

Plate 2. a. *Clibanites paradoxa*, asci and ascospores. b. *Hydriophora rufofusca*, ascus and ascospores. c. *Ijuhya aquifolii*, ascomata hairs and ascospores. d. *Ijuhya chilensis*, ascus. e. *Lasioneectria mantuana*, asci and ascospores. f. *Nectriella minuta*, median section of ascoma, asci, ascospores, conidiophores and conidia. a. Holotype - H. b. Holotype of *Nectriella rufofusca* - PAD. c. Lectotype of *Peziza aquifolii* - BPI 1113199. d. Holotype of *Lepidoneectria chilensis* - LPS. e. Holotype - PAD. f. Holotype - NY. Scale bars: a-f = 10 μ m, except upper figure in f = 100 μ m.

flattened cells. Asci subcylindrical, 25–30 \times 4–5 μ m, sessile, apex broad, blunt, with a ring, ascospores biserial. Ascospores narrowly cylindrical, 6–10 \times 1.5–2 μ m, equally 2-celled, not constricted, hyaline, smooth. **HABITAT AND DISTRIBUTION.**— Known only from the type specimen.

HOLOTYPE.— FINLAND. Runsala: 'prope oppid. supra lignum *Quercus vetustum*', 26 May 1861, P. Karsten No. 3365 (H).

DIMEROSPORIELLA Speg., *Revista Mus. La Plata* 15: 10. 1908.

Type: *D. paulistana* Speg.

= *Epinectria* Syd. & P. Syd., *Ann. Mycol.* 15: 215. 1917. — Type: *E. meliolae* Syd. & P. Syd.

Mycelium white, cottony, often bearing conidia, hyphae septate, branching. Ascumata scattered, superfi-

cial on white mycelium or directly on black mycelium of the host fungus, usually easily removed from substratum, subglobose, globose to obovoid, often collapsing by lateral pinching, 100–245(–270) μ m diam, pale yellow, KOH–, non-papillate, smooth or with short, flexuous hairs up to 25 μ m long. Ascumatal wall thin, often about 10 μ m thick, with wall of non-descript, small cells, often forming a *textura epidermoidea*. Asci clavate, usually less than 70 μ m long, often with an apical ring, 8-spored. Ascospores ellipsoid, 1–3-septate, hyaline, smooth, spinulose or striate. Anamorph, where known, *Acremonium*-like. On black, thick-walled hyphae of *Asterina*, *Meliola*, *Schiffnerula* or related species on living leaves in tropical regions.

NOTES.— *Dimerosporiella* is herein recognized for species that have previously been placed in the *Nectria leucorrhodina*-group (Samuels, 1976a; Rossman, 1983) or treated within *Nectriopsis* (Samuels, 1988). Spegazzini placed *Dimerosporiella* near *Dimerosporium* in the *Englerulaceae* differentiated by the presence of an ostiole. Petrak & Sydow (1934) examined the rather sparse type specimen of *D. paulistana*, presented a detailed description, and concluded that this species belonged in *Nectria*. *Dimerosporiella paulistana* represents a species additional to those previously placed in the *N. leucorrhodina*-group and/or *Nectriopsis*. The unispecific genus *Epinectria* was established for a species considered to be close to *Hyalocrea* but having elongate, one-septate ascospores. Several parts of the type specimen of *E. meliolae* were examined and the fungus was determined to be a synonym of *Dimerosporiella pipericola*. Seven species are included in *Dimerosporiella* differentiated primarily by ascumatal wall surface features and characteristics of the ascospores.

Dimerosporiella paulistana Speg., *Revista Mus. La Plata* 15: 10. 1908. — Plate 3, a–d.

Ascumata superficial, on black mycelium of *Schiffnerula* and on the surrounding leaf tissue, obovoidal, minute, 117 μ m high \times 80 μ m diam, pale yellow, ostiolate, thin-walled. Ascumatal wall ca 10 μ m thick, unpigmented, of *textura epidermoidea*. Asci clavate, apex thickened, with a ring, spent asci with open tops following ascospore discharge, ascospores biserial. Ascospores ellipsoid, 12–14 \times 4–4.5 μ m, 1-septate, hyaline, smooth.

