several anamorphs, some related to *Macrospora* species through cultures and others simply morphologically similar, which for practical purposes require a new genus name. However, it must be emphasized here that I do not consider this discussion of *Macrospora scirpicola* and *Nimbya scirpicola* to be the final word on the subject. The pertinent teleomorph specimens studied (especially those of DE CANDOLLE, of FUCKEL, and of J. WEBSTER) have ascospores that I do not consider to be identical. FUCKEL's suggestion that his *Sporidesmium scirpicola* was the conidial state of DE CANDOLLE's

ascomycete still remains questionable. However, my main purpose is to demonstrate that there is a distinguishable ascomycete genus, *Macrospora,* from specimens of which members of a distinct hyphomycetous genus, *Nimbya,* can be derived, and to place in the literature several *Nimbya* species that have accumulated for study.

Macrospora FUCKEL, Jahrb. Nassau. Vereins Naturk. 23–24: 139. 1870

Type: *Macrospora scirpicola* (DC.: FR.) FUCKEL, l. c., 23–24: 140. 1870 (*"scirpi";* a lapsus corrected in FUCKEL, l. c., 25–26: 301. 1871)

= *Sphaeria scirpicola* DC., in LAMARCK & DE CANDOLLE, Flore française, ed. 3, 2: 300. 1805. Holotype, G (EGS 37–154).

= *Sphaeria scirpicola* DC.: FR., Syst. mycol. II (2): 510. 1823

Nimbya E. SIMMONS, gen. anamorph. nov.

Type: *Nimbya scirpicola* (FUCKEL) E. SIMMONS comb. nov.

= *Sporidesmium scirpicola* FUCKEL, Fungi rhen. exsicc. 78 1963 [edit. in sched.] Holotype, G (EGS 37–156).

Nimbya E. SIMMONS, gen. anam. nov. Hyphomycetum

Conidiophora septata, straminea vel brunnea, 1-conpluries geniculata et conidiogena, simplicia vel ramosa; locis conidiogenis distincte pigmentiferis. Conidia straminea vel brunnea, elongato-obclavata, brevi- vel longirostrata, distophragmoseptata, partim vel omnino euphragmoseptatescentia, solitaria vel carenata, tretica aut restrictissime blastica; zonis contactus basalibus prominulis et valde pigmentosis.

Typus: *Nimbya scirpicola* (FUCKEL) E. SIMMONS, c. n. (BAS.: *Sporidesmium scirpicola* FUCKEL, Fungi Rhenani Exs. no. 78. 1863) [edit. in sched.]

Etym.: from the USA jargon acronym for "not in my backyard", used when some action, though recognized as useful or even necessary, is opposed in one's own neighborhood; knowledgeable systematists have pushed some anamorphs included here from genus to genus over the years, and finally into *Alternaria,* at which point my taxonomic reaction is "nimby".

FUCKEL (1870) suspected that spores of his *Sporidesmium scirpicola* represented the conidial state of *Macrospora scirpicola.* A teleomorph/anamorph relationship for one, perhaps more species of *Macrospora* has been demonstrated by means of single ascospores germinated and grown through to conidium production in culture (LUCAS & WEBSTER, 1964; CRIVELLI, 1983; and by me from specimens generously supplied by J. WEBSTER). LUCAS & WEBSTER (l. c.) and CRIVELLI (l. c.) reported obtaining mature ascomata in their cultures; I have not succeeded in doing so, although presumed protoascomata often have developed in my cultures of fresh 1-ascospore isolates.

Nimbya anamorphs of *Macrospora* have conidiophores that (on the natural substrate) are short, septate, dilute brown, apically 1-conidiogenous (tretic or very restrictedly blastic), becoming closely one to several geniculate-contorted, sometimes branched, with one conidiogenous site at each bend; the conidiogenous locus is distinctly pigmented around the residual pore. Conidia are subhyaline to brown, elongate-obclavate with a short to very long apically tapered portion, conspicuously disto-phragmoseptate, becoming partially or even completely euphragmoseptate and often distinctly constricted at eusepta, solitary or in acropetalous chains, usually maturing with a strongly developed and pigmented contact ring that often extends beyond the otherwise rounded contour of the conidium base.

