

NOTES AND BRIEF ARTICLES

CALLISTOSPORA AND CREODIPLODINA, TWO COELOMYCETOUS GENERA
FROM AUSTRALIA

J. A. VON ARX & O. CONSTANTINESCU

Centraalbureau voor Schimmelcultures, Baarn

The coelomycete genera *Callistospora* and *Creodiplodina* were described but not illustrated by Petrak (1955, 1957). Both genera have been omitted in recent publications on Coelomycetes. The following notes and figures are based on a study of the type specimens collected by E. Gauba in Australia and maintained in herb. W.

1. *Callistospora gaubae* Petr.—Fig. 1.

Callistospora gaubae Petr. in *Sydowia* 9: 571. 1955.

The type specimen, collected on Mt. Kosciusko at 6000 ft on 29.3.1955, consists of conidiomata on some dead culms of *Danthonia frigida*. The conidiomata are deeply immersed in the host tissue, spherical or slightly flattened, 150–220 μm diam. and dark, the apical ostiolum being cylindrical or conical, 40–50 μm broad and 35–45 μm high. The 15–20 μm thick conidioma wall is composed of flattened, brown, rather thick-walled cells, 6–14 μm diam. The cells lining the cavity are smaller, hyaline and bear conical or cylindrical conidiogenous cells, 2–6 \times 2–4 μm , which may elongate entero-percurrently to show 2–3 collars. However, most of the conidiogenous cells form a single conidium. The conidia are fusiform, often slightly curved, 8- to 10-euseptate, apically attenuated and rounded at the apex, attenuated and truncate at the base, with an unthickened, bulging scar, 40–60 \times 11–15 μm . The central cells of the conidia are brown and thick-walled, the apical and basal ones subhyaline. Some filamentous, hyaline, 2–3 μm broad and 30–50 μm long paraphyses line the cavity and surround the conida.

The genus *Callistospora* is similar to *Labridella* Brenckle (including *Hyalotiella* Papendorf and *Hyalotiopsis* Punithalingam, see von Arx, 1981) and *Scolecosporiella* Petr. (including *Brencklea* Petr. and *Urohendersoniella* Petr., see Sutton, 1980), but differs by conidia which are non-rostrate or appendaged at the apex and by the conidiogenous cells, which often show collars and form conidia basipetally.

In *Labridella* and *Scolecosporiella* the conidiogenous cells apparently form a single conidium. The genera *Labridella* and *Scolecosporiella* are close to each other; in the former the apical appendages of the conidia are basally forked, in the latter the conidia are provided with an unbranched, apical rostrum. The genus *Scolecosporiella* also can be regarded as the graminicolous counterpart of *Labridella* which now contains 3 or 4 spe-

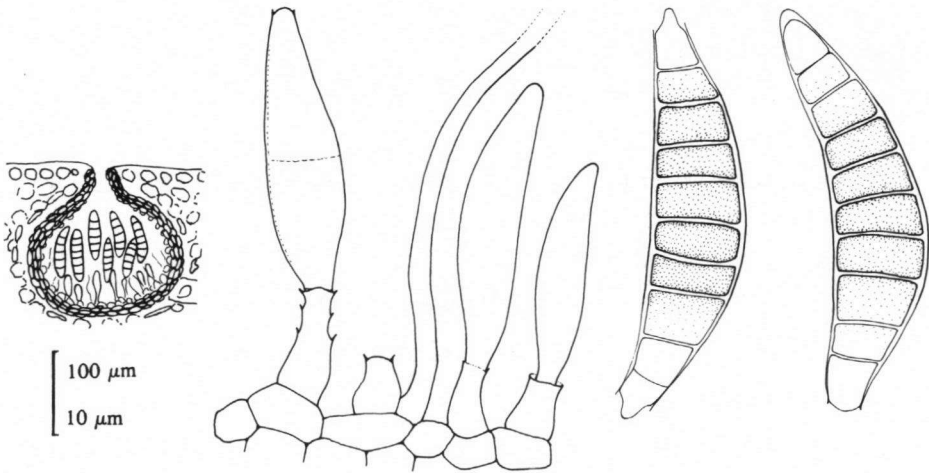


Fig. 1. *Callistospora gaubae*, conidioma, conidiogenous cells, and conidia.

cies growing on Dicotyledons. In *Scolecosporiella* Sutton (1980) accepted 5 species with partly dark, partly light conidia, which may be phragmosporous or dictyosporous. In the type species *S. typhae* (Oud.) Petr. the conidia are usually only slightly pigmented and often only indistinctly rostrate.

