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Taxonomic study of Japanese Corticiaceae (Aphyllophorales) V*

N. MAEKAWA

Abstract

Ten corticiaceous species (Basidiomycotina), collected from Hahajima Island which is one of the Ogasawara Islands and located about 1,000 km south of Tokyo, are reported as new records from Japan. They are *Candelabrochaete langloisii*, *Gloeodontia discolor*, *Hyphodontia gossypina*, *H. niemelaei*, *Peniophora bicornis*, *Scytinostromella nannfeldtii*, *Sistotrema coronilla*, *Trechispora alnicola*, *T. dimitica* and *T. nivea*. Their morphological descriptions, illustrations and remarks based on the Japanese specimens are provided.

Key Words: **Basidiomycotina, description, Japan, morphology, Ogasawara (Bonin) Islands, systematics.**

Hahajima Island, a small oceanic island and one of the Ogasawara Islands (Bonin Islands), is located about 1,000 km south (26°40'N, 142°10"E) of Tokyo, Japan. This island belongs to subtropical regions, and has a characteristic forest ecosystem with many endemic species of trees and small woody plants (Ito, 1992). From the island, many fungi of Aphyllophorales (Basidiomycotina) have been described by several mycologists, e.g. Berkeley and Curtis (1860), Kobayasi (1937), Ito and Imai (1940), Ito (1955), and Neda and Hattori (1991), but corticiaceous fungi (Corticiaceae sensu lato) not known except for a few species reported by Ito and Imai (1940) and Neda and Hattori (1991). In December of 1997 and November of 1999, the author collected a total of 350 specimens of corticiaceous fungi on the island. In the present paper, of these collections, the following ten corticiaceous species are reported as new records from Japan. In the description, color names in double quotation marks are from Rayner (1970). Methods of microscopic observation are those described in Maekawa (1993). All of the specimens examined here are deposited in the herbarium of the Tottori Mycological Institute (TMI).

* Contribution No. 334 of the Tottori Mycological Institute, 211 Kokoge, Tottori, 689-1125 Japan.

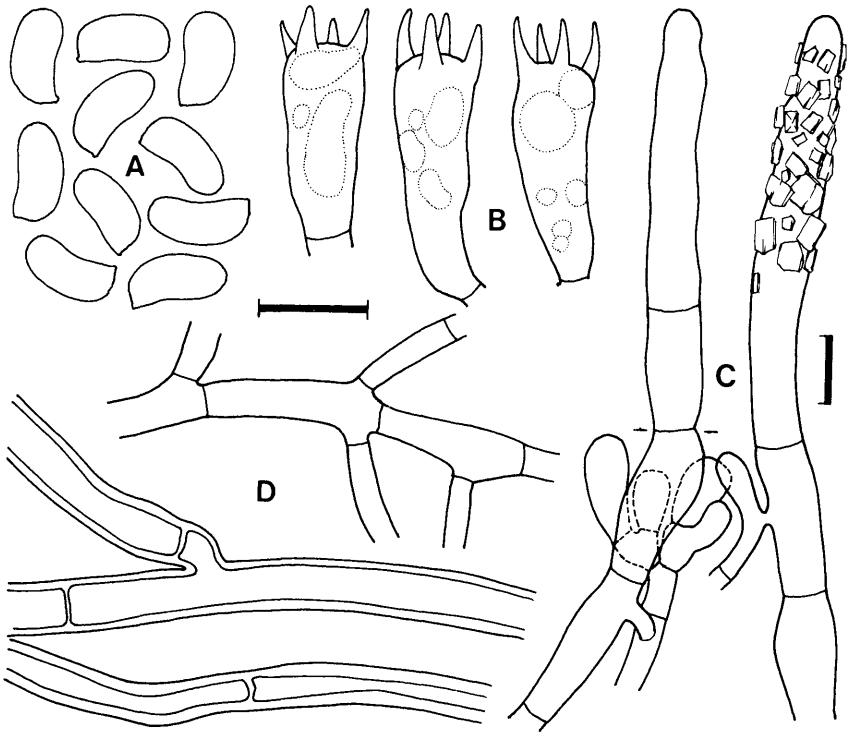

FIG. 1. *Candelabrochaete langloisii* (TMI 20887). A. Basidiospores. B. Basidia. C. Cystidia. Short bars indicate the level of the hymenial surface. D. Subicular hyphae. Scale bars = 10 μm.

Candelabrochaete langloisii (Pat.) Boidin, Cah. Maboké **8**: 24, 1970. Fig. 1.

≡ *Hypochnus langloisii* Pat., Bull. Soc. Mycol. France **24**: 3, 1908.

Distribution: North America. New to Japan.

Basidiomata resupinate, loosely adnate, effused, thin, fragile; hymenial surface grayish white to "Rosy Buff", smooth; margin concolorous with the hymenial surface, thinning out, indeterminate, sometimes reticulate under the lens (×20). In vertical section subhyaline, pellicular to submembranous. Hyphal system monomitic; hyphae 3–8 μm in diam, smooth, thin- to slightly thick-walled (up to 1.5 μm), clampless-septate; cystidia narrowly clavate to cylindrical, 80–160 × 8–12 μm, with several clampless-septa, sometimes slightly constricted at the septa, smooth, thin-walled, sometimes encrusted with subhyaline crystalloid or orange-brown granular materials; basidia clavate, sometimes with a slight median constriction, 17–21 × 6.5–7.5 μm, without a basal clamp, producing 4 sterigmata; basidiospores broadly suballantoid, 7.5–8.5 × 3.5–4 μm, smooth, thin-walled, non-amyloid.

Specimen examined: TOKYO (Hahajima Island) — TMI 20887 on decaying branch of *Terminalia catappa* L., Minamizaki (30–80 m alt.), 12 Dec. 1997, coll. N. Maekawa.