The type and all but one of the known species of *Nimbya* occur on species of Cyperaceae and Juncaceae; the exceptional one occurs widely on *Gomphrena globosa* (Amaranthaceae).

Although ascospores of *Macrospora scirpicola* are very similar to those of typical *Pyrenophora,* suggestions that the anamorph (originally described as *Sporidesmium scirpicola)* is similar to species of anamorphic *Drechslera* appear to be restricted to ones of Crivelli (1983), who, however, eventually opted for *Alternaria.* I speculate that the long-tapered conidium apex, the presence of some constricting eusepta, and the tendency to production of conidial chains have been a combination of characters too miscellaneous for consideration in *Drechslera* but acceptable, at least superficially, in *Alternaria.* I find the combination of characters unacceptable in either genus. The tapered, multicelled conidia and conidial chains, the extreme rarity of longitudinal septa, and the gradual insertion of constricting eusepta in otherwise strikingly distoseptate conidia are characters constant enough to distinguish *Nimbya* from *Alternaria* and *Drechslera* as well as from the few other genera suggested over the years.

1. *Macrospora scirpicola* (DC.: Fr.) Fuckel, Jahrb. Nassau. Ver. Naturk. 23–24: 140. 1870; ("*scirpi*"; a lapsus corrected in l. c., 25–26: 301. 1871). – Fig. 1.

   = *Sphaeria scirpicola* DC., in Lamarck & de Candolle, Flore française, ed. 3, 2: 300. 1805. Holotype, G (EGS 37-154): "*Sphaeria scirpicola* F. f: 809 [Fl. fr. no. 809], Neuchâtel. Chaillet in hb. Hall. Aestate."

   = *Sphaeria scirpicola* DC.: Fr., Syst. mycol. II (2): 510. 1823

   = *Pleospora scirpicola* (DC.) Karsten, Bidrag Kännedom Finlands Natur Folk 19: 72. 1871

   = *Pyrenophora scirpicola* (Dc.) E. Müller, Sydowia 5: 256. 1951

   = *Sphaeria scirpi* Rabenh., in Herb. mycol. 456. (fide Wehmeyer, 1961); confirmation is required.

= *Pleospora scirpi* (RABENH.) CES. & DE NOT. Comment. Soc. Crittogam. Ital. 1: 217. 1863

= *Pyrenophora scirpi* (RABENH.) WEHMEYER, A World Monograph of the Genus *Pleospora* and Its Segregates (1961), p. 287.

Anamorph. – *Nimbya scirpicola* (FUCKEL) E. SIMMONS; confirmation as anamorph of *M. scirpicola* is required. – Fig. 2.

= *Sporidesmium scirpicola* FUCKEL, Fungi rhenani 78. 1863 [edit. in sched.] Holotype, G (EGS 37-156): *"Ad Sc. lacustris culmos aridos, raro. Vere. Ca. Hattenheim."*

= *Clasterosporium scirpicola* (FUCKEL) SACC., Syll. Fung. 4: 393. 1886

= *Cercospora scirpicola* (FUCKEL) v. ZINDEREN BAKKER, Rev. Mycol. 5: 66. 1940

= *Alternaria scirpicola* (FUCKEL) LUCAS & WEBSTER, in ONDREJ, Cas. Slez. Muz., Ser. A., Hist. Nat. 23: 151. 1974; (comb. illegit.; basionym source not cited)

= *Alternaria scirpicola* (FUCKEL) SIVANESAN, The Bitunicate Ascomycetes, p. 526. 1984

Ascomata of the type specimen of *Macrospora scirpicola* are subspherical and comparatively large (up to about 330 µm diam.); asci are broadly obovate-saccate, 8-spored, with thickened walls and a short stout base; ascospores are comparatively large (c. 50 × 18 µm), somewhat flattened, long obovate in face view, long elliptic in side view, 5 transeptate with one longiseptum in each of most of the segments; the initial central transeptum apparently is functionally weak, for ascospores often break into halves across this line.

Ascomata, asci, and ascospores of *Macrospora scirpicola* are very similar to those of typical species of *Pyrenophora* in size, shape, color, and comparatively small numbers of ascospore septa and, therefore, of cells. However, the pattern of development (particularly septation and tapered breaks) of conidia of *Macrospora* is different enough from that of conidial *Pyrenophora* to support maintaining both genera.

