

A new species of *Dactylaria* from Hong Kong

K. M. Tsui, T. K. Goh & K. D. Hyde

Department of Ecology and Biodiversity, The University of Hong Kong, Pokfulam Road, Hong Kong

Tsui, K. M., T. K. Goh & K. D. Hyde (1997). A new species of *Dactylaria* from Hong Kong. – *Sydowia* 49(2): 182–186.

Dactylaria hyalotunicata sp. nov. from submerged wood collected in Hong Kong is described and illustrated. It differs from previously described species in having hyaline conidiophores and relatively small conidia with a hyaline gelatinous sheath. *D. hyalotunicata* is compared with other *Dactylaria* species and illustrated with interference light micrographs.

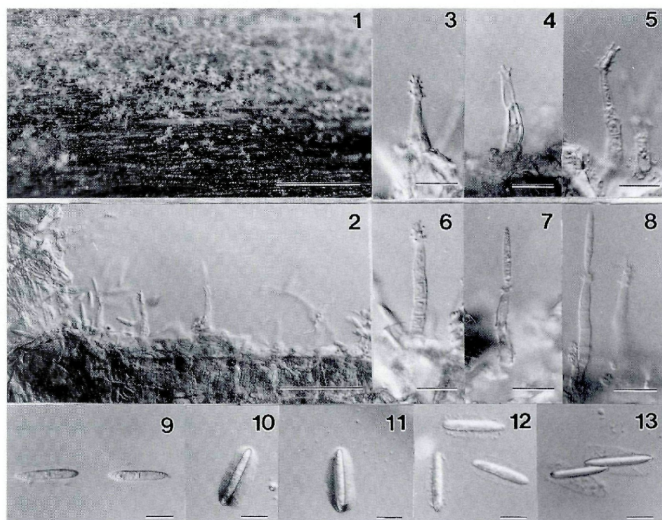
Key words: Aquatic fungi, hyphomycetes, lignicolous fungi, mitosporic fungi, systematics.

The genus *Dactylaria* Sacc. has been revised several times (Bhatt & Kendrick, 1968; Rifai, 1968). De Hoog (1985) redefined and subdivided the genus into four sections, i.e. *Dactylaria*, *Diplorhinotrichum* (Höhn.) de Hoog, *Mirandina* (G. Arnaud ex Matsush.) de Hoog, and *Pleurophragmium* (Costantin) de Hoog. Forty one species were accepted in *Dactylaria sensu lato* (de Hoog, 1985) and keys were provided under each section. Since then, a further 41 species have been validly published and these are listed by Goh & K. D. Hyde (1997) who also provide a key to these additional species.

During our investigation of freshwater microfungi occurring on submerged wood from Lam Tsuen River in Hong Kong, we found a hyphomycete representing a member of the *Dactylaria*-complex, which we considered to be new to science. In this paper we describe this species as *Dactylaria hyalotunicata* sp. nov.

***Dactylaria hyalotunicata* K. M. Tsui, Goh & K. D. Hyde, sp. nov. – Figs. 1–14.**

Coloniae in PDA (Potato Dextrose Agar) effusae, flavae vel hyalinae. Mycelium inconspicuum in ligneo substrato immersum. Stromata nulla. Setae nullae et hyphopodia absentia. Conidiophora macronemata, erecta, solitaria, simplicia vel non ramosa, laevia, 4–6 septata, plus minusve cylindrica, 30–60 × 4–5 µm, apicem versus leniter attenuata (ca. 3 µm lata), hyalina. Cellulae conidiogenae in conidiophoris incorporatae, polyblasticae, terminales, hyalinae, denticulatae. Denticuli cylindrici, hyalini, 1–1.5 µm longi, 1–1.2 µm lati. Conidiorum secessio schizolytica. Conidia holoblastica, solitaria, naviculata ad fusiformia, plerumque parallela,



Figs. 1-13. *Dactylaria hyalotunicata* (from holotype). - 1. Portion of colony on submerged wood. - 2. Squash amounts of conidiophores and conidia in water. - 3-6. Conidiophores with polyblastic conidiogenous cells. - 7-8. Conidiophores with new holoblastic conidia. - 9. Conidia showing the septa. - 10-13. Conidia. Note the hyaline gelatinous sheath around the conidia. - Bars: 1 = 500 μ m; 2 = 100 μ m; 3-8 = 20 μ m; 9-13 = 10 μ m.

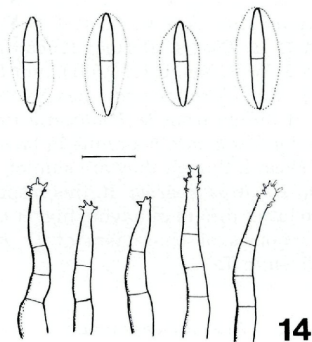


Fig. 14. - *Dactylaria hyalotunicata* (line diagram from holotype), conidiophores and conidia. - Bar: 14 = 10 μ m.

hyalina, laevia, 0–1 septata, non constricta ad septa, 20–25 × 2.5–3 µm, tunica gelatinosa hyalina praedita.

Holotypus. – HONG KONG, New Territories, Tai Po, Lam Tsuen River, on submerged wood, 22 Jan. 1997, K. M. Tsui, KM158 (HKU(M) 5377).

Etymology. – *hyalotunicata* – in reference to the hyaline conidiophores and conidia with a hyaline gelatinous sheath.