Remarks: *Candelabrochaete langloisii* can be distinguished from other species of this genus by its narrowly clavate to cylindrical cystidia, which are with several clampless-septa and encrusted with subhyaline crystalloid

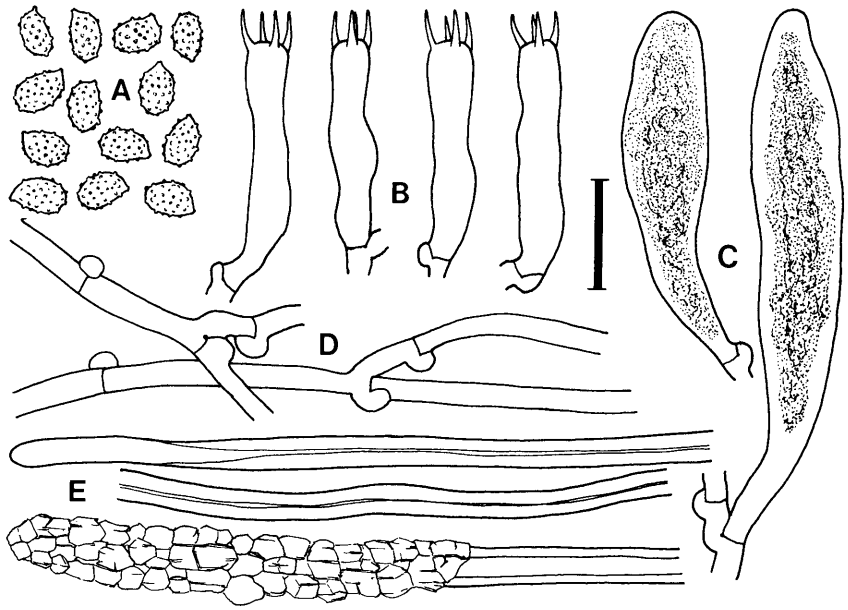

FIG. 2. *Gloeodontia discolor* (TMI 20890). A. Basidiospores. B. Basidia. C. Gloeocystidia. D. Generative hyphae. E. Skeletal hyphae. Scale bar = 10 μm.

or orange-brown granular materials, and broadly suballantoid basidiospores measuring 7.5–8.5 × 3.5–4 μm. This species has been reported only from Florida and Louisiana in U.S.A. (Burdsall, 1984; Rogers, 1943), and therefore, the Hahajima specimen represents the first record of *C. langloisii* outside southerstern U.S.A.

Gloeodontia discolor (Berk. & Curtis) Boidin, Cah. Maboké **4**: 22, 1966. Fig. 2.

≡ *Irpex discolor* Berk. & Curtis, Grevillea **1**: 145, 1873.

Distribution: Africa, and North and South America. New to Japan.

Basidiomata resupinate, adnate, effused, 20–60 μm thick excluding aculei; hymenial surface "Buff", "Pale Luteous" to "Ochreous", odontoid to hydnoid; aculei 5–15 per mm^2, usually conical, up to 2.5 mm in length; margin white to "Buff", thinning out, indeterminate, sometimes fimbriate under the lens (×20). In vertical section, subhyaline, membranous. Hyphal system dimitic; generative hyphae 1–3 μm in diam, smooth, thin- to slightly thick-walled (up to 1 μm), nodose-septate; skeletal hyphae 2–4 μm in diam, smooth, thick-walled (up to 2 μm), becoming thin-walled and sometimes heavily encrusted at the apex in the aculei, non-amyloid, non-dextrinoid; cystidia (gloeocystidia) narrowly clavate to cylindrical, sometimes sinuous, 25–85 × 6.5–8.5 μm, with a basal clamp, positive in sulphobenzaldehyde; basidia cylindrical, sometimes slightly sinuous, 17–23 × 3.5–4.5 μm, with a basal clamp, producing 4 sterigmata; basidiospores ellipsoid, sometimes adaxially flattened, 3.5–4.5 × 2.5–3 μm, verrucose, thin-walled, amyloid.

Specimens examined: TOKYO (Hahajima Island) — TMI 20889 on decaying branch of *Terminalia catappa*, Minamizaki (30–80 m alt.), 12 Dec. 1997, coll. N. Maekawa; TMI 20890 on

decaying wood of a broad-leaved tree, Minamizaki (30–80 m alt.), 12 Dec. 1997, coll. N. Maekawa; TMI 21333 on decaying branch of a broad-leaved tree, Mt. Kuwanokiyama (150–250 m alt.), 22 Nov. 1999, coll. N. Maekawa; TMI 21314 on decaying branch of a broad-leaved tree, Mt. Funaki to Mt. Chibusayama (150–400 m alt.), 23 Nov. 1999, coll. N. Maekawa.

Remarks: The odontoid to hydnoid hymenial surface, dimitic hyphal system, presence of gloeocystidia, and verrucose, amyloid basidiospores are distinct in *G. discolor*. Cultural features of a dikaryotic strain derived from basidiospores of TMI 21333 agree with those described by Burdsall and Lombard (1976) and Nakasone (1990). This species has been known only from the subtropical to tropical regions, i.e., southeastern U.S.A. (Alabama, Arizona, Florida, Georgia, Mississippi, South Carolina and Texas) (Burdsall and Lombard, 1976), Brazil, Ivory Coast, Kenya and Tanzania (Hjortstam and Larsson, 1995). *Gloeodontia discolor* appears to be common in Hahajima Island.

Hyphodontia gossypina (Parm.) Hjortstam, Mycotaxon **39**: 416, 1990. Fig. 3.

≡ *Fibrodontia gossypina* Parm., Consp. Syst. Cort. p. 207, 1968.

Distribution: Africa, Asia [Iran (Hallenberg, 1981), Nepal (Hjortstam and Ryvarden, 1984), Thailand (Hjortstam and Ryvarden, 1982)], Europe and North America. New to Japan.

