

## NOTES ON MYCOACIA—I

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(With one Text-figure)

The genus *Mycoacia* Donk (1931) originally contained four species, viz. *M. fuscoatra* (Fr. ex Fr.) Donk (type), *M. uda* (Fr.) Donk, *M. stenodon* (Pers.) Donk, and *M. setosa* (Pers.) Donk. This last species, however, is the type species of *Sarcodontia* S. Schulzer 1866. Later (1952) Donk considered *M. setosa* as generically distinct. The monotypic genus *Sarcodontia* has globose to subglobose spores with thickened walls and is parasitic, while *Mycoacia* has ellipsoid to allantoid thin-walled spores and is saprophytic. When *Mycoacia* and *Sarcodontia* are considered as congeneric (e.g. Nikolajeva, 1961), *Sarcodontia* is the correct name for the genus.

*Mycoacia* and *Sarcodontia* are both classified in the Corticiaceae (Donk, 1964; Parmasto, 1968); they are characterized by the resupinate hydroid ceraceous basidiocarp, the monomitic hyphal system and the smooth non-amyloid spores. The genera are closely related to *Phlebia*.

Another eight species have been added to *Mycoacia*. Four really belong there (although they cannot all be accepted as distinct species), of two species no type material is available and two are good species, but have to be excluded. These last two species are described and discussed below.

## MYCOACIA DENTICULATA (Pers.) Parm.

The type specimen is *Steccherinum ochraceum* (Pers. apud Gmel. ex Fr.) S. F. Gray (Maas Geesteranus, 1974). However, Nikolajeva (1961) as well as Parmasto (1967) considered the species in the sense of Bourdot & Galzin (1928), who described a quite different species under this name. The latter should be classified in the genus *Resinicium*.

**Resinicium bisporum** Stalpers *spec. nov.*—Fig. 1a-c

Fructificatio resupinata, effusa, hydnoidea, membranacea vel ceracea. Aculei ad 2 mm longi. Hymenium ochraceum vel cinnamomeum. Systema hypharum dimiticum. Hyphae fibratae in parte centrale aculeorum, 2.5-4.5(-5)  $\mu\text{m}$  diam. Hyphae subhymeniales irregulares, fibulatae, 2-3.5(-7)  $\mu\text{m}$  diam., interdum subgelatinosae. Cystidiolae capitatae vel fusiformae, normaliter ad apices halonatae. Basidia subclavata, 11-17  $\times$  3-4  $\mu\text{m}$ , cum 2 sterigmatibus. Sporae hyalinae, levae, ellipsoideae vel cylindricae, 4.5-5.5(-6)  $\times$  2.2-2.8  $\mu\text{m}$ , non amyloideae. Specimen typicum: Bourdot 4277 (PC).

Basidiocarp annual, resupinate, effused, membranaceous to ceraceous, cracked when dry, densely covered with spines. Spines single, rarely conerescent at the very base, slender, acute or somewhat fimbriate at the apex, up to 2 mm long. Hymenial surface ochraceous to cinnamon. Margin paler. No reaction with KOH. Hyphal system dimitic. Skeletal hyphae in central cylinder of spines,  $2.5-4.5(-5) \mu\text{m}$  in diameter, thick-walled (up to  $2.2 \mu\text{m}$ ), leaving a narrow or invisible lumen, which expands at the tip. Generative hyphae hyaline, thin-walled, irregular,  $2-3.5(-7) \mu\text{m}$  in diameter, cells typically less than  $25 \mu\text{m}$  long, sometimes gelatinized. Clamps present. Some hyphae encrusted with yellowish material. Cystidioles originating in subhymenium, hyaline, thin-walled, obtuse to capitate, rarely fusiform,  $16-25 \times 2.5-4 \mu\text{m}$ , typically with large yellowish oil-cap (halo) up to  $9 \mu\text{m}$  in diameter. Basidia in small clusters, subclavate,  $11-17 \times 3-4 \mu\text{m}$ , with (1-)2 sterigmata, basally with clamps. Spores hyaline, thin-walled, smooth, narrowly ellipsoid to cylindrical, flattened at one side,  $4.5-5.5(-3) \times 2.2-2.8 \mu\text{m}$ , not amyloid.

