

## A NEW SPECIES OF *CORDANA* (DEMATIACEAE, HYPHOMYCETES)

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### SUMMARY

Typification of *Cordana pauciseptata*, the lectotype species of the genus *Cordana*, is briefly discussed. A new species, isolated from soil in Nepal, is described. Short notes are given on some other *Cordana* species. *Cordana bambusae* is discussed; a new combination in *Endophragmiopsis* is proposed.

PREUSS (1851) described the genus *Cordana* with three species. Amongst these *C. pauciseptata* is the lectotype, as pointed out by HUGHUS (1955). In the Preuss herbarium (B) two collections of this species are preserved as no. 1067 and 1068. No. 1067 bears the indication "Fig. 1348" in Preuss' handwriting as a reference to an unpublished drawing, which is now lost. It consists of a piece of wood on which, apart from a *Haplographium* species, no dematiaceous fungus could be found. No. 1068 contains a species of *Brachysporium*, identical with *B. britannicum* Hughes. It has a few denticles on the narrowed tip of the conidiophore, and the conidia are three-celled. However, according to the original description, *C. pauciseptata* has erect conidiophores, the apical capitate, hyaline conidiiferous part of which bears a cluster of small denticles ("capitulis radiantibus"), and ovate conidia with one transverse septum. So it is likely that Preuss' fungus is lost on both collections. A fungus agreeing with the diagnosis is now generally recognized as *Cordana pauciseptata*. It is described and depicted by HUGHES (1955) and ELLIS (1971a).

A similar species was recently isolated from a soil sample taken in a *Quercus* forest near Sunderijal, c. 1300 m, in Nepal by Dr Gertrud Franz. It differs by the shape of the conidia and the conidiophores, and is thought to be a further species of *Cordana*.

### *Cordana ellipsoidea* de Hoog, sp. nov. – Fig. 1

Coloniae olivaceo-nigrae, farinaceae. Hyphae submersae, hyalinae vel pallide olivaceae. Conidiophora erecta, simplicia, stipes brunneus, paulatim attenuatus, 50–120  $\mu\text{m}$  longus, pars conidiifera capitata, sympodialis, hyalina. Conidia e denticulis truncatis oriuntur, 1-septata, pallide brunnea, 8.7–11.5  $\times$  4.3–4.7  $\mu\text{m}$ , septo obscuro divisa; cellula apicalis rotundata. Blastoconidia unicellularia, fusca, 5.2–9.1  $\times$  4.6–6  $\mu\text{m}$ , in hyphis vegetativis formantur. Status perfectus ignotus.

*Colonies* on oatmeal agar at 20°C attaining a diameter of 15 mm in 8 days, at first without aerial mycelium, soon becoming powdery by abundant sporulation,

