*Rogersonia* suggest those of *Sarawakus* Boedijn (Samuels & Rossman, 1992). However, ascomata of species of *Sarawakus* form in a discrete, discoidal or pulvinate stroma and the ascal apex of species of that genus is thickened and has a shallow ring. The affinities of *Sarawakus* lie with *Hypocrea*, whereas those of *Rogersonia* lie with *Hypomyces*.

**Rogersonia striolata** Samuels & Lodge, Sydowia 48: 251. 1996. — Plate 22, b; Plate 23, a–e.

Subiculum indefinitely effused, thin, dissipated at the margin, light-colored, center dull yellowish, greyish yellow, pale yellow to yellowish brown, KOH–; behind the margin yellowish brown to pale yellow; white at the margin; hyphae *ca* 5.5 µm wide, tending to be vesiculose, 9–13 µm wide, thin-walled, with many erect free ends or lateral branches, 25–40 µm long, *ca* 10 µm wide, septate, tapering slightly from base to apex, hyaline, smooth-walled. Ascomata caespitose in great numbers except at the margin of the subiculum, discrete but crowded, clothed in hyphae with emergent papillae, pale yellow, KOH–, becoming cupulate on drying with erect papilla. Ascomatal wall *ca* 20 µm thick, of a single region of thin-walled, flattened cells, *ca* 15 × 4 µm. Ascomatal apex of conspicuous chains of cells that terminate in a larger clavate cell, 10–15 × 6–7 µm. Asci cylindrical, (80–)90–110(–120) × (6–)6.5–9(–11) µm, disintegrating at maturity; apex simple, 8-spored, ascospores uniseriate. Ascospores broadly ellipsoid, (10–)11.5–14(–16) × (5–)6–7.5(–8.5) µm, non-septate, hyaline, wall 1–1.7 µm thick, with conspicuous, transversely arranged, slightly anastomosing, ridge-like striations and intermittently reinforced with spinose extensions.

Habitat.— In rain forest on large fallen branches and logs of *Guarea guidonia* and *Swietenia macrophylla* at an elevation of 350 m.

Distribution.— Puerto Rico, Luquillo Mts.

Type and other specimens examined are listed in Samuels & Lodge (1996b).

Specimens illustrated.— PUERTO RICO. Luquillo Mts., El Verde Research Area, trail to Rio Sonadora, elev. 350 m, on underside of log, 4 Jul 1993, D.J. Lodge PR 1214 (Holotype – BPI 749257); same locality, on branch of *Guarea guidonia*, 4 Oct 1993, D.J. Lodge RP 1282 (BPI 749255); same locality, on log of *Swietenia macrophylla*, 16 Nov 1993, D.J. Lodge PR 1586 (BPI 749254).

Illustrations.— Samuels & Lodge (1996b, Figs. 1–11).

**SARAWAKUS** Lloyd, Mycol. Writings 7: 1258. 1924.

Type: *S. lycogaloides* (Berk. & Broome) Lloyd (≡ *Hypoxylon lycogaloides* Berk. & Broome).

Stroma discrete, discoidal, fleshy, pale yellow to rufous or brown, *Hypocrea*-like. Ascomata immersed in a single layer. Asci cylindrical, (6–)8-spored. Ascospores non-septate, hyaline, pale yellow to green, spinulose to tuberculate. Anamorphs *Gliocladium*-, *Trichoderma*-, or *Verticillium*-like. On decaying woody substrata.

Notes.— *Sarawakus* was established as a unispecific genus for *S. lycogaloides* which Lloyd considered unique and allied to either *Hypocrea* in having a soft-textured stroma or *Hypoxylon* in having a dark brown stroma and brown, non-septate ascospores. Boedijn (1934, 1964) provided the first complete description of the type species, placing the genus in the *Hypocreales*, and later he compared it to *Thuemenella*. Rifai (1969b) examined the type specimen and provided a detailed account of *Sarawakus* and its type species, placing it in the *Hypocreales*. Samuels & Rossman (1992) determined that *Sarawakus* is correctly placed in the *Hypocreales* and is distinct from *Thuemenella*, the latter belonging to the *Xylariales*, based primarily on characteristics of the anamorph. They provided a key, descriptions and illustrations to eleven species in *Sarawakus*, many of which have *Gliocladium*-, *Trichoderma*- or *Verticillium*-like anamorphs and show close affinities to *Hypocrea*. *Sarawakus* may eventually be restricted to *S. lycogaloides* Boedijn and *S. succisus* Rifai. Based on their anamorphs, the remaining species may by regarded as species of *Hypocrea* having non-septate ascospores. All names in *Sarawakus* were accounted for by Samuels & Rossman (1992).