No teleomorphs are known in *Scolecosporiella*. Those of *Labridella* belong in *Lepteutypa* Petr., when ascospores are pigmented and asci have an amyloid apical ring, or in *Griphosphaerioma* Höhn. when ascospores are hyaline and the apical ring is not amyloid.

Callistospora is also close to *Sporocadus* Corda (including *Stigmina* Sacc.). This genus can be distinguished by sporodochial-acervular, erumpent, stromatic conidiomata and by longer, distinctly entero-percurrently elongating conidiogenous cells. Its teleomorphs belong to *Discostroma* Clem.

2. *Creodiplodina fusispora* Petr.—Fig. 2.

Creodiplodina fusispora Petr. in Sydowia 10: 316. ('1956') 1957.

The fungus has been collected on the Proteaceae *Grevillea linearis* on 9.6.1953 in Pigeon House Range in NSW. The conidiomata are immersed in the host tissue, spherical or turbinata, apically flattened, 150–260 μm , and disrupt the thick cuticle of the host by a 10–20 μm wide pore. The conidioma wall is 17–26 μm thick, fleshy and composed of several layers of thin-walled, 2–3 μm in size, pale cells which are slightly pigmented only around the pore. The conidiogenous cells line the inner cavity in a dense layer, are conical, 10–14 \times 2–3 μm , form conidia basipetally and may proliferate percurrently. The conidia are fusiform-clavate, attenuated and rounded at both ends with a median septum, hyaline and 23–32 \times 4–4.5 μm .

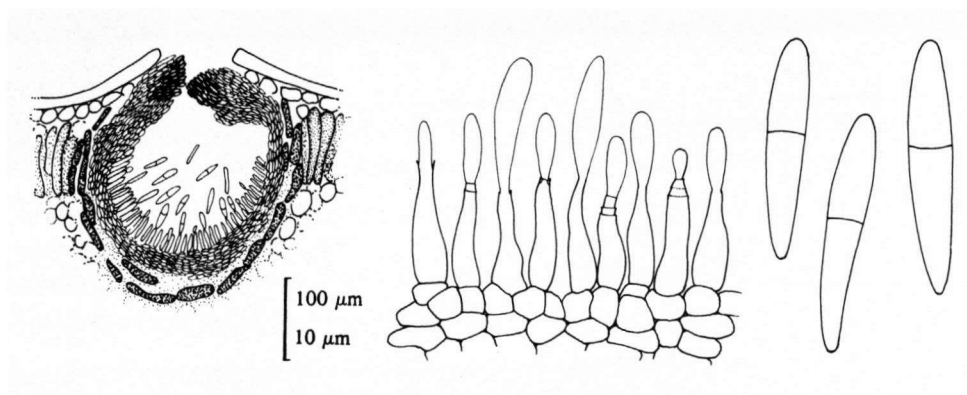


Fig. 2. *Creodiplodina fusispora*, conidioma, conidiogenous cells, and conidia.

The genus *Creodiplodina* is close to *Diplodina* Westend. (synonym: *Septomyxa* Sacc.), which contains anamorphs of *Cryptodiaporthe* Petr. *Creodiplodina* can be distinguished by the pale, fleshy conidiomata-wall, the proliferating phialides and the rather large, basally attenuated conidia.

REFERENCES

- ARX, J. A. VON (1981). The genera of fungi sporulating in pure culture. J. Cramer, Vaduz.
 PETRAK, F. (1955). *Callistospora* n. gen. eine neue, phaeophragmospore Sphaeropsideengattung. In *Sydowia* 9: 571–573.
 — (1957). *Creodiplodina* n. gen., eine neue Gattung der hyalodidymen Sphaeropsideen. *Sydowia* 10: 316–318. '1956' (publ. 1957).
 SUTTON, B. C. (1980). *The Coelomycetes*, Kew.