Basidiomata resupinate, loosely adnate, effused, 100–900 μm thick including aculei; hymenial surface white, whitish cream to "Buff", smooth to odontoid; aculei dense, 15–25 per mm^2, conical to cylindrical, up to 800 μm in length, apically fimbriate under the lens (×20); margin concolorous with the hymenial surface, thinning out, indeterminate, sometimes fibrillose to fimbriate under the lens (×20). In vertical section, subhyaline, submembranous. Hyphal system pseudodimitic; generative hyphae 1.5–3.5 μm in diam, smooth, thin- to slightly thick-walled (up to 1 μm), nodose-septate; pseudoskeletal hyphae numerous in the aculei, originating from the generative hyphae in the subiculum, 1.5–3 μm in diam, smooth, thick-walled (up to 1.5 μm), becoming thin-

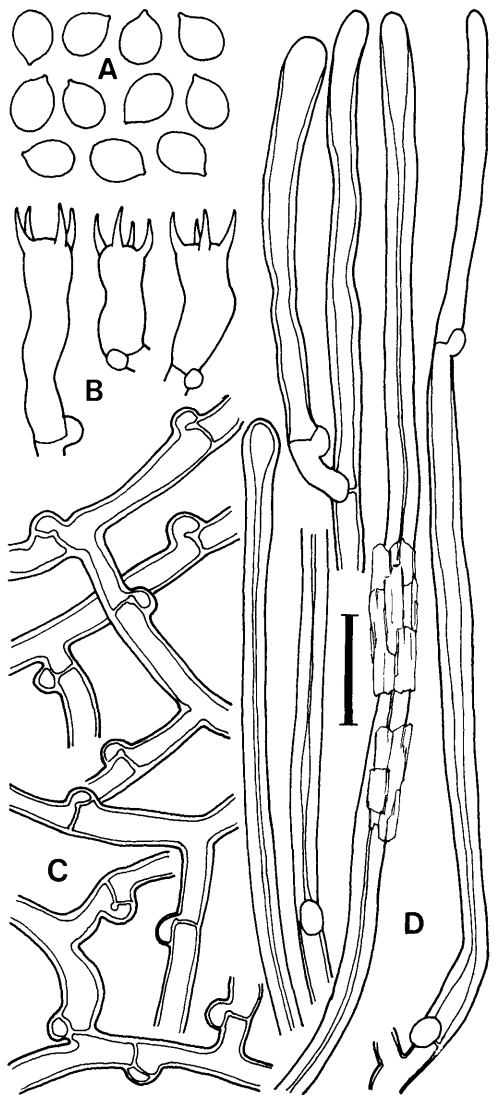

FIG. 3. *Hyphodontia gossypina* (TMI 21349). A. Basidiospores. B. Basidia. C. Generative hyphae. D. Pseudoskeletal hyphae in an aculeus. Scale bar = 10 μm.

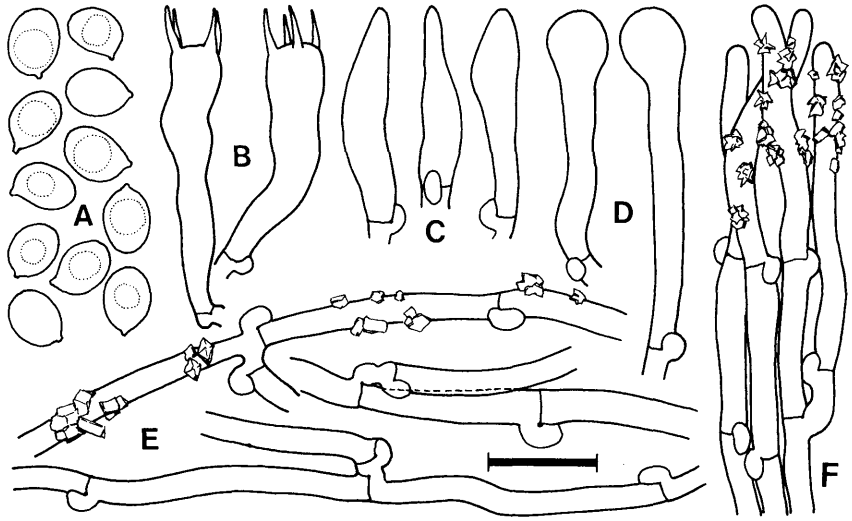

FIG. 4. *Hyphodontia niemelaei* (TMI 20771). A. Basidiospores. B. Basidia. C. Subulate leptocystidia. D. Capitate cystidia. E. Subicular hyphae. F. Apical part of a dissepiment edge. Scale bar = 10 μm.

walled at the apex in the aculei, sometimes encrusted, non-amyloid, non-dextrinoid; cystidia lacking; basidia cylindrical to subclavate, sometimes slightly constricted, 11–18 × 4–4.5 μm, with a basal clamp, producing 4 sterigmata; basidiospores ellipsoid, 4.5–5 × 3–3.5 μm, smooth, thin-walled, non-amyloid.

Specimens examined: TOKYO (Hahajima Island) — TMI 20799 on decaying branch of a broad-leaved tree, Minamizaki (30–80 m alt.), 12 Dec. 1997, coll. N. Maekawa; TMI 20891 on decaying wood of a broad-leaved tree, Minamizaki (30–80 m alt.), 12 Dec. 1997, coll. N. Maekawa; TMI 20783 on decaying wood of a broad-leaved tree, Mt. Sakaigatake to Sekimon (250–400 m alt.), 11 Dec. 1997, coll. N. Maekawa; TMI 20784 on decaying trunk of a broad-leaved tree, Mt. Sakaigatake to Sekimon (250–400 m alt.), 11 Dec. 1997, coll. N. Maekawa; TMI 20876 on decaying bark of a broad-leaved tree, Mt. Sakaigatake to Sekimon (250–400 m alt.), 11 Dec. 1997, coll. N. Maekawa; TMI 21183 and TMI 21184 on decaying and decorticated branch of a broad-leaved tree, Mt. Kuwanokiyama (150–250 m alt.), 22 Nov. 1999, coll. N. Maekawa; TMI 21349 on decaying trunk of a broad-leaved tree, Sekimon (250–300 m alt.), 24 Nov. 1999, coll. N. Maekawa.