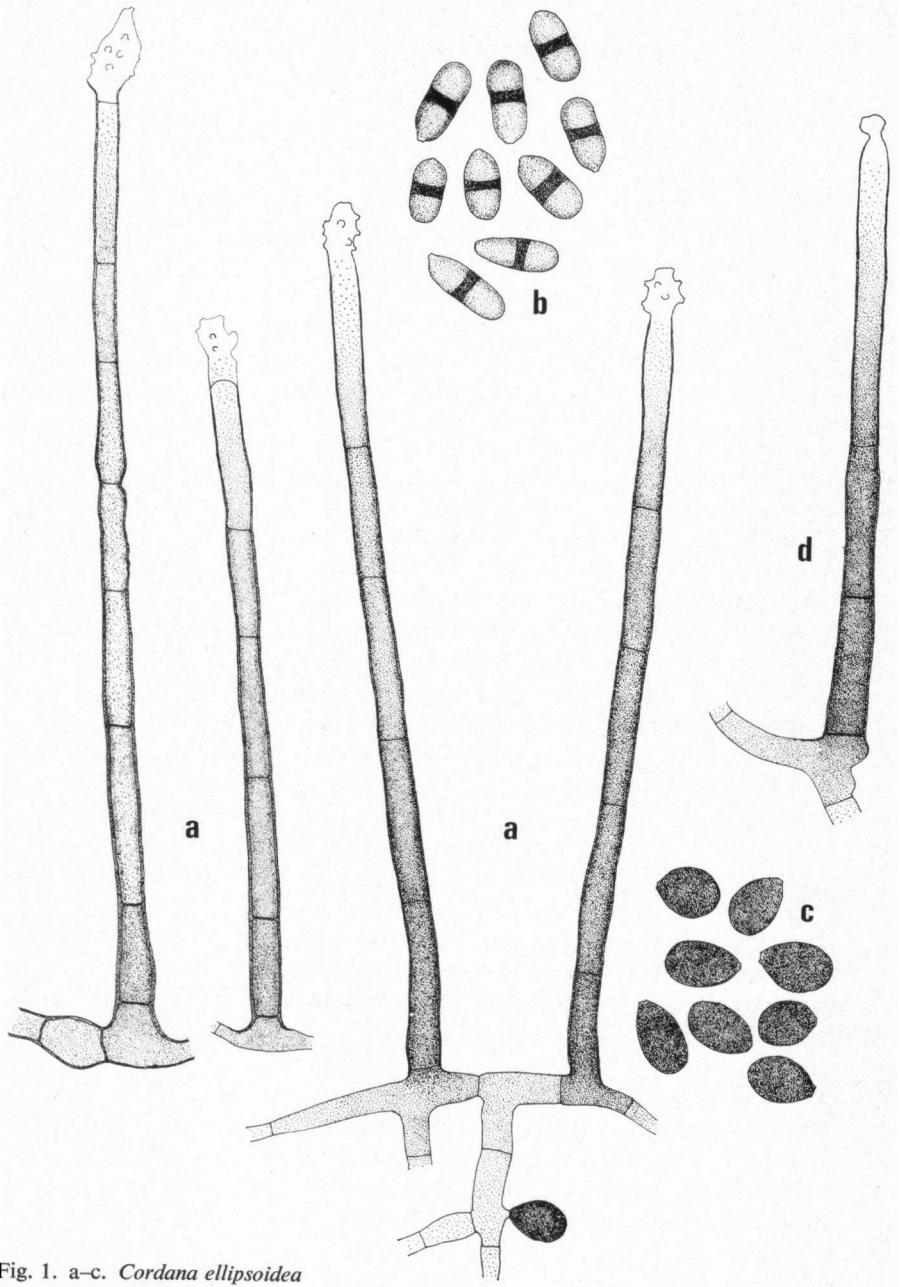


Fig. 1. a-c. *Cordana ellipsoidea*

a. conidiophores;

b. sympodial conidia;

c. 'chlamyospores' ( $\times 1000$ );

d. *Cordana pauciseptata*, conidiophore ( $\times 1000$ ).

olivaceous black, dark greenish grey towards the margin, slightly zonate; reverse olivaceous black. Submerged *hyphae* hyaline to pale olivaceous, smooth-, or rough-walled by pigment incrustation, 1–3  $\mu\text{m}$  wide; vegetative aerial hyphae mostly absent. *Conidiophores* arising from submerged, subhyaline, mostly somewhat widened vegetative hyphae, erect, simple; stalk brown, rather thick- and somewhat rough-walled, 3.5–4.5  $\mu\text{m}$  wide at the base, occasionally swollen up to 6  $\mu\text{m}$ , slightly tapering towards the tip, 50–120  $\mu\text{m}$  long with thin septa 15–25  $\mu\text{m}$  apart; conidiiferous portion apical, hyaline, thin-walled, capitate, up to 5.5  $\mu\text{m}$  wide, forming conidia by sympodial growth, soon with many blunt denticles, about 1–1.5  $\mu\text{m}$  long, protruding in all directions; conidiiferous part often proliferating, forming a new stalk of variable length, with another apical cluster of conidia; conidiophores with second, third or rarely fourth proliferation reaching a total length of up to 380  $\mu\text{m}$ . *Sympodial conidia* two-celled, pale brown to brown, slightly obovate, with a slightly protruding basal hilum, 8.7–11.5  $\times$  4.3–4.7  $\mu\text{m}$ , somewhat constricted at the dark and thick median septum; apical cell rounded at the tip, mostly somewhat wider than the basal cell. One-celled, chlamydospore-like blastoconidia occurring scattered on undifferentiated hyphae, dark brown, ellipsoidal to subglobose, smooth-walled with a small basal scar, 5.2–9.1  $\times$  4.6–6  $\mu\text{m}$ . *Perfect state* unknown.

*Cordana ellipsoidea* differs from *C. pauciseptata* by ellipsoidal or obovate conidia, which are rounded at the tip, the sympodial portion of the conidiophore, which has rather long conidiiferous denticles and is not constricted at the junction with the stalk of the conidiophore, and the dark brown, one-celled chlamydospore-like blastoconidia.

A similar species is *Cordana parasitica* TOGASHI & ONUMA (1934), which was described as a leaf parasite on *Aster trinervius* Roxb. var. *adustus* Maxim. No type material of this species could be studied. From the description and illustration it appears that the conidia are formed on small denticles on the gradually tapering tip of the conidiophore. The conidiiferous part is rather short and narrow, little differentiated from the stalk of the conidiophore.

Of *Cordana gilibertiae* TOGASHI & KATSUKI (in KATSUKI 1950) neither type material nor literature could be studied.

Both *Cordana musae* (Zimm.) Höhnelt and *C. johnstonii* M. B. Ellis, described and depicted by ELLIS (1971a and b respectively) differ considerably from *C. ellipsoidea*. In these species the conidia are borne on inconspicuous denticles, which mostly occur scattered along the conidiophore. The transverse septa of the conidia are not thickened. No observation of 'chlamydospores' is reported.

BATISTA & NASCIMENTO (in BATISTA & VITAL 1957) described and depicted the new species *Cordana bambusae* from the Philippines. The type material (URM) consists of a dense, matted, blackish brown, superficial mycelium on the cortex of *Bambusa* sp. The hyphae are irregularly branched, smooth- and thick-walled, brown to dark brown, about 5–9 (–12)  $\mu\text{m}$  wide, forming solitary conidia on the tips of ascending, little differentiated conidiophores. The conidia are attached with a wide, truncate base to the conidiogenous cells and break off at maturity. Sometimes the conidiophore is inconspicuously percurrent. The conidia are

dark brown to almost black, about  $25\text{--}30 \times 15\text{--}20 \mu\text{m}$ , and have one thick and dark transverse septum. The conidium morphology and ontogeny resembles *Endophragmiopsis pirozynskii* M. B. ELLIS (1966). The fungus is thought to be a second species of *Endophragmiopsis* M. B. ELLIS, and should be referred to as *Endophragmiopsis bambusae* (Batista & Nascimento) de Hoog, comb. nov. It differs from *Endophragma* DUVERNOY & MAIRE (1920) by the absence of submerged mycelium, the occurrence of ellipsoidal or somewhat lobed hyphopodia and the presence of conidial scars both laterally and terminally on the conidiophore.

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