HABITAT.— Known only from type specimen.

HOLOTYPE.— BRAZIL. São Paulo: Ipiranga Moça, on wilting leaves of *Buddleja* sp., Sep 1905, A. Uster, No. 143, det. C. Spegazzini, No. 402 (LPS).

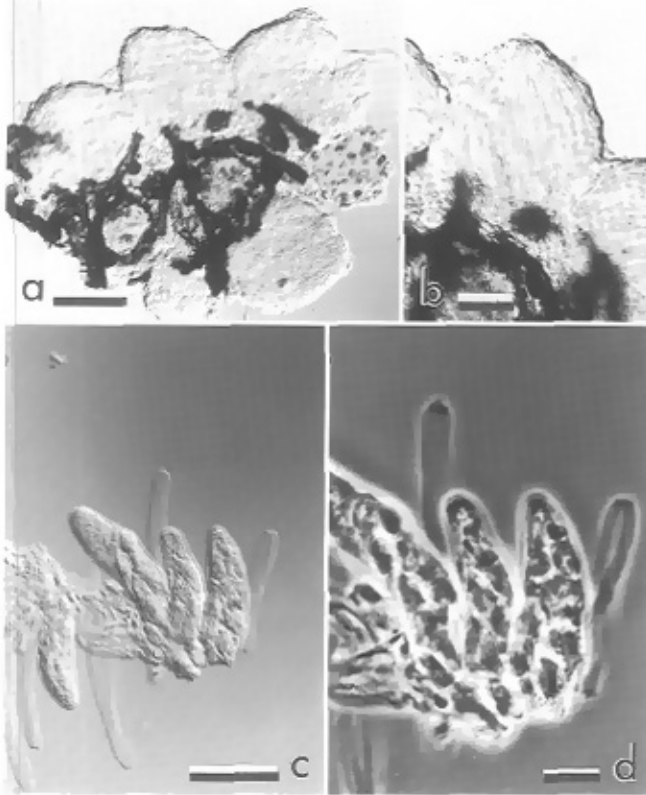


Plate 3. a–d. *Dimerosporiella paulistana*. a–b. Translucent, thin-walled ascomata on black, thick-walled host hyphae. c, d. Asci with ascospores and overmature asci. a–d. Holotype – LPS. Scale bars: a = 50 μ m; b, c = 25 μ m; d = 10 μ m

ADDITIONAL SPECIES OF *DIMEROSPORIELLA*:

Dimerosporiella cephalosporii (Hansford) Rossman & Samuels, *comb. nov.*

= *Calonectria cephalosporii* Hansford, Mycol. Pap. 15: 117. 1946.

= *Nectriopsis cephalosporii* (Hansford) Samuels, Mem. New York Bot. Gard. 48: 38. 1988.

This species was described and illustrated in Gams (1971, anamorph only) and Samuels (1988).

Dimerosporiella guarapiensis (Speg.) Rossman & Samuels, *comb. nov.*

= *Calonectria guarapiensis* Speg., Anales Soc. Ci. Argent. 19: 41. 1885.

= *Nectria microleuca* Rossman, Mycotaxon 8: 515. 1979.

= *Nectriopsis guarapiensis* (Speg.) Samuels, Mem. New York Bot. Gard. 48: 42. 1988.

= *Nectria bakeri* Rehm, Ann. Mycol. 6: 319. 1908.

[= *Nectria perpusilla* Sacc., Ann. Mycol. 11: 515. 1913, non (Mont.) Mont. 1856].

This species was described and illustrated in Samuels (1976a, as *Nectria bakeri*, 1988).

Dimerosporiella leucorrhodina (Mont.) Rossman & Samuels, *comb. nov.* — Plate 4, a.