**Sarawakus lycogaloides** (Berk. & Broome) Lloyd, Mycol. Writings 7: 1258. 1924. — Plate 24, a–f.

≡ *Hypoxylon lycogaloides* Berk. & Broome, J. Linn. Soc., Bot. 14: 120. 1873.

≡ *Sarcoxylon lycogaloides* (Berk. & Broome) Cooke, Grevillea 12: 50. 1883.

≡ *Penzigia lycogaloides* (Berk. & Broome) Sacc., Syll. Fung. 9: 569. 1891.

= *Hypocrea rhytidospora* Ces., Atti Accad. Sci. Fis. (Napoli) 8: 14. 1879.

≡ *Clintoniella rhytidospora* (Ces.) Sacc. & P. Syd., Syll. Fung. 16: 588. 1902.

Anamorph: None known.

Subiculum conspicuous to lacking, restricted to the immediate vicinity of the stroma or spreading over the substratum, nearly white to yellow, of branched, septate, thick-walled, 3–7 µm wide hyphae. Stromata discoidal, 3–10 mm diam, to 4 mm high, constricted at the base with margins free, surface papillate to slightly tuberculate from ascomatal protuberances, yellow at first, yellow-brown to rufous with age. Cells at stromal surface forming a 20–30 µm thick cortex of densely interwoven cells with 1.5–2 µm thick walls and narrow lumina; cortex continuous around the stroma to the

base, yellow. Ascomata completely immersed below the cortex, forming in a single layer, numerous, subglobose, 200–450 μm high × 270–350 μm diam. Tissue below the cortex consisting of *textura epidermoidea*, cells short, 7–10 μm wide, thin-walled, hyaline, merging below with hyphal tissue of the subiculum. Asci 120–190 × 9–13 μm, apex simple, 8-spored, ascospores uniseriate. Ascospores ellipsoid, 17–20 × 8–10 μm, non-septate, olivaceous (green in lactic acid), conspicuously tuberculate, tubercles broadly rounded, to 3 μm high.