Conidia in the type specimen of *Nimbya scirpicola* are long narrow-obclavate throughout their development, initially with a tapered apical region that becomes very long, filiform, and septate as maximum spore size is reached. Internal cell-like lumina are delimited by transverse distosepta and adjoining internal spore wall material. The largest conidia have as many as 9–11 such cells, each connected to its neighbor by a channel through the separating wall. Transverse eusepta, reaching the lateral spore walls, are easily visible across one to several of the pseudosepta. No longitudinal disto- or eusepta are present in the material examined; there is no evidence of conidium chain formation in this specimen. Conidia are pale yellow-brown except for the darker brown of the prominent basal pore area; up to about 100–120 × 15–20 µm (spore body) plus a narrowed apical portion up to about 50–100 × 5 µm tapering to

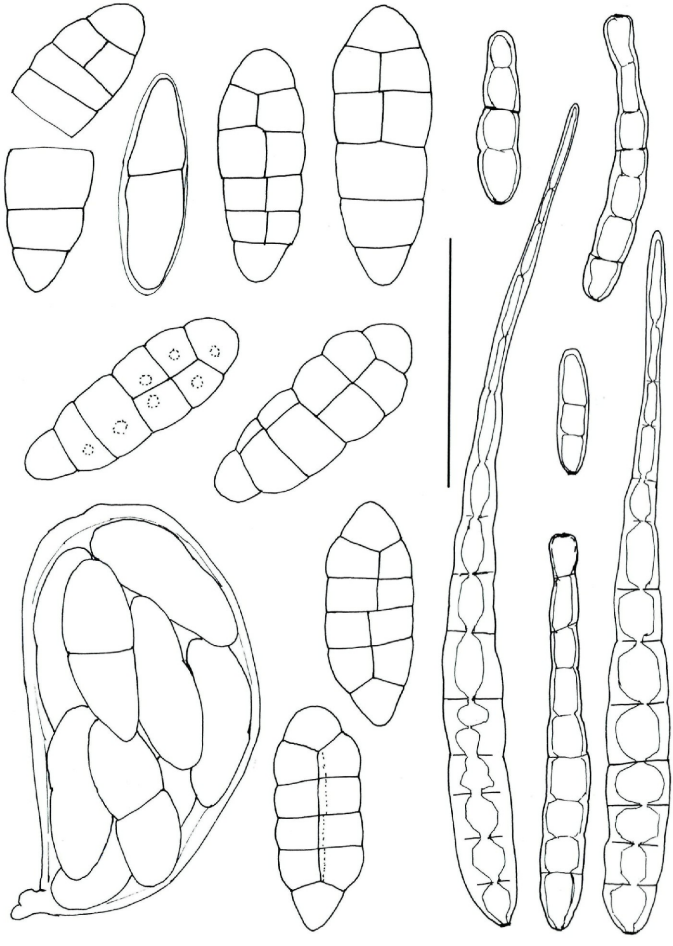

Fig. 1: *Macrospora scirpicola.* – At left, ascospores and ascus (above) from holotype of teleomorph [G], (center) from FUCKEL, F. rhen. no. 859, (below) from J. WEBSTER coll.on *Eleocharis;* at right, anamorph cfr. *Nimbya scirpicola,* isolated in culture from ascospore of J. WEBSTER coll. on *Eleocharis.* – Bar = 50 µm.