Colonies in PDA (Potato Dextrose Agar) effuse, yellowish to hyaline. – Mycelium on wood inconspicuous, immersed in substratum. – Stromata absent. – Setae and hyphopodia absent. – Conidiophores macronematous, erect, solitary, simple or unbranched, smooth-walled, more or less cylindrical, 4–6-septate, 30–60 µm long, 4–5 µm wide, slightly attenuate towards the apex (ca. 3 µm wide), hyaline. – Conidiogenous cells polyblastic, terminal, integrated, hyaline, denticulate, proliferating sympodially. – Denticles cylindrical, hyaline, 1–1.5 µm long, 1–1.2 µm wide. – Conidial secession schizolytic. – Conidia holoblastic, solitary, naviculate to fusiform, mostly with parallel sides, smooth, hyaline, 0–1 septate, not constricted at the septum, 20–25 × 2.5–3 µm, winged with a hyaline, gelatinous sheath.

In accordance with the classification of de Hoog (1985), this species can be classified under the Section *Dactylaria* (*sensu* de Hoog) because it possesses hyaline conidiophores with cylindrical denticles and hyaline conidia.

Dactylaria hyalotunicata bears some resemblance to a few species of *Dactylaria* which also produce hyaline, fusiform, 1-septate conidia, such as *D. candidula* (Höhn.) G. C. Bhatt & W. B. Kendrick (1968), *D. chrysosperma* (Sacc.) G. C. Bhatt & W. B. Kendrick (1968), *D. fusifera* (Berk. & M. A. Curtis) de Hoog (1985), *D. hemibeltranioides* R. F. Castañeda & W. B. Kendrick (1991), and *D. tunicata* Goh & K. D. Hyde (1997). *Dactylaria fusifera* has hyaline to subhyaline conidiophores, but it differs from *D. hyalotunicata* in having larger conidia. *Dactylaria hyalotunicata* is unique in having conidia with a hyaline gelatinous sheath, though they are similar in size with those of *D. candidula* and *D. chrysosperma*. In this respect, it is similar to *D. tunicata*, but the latter differs in having bigger conidia and brown conidiophores. A synopsis of characters of *D. hyalotunicata* and similar species is given in Tab. 1.

Acknowledgments

We are grateful to A. Y. P. Lee, Helen Leung and Michelle Wong for their photographic and technical assistance.

Tab. 1. – Comparison of *Dactylaria hyalotunicata* with other similar species (from Bhatt & Kendrick, 1968; Hoog, 1985; Castañeda Ruiz & Kendrick, 1991; Goh & Hyde, 1997).

Species	Conidiophore	Conidia	Substrate and locality
<i>D. hyalotunicata</i>	Hyaline, smooth-walled, 30–60 × 4–5 µm, 4–6-septate.	Hyaline, naviculate to fusiform, 20–25 × 2.5–3 µm, 0–1-septate, with hyaline gelatinous sheath.	On submerged wood in rivers, Hong Kong.
<i>D. candidula</i>	Hyaline, thick-walled, 20–50 × 4–5 µm, 1–3-septate.	Hyaline, fusiform, 15–23 × 2.5–4.2 µm, 1-septate, occasionally constricted at the septum.	On rotten wood, Austria, New Zealand & Netherlands; on branches, U. K. & Netherlands; on bait, New Zealand.
<i>D. chrysosperma</i>	Brown, paler towards the apex, 60–220 × 3–5 µm.	Hyaline or yellowish, fusiform, 18–26 × 3–4 µm, 1-septate.	On decaying wood in Europe e.g. Italy, U. K. & Netherlands.
<i>D. fusifera</i>	(Sub)hyaline, thick walled, 25–30 × 4–6 µm, often with a swollen base.	Hyaline, cylindrical, 30–40 × 3.8–4.6 µm, 1-septate.	On rotten wood, South Carolina.
<i>D. hemibeltranioides</i>	Base brown, apex paler, smooth-walled, 30–180 × 4–8 µm.	Hyaline, fusiform, cylindrical or naviculate, 12–20 × 2–2.5 µm, non-septate or rarely 1-septate.	Dead leaves of <i>Stigmaphyllon sagraeanum</i> , Cuba.
<i>D. tunicata</i>	Mid-olivaceous brown, 75–160 × 4–4.5 µm, 2–6-septate.	Hyaline, naviculate to fusiform, 25–31 × 3–4.5 µm, 1-septate, with hyaline gelatinous sheath.	On submerged wood in streams, Australia.

References

- Bhatt, G. C. & W. B. Kendrick, (1968). The generic concept of *Diplorhinotrichum* and *Dactylaria*, and a new species of *Dactylaria* from soil. – Can. J. Bot. 46: 1253–1257.
- Castañeda Ruiz, R. F. & W. B. Kendrick (1991). Ninety-nine conidial fungi from Cuba and three from Canada. – University of Waterloo Biol. Ser. 35: 1–132.
- Goh, T. K. & K. D. Hyde (1997). A revision of the genus *Dactylaria*, with description of *D. tunicata* sp. nov. from submerged wood in Australia. – Mycol. Res. 101: 1265–1272.
- Hoog, G. S. de (1985). Taxonomy of the *Dactylaria* complex IV–VI. – Stud. Mycol. 26: 1–122.
- Rifai, M. A. (1968). The hyphomycete genus *Dactylaria* Sacc. – Reinwardtia 7: 357–374.

(Manuscript accepted 22nd June 1997)

ZOBODAT - www.zobodat.at

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Sydowia](#)

Jahr/Year: 1997

Band/Volume: [49](#)

Autor(en)/Author(s): Tsui K. M., Goh T. K., Hyde Kevin D.

Artikel/Article: [A new Species of Dactylaria from Hong Kong. 182-186](#)