

receptacles with a fringe of pale tan dichophyses, $14,5 \times 1-1,5 \mu$, branched; receptacles formed of three tramal layers, the outer $5-8 \mu$ thick, formed of several layers of dichophysoid hairs, middle layer formed of parallel arranged, light brownish hyphae, up to 15μ thick, and hymenial layer composed only of basidia, 15μ thick; basidia $14,5 \times 6 \mu$, 4-sterigmate, arising almost directly from the context; subhymenium 1-2 cells thick, no clamps seen; spores hyaline, globose, apiculate, smooth, 4μ in diameter; adjacent receptacles more or less cemented together but not grown together.

Habitat: On leaves of *Calamus* sp.

Type and specimen examined: Java: Bogor botanical garden. Collected by E. Nyman, March 3, 1898. (S).

Solenia canadensis sp. nov.

Cupula cylindracea, alba vel pallide lutea, $200-800 \mu$ longa, $100-400 \mu$ diam. subiculo albo, tortuoso ex hyphis $3-4 \mu$ crassis composito praedita; basidiis 4-sporis, $14-20 \times 5-7 \mu$; sporis hyalinis, laevibus, apiculatis, subglobois vel ellipsoideis, $4-6 \times 2,5-4 \mu$.

Receptacles cylindric, whitish to light cream-colored, $200-800 \mu$ high, $100-400 \mu$ in diameter, seated in a white subiculum, gregarious, appearing macroscopically like a *Poria*, under a hand lens like an *Odontia*, but hymenium lining the inside of tubules; subiculum loose, of spiral-shaped hyphae $3-4 \mu$ in diameter, rarely septate, not clamped, covering the cups when dry, appearing as surface hairs or tissue when moistened, on outer half or three-fourths of cups surface hairs $100-200 \mu$ long, hyaline, mostly smooth; basidia 4-sterigmate, $14-20 \times 5-7 \mu$; spores hyaline, smooth, apiculate, subglobose to ellipsoid, flattened on one side, $4-6 \times 2,5-4 \mu$.

Habitat: On wood, especially of *Abies balsamea*, *Picea* sp., and *Fagus* sp.

Type: Ontario: Lake Temagami, Bear Island, Aug. 14, 1931. Coll. R. F. Cain 846 (NFC).

Other specimens examined: Same location: July 22, 1939. Coll. H. S. Jackson (TRTC 15292); Island 725, Lake Temagami, Aug. 8, 1939. Coll. R. F. Cain (TRTC 17953); Odell Park, Frederickton, New Brunswick, Sept. 4, 1959. Coll. K. A. Harrison (OTC 4205).

Solenia candida Pers., Myc. Eur. 1: 334. 1822.

Calypstellia nivea Quél., Ench. Fung. 216. 1886 non *Cyphella nivea* Crouan, Fl. Finist. 61. 1867 nec *Cyphella nivea* Fckl., Symb. Myc. 1: 26. 1870 (*C. niveola* Sacc., 1886) — *Solenia candida* var. *polyporoidea* Pk., Ann. Rep. N. Y. St. Mus. 41: 86. 1886. — *Solenia fascicularis* var. *palmicola* Henn., Verh. Bot. Ver. Prov. Brandenb. 40: 120. 1898. — *Henningsomyces candidus* (Pers.) O. Kuntze, Rev. Gen. 3(2): 483. 1898. — *Cyphella candida* (Pers.)

Pat., Ess. Taxon. 55. 1900. — *Cyphella (Calypstella) nivea* (Quél.) Bourd. & Galz., Hym. Fr. 155. 1928. — *Solenia polyporoidea* (Pk.) Burt, Mo. Bot. Gard. Ann. 11: 16. 1924. — *Solenia candida* var. *herbarum* Pilát, Ann. Mycol. 23: 167. 1925.