Remarks: Characteristic features of *H. gossypina* include its densely odontoid hymenial surface, pseudoskeletal hyphae in the aculei and ellipsoid basidiospores measuring 4.5–5 × 3–3.5 μm. Dikaryotic strains from the Japanese specimens, TMI 21183, 21184 and 21349, all produced silky and cottony mats and globose-vesicles in culture. These characteristics were identical to those described by Nakasone (1990). *Hyphodontia gossypina* is common in Hahajima Island.

Hyphodontia niemelaei S.H. Wu, Acta Bot. Fenn. **142**: 98, 1990. Fig. 4.

Distribution: Africa, Asia [Taiwan (Wu, 1990)] and South America. New to Japan.

Basidiomata resupinate, loosely adnate, effused, 50–250 μm thick; hymenial surface white, cream to "Pale Luteous", poroid; pores 10–30 per mm^2, anguler, thin-walled, up to 150

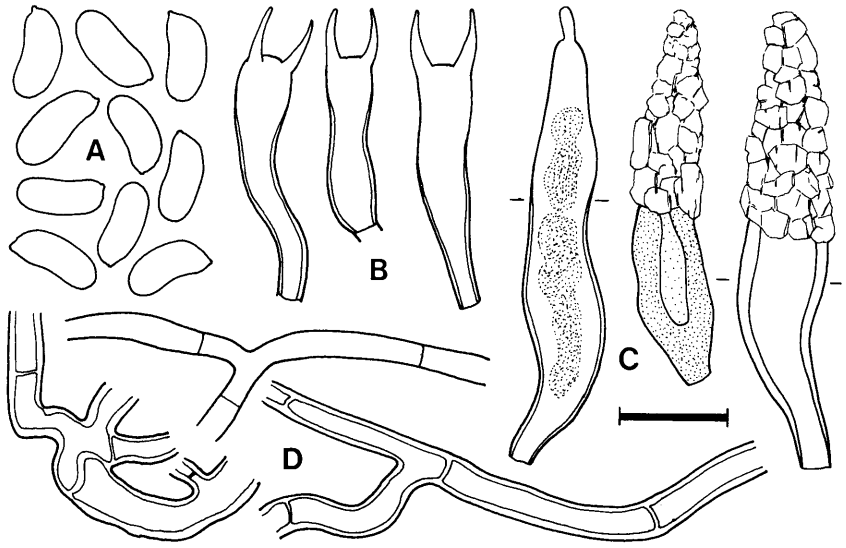

FIG. 5. *Peniophora bicornis* (TMI 20744). A. Basidiospores. B. Basidia. C. Immature and mature lamprocystidia. Short bars indicate the level of the hymenial surface. D. Subicular hyphae. Scale bar = 10 μm.

μm in depth; margin white to cream, thinning out, indeterminate, sometimes puruinose or reticulate under the lens (×20). In vertical section, subhyaline, submembranous. Hyphal system monomitic; hyphae 2–3 μm in diam, smooth, thin- to slightly thick-walled (up to 0.5 μm), nodose-septate, sometimes encrusted; capitate cystidia 20–30 × 2.5–3 μm, with a basal clamp, smooth, thin-walled, originating from the subhymenial or surbicular hyphae; subulate leptocystidia 15–20 × 3–4.5 μm, with a basal clamp, smooth, thin-walled; basidia narrowly clavate, sometimes slightly constricted, 15–20 × 4.5–5 μm, with a basal clamp, producing 4 sterigmata; basidiospores broadly ellipsoid, 5–5.5(–6) × 3.5–4 μm, smooth, thin-walled, non-amyloid.

Specimens examined: TOKYO (Hahajima Island) — TMI 20771 on decaying branch of a broad-leaved tree, Motochi to Mt. Chibusayama (50–460 m alt.), 9 Dec. 1997, coll. N. Maekawa; TMI 21334 on decaying bark of a broad-leaved tree, Mt. Kuwanokiyama (150–250 m alt.), 22 Nov. 1999, coll. N. Maekawa; TMI 21335 on decaying trunk of *Elaeocarpus photiniaefolius* Hook & Arn., Mt. Kuwanokiyama (150–250 m alt.), 22 Nov. 1999, coll. N. Maekawa.

Remarks: *Hyphodontia niemelaei* is macroscopically characterized by its shallowly poroid hymenial surface and microscopically by the capitate cystidia, subulate leptocystidia and broadly ellipsoid basidiospores, 5–5.5(–6) × 3.5–4 μm. The size of subulate leptocystidia of the Japanese material is smaller than that described as 18–28 × 4–6 μm by Wu (1990), but all the other morphological characteristics are consistent with the original description. This species has been known from the subtropical to tropical regions, i.e., Cameroon and Colombia (Langer, 1994) and Taiwan (Wu, 1990).

Peniophora bicornis Hjortstam & Ryvarden, Mycotaxon **20**: 138. 1984. Fig. 5.

Distribution: Africa, Asia [Nepal (Hjortstam and Ryvarden, 1984); Singapore (Boidin et al., 1991)]. New to Japan.

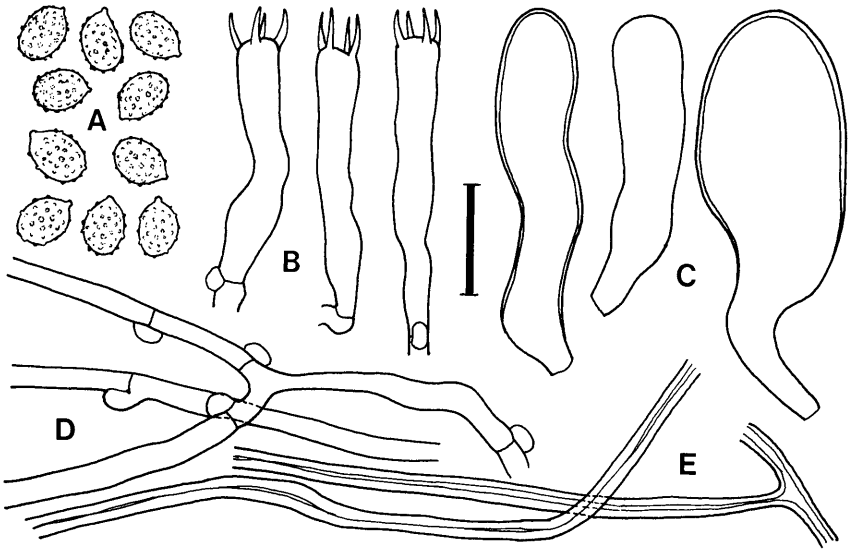

FIG. 6. *Scytinostromella nannfeldtii* (TMI 21360). A. Basidiospores. B. Basidia. C. Gloeocystidia. D. Generative hyphae. E. Skeketal hyphae. Scale bars = 10 μm.