MATERIAL EXAMINED.—On *Alnus*, bank of the Garnafag, between Le Mazeau and La Roche (Chappes), France, Bourdot 4277, 9.VIII.1905 (PC, type). — On *Alnus*, bank of the Gange, St.-Marcel, Bourdot 4995, 27.VIII.1907 (PC, as *Acia fuscoatra*).

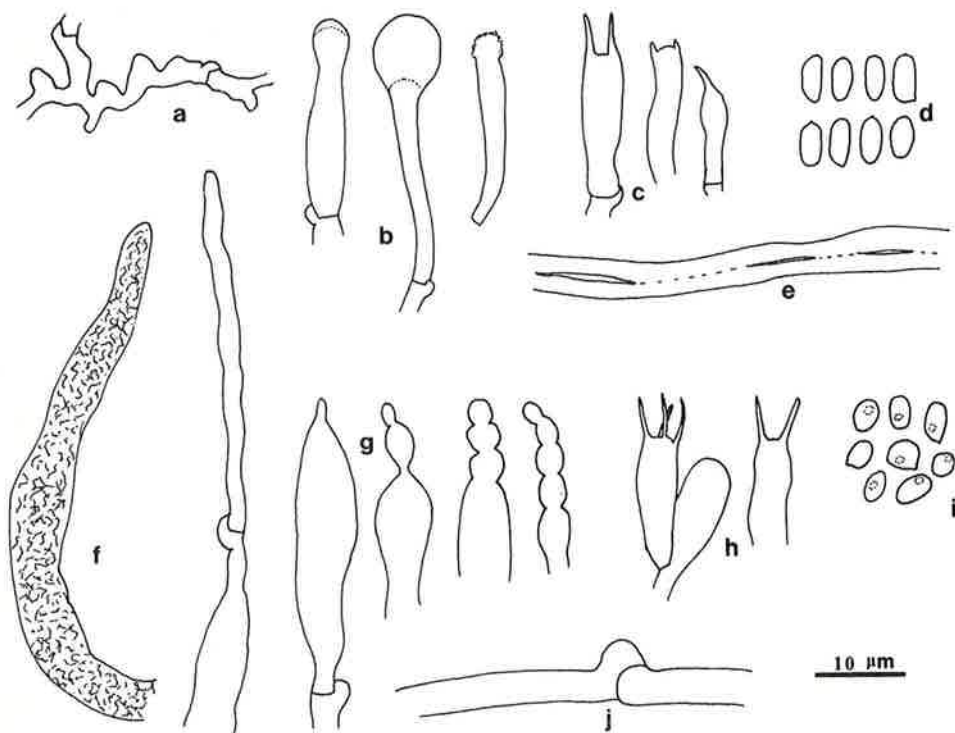


Fig. 1. a-c. *Resinicium bisporum*. — a. Irregular hypha. — b. Cystidioles. — c. Basidia. — d. Spores. — e. Skeletal hypha. — f-j. *Dentipellis isidioides*. — f. Gloecystidium from subiculum. — g. Hymenial gloecystidia, apical structures. — h. Basidia. — i. Spores. — j. Hypha.

The species is classified in *Resinicium* because of the typical cystidioles, which are unique in the Corticiaceae. Basidiocarp texture, basidia and spores are also concordant. It differs from all other species by the dimitic hyphal system, a fact which would in the past have been reason enough to erect a new monotypic genus. The author, however, is not so inclined, since the species is so close to *Resinicium* in other respects and since there are several precedents where genera contain monomitic and dimitic species (e.g. *Tomentella*, *Aleurodiscus*, *Coniophora*).

Within the genus *Resinicium* *R. chiricahuaense* Gilberts. & Budington is most closely related, but differs in the allantoid spores ( $4-6 \times 1.5-2 \mu\text{m}$ ), the generally 4-spored basidia, the monomitic hyphal system, the preference of gymnospermous wood and the distribution (only known from North America) (Gilbertson & Budington, 1970).

