STACHYLIDIUM PALLIDUM DEWI SP. NOV. FROM JAVA

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ABSTRACT

Key words: Dendrocalamus giganteus, Hyphomycetes, Stachylidium

INTRODUCTION
In making general collection of bambusicolous Hyphomycetes in Java, a species of Stachylidium was found growing on dead leaf of Dendrocalamus giganteus cultivated in Bogor Botanical Garden.

This species is characterized by the pale colour of the colonies, hyaline phialides and conidia, much branched conidiophores which has 4-6 whorls of lateral branches. The conidiophores are short (160-400 µm long), pale brown at the base and much paler toward to the apex. The phialides are cylindrical with conical apex, producing ellipsoid conidia, measuring 3-6 µm long and 2-3 µm in diameters.

This bambusicolous species is different from Stachylidium bicolor Link, the type species of the genus, because the latter possesses brown or olivaceous brown colonies, with conidiophores up to 700 µm long, their phialides smooth or minutely verruculose, hyaline or pale olivaceous, 9-20 x 3-4 µm, producing conidia 4-8 x 2-3 µm. In addition, Stachylidium bicolor grows on a great variety of herbaceous and woody substrata (Hughes 1951a, Ellis, Ellis & Ellis 1951, Ellis 1971). In Java this species has also been collected on Musa paradisiaca, Piper betle, Piper aduncum and Zalacca magnifica.

The bambusicolous species also differs from Stachylidium bicolor var. caespitosum Hol.-Jech. which has verrucose conidiophores arising singly or caespitose in tufts. Its phialides are pale yellow-brown to olive-brown, verrucose to echinulate, producing conidia which are longer, 5-10 x 1.5-2.5 µm (Holubová-Jechová 1988).

According to Holubová-Jechová (1988), there is another tuft forming or synnematous Stachylidium species from Cuba, Stachylidium cubense Mena et Mercado which is similar to Stachylidium bicolor var. caespitosum Hol.-Jech., but its conidia are larger (10-15.5 x 3.5-5 µm) and their phialides are not regularly verticilately arranged on the conidiophores.

Since this new collection is congruent with the genus Stachylidium which have an oval and wide phialides in contrast to the more or less subulate and narrow phialides of Verticillium spp. (Hughes 1951b), but because it cannot be matched with any described taxa, it is proposed here as a new species of Stachylidium.

Stachylidium pallidum Dewi, sp. nov.—Fig. 1c,d,e

Coloniae effusae, pilosae, cinerea vel pallide brunneae. Mycelia plerumque immersa, hyalina. Conidiophora singula recta, flexuosa, 160-400 µm longa, pallide brunnea, saepe apicem versus pallidiora vel hyalina, ramosa. Phialides cylindriatae ad apicem conoidea levia, 13-18 x 2-3 µm. Conidia hyalina, ellipsoidea, 4-4.5 µm longa, 2-3 µm crassa, levia.

Colonies effuse, hairy, grey to very pale brown. Mycelium mostly embedded in the
Fig. 1. *Stachylidium bicolor*: a. Habit and Conidiophore; b. Conidia (based on BO22542); *Stachylidium pallidum*: c. Habit and Conidiophore; d. Conidia; e. Phialides (based on BO22541).
substratum consist of hyaline hyphae. Conidiophores erect, flexuous, pale brown at the base, much paler to hyaline toward the apex, 160-400 µm long, singly or in groups, 10-15 septate, with 4-6 whorls of lateral branches arising in the upper part. Branches cylindrical, taper gradually to the apex, very pale brown to hyaline, 22.5-90 µm long, 2.25-4 µm diameter at base. Lateral branches bearing singly, in pairs or in verticils of 3 to 4 second branches or phialides. Phialides conoidal, constricted at base, conoidal at the apex, with almost imperceptible minute collarette, hyaline to subhyaline, smooth, 13-18 µm long, 2-3 µm in diameters. Conidia formed at the tips of phialides, 3-6 µm long, 2-3 µm in diameters, hyaline, ellipsoidal to subovoidal, smooth. Teleomorph unknown.

SPECIMEN EXAMINED. On dead leaf of Dendrocalamus giganteus, Indonesia, Java, West Java, Bogor Botanical Garden, 15 February 2006, Dewi 168 (BO22541, Holotype).

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