Basidiomata resupinate, closely adnate, effused, 45–100 μm thick; hymenial surface "Buff", "Rosy Buff", "Pale Purplish Grey" to "Purplish Buff", smooth, sometimes pruinose under the lens (×20); margin concolorous with the hymenial surface, thinning out, indeterminate, sometimes pruinose under the lens (×20). In vertical section, subhyaline but brown in the basal layer, pseudoparenchymatic. Hyphal system monomitic; hyphae 1.5–4 μm in diam, smooth, thin- to thick-walled (up to 1.5 μm), clampless-septate, brown in the basal layer; cystidia (lamprocystidida) numerous, conical to subfusiformi, 30–45 × 6.5–8 μm, at first thin-walled, subhyaline and then thick-walled, brown, heavily encrusted with subhyaline crystalloid materials over the upper half, sometimes projecting up to 25 μm beyond the hymenial surface; basidia subcylindrical to narrowly clavate, 15–25 × 4–5 μm, without a basal clamp, producing 2 sterigmata; basidiospores subcylindrical to suballantoid, 7.5–8.5 × 3–3.5 μm, smooth, thin-walled, non-amyloid.

Specimens examined: TOKYO (Hahajima Island) — TMI 20744 on decaying branch of a broad-leaved tree, Mt. Kuwanokiyama (200–250 m alt.), 10 Dec. 1997, coll. N. Maekawa; TMI 21315 on decaying branch of a broad-leaved tree, Mt. Funaki to Mt. Chibusayama (150–400 m alt.), 23 Nov. 1999, coll. N. Maekawa.

Remarks: *Peniophora bicornis* is easily recognized by having clampless hyphae, numerous lamprocystidia, two-sterigmate basidia and subcylindrical to suballantoid basidiospores measuring 7.5–8.5 × 3–3.5 μm.

Scytinostromella nannfeldtii (J. Erikss.) Freeman & Petersen, Mycologia **71**: 90, 1979.
Fig. 6.

≡ *Gloeocystidiellum nannfeldtii* J. Erikss., Svensk Bot. Tidskr. **52**: 14, 1958.

Distribution: Europe and North America. New to Japan.

Basidiomata resupinate, adnate, effused, 100–250 μm thick; hymenial surface creamy white to "Buff", smooth; margin concolorous

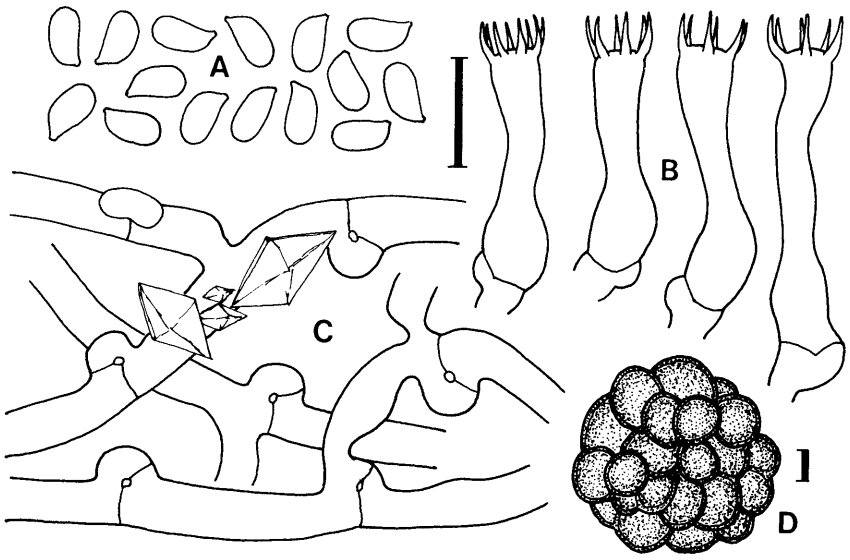

FIG. 7. *Sistotrema coronilla* (TMI 21187) A. Basidiospores. B. Basidia. C. Subicular hyphae. D. Bulbil produced in culture. Scale bars = 10 μm.

with the hymenial surface, thinning out, indeterminate, sometimes pruinose under the lens (×20). In vertical section, subhyaline, subpellicular to membranous. Hyphal system dimitic; generative hyphae 1–3 μm in diam, smooth, thin-walled, nodose-septate; skeletal hyphae 1–2 μm in diam, smooth, thick-walled, non-amyloid, non-dextrinoid; cystidia (gloeocystidia) clavate to cylindrical, sometimes sinuous, 24–35 × 6–12 μm, with a basal clamp; basidia narrowly clavate to cylindrical, sometimes slightly constricted, 20–25 × 3.5–4.5 μm, with a basal clamp, producing 4 sterigmata; basidiospores ellipsoid, 4.5–5 × 3(–3.5) μm, verrucose, thin-walled, amyloid.

Specimen examined: TOKYO (Hahajima Island) — TMI 21360 on decaying branch of a broad-leaved tree, Mt. Funaki to Mt. Chibusa-yama (150–400 m alt.), 23 Nov. 1999, coll. N. Maekawa.