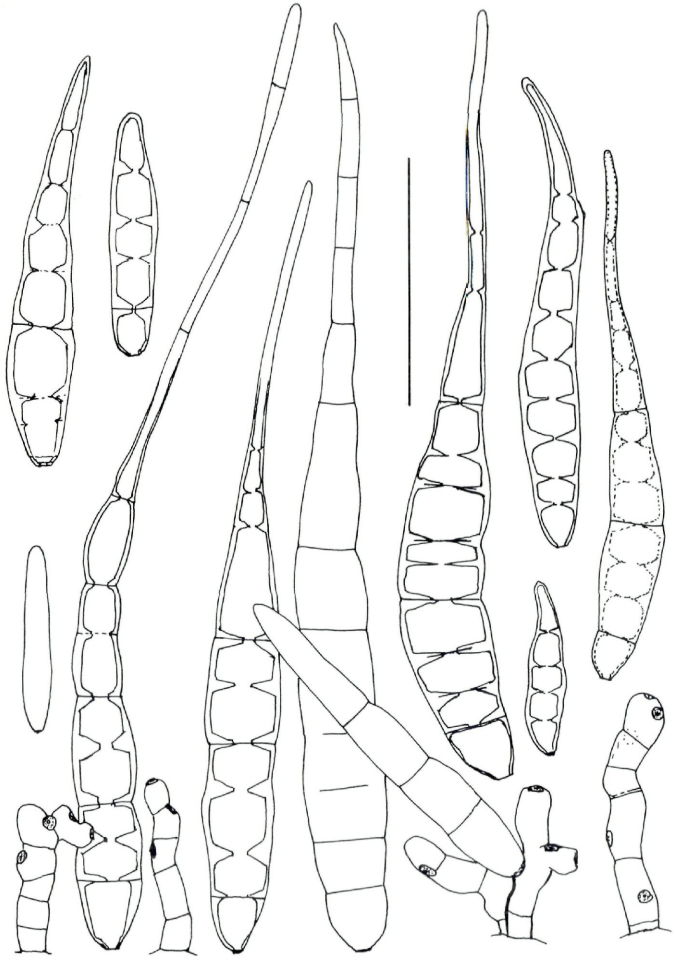

Fig. 2: *Nimbya scirpicola*. – Conidia and conidiophores from holotype of anamorph [G]. – Bar = 50 µm.

2 µm; maximum total dimensions observed 150–300 × 22 µm. Conidiophores are short, swollen, somewhat contorted, with 1–3 dark pore scars in each conidiogenous cell.

Conidia produced in culture tend to be shorter and narrower than those from field material; 0–4-septate juveniles 40–60 × 4–5 µm, fully developed about 120–130 × 10–12 µm.; primary conidia frequently germinate apically, producing a secondary conidiophore and short chains of 2–3 secondary conidia; distal half of most conidia tapers gradually but does not usually become filiform.

Specimens assigned to this species group. – (teleomorph) on *Scirpus lacustris*, France, holotype G (EGS 37-154 and 37-155); on *Scirpus* sp. UK, coll. J. WEBSTER (EGS 19-042), source of anamorph isolates; on *Eleocharis palustris*, UK, coll. J. WEBSTER (EGS 19-016), source of anamorph isolates; (anamorph) on *S. lacustris*, Germany, holotype G (EGS 37-156); ex *Scirpus* sp., UK (EGS 19-042); ex *E. palustris*, UK (EGS 19-016); ex *E. palustris*, Switzerland, ZT 9171 (EGS 37-153); ex *S. americanus*, RI, USA, (EGS 31-017); on *E. palustris*, Czechoslovakia, IMI 154117 (EGS 37-158); on *S. fluviatalis*, IA, USA, CUP 41177 (EGS 38-003).

2. ***Nimbya juncicola*** E. SIMMONS, sp. anamorph. nov. – Fig. 3.

A second *Nimbya* species is known from work published by LUCAS and WEBSTER (1964) on isolates derived from ascospores of what they called *Pleospora valesiaca* (NIESSL) MÜLLER. CRIVELLI (1983) noted the LUCAS and WEBSTER report but chose to call the species *P. discors* (DUR. & MONT.) CES. & DE NOT. in his revisionary studies; however, his isolates from his own collections determined as the two species *P. valesiaca* and *P. discors* yielded either teleomorphs or only sterile mycelium in culture, never an anamorph. Both M. B. ELLIS (1976) and A. SIVANESAN (1984) record this connection with excellent illustrations in their treatments, respectively, of dematiaceous hyphomycetes and of bitunicate ascomycetes.

My own observations on this species are based on field specimens received from J. WEBSTER under the name *P. valesiaca* and on my own isolates from his material. I decline at this point to try to sort out the identity and correct name for this teleomorph parent of *Nimbya juncicola* for several reasons, a major one being that ascospores in WEHMEYER's (1961) photograph of the type specimen of *P. valesiaca* (l. c., Pl. XIV, fig. 163) are not convincingly the same as ascospores I have seen and used for isolation. It is sufficient, for the moment, to speculate that there are several similar *Macrospora* and *"Pleospora"* species on *Carex* and *Juncus* and that the species used in the LUCAS & WEBSTER (1964) study and in my work is not the same as those studied by CRIVELLI (1983) and, quite possibly, that none of them is identical with typical *P. valesiaca*.

