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Dactylaria mucoglobifera sp. nov. – a new species from Vietnam

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Abstract: Mel'nik, V. A., Braun, U. & Alexandrova, A. V. 2013: *Dactylaria mucoglobifera* sp. nov. – a new species from Vietnam. Schlechtendalia **25**: 49–52.

The new species *Dactylaria mucoglobifera*, found in Vietnam on the inner side of cupules belonging to *Lithocarpus* or *Quercus* (*Fagaceae*), is described, illustrated and discussed. This species is unique by its conidia with mucous, globose apical appendages.

Zusammenfassung: Mel'nik, V. A., Braun, U. & Alexandrova, A. V. 2013: *Dactylaria mucoglobifera* sp. nov – eine neue Art aus Vietnam. Schlechtendalia **25**: 49–52.

The neue Art *Dactylaria mucoglobifera*, gefunden in Vietnam auf Cupulae von *Lithocarpus* oder *Quercus* (*Fagaceae*), wird beschrieben, abgebildet und diskutiert. Diese Art ist einmalig auf Grund ihrer Konidien mit schleimigen, kugeligen Anhängseln an der Spitze.

Key words: *Dactylaria*, new species, Southeast Asia, conidial appendages.

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Introduction

Mel'nik (2011, 2012a,b) and Mel'nik et al. (2012) published results of examinations of several hyphomycetes recently collected in Vietnam within the frame of a Research Program of the Vietnam-Russian Tropical Research and Technological Centre, including some new species and numerous new records. An additional collection found on cupules belonging to *Lithocarpus* or *Quercus* proved to represent a new species of *Dactylaria* Sacc. Attempts to cultivate this fungus, in order to be able to carry out molecular sequence analyses, failed unfortunately. However, the Vietnamese fungus is morphologically unique within *Dactylaria* by its conidia characterised by having mucous, globose apical appendages, which warrants its description as new species.

Material and Methods

Fresh samples collected in the course of field trips in Vietnam were dried at room temperature. The material was later examined in distilled water and photographed using a Zeiss microscope, Stemi 2000CS, and Axio Imager A1 equipped with Nomarski differential interference contrast optics. Identification was carried out through comparison with current taxonomic works dealing with *Dactylaria* spp. The examined specimen is deposited at LE.

Result

Dactylaria mucoglobifera Melnik, U. Braun & A.V. Alexandrova, **sp. nov.** Figs 1–2

MycoBank, MB 802449.

Etym.: composed of muco- and -globifera, which refers to the conidia that carry mucous, globose appendages.

Dactylariae flammulicornutae similis, sed appendicibus terminalibus conidiorum mucosis globosis, conidiis anguste obovoideis vel breviter clavatis, minoribus, 10.3–11.2(–11.6) × 2.2–2.4(–2.5) µm.

Colonies on the inner surface of cupules, mouse-grey, effuse. Conidiophores scattered, arising from hyphal cells, solitary, macronematous, mononematous, unbranched, straight, sometimes slightly flexuous, cylindrical or gradually attenuated towards the apex, 20–30 µm long, 4–6 µm wide at the base and 3–4 µm wide near the apex, pale brown at the base, paler towards the tip, subhyaline or hyaline, 1–2(–3)-septate, thin-walled, smooth. Conidiogenous cells integrated, terminal, sympodially proliferating, hyaline, with short denticles, 1–1.5 × 0.5(–1) µm, subcylindrical. Conidia solitary, narrowly obovoid to short clavate, 10.3–11.2(–11.6) × 2.2–2.4(–2.5) µm, with a single somewhat supramedian septum, non-constricted at the septum, thin-

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walled, hyaline, distinctly tapered towards the base, apex round or slightly attenuated, with a mucous, globose, durable appendage, 2.3–2.6 µm diam. Teleomorph unknown.

Holotype: Vietnam, Dak Lak Prov., Krong Kmar District, Chu Yang Sin National Park, 1.5 km west of Chu Pan Phan mountain, mountain tropical forest, 12°22’93’’N, 108°22’13’’E, 1950 m alt., on the inner surface of cupules of *Lithocarpus* or *Quercus* (*Fagaceae*), 9 Apr. 2012, A. V. Alexandrova (LE 263775).