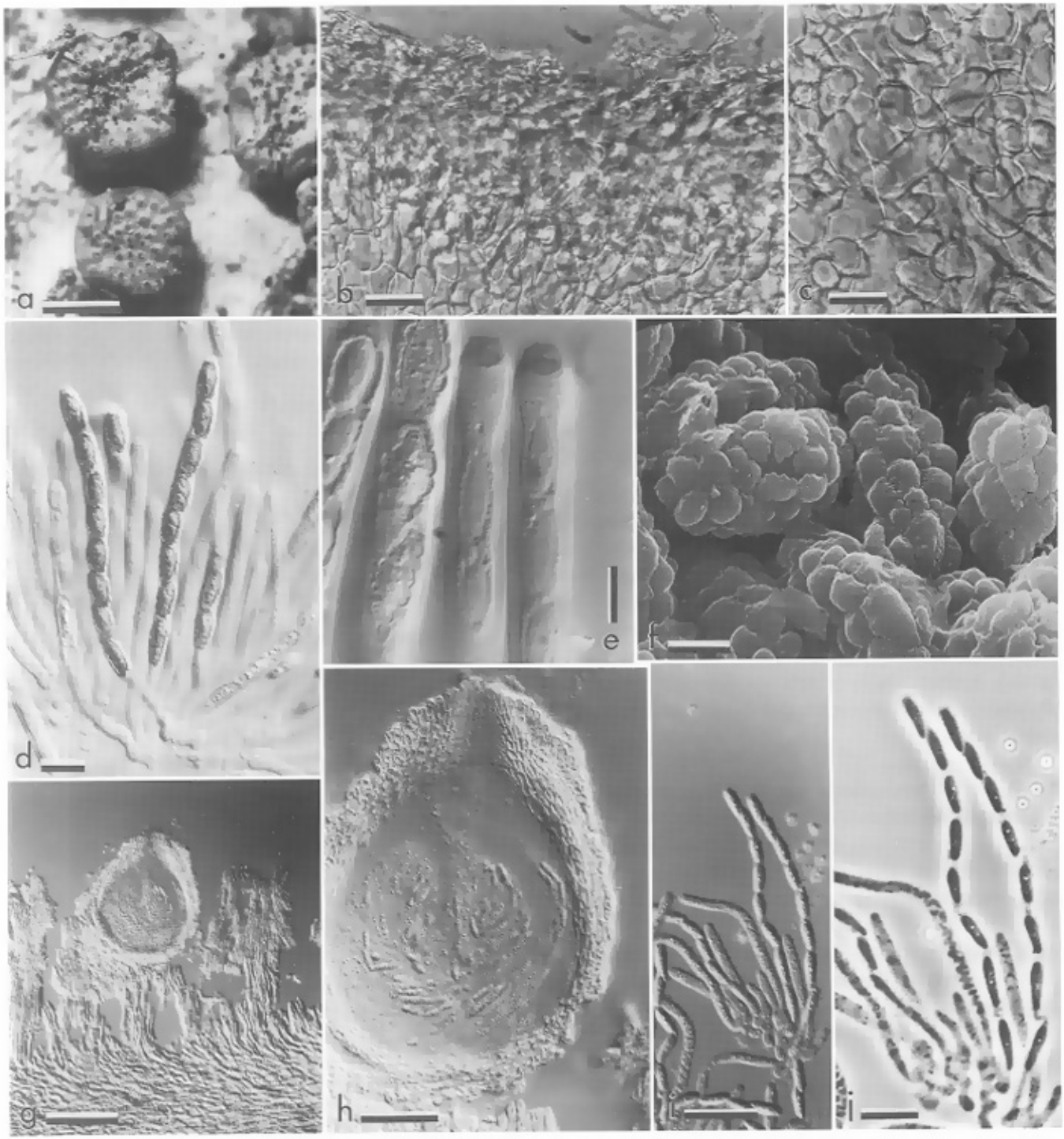


**Plate 24. a–f.** *Sarawakus lycogaloides*. a. Stroma with immersed ascomata. b. Section of stroma. c. Section of inner stroma. d. Asci with ascospores. e. Ascal apices and ascospores in median focus. f. SEM of ascospores showing tuberculate ornamentation. **g–j.** *Sphaerostilbella aureonitens*. g. Median section of ascoma and stroma. h. Median section of ascoma. i. Asci with ascospores. j. Asci with ascospores in phase contrast. a–e. G.J.S. 4102 – NY. f. G.J.S. 3368 – NY. g–j. Dumont VE 4752 – NY. Scale bars: a = 1 mm; b–d, h = 25 μm; e, j = 10 μm; f = 5 μm; g = 100 μm; i = 20 μm.

Habitat.— On wood and bark.
Distribution.— Costa Rica, Indonesia (Boedijn, 1934; Rifai, 1969b), French Guiana (Lusk, 1990), Sri Lanka, United States (Florida; Lusk, 1990).

Type specimens not examined.
Specimens examined.— COSTA RICA. Finca 1, Standard Fruit Co., Pandorra, host unknown, 20 June 1962, Carroll 36 (NY). FRENCH GUIANA. Paul Isnard Area, Mts. Lucifer and Decou Decou, *ca* 150 km S of St. Laurent du Maroni, on recently dead tree, 7–17 Mar 1986, Samuels 4102 (NY); Saül, elev. *ca* 200 m, on well rotted wood, 3–16 Feb 1986, Samuels 3739 (NY); *ca* 17.5 km SW of Saül (03°60′ N, 53°20′ W) toward Mt. Galbao, elev. 250 m, on bark, 24–28 Jan 1986, Samuels 3368 (CAY, NY). UNITED STATES. Florida: Alachua Co., Gainesville, San Palasco Hammock, in woods across road from nature trail, on downed sweet gum, 13 and 27 Jan 1987, Lusk 205 (NY).

Illustrations.— Boedijn (1934, Fig. 1), Rifai (1969b, Figs. 1, 2a), Samuels & Rossman (1992, Figs. 18–27).

**SPHAEROSTILBELLA** (Henn.) Sacc. & D. Sacc., Syll. Fung. 17: 778. 1905.

≡ *Sphaerostilbe* subgenus *Sphaerostilbella* Henn., Bot. Jahrb. Syst. 30: 40. 1901. — Type: *S. lutea* (Henn.) Sacc. (≡ *Sphaerostilbe lutea* Henn.).

Subiculum not conspicuous, at most, forming a thin compact layer on the host hymenium. Ascomata superficial, solitary to gregarious, obpyriform, non-papillate, smooth, ascomatal wall less than 25 µm thick. Asci cylindrical, apex slightly thickened, ascospores uniseriate. Ascospores naviculate to ellipsoid, with one median or slightly sub-median septum, non-disarticulating in asci, hyaline, finely spinulose.
Anamorph *Gliocladium*. On decaying Aphyllophorales, rarely wood.