Nimbya juncicola E. SIMMONS, sp. anamorph. nov.

Ex culturis in agaro "hay decoction" descripta. Conidiophora simplicia, vulgo 60–130 × 5 µm, ad 1–3 locos conidiogenos aliquot geniculata. Conidia solitaria vel

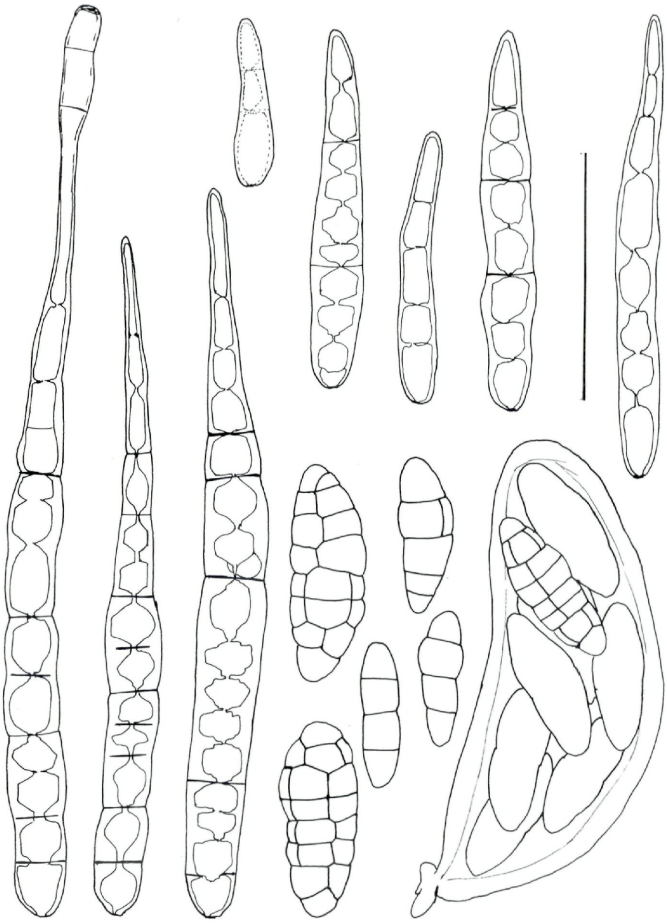

Fig. 3: *Nimbya juncicola*. – Conidia (above and left) from culture prepared as type and (lower right) ascus and ascospores from J. WEBSTER specimen det. *Pleospora valesiaca*, which was source of anamorph. – Bar = 50 µm.

raro 2-catenata; juventute (0–4-pseudoseptata) ca. 50 × 7 µm, maturitate anguste ellipsoidea vel anguste obclavata, 75–200 × 11–15 µm, transverse distincte 7–16 distoseptata et gradatim 3–8 euseptata. Habitatio typi: in foliis *Juncus maritimus*, Norfolk, UK. Typus: praeparatio in lamina vitrea ex EGS 19-017 in BPI (holotypus) conservanda.

Conidia of *Nimbya juncicola* produced in culture are solitary at the apex of each simple conidiophore and at the 1–3 geniculate loci of proliferant conidiophores; secondary sporulation, resulting in 2-conidium chains, occurs rarely. Conidia are dilute yellow-brown with a conspicuous, dark brown basal pore area, narrowly ellipsoid or narrowly obclavate throughout their development, and gradually tapered distally into a narrow but not filiform apical region. Juvenile conidia (0–4-pseudoseptate) are ca. 50 × 7 µm, fully developed conidia 75–200 × 11–15 µm. The longest conidia are compartmented internally into as many as 17 well-defined, angular to rounded lumina that are surrounded by pseudoseptum material. These lumina interconnect by means of narrow channels through the septa, several of which (0–8) gradually become bisected by eusepta that define constrictions in the conidium wall. A longitudinal pseudoseptum appears to form rarely through one or two cells of aged conidia; longitudinal eusepta have not been observed in this material.