Remarks: *Scytinostromella nannfeldtii* differs from other members of the genus in producing gloeocystidia and lacking encrusted cystidia. Microscopical features of the Japanese specimen agree with those of the previous descriptions (Eriksson, 1958; Freeman and Petersen, 1979; Ginns and Freeman, 1994). This species has previously been reported only from subarctic regions, i.e., Jämtland in Sweden and Alaska in U.S.A. (Freeman and Petersen, 1979), and Northwest Territories and Yukon in Canada (Ginns and Freeman, 1994), thus, the Hahajima specimen represents the first record of *S. nannfeldtii* from the subtropics. Further studies are needed to clarify its geographical distribution.

Sistotrema coronilla (v. Höhn. & Litsch.) Donk ex Rogers, Univ. Iowa Stud. Nat. Hist. **17**: 23, 1935, sensu Hallenberg, Mycotaxon **21**: 403, 1984. Fig. 7.

≡ *Corticium coronilla* v. Höhn. & Litsch., Ann. Mycol. **4**: 291, 1906.

Distribution: Europe and North America. New to Japan.

Basidiomata resupinate, loosely adnate,

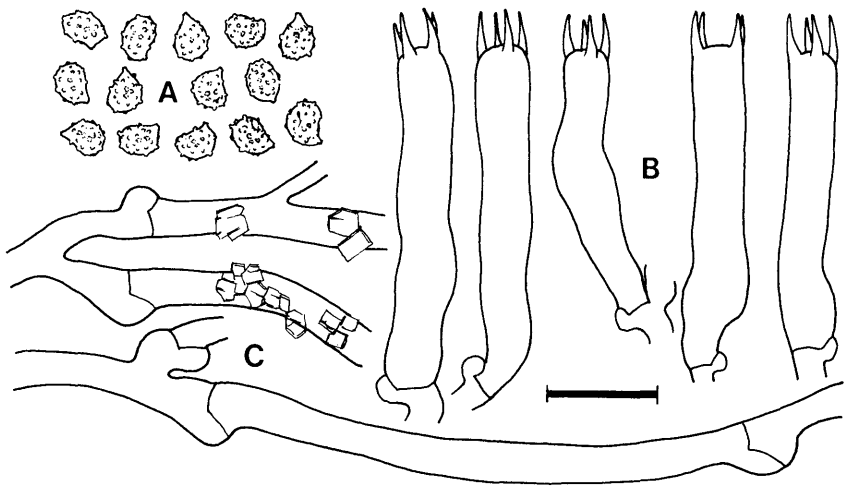

FIG. 8. *Trechispora alnicola* (TMI 21332). A. Basidiospores. B. Basidia. C. Subicular hyphae. Scale bar = 10 μm.

effused, up to 120 μm thick; hymenial surface white to whitish cream, smooth; margin white, thinning out, indeterminate, sometimes pruinose under the lens (×20). In vertical section, subhyaline, pellicular to submembranous. Hyphal system monomitic; hyphae 2–4.5 μm in diam, smooth, thin-walled, nodose-septate, sometimes encrusted; cystidia lacking; basidia urniform, 12–25 × 4.5–5 μm, with a basal clamp, producing 6–8 sterigmata; basidiospores subcylindrical to narrowly ellipsoid, adaxially flattened, 5–6 × (2–)2.5 μm, smooth, thin-walled, non-amyloid.

Specimens examined: TOKYO (Hahajima Island) — TMI 20613 on decaying wood of a broad-leaved tree, Mt. Kuwanokiyama (200–250 m alt.), 10 Dec. 1997, coll. N. Maekawa; TMI 21187 on decaying wood of a broad-leaved tree, Mt. Kuwanokiyama (150–250 m alt.), 22 Nov. 1999, coll. N. Maekawa.

Remarks: *Sistotrema coronilla* belongs to the *S. brinkmannii* (Bres.) J. Erikss. group., and is distinguishable from its related species by the subcylindrical to narrowly ellipsoid basidiospores measuring 5–6 × (2–)2.5 μm. According to Hallenberg (1984), this species produces sometimes brown bulbils associated with its basidiomata. In the Japanese specimens examined, the bulbils were not observed, but a dikaryotic strain derived from basidiospores of TMI 21187 produced in culture the bulbils (Fig. 7D), which were pale to dark brown and more or less globose (up to 150 μm in diam).

Trechispora alnicola (Bourd. & Galzin) Liberta, Taxon **15**: 318, 1966. Fig. 8.

≡ *Grandinia alnicola* Bourd. & Galzin, Bull. Soc. Mycol. France **30**: 254, 1914.

Distribution: Africa, Asia [China (Maekawa and Zang, 1995); India (Rattan, 1977); Iran (Hjortstam et al., 1988)], Europe and North America. New to Japan.

Basidiomata resupinate, adnate, effused, 100–250 μm thick; hymenial surface grayish cream to "Buff", partly "Ochreous", smooth, grandinioid to odontoid; aculei 5–15 per mm^2, usually cylindrical up to 1 mm in length; margin white to "Buff", thinning out, indeterminate, sometimes fimbriate under the lens (×20). In vertical section, subhyaline, membranous.

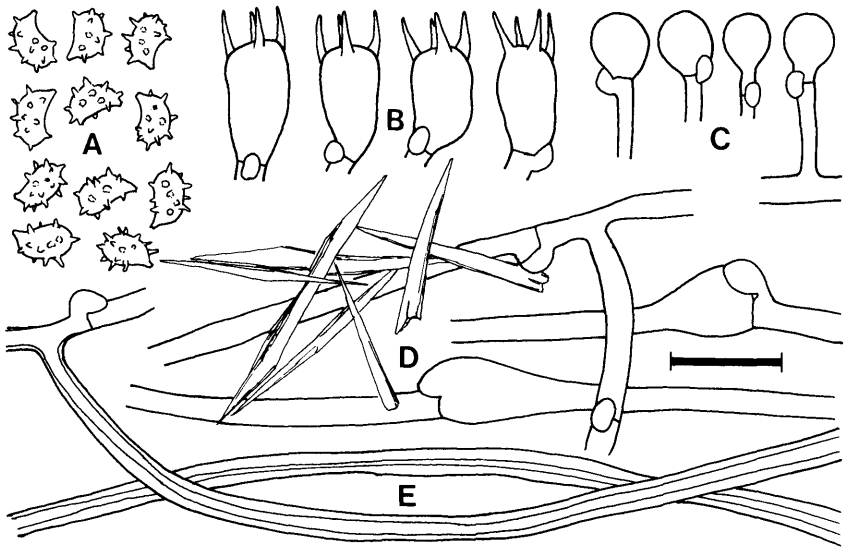

FIG. 9. *Trechispora dimitica* (TMI 21308). A. Basidiospores. B. Basidia. C. Aleuriospore-like cells. D. Generative hyphae. E. Skeletal hyphae. Scale bar = 10 μm.