Notes.— *Sphaerostilbella* was originally established as a subgenus of *Sphaerostilbe* that included one species, *S. lutea*. Seifert (1985) examined the holotype specimen and provided a detailed redescription and account of *Sphaerostilbella lutea* and its anamorph, *Gliocladium aurifilum*, as well as two additional species. Ascomata of *S. lutea* are known only from Africa and southeast Asia (Indonesia, Thailand), although its anamorph is cosmopolitan. *Sphaerostilbella aureonitens* with its anamorph, *Gliocladium penicillioides*, type of the genus *Gliocladium*, is a common cosmopolitan species, occurring in temperate and tropical regions. *Sphaerostilbella novaezelandiae* and its anamorph, *G. novaezelandiae*, are known only from New Zealand. A fourth species, *S. berkeleyana*, occurs in Europe, New Zealand, and North America in temperate regions.

Species of *Sphaerostilbella* have been variously included in *Hypomyces* because of their habit, parasitic on members of the *Aphyllophorales*, and in *Nectria sensu lato*, because of their non-apiculate, one-septate, ascospores and the lack of a conspicuous subiculum. Rehner & Samuels (1994) presented evidence from sequence analyses of 28S rDNA that *Sphaerostilbella* is distinct from both *Hypomyces* and *Nectria*, but closer to *Hypomyces*. In the anamorph, habit, and, to a lesser extent, ascospore characteristics, *Sphaerostilbella* is similar to *Hypocrea pallida*. The most obvious difference between the two is the disarticulation of the ascospores in *H. pallida*. The anamorphs of *Sphaerostilbella* and *H. pallida* are species of *Gliocladium sensu stricto* and, in the absence of the teleomorph, they could not be distinguished at the generic level. However, sequence data correlate with the teleomorph differences in distinguishing *Sphaerostilbella* from *H. pallida* (Rehner & Samuels, 1994).

Species of *Sphaerostilbella*:
**Sphaerostilbella aureonitens** (Tul. & C. Tul.) Seifert, Samuels & W. Gams, Stud. Mycol. 27: 145. 1985. — Plate 24, g–j.

≡ *Hypomyces aureonitens* Tul. & C. Tul., Sel. Fung. Carpol. 3: 64. 1865.
≡ *Hypolyssus aureonitens* (Tul. & C. Tul.) O. Kuntze, Rev. Gen. Pl. 3(3): 488. 1898.
≡ *Nectriopsis aureonitens* (Tul. & C. Tul.) Maire, Ann. Mycol. 9: 323. 1911.
≡ *Hyphonectria aureonitens* (Tul. & C. Tul.) Petch, J. Bot. 75: 220. 1937.
= *Nectria mycetophila* Peck, Bull. Buffalo Soc. Nat. Sci 1: 71. 1873.
≡ *Nectriella mycetophila* (Peck) Sacc., Syll. Fung. 2: 449. 1883.
= *Nectria parvispora* G. Winter, Hedwigia 25: 93. 1886.
≡ *Cucurbitaria parvispora* (G. Winter) O. Kuntze, Rev. Gen. Pl. 3(3): 461. 1898.
= *Dialonectria sulfurea* Ellis & Calk., J. Mycol. 4: 57. 1888.
≡ *Nectria sulfurea* (Ellis & Calk.) Sacc., Syll. Fung. 9: 966. 1891.
≡ *Cucurbitaria sulfurea* (Ellis & Calk.) O. Kuntze, Rev. Gen. Pl. 3(2): 461. 1898
= *Hypomyces arenaceus* A.L. Smith, J. Linn. Soc. Bot 35: 17. 1901.

Anamorph: *Gliocladium penicillioides* Corda.

This species was described and illustrated by Samuels (1976a, as *Hypomyces aureonitens*) and the anamorph by Seifert (1985).

Specimen illustrated.— VENEZUELA. Edo. Sucre, NW Irapa, trail from Los Pocitos, 11/2 h walking toward Santa Isabel, on *Stereum* sp. on unidentified wood, 11 July 1972, K.P Dumont VE 4752, *et al.* (NY).

**Sphaerostilbella berkeleyana** (Plowr. & Cooke) Samuels & Candoussau, Mycologist 9: 12. 1995.