Specimens assigned to this species. – (teleomorph) on *Juncus maritimus*, UK, coll. J. WEBSTER (EGS 19-017), ascospore source of anamorph isolate; on *J. ?gerardii*, UK, coll. J. WEBSTER (EGS 19-041); (anamorph) ex *J. maritimus* (EGS 19-017); ex *J. ?gerardii* (EGS 19-041).

3. ***Nimbya heteroschemos*** (FAUTREY) E. SIMMONS, comb. nov. – Fig. 4.

= *Macrosporium heteroschemon* FAUTREY, in FAUTREY & LAMBOTTE, Rev. Mycol. 18: 69. 1896

FAUTREY (1896) described and illustrated a fungus on *Carex vulpina* with large conidia (120–150 + µm long) of three different cell patterns ("*heteroschemon*"): conidia hyaline, with angular vacuoles; conidia hyaline with round or oval vacuoles; and dark, aging conidia with transverse septa and with one cell longitudinally septate. His illustrations fit this description well; and they, along with a portion of his type specimen, represent a *Nimbya* species.

Conidia in the specimen are broadly obclavate, beakless or narrowed into a filiform apical extension (only partially intact in material examined), spore body alone 75–100 × 18–22 µm, with 6–9 transverse pseudosepta incorporating 3–6 partial or complete eusepta; a single vertical pseudoseptum was seen in one cell.

Specimen examined. – C. ROUMEGUÈRE, Fungi sel. exs. 6942, on *Carex vulpina*, France, isotype, NY (EGS 03-057).

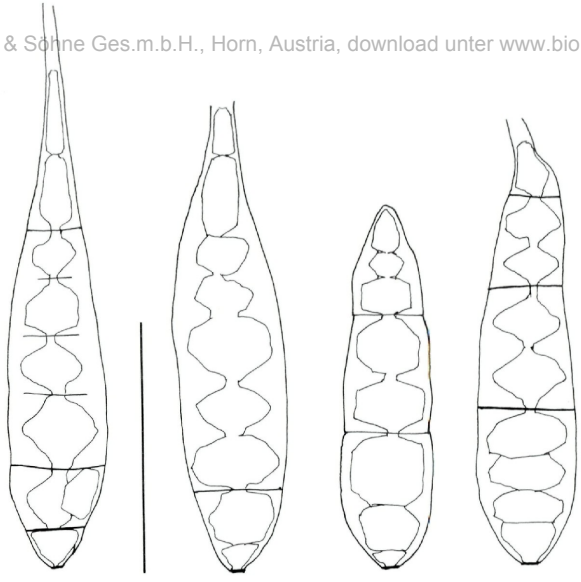

Fig. 4: *Nimbya heteroschemos*. – Conidia from isotype [NY]. – Bar = 50 µm.

4. ***Nimbya gomphrenae*** (TOGASHI) E. SIMMONS, comb. nov. – Fig. 5.

= *Alternaria gomphrenae* TOGASHI, Bull. Imp. coll. Agr. & For. (Morioka) 9: 6. 1926

= *Pseudocercospora gomphrenicola* CHIDDARWAR, Sci. & Cult. 22: 511. 1957

TOGASHI (1926) was the first to describe and name this leafspot fungus, which by now is known to occur commonly where the host is grown, particularly in tropical regions. Collections of the fungus are represented abundantly in IMI and BPI.

TOGASHI (1926) described the disease and gave a fungus description with illustrations; he also obtained isolates from his material. Unfortunately, but not irretrievably, he saw, described, and illustrated two different fungi associated with the leafspots, one the very distinctive large-spored *"Alternaria gomphrenae"* and the other a small-spored, chain-forming species of *Alternaria* of the *A. alternata* group. His isolate was of the small-spored species; for some years it was on deposit at the Centraalbureau voor Schimmelcultures (Baarn), but appears now to have been withdrawn from the CBS catalogue of strains (1987). The large-spored species is not listed by major culture collections. I have not recently been able to induce sporulation in any of the few isolates sent to me in the past.