= *Peziza leucorrhodina* Mont., in Sagra, Hist. Phys. Cuba, Bot. Pl. Cell. p. 360. 1842.

= *Calonectria leucorrhodina* (Mont.) Speg., Anal. Soc. Ci. Argent. 19: 40. 1885.

= *Scutula leucorrhodina* (Mont.) Speg., Anal. Soc. Ci. Argent. 26: 58. 1888.

= *Belonidium leucorrhodinum* (Mont.) Sacc., Syll. Fung. 8: 501. 1889.

= *Trichobelonium leucorrhodina* (Mont.) Seaver, North Amer. Cup Fungi (Inoperculates), p. 161. 1951.

= *Nectriopsis leucorrhodina* (Mont.) Samuels, Mem. New York Bot. Gard. 48: 42. 1988.

= *Nectria byssiseda* Rehm, in Winter, Rabenhorstii Fungi Europ. Exs., Ed. Nova, Ser. 2, Cent. 22, no. 4152. 1898.

= *Calonectria tubaroënsis* Rehm, Hedwigia 37: 195. 1898.

= *Pseudomeliola collapsa* Earle, Bull. New York Bot. Gard. 3: 309. 1905.

= *Calonectria limpida* Syd. & P. Syd., Leaflet Philipp. Bot. 5: 1545. 1912.

= *Pseudomeliola pipericola* F. Stevens, Bot. Gaz. 65: 230. 1918.

= *Nectria puberula* Speg. var. *microspora* Bat. & Nascim., in Batista et al., Inst. Micol. Recife Publ. 33: 5. 1956.

= *Calonectria ukolayii* Thaug, Trans. Brit. Mycol. Soc. 67: 435. 1976.

This species was described and illustrated in Samuels (1976a, 1988).

SPECIMEN ILLUSTRATED.—UGANDA. Entebbe Rd., on *Meliola* on living leaves of *Trichilia buchamani*, Aug 1944, C.G. Hansford, as *Calonectria cephalosporii* (BPI 631957).

Dimerosporiella oidioides (Speg.) Rossman & Samuels, *comb. nov.*

= *Nectria oidioides* Speg., Bol. Acad. Nac. Ci. 11: 524. 1889.

= *Nectriopsis oidioides* (Speg.) Samuels, Mem. New York Bot. Gard. 48: 42. 1988.

This species was described and illustrated in Samuels (1976a, 1988).

Dimerosporiella pipericola (Henn.) Rossman & Samuels, *comb. nov.*

= *Nectria pipericola* Henn., Hedwigia 43: 244. 1904

= *Nectriopsis pipericola* (Henn.) Samuels, Mem. New York Bot. Gard. 48: 42. 1988.

= *Epinectria meliolae* Syd. & P. Syd., Ann. Mycol. 15: 215. 1917.

This species was described and illustrated in Samuels (1976a, 1988) and one synonym is added here.

TYPE.—PHILIPPINES: Luzon, prov. Sorsogon, parasitic on mycelium of *Meliola* on leaves of a grass, July–Aug 1915, M. Ramos (Bureau of Science 23722). (Specimen with a typed label at FH is herein designated the **lectotype** of *Epinectria meliolae*; isolectotype at FH; two isolectotypes at BPI).