***Dentipellis isidioides* (Berk.) Stalpers comb. nov.**—Fig. 1, f-j

*Hydnum isidioides* Berk. in Hook. J. Bot. (London) 4: 58. 1845 (basionym). — *Sarcodontia isidioides* Reid in Kew Bull. 1955: 641. 1956.

Basidiocarp resupinate, effused, membranaceous, densely covered with spines. Spines single, not con crescent, slender, up to 5 mm long; apex not fimbriate, often covered with a whitish bloom, appearing farinaceous. Between the spines a whitish subiculum is visible. Hymenial surface ochraceous. Margin adnate, indistinct. Hyphal system monomitic. Hyphae hyaline, with thin or slightly thickened walls, 2-4  $\mu\text{m}$  in diameter. Clamps present. Gloecystidia thin-walled, with refractive contents, originating in the subiculum and than up to 7(-10)  $\mu\text{m}$  in diameter or originating in the subhymenium, 30-65  $\times$  4-8  $\mu\text{m}$ , apically abruptly narrowed and forming a tubular (1.5-2  $\mu\text{m}$  wide) or moniliform outgrowth with up to eight constrictions, often somewhat projecting, sulpho-negative. Basidia in small clusters, subclavate to cylindrical, 12-18  $\times$  (3.5-)4-5  $\mu\text{m}$ , with (2-)4 sterigmata. Spores hyaline, with thin to slightly thickened walls, smooth, subglobose to broadly ellipsoid, 2.5-4(-4.5)  $\times$  2-2.7(-3)  $\mu\text{m}$ , with small apiculus, amyloid.

**MATERIAL EXAMINED.** — On *Polyporus gryphaeformis*, Swan River, Australia, Drummond 149, Herb. Berkeley, 1879 (K, type). — On *Atherospermum moschatum*, Powelltown, Victoria, Australia, E. W. B. Da Costa 2169, 20.IV.1949 (K). — On *Eucalyptus regnans*, Powelltown, Victoria, Australia, C. S. I. R. O. 2572B, 18.VII.1950.

The sulpho-negative gloecystidia, the amyloid spores, the resupinate hydroid basidiocarp and the monomitic hyphal system give this species a place in *Dentipellis* (Hericiaceae). When Reid (1956) published the combination in *Sarcodontia*, the genus *Dentipellis* and the family of the Hericiaceae had not yet been erected. However, he indicated the relationship when he mentioned *Hydnum macrodon* Pers. ex Fr. (= *Dentipellis macrodon* (Pers. ex Fr.) Furukawa) as being closely related.

## REFERENCES

- BOURDOT, H. & GALZIN, A. (1928). Hyménomycètes de France. Sceaux.
- DONK, M. A. (1931), Revisie van de Nederlandse Heterobasidiomycetae en Homobasidiomycetae-Aphylophoraceae. I. *In* Meded. Ned. mycol. Ver. **18-20**: 65-200.
- (1952). The status of the generic name *Oxydontia* L. W. Miller ("Hydnaceae"). *In* *Mycologia* **44**: 262-263.
- (1964). A conspectus of the families of Aphylophorales. *In* *Persoonia* **3**: 199-324.
- GILBERTSON, R. L. & BUDINGTON, A. B. (1970). Three new species of woodrotting fungi in the Corticiaceae. *In* *Mycologia* **62**: 672-678.
- MAAS GEESTERANUS, R. A. (1974). Studies in the genera *Irpex* and *Steccherinum*. *In* *Persoonia* **7**: 443-581.
- NIKOLAJEVA, T. L. (1961). Familia Hydnaceae. *In* Fl. Pl. crypt. SSSR **6**. Moscow-Leningrad.
- PARMASTO, E. (1967). Corticiaceae URSS IV. Descriptiones taxorum novorum. Combinationes novae. *In* Eesti NSV Tead. Akad. Toim. (Biol. Seer.) **16**: 377-394.
- (1968). Conspectus Systematis Corticiacearum. Tartu.
- REID, D. A. (1956). New or interesting records of Australasian Basidiomycetes. *In* *Kew Bull.* 1955: 631-677.