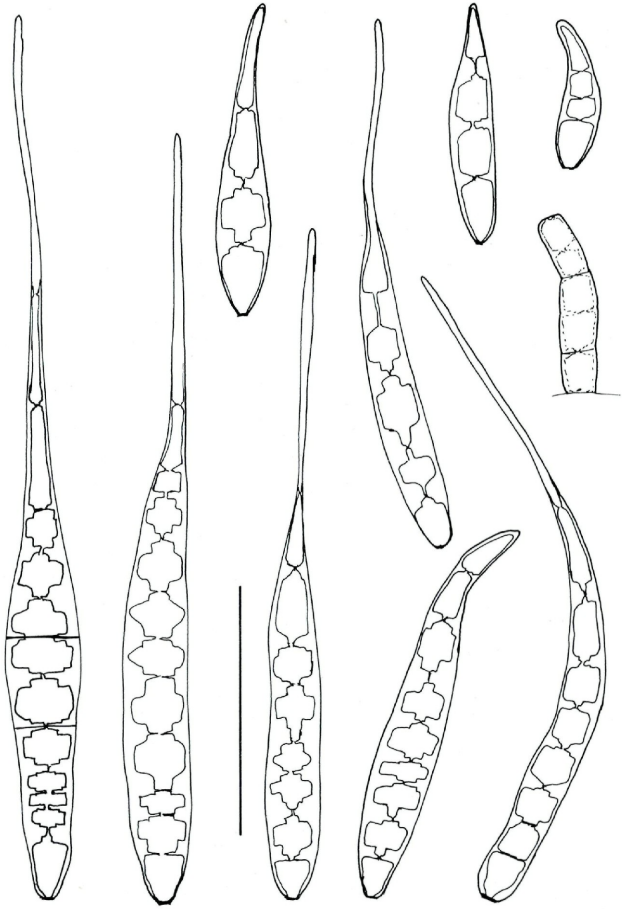

Fig. 5: *Nimbya gomphrenae*. – Conidia and conidiophore from a representative specimen on *Gomphrena globosa* in Cambodia [BPI] EGS 16-129. – Bar = 50 µm.

There is no necessity to discard TOGASHI's fungus name for reasons of potential confusion of two different species. A brief abstract of his observations of *Nimbya gomphrenae* may preclude future problems, for various species of true *Alternaria, Phaeotrichoconis,* and other dark molds often occur with the *Nimbya* on senescent spots: conidiophores arising singly or in bunches of 3–4, often of 5–9, simple, rarely branched, brown, lighter towards the tip, 65–123 × 5–8 µm in size, 1–5 septate, generally bearing a single conidium at the apex; conidia elongate-obclavate to obclavate in shape, terminating in a long septate beak, often curved, somewhat constricted at the septum, but sometimes not, brown, lighter in beak, smooth, 5–14 transversely septate, with a few longitudinal septa [only 1 is shown in typical conidia], and 56–216 × 11–20 µm in size.

Fungus elements on TOGASHI's original specimen now are scarce. More recent specimens yield conidia that are narrowly ellipsoid or obclavate, tapered distally into a narrow beak. Pseudosepta are very well defined throughout conidium development; the angular shape and the interconnections of adjoining lumina are extremely exaggerated in young conidia, becoming less so as additional pseudosepta, then some eusepta develop. Conidia and conidiophores are medium brown in color (and thus somewhat darker than the three species discussed above but not darker than the following species, *N. caricis*); the spore body commonly enlarges to about 100 × 15 µm plus a tapered beak that gives a common maximum length of about 150 µm. I have not seen conidia as long as the 216 µm recorded by TOGASHI; ELLIS (1976) gives 140 µm as the maximum length. The 8–11 transverse pseudosepta gradually are traversed by eusepta; a longitudinal pseudoseptum frequently can be seen in one to three of the largest cells.

Specimens examined (all on leaves of *Gomphrena globosa).* – Japan, NY (EGS 02-070); Japan, syntype NY (EGS 02-071); India, coll. G. P. AGARWAL (EGS 13-041 & -053); Cambodia, BPI (EGS 16-129, -130, -131); Java, coll. BOEDIJN (EGS 16-199); India, IMI-61825 (EGS 23-116), as type of *Pseudocercospora gomphrenicola* CHIDDARWAR; and numerous other specimens in BPI and IMI from India, Jamaica, Cuba, Trinidad, and Ceylon.

5. ***Nimbya caricis*** E. SIMMONS, sp. anamorph. nov. – Fig. 6.