Hyphal system monomitic; hyphae 2–4.5 μm in diam, smooth, thin-walled, nodose-septate, sometimes encrusted; cystidia lacking; basidia cylindrical, occasionally pleural, sometimes slightly sinuous, 22–30 × 4.5–5 μm, with a basal clamp, producing 4 sterigmata; basidiospores broadly ellipsoid to subglobose, adaxially flattened, 4–4.5 × 2.5–3 μm, verrucose, thin- to slightly thick-walled (up to 0.5 μm), non-amyloid.

Specimens examined: TOKYO (Hahajima Island) — TMI 20614 on decaying wood of a broad-leaved tree, Mt. Kuwanokiyama (200–250 m alt.), 10 Dec. 1997, coll. N. Maekawa; TMI 21332 on decaying branch of a broad-leaved tree, Mt. Kuwanokiyama (150–250 m alt.), 22 Nov. 1999, coll. N. Maekawa.

Remarks: The major diagnostic characteristics of *T. alnicola* are the grandinioid to odontoid basidiomata, cylindrical basidia measuring 22–30 × 4.5–5 μm, and verrucose, broadly ellipsoid to subglobose basidiospores, 4–4.5 × 2.5–3 μm. Production of aleuriospores throughout the context has been reported by Liberta (1973) and Hjortstam et al. (1988). In the Japanese specimens examined in this study, the aleuriospores were not found in their basidiomata, but all other morphological features agreed with those given by Hjortstam et al. (1988).

Trechispora dimitica Hallenb., Mycotaxon **11**: 468, 1980. Fig. 9.

Distribution: Asia [Iran (Hallenberg, 1980); Taiwan (Maekawa, 1992)]. New to Japan.

Basidiomata resupinate, loosely adnate, effused, arachnoid to byssoid, thin, fragile; hymenial surface white to pale grayish white when dry, smooth, reticulate, hypochnoid or farinose under the lens (×20); margin concolorous with the hymenial surface, thinning out, indeterminate, sometimes with white, thin hyphal strands. In vertical section subhyaline, arachnoid to byssoid, sometimes with thin hyphal strands in the subiculum. Hyphal system dimitic; generative hyphae 1–3 μm in diam, smooth, thin-walled, nodose-septate,

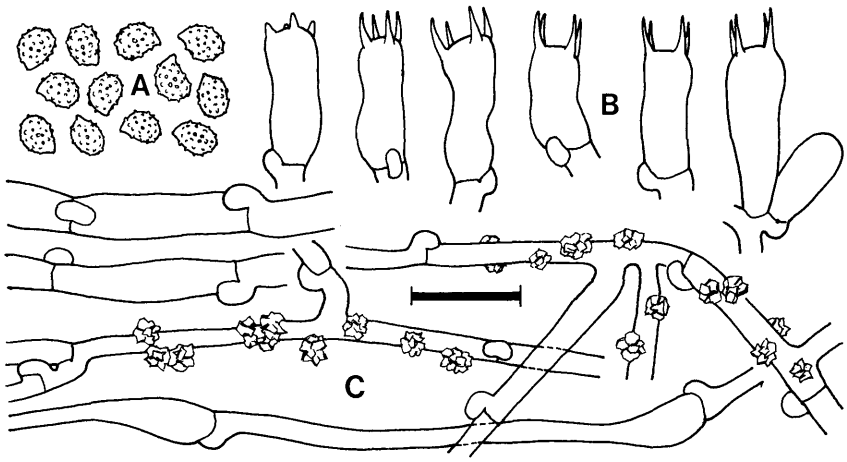

FIG. 10. *Trechispora nivea* (TMI 21311). A. Basidiospores. B. Immature and mature basidia. C. Subicular hyphae. Scale bar = 10 μm.

often ampullate at the septa especially in the hyphal strands, sometimes encrusted with acicular shaped crystalloid materials; skeletal hyphae present in the hyphal strands, subhyaline, 2–2.5 μm in diam, smooth, thick-walled (up to 1 μm), clampless-septate, non-amyloid, non-dextrinoid; cystidia lacking; aleuriospore-like cells present in the subiculum, subglobose, 4–5 × 2–2.5 μm, with a basal clamp, smooth, thin- to slightly thick-walled (up to 0.5 μm); basidia subclavate to cylindrical, 7.5–10.5 × 4.5–5.5 μm, with a basal clamp, producing 4 sterigmata; basidiospores ellipsoid, often straight to slightly concave at the adaxial side, asperulate, 4–5 × 2–2.5 μm (excluding spines), the spines up to 1 μm in length, thin-walled, non-amyloid.

Specimen examined: TOKYO (Hahajima Island) — TMI 21308 on decaying branch of a broad-leaved tree, Mt. Funaki to Mt. Chibusa-yama (150–400 m alt.), 23 Nov. 1999, coll. N. Maekawa.

Remarks: The dimitic hyphal system, thin and white hyphal strands in its subiculum, and asperulate, ellipsoid basidiospores are distinct in *T. dimitica*. The sizes of basidiospores and aleuriospore-like cells of the Japanese specimen are different from those described as 3–4 × 2.3–2.5 μm and 4–5 × 3.5–4.5 μm, respectively, by Hallenberg (1980), but other morphological characteristics are identical to those of the original description.