Receptacles tubular, white at first, then cream color in some specimens when dry, free to confluent, when confluent not separating without damage, with an evanescent subiculum which may not be evident in some specimens, 200—800 μ , sometimes reaching 3 mm. tall, 200—500 μ in diameter, appearing sessile at first, with a stipe-like base which may be as much as half the length of the receptacle at maturity; covered with a fine network of clamped hyphae 1—2 μ in diameter, finely branched, forming a dichophysoid pellicle, dichophysoid hyphae 10—25—(50) \times 0.5—1.0—(1.5) μ ; mouth of receptacles somewhat inrolled when dry, with a palisade of dichophyses around the margin, dichophyses hyaline, branched dichotomously, 1—2 μ in diameter, branch tips slender, probably a continuation of the dichophysoid network of surface hyphae; basidia 14.5—21 \times (4—5)—7—8 μ , 2—4-spored, in a compact, whitish to creamcolored hymenium; spores hyaline, smooth, apiculate, globose to subglobose, or ovoid, 3.5—6.0 \times 3.0—5.0 μ , or 3—6 μ in diameter.

Habitat: On rotting coniferous and hardwood wood and bark, especially of: *Abies* sp., *A. alba*, *A. balsamea*, *A. bornmulleriana*, *A. concolor*, *A. magnifica* var. *shastensis*, *A. pectinata*, *Chamaecyparis thyoides*, *Juniperus virginiana*, *Larix* sp., *Picea* sp., *P. excelsa*, *Pinus* sp., *P. monticola*, *P. ponderosa*, *Pseudotsuga menziesii*, *Taxodium distichum*, *Thuja occidentalis*, *Tsuga canadensis*, *Acer* sp., *Alnus* sp., *A. glutinosa*, *Anona reticulata*, *Betula* spp., *B. alba*, *B. verrucosa*, *Bignonia capreolata*, *Bixa orellana*, *Citharoxylum spinosa*, *Cocos nucifera*, *Eucalyptus regnans*, *Fagus* sp., *F. silvatica*, *Fraxinus* sp., *Mimusops* sp., *Palmaceae* spp., *Phyllicia* sp., *Populus* sp., *P. tremuloides*, *Quercus* sp., *Q. alba*, *Q. morbeckii*, *Q. suber*, *Robinia pseudacacia*, *Sabal* sp., *S. blackburnianum*, *Salix alba*, *Tecoma radicans*, *Umbellularia californica*, *Vitis* sp.

Specimens examined from: Austria (8), Czechoslovakia (25), France (9), Germany (21), Great Britain (8), Hungary (7), Italy (1), Latvia (3), Holland (1), Poland (1), Portugal (3), Sweden (44), Yugoslavia (1), Macedonia (1), Turkey (2), Algiers (1), French Morocco (2), Sierra Leone (1), Tunis (1), Ceylon (4), Japan (2), Australia (3), New Zealand (3), Philippine Islands (3), Brazil (6), Ecuador (2), Chile (1), Tristan da Cunha (1), Bermuda (14), Jamaica (2), Trinidad, B. W. I. (1), Canal Zone (1), British Columbia (2), Ontario (30), Nova Scotia (5), Quebec (3), California (13), Connecticut (1), Delaware (1), Florida (3), Georgia (1), Idaho (2), Iowa (4), Kentucky (2), Louisiana (21), Maine (2), Massachusetts (4), Michigan (1), Missouri (1), New Hampshire (10), New Jersey (8), New York (22), North Carolina (1), Ohio (6), Oregon (1).

Pennsylvania (5), Tennessee (3), South Carolina (5), Texas (2), Vermont (4), Virginia (1), Washington (3).

One of the specimens received from Malençon from Morocco had spores $4-5 \times 2-3 \mu$. Surface hairs on the Australian specimen were weakly developed. The type of surface covering exhibited in the receptacles of this species is referred to by Singer in his descriptions of certain species of *Campanella* as "numerous dichophyses on the sterile surface form[ing] a cuticle with asterostromelloid structure". Such dichophysoid surface coverings are found in several of the genera treated here. At present no phylogenetic significance is attached to the possession of such pellicles by certain species.

Solenia candida var. *polyporoidea* differs from *Solenia candida* only in growth habit. In the species the tubules are always widely enough spaced so that they remain separate if only by a fraction of a millimeter. In the variety, if it should be recognized, at least some, if not all, of the tubules are close enough together on the substratum so that in reaching maturity they touch and hyphae of adjacent tubules become permanently interwoven. The ranges of the two habits overlap. On the basis of fresh material found during Mycological Society of America Forays near Ithaca, New York, and Madison, Wisconsin, the writer thinks that the division of this species into varieties is not justified. In both cases specimens were found which could be divided into specimens of each type of growth habit. Neither specimen covered more than five square inches of area on the under side of rotting sticks. This type of crowded growth on a palm leaf sheath in the Berlin Botanical Garden's Palm House prompted P. Hennings to erect the new variety *Solenia fasciculata* var. *palmicola* which otherwise agrees with material seen of *S. candida*.

