
***Berkleasium typhae* sp. nov., a new hyphomycete on narrow-leaved cattail (*Typha angustifolia*) from Thailand**

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Berkleasium typhae, collected from a decaying leaf of *Typha angustifolia* from Thailand is illustrated and described as a new species and compared with related taxa.

Key words: anamorphic fungi, *Berkleasium*, narrow-leaved cattail, Thailand, *Typha*.

Introduction

During an investigation and isolation of fungi in Thailand, a sporodochial fungus with pigmented dictyospores borne on simple conidiophores was collected. These characters indicate placement in the genus *Berkleasium*. Bussaban *et al.* (2001) recently reviewed the genus *Berkleasium*, and accepted 24 species and described 2 new species. Of the species discussed by Bussaban *et al.* (2001) none are identical to our species and it is therefore illustrated and described as a new species.

Materials and methods

Narrow-leaved cattail (*Typha angustifolia*), collected from the Pathum Thani, Thailand, was incubated in moist chambers in the laboratory and periodically examined for sporulating fungi. Fungi encountered were mounted in water and measurements, photographs and drawings made to enable identification. Single spore isolations were made on cornmeal agar (CMA) with added streptomycin sulfate to suppress bacterial growth. All material examined was dried down and deposited in the BIOTEC Bangkok Herbarium (BBH). Cultures are deposited in BIOTEC Culture Collection (BCC).

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Taxonomy

Berkleasmium typhae Somrithipol & E.B.G. Jones, **sp. nov.** (Figs. 1, 2)

Etymology: typhae ex substrato *Typha angustifolia* (*Typhaceae*).

Coloniae sporodochia, punctiformis, sparsa, pulvinata, atra, nitida. Mycelium immersum in substrato. *Hyphae* ramosis, septatis, laevibus, pallide brunnea vel brunnea. *Conidiophora* macronematosa, mononematosa, clavatus, exseptata, hyalinae, laeves, 17.5-25 μm longa, 7.5-13 μm lata ad maxime crassorum posito, 2.5-5 μm lata ad basim, 4-6 μm lata ad apice. *Cellulae conidiogenae* terminalitor in conidiophoris, holoblasticae. *Conidia* solitaria, ovalia vel ellipsoidea, muriformia, septatis constrictus, pallide brunneis vel brunnei, septis ad medio atrobrunneis, 23-28.5 μm longa, 15-19.5 μm lata.

Holotypus: THAILAND, Pathum Thani, Klong Luang, in folio putrescentium *Typha angustifolia*, August 2002, S. Somrithipol (SFC 1610 in BBH).

Cultura ex-typus: BCC 12536 in BCC.

Colonies sporodochia, punctiform, scattered, cushion-shaped, brown, shiny. *Mycelium* immersed in the substratum. *Hyphae* branched, septate, smooth, pale brown to brown. *Conidiophores* macronematous, mononematous, clavate, non-septate, hyaline, smooth, 17.5-25 μm long, 7.5-13 μm wide at the broadest part, 2.5-5 μm wide at the base, 4-6 μm wide at the apex. *Conidiogenous cells* terminal on the conidiophores, holoblastic. *Conidia* solitary, oval to ellipsoidal, muriform, constricted at the septa, often with a dark median septum, pale brown to brown, smooth, 23-28.5 μm (\bar{x} = 25 μm , n = 50) long, 15-19.5 μm (\bar{x} = 16.6 μm , n = 50) wide.

Colonies on CMA at 20°C reaching a diam. of 3 cm in 15 days with olivaceous gray mycelium immersed in the agar and often covered with little pale gray aerial mycelium at the centre. Colonies on PDA at the same environmental condition reaching a diam. of 2 cm, cottony, olivaceous-gray to olivaceous-green, reverse olivaceous black. No sporulating structures were observed.

Discussion

The genus *Berkleasmium* is characterized by the sporodochial colonies with pigmented dictyosporous conidia borne on short and simple conidiophores (Moore, 1958). It most closely resembles *Canalisporium*, however, conidia of the latter are complanate with rows of cells (Nawawi and Kuthubutheen, 1989; Goh *et al.*, 1998).

The genus *Berkleasmium* is also similar to *Oncopodium* with its sporodochia and pigmented dictyospores, however, conidia of the latter are vertically orientated (wider than long) and have a distinct apex and base (Sutton, 1978). Castañeda Ruíz *et al.* (2001) recently provided a key to *Oncopodium* accepting 8 species and none are identical to *B. typhae*.