A fungus on and isolated from *Carex hoodii* has huddled in my "unidentified alternarioid" files for almost 30 years, ever since it was the subject of much discussion with R. A. SHOEMAKER, who shared with me a specimen of an unusual fungus collected in Idaho, USA, in 1959 by R. SPRAGUE. My initial reaction was that we had a species of *Alternaria* whose conidia have a bluntly rounded, nonbeaked apex and which rarely formed longitudinal eusepta. It was realized, gradually, that euseptation of conidia in this species arose

after an earlier distoseptate condition. No genus known at that time seemed an appropriate home for the species. I now consider it to have the same pattern of conidium development as do species of *Nimbya* discussed above, noting that euseptation eventually may occur through any or all pseudosepta, including the rare longitudinal septa that sometimes are formed.

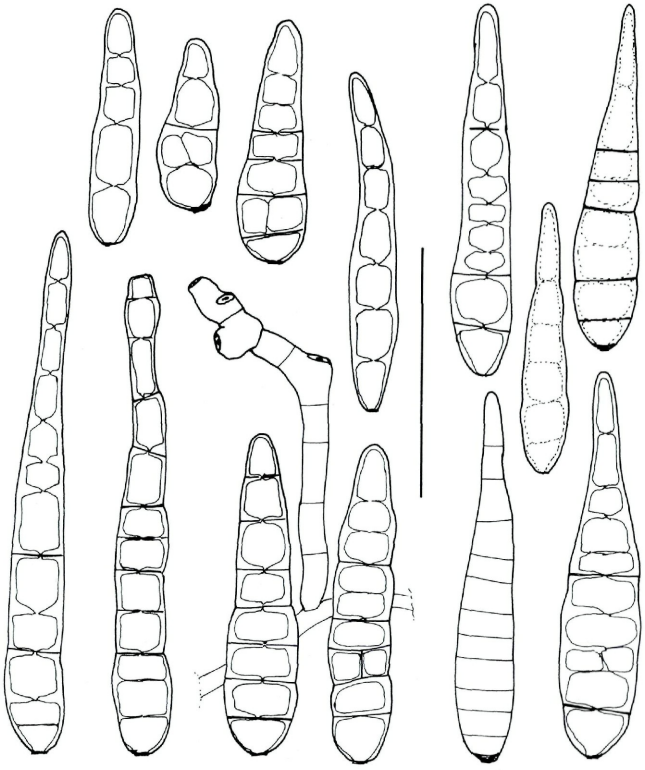

Fig. 6: *Nimbya caricis*. – Conidia and conidiophore (right of bar) from holotype [BPI] and (left of bar) from culture derived from original specimen. – Bar = 50 µm.

Nimbya caricis E. SIMMONS, sp. anamorph. nov.

Ex culturis in agaro "hay decoction" descripta. Conidiophora simplicia vel ad 1–4 locos conidiogenos aliquot geniculata, vulgo 40–150 × 5–6 µm. Conidia solitaria vel vulgo in catenam; juventute (2–3-pseudoseptata) ca. 20–40 × 6–10 µm, maturitate obclavata, 65–95 × 10–16 µm, transverse distincte 7–10, longitudinaliter 0–1 distoseptata, postremo euseptata.

Habitatio typi: in foliis *Carex hoodii*, Idaho, USA. Typus: praeparatio in lamina vitrea ex EGS 13-094 (ex WSP 46770 via DAOM 75059) in BPI (holotypus) conservanda.

Conidiophores of *N. caricis* may be short and closely geniculate as they produce successive conidiogenous sites, or they may be quite elongate, with conidiogenous sites about 50 µm apart. Conidia produced in culture are very similar in size and septation to those found in the original specimen. Usually solitary, they often give the appearance of a tuft of spores when borne on a closely geniculate conidiophore. Secondary sporulation is quite common, resulting in short chains of conidia. Conidia are a clear medium brown with a conspicuously darker, flattened basal area, ellipsoid to broadly obclavate, and gradually tapering into a broad, abruptly blunt beak. Young conidia (2–3-pseudoseptate) are 20–40 × 6–10 µm, fully developed conidia 65–95 × 10–16 µm. Conidia are distoseptate throughout their development, maturing with 7–10 transverse and 0–1 longitudinal septa, some or all of which eventually may be traversed by eusepta.

Material examined. – on *Carex hoodii*, ID, USA, coll. R. SPRAGUE (EGS 13-094, via DAOM 75059; and derivative isolate EGS 13-094).

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