Type specimens examined: *Solenia candida* var. *polyporoidea* Pk., on *Tsuga canadensis*. New York: Adirondack Mountains, July 1887. Coll. C. H. Peck. (NYS).

Porothelium anastomosans Burt in herb. (FH) (Farlow)

Chile: Corral, Dec. 1905, R. Thaxter 4157 and 4158 (FH)

Burt noted in the packet: "This is a beautiful and very distinct *Porothelium*".

Solenia candida var. *hydnoidea* (Berk. & Br.) comb. nov.

Solenia hydnoidea Berk. & Br., Jour. Linn. Soc. Lond., Bot. 14: 74. 1875.

Microscopic skeletal appearance like that of *S. candida*; receptacles seated on thin subiculum-like surface hairs; macroscopic appearance like that of *S. candida*, receptacles crowded, seated on the thin concolorous subiculum; basidia present but collapsed.

Type: Ceylon, Peradeniya, Dec. 1868, No. 149.

Specimens examined: Ceylon (2)

This growth form is maintained as a distinct variety because the receptacles are produced on a distinct subiculum in a restricted area whereas *S. polyporoidea* is not because its cupules are gregarious to scattered on a nearly subiculum-free surface.

Solenia conferta Burt, Mo. Bot. Gard. Ann. 11: 17. 1924.

Receptacles tubular, separate, yellow, densely crowded together, not distorted by mutual pressure, not becoming confluent; 2–5 mm. long, up to 500 μ in diameter; covered with hairs, appressed, parallel, more or less interwoven, yellowish, smooth, non-septate, pointed at the tip, more or less flexuous, not stiff, 100–200 \times 3–4 μ ; trama 1–2 cells thick, giving rise to a compact hymenium on one side, to the surface hairs on the other; basidia short-clavate, 10–14 \times 4–5 μ , 4-sterigmate; spores smooth, apiculate, hyaline, subglobose to ellipsoid, 4,5–5,5 \times 2,5–3,0 μ .

Habitat: On rotten wood.

Type: Missouri: Meramec Highlands, Dec. 6, 1913, L. O. Overholts. (LOO 12990 in PAC; MO 14505 in NFC).

Specimens examined from: Alabama (3), South Carolina (6), Kentucky (3), Missouri (2), Virginia (1).

A specimen from Barro Colorado Island, Panama Canal Zone, is similar to this species but more cupulate and with narrower surface hairs (IA).

Solenia epiphylla Dur. & Lév., Fl. Alg., t. 29, f. 1. 1846.

Receptacles cylindrical, cream color, gregarious, up to 500 μ long, 100–200 μ in diameter, covered with special hairs; surface hairs ivory to hyaline, non-septate, not incrustated, not stiff, wavy, sometimes weakly spiral tipped, simple, 75–100 \times 1,5 μ ; context thin, hyphae 2,5–3 μ in diameter, no clamps seen; basidia crowded, 14–17 \times 5,5–8 μ , 4-sterigmate; spores hyaline, broad ovate, apiculate, smooth, flattened on one side, 4 \times 3 μ .

Habitat: On leaves of *Arbutus unedo*.

Specimens examined: France, La Calle. On leaves of *Arbutus unedo* and other trees. Oct. 21. 1846. (PA) (probably ex herb Lévêillé)

Solenia farinacea P. Henn. & E. Nym., Monsumia 1: 7. 1899.

Receptacles gregarious, cylindrical, with no special subiculum, 500 μ high, 100 μ in diameter; surface hairs hyaline, thick-walled, contorted, 125–150 \times 3–4 μ ; context composed of hyaline hyphae, 3–4 μ in diameter, giving rise to the subhymenium composed of hyaline hyphae 2–3 μ in diameter; basidia crowded in a tight palisade, 10 \times 3 μ , 4-sterigmate; spores hyaline, smooth, ovate, apiculate, 5,8 \times 2,9 μ ; no clamp connections seen.

Habitat: On dead plant materials.

Type and specimen examined: Java: Zandbai, Coll. E. Nyman, Dec. 17, 1897. (S).