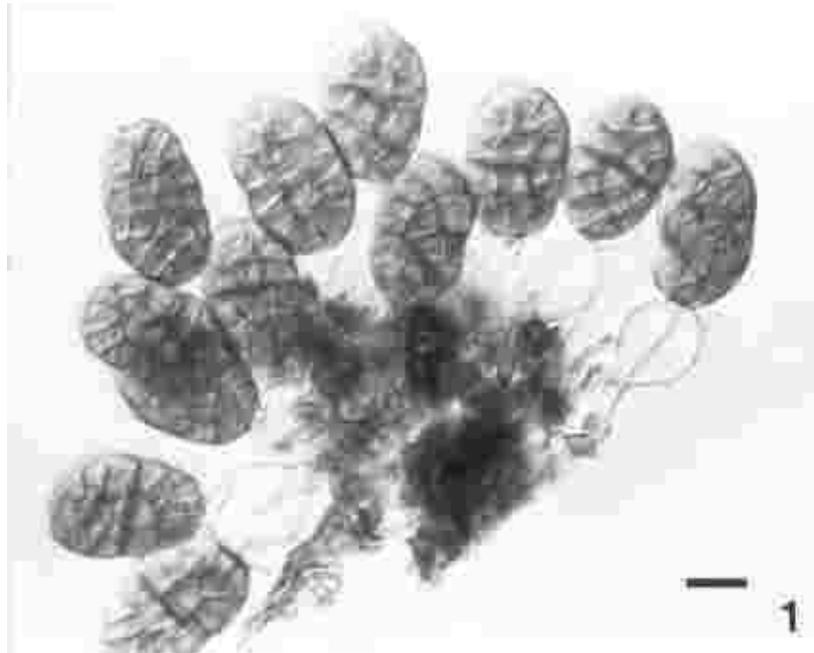


Fig. 1. Light micrograph of *Berkleasmium typhae* (from holotype). Bar = 10 μ m.

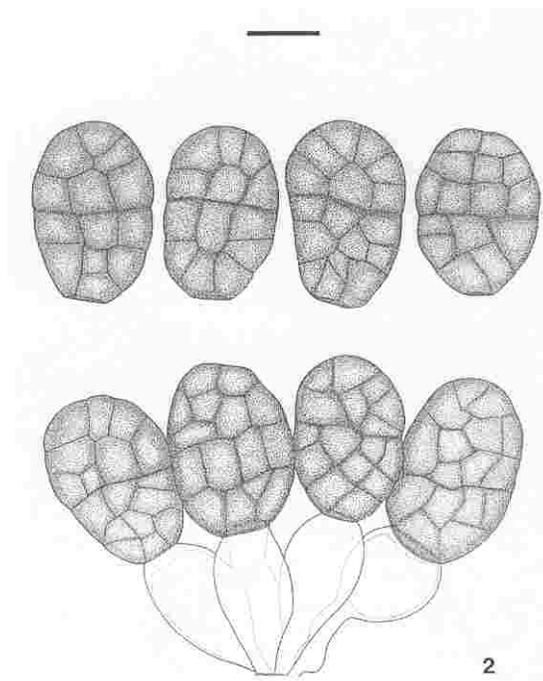


Fig. 2. Line drawings. Conidia and inflated conidiophores of *Berkleasmium typhae*. Bar = 10 μ m.

Of the total 24 *Berkleasium* species (Bussaban *et al.*, 2001), *B. typhae* most closely resembles *B. inflatum* (Holbová-Jechová, 1987) in that both have inflated conidiophores. However, conidia of *B. typhae* ($23-28.5 \times 15-19.5 \mu\text{m}$) are smaller than those of *B. inflatum* ($40-48 \times 19.5-21 \mu\text{m}$). Conidiophores of *B. typhae* ($21.5 \mu\text{m}$) are also shorter than those of *B. inflatum* ($48 \mu\text{m}$).

Berkleasium typhae was collected from a dead leaf of *Typha angustifolia* which suggest that it has a saprobic mode of life as most of the recorded species (Moore, 1958, 1959; Ellis, 1971, 1976). Conidia of *B. typhae* germinated within 24 hours after isolation with a colony diam. *ca.* 1 cm within a week. However no sporulating structures were observed in culture.

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