KEY TO THE SPECIES OF *DIMEROSPORIELLA*

1. Ascospores generally less than 12 μm long, smooth or finely spinulose 2
1. Ascospores generally more than 12 μm long, smooth or striate 3
2. Ascospores 8–10.5 \times 2.5–3 μm , smooth to finely spinulose; ascomata glabrous
..... *D. guarapiensis*
2. Ascospores 9–11 \times 3–4 μm , smooth; with modified, hair-like cells arising from around the
ascomatal apex *D. pipericola*
3. Ascospores (14–)17–22(–27) \times 3–4 μm , striate *D. oidioides*
3. Ascospores smaller, smooth-walled, spinulose or striate 4
4. Ascospores striate, (11–)12.5–16.5 \times 3–4 μm ; ascomatal hairs lacking; anamorph not pre-
sent *D. leucorrhodina*
4. Ascospores smooth; ascomatal hairs present or lacking; ascomata often associated with an
Acremonium-like anamorph having thick-walled conidiophores 5
5. Ascospores (8.5–)11.5–15.5(–18) \times 2.5–4 μm ; ascus apex simple; with hyphal hairs arising
from around the ascomatal apex *D. cephalosporii*
5. Ascus apex with a small ring; ascomatal lacking hairs 6
6. Ascospores (13.5–)14–16(–17) \times 2–3.5(–4) μm *D. sensitiva*
6. Ascospores 12–14 \times 4–4.5 μm *D. paulistana*

Dimerosporiella sensitiva (Rehm) Rossman & Samuels, *comb. nov.*

≡ *Nectria sensitiva* Rehm, *Hedwigia* 39: 222. 1900.

≡ *Nectriopsis sensitiva* (Rehm) Samuels, *Mem. New York Bot. Gard.* 48: 40. 1988.

This species was described and illustrated in Samuels (1988).

EMERICELLOPSIS J.F.H. Beyma, *Antonie van Leeuwenhoek Ned. Tijdschr. Hyg.* 6: 263. 1940.

Type: *E. terricola* J.F.H. Beyma.

Ascomata globose, hyaline but appearing brown due to the ascospores, wall of hyaline, flattened cells, non-ostiolate. Asci globose, hyaline, 8-spored. Ascospores ellipsoid, pale brown, initially smooth, wide, gelatinous layer collapsing to form 3–6 longitudinal wings at ma-

turity' (Domsch *et al.*, 1980, vol. 1, p. 272). Anamorph *Acremonium*. Isolated from soil and numerous organic substrata.

NOTES.—*Emericellopsis* was described as a member of the *Eurotiaceae* and assumed to bear a relationship with the teleomorph of *Emericella nidulans* based on the distinctively ornamented ascospores. Recent molecular studies have confirmed accounts that place this genus in the *Hypocreales*. Based on both 18S and 28S sequence data, *Emericellopsis* grouped within the *Hypocreales* (Glenn *et al.*, 1996; Ogawa *et al.*, 1997), allied with *Mycocarachis* in a subclade of the *Bionectriaceae* along with several anamorph genera. A nomenclatural account of the genus *Emericellopsis* with descriptions of six accepted species is provided by Gams (1971); since then three more species have been published.

Plate 4. a. *Dimerosporiella leucorrhodina*. b. *Ochronectria calami*. c. *Protocreopsis fusigera*. d. *Stilbocrea macrostoma*. e. *Arachnocrea stipitata*. f. *Hypocrea aureoviridis* f. *macrospora*. g. *Hypocrea pseudokoningii*. h–i. *Hypocreopsis lichenoides*. j. *Hypomyces lactiflorum*. k. *Hypomyces lateritius*. l. *Podostroma alutaceum*. m–n. *Protocrea farinosa*. a. BPI 631957. b. Holotype of *Calonectria oödes* – K. c. EC 682. d. BPI 744508; e. Fuckel 2358, BPI. f. G.J.S. 96-189, BPI 744424. g. PDD 23871. h, i. Photograph by J.-F. Magni, A8907. j. BPI slide 2030, photograph by K.H. McKnight. k. Photograph by S. Stein, Wayne, Maine, 1963. l. Holotype of *Podostroma leucopus* – H. m. n. Photograph by J.-F. Magni, specimen A94131. Scale bars: a = 2 mm, b = 2.7 mm, c = 1.8 mm, d = 1.6 mm, e = 3 mm, f = 5 mm, g = 2.5 mm, h = 4 mm, i = 1 mm, j = 50 μm , k = 25 mm, l = 4 mm, m = 2.5 mm, n = 500 μm .