Trechispora nivea (Pers.) K.H. Larss., Symb. Bot. Upsal. **30**: 110, 1995. Fig. 10.

≡ *Odontia nivea* Pers., Neues Mag. Bot. (ed. Römer) p. 110, 1794.

Distribution: Africa, Asia [Iran, Sri Lanka, Taiwan (Larsson, 1995)], Australasia, Europe, North and South America. New to Japan.

Basidiomata resupinate, loosely adnate, effused, thin excepting aculei, fragile; hymenial surface grayish white to "Buff", odontoid, pruinose under the lens (×20); aculei 5–10 per mm^2, conical, up to 1 mm in length; margin concolorous with the hymeninal surface, thinning out, indeterminate, sometimes fimbriate under the lens (×20). In vertical section, subhyaline, membranous. Hyphal system monomitic; hyphae 1.5–3 μm in diam, smooth, thin-

walled, nodose-septate, sometimes ampullate at the septa, sometimes encrusted; cystidia lacking; basidia subclavate to cylindrical, sometimes slightly constricted, 10–15 × 4–5 μm, with a basal clamp, producing 4 sterigmata; basidiospores broadly ellipsoid to subglobose, adaxially flattened, 3.5–4 × 2.5–3 μm, verrucose, thin-walled, non-amyloid.

Specimen examined: TOKYO (Hahajima Island) — TMI 21311 on decaying wood of a broad-leaved tree, Mt. Funaki to Mt. Chibusa-yama (150–400 m alt.), 23 Nov. 1999, coll. N. Maekawa.

Remarks: *Trechispora nivea* is characterized by having a hydnoid hymenial surface, and by producing verrucose, broadly ellipsoid to subglobose basidiospores measuring 3.5–4 × 2.5–3 μm. This species is similar to *T. farinacea* (Pers.: Fr.) Liberta, but differs in its hyphal morphology in the trama of aculei. *Trechispora nivea* produces aculei consisting of long-celled hyphae whereas *T. farinacea* has short-celled ones in aculei. According to Larsson (1995), *T. nivea* is widely distributed from tropical to cold temperate regions.

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摘　　要

日本産コウヤクタケ科の分類学的研究 V

前川二太郎

小笠原諸島母島のコウヤクタケ科（広義，担子菌類ヒダナシタケ目）菌類の分布調査において，日本未報告種として以下の 10 種を認めた。

Candelabrochaete langloisii (Pat.) Boidin ：のう状体が幅の狭い棍棒形から円筒形で，数個の隔壁をもつことおよび担子胞子が幅の広いソーセージ形（3.5–4 × 2.5–3 µm）であることによって特徴づけられる。本種は従来アメリカの南東部からのみ報告されていた。

Gloeodontia discolor (Berk. & Curtis) Boidin ：子実層面は針状を呈し，菌糸構成は二菌糸型。粘のう体および微細ないぼ状突起で被われたアミロイド性の担子胞子をもつ。本種は亜熱帯から熱帯域に分布する。

Hyphodontia gossypina (Parm.) Hjortst.：子実層面は針状を呈し，針の実質には偽骨格菌糸が存在する。担子胞子は大きさ 4.5–5 × 3–3.5 µm で，広楕円形。本種は温帯から熱帯域に分布が認められ，母島では普通種と考えられる。

Hyphodontia niemelaei S.H. Wu ：子実層面が浅い孔状を呈し，2 種類ののう状体と広楕円形の担子胞子 [5–5.5(–6) × 3.5–4 µm] を形成することによって特徴づけられる。本種は亜熱帯から熱帯域に分布する。

Peniophora bicornis Hjortst. & Ryv.：菌糸隔壁にクランプを欠き，結晶で被われたのう状体（メチュロイド），2 本の小柄をもつ担子器および類円筒形から類ソーセージ形の担子胞子（7.5–8.5 × 3–3.5 µm）を形成する点において他の *Peniophora* 属種から区別される。本種はアフリカおよびアジアに分布する。

Scytinostromella nannfeldtii (J. Erikss.) Freeman & Petersen ：粘のう体をもつが，結晶で被われたのう状体を形成しない点において *Scytinostromella* 属の他種と異なる。本種は従来亜寒帯域から報告されていた種であり，亜熱帯域からの報告は本報告が最初である。

Sistotrema coronilla (v. Höhn. & Litsch.) Donk ex Rogers ： *S. brinkmannii* グループに入るが，類円筒形から幅の狭い楕円形の担子胞子 [5–6 × (2–)2.5 µm] をもつことによって近縁種と異なる。本種は子実体中にしばしば小菌核（bulbil）を形成するが，母島産標本では観察されなかった。しかし，本標本から得られた分離菌株は培養菌糸体中に褐色でほぼ球形の小菌核を形成した。*Sistotrema coronilla* は従来ヨーロッパおよび北アメリカで知られていた種であり，アジアからの報告は本報が最初である。

Trechispora alnicola (Bourd. & Galzin) Liberta ：子実層面がいぼ状から針状を呈し，円筒形の担子器 (22–30 × 4.5–5 µm）といぼ状突起で被われた広楕円形の担子胞子（4–4.5 × 2.5–3 µm）をもつ。本種は子実体中にアレウロ型分生子を形成することが報告されているが，今回観察した母島産標本では観察されなかった。*Trechispora alnicola* は温帯から熱帯域に広く分布する。

Trechispora dimitica Hallenb.：子実体の菌糸構成が二菌糸型で，実質に細い菌糸束を有し，針状突起で被われた卵形の担子胞子をもつ。また，本種は実質の菌糸上にまれにアレウロ型分生子様の細胞を形成する。*Trechispora dimitica* は従来イランおよび台湾で分布が認められていた種である。

Trechispora nivea (Pers.) K.H. Larss.：子実層面が針状を呈し，微細ないぼ状突起で被われた広楕円形の担子胞子（3.5–4 × 2.5–3 µm）をもつことによって *Trechispora* 属の近縁種と区別される。本種は汎世界種である。