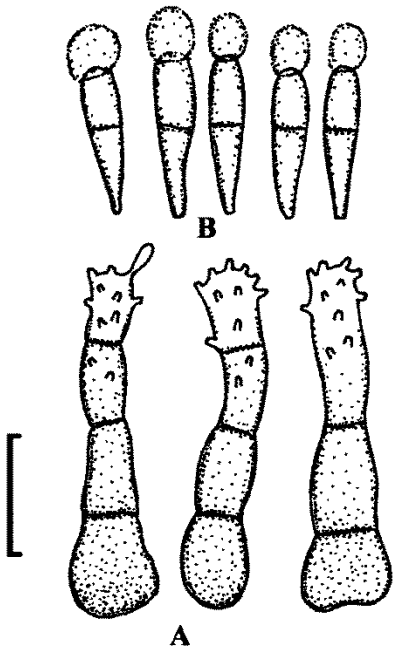


Fig. 1: *Dactylaria mucoglobifera*, A – Conidiophores, B – Conidia. Bar – 10 µm. U. Braun del.

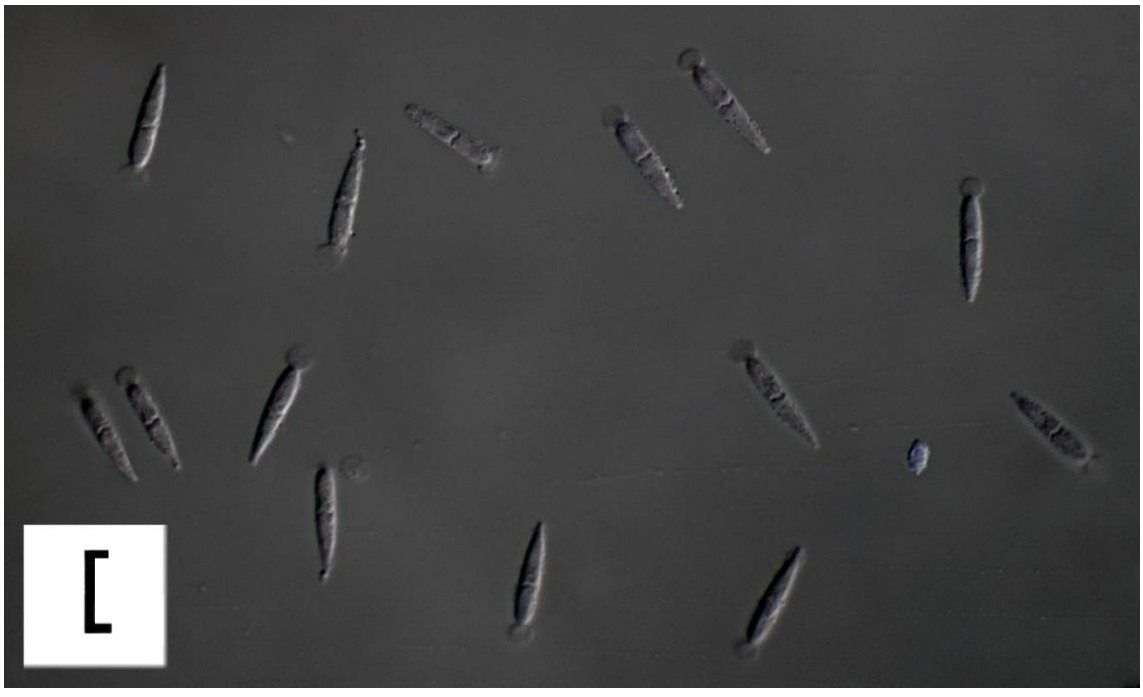


Fig. 2: *Dactylaria mucoglobifera*, Conidia in dark field. Bar – 10 µm.

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Discussion

The characteristics of conidiophores, denticulate conidiogenous cells and conidia classify the new species from Vietnam as a member of the genus *Dactylaria*. De Hoog (1985) introduced a wider circumscription of this genus, which he divided into several sections. Due to pigmented conidiophores and its conidial shape and septation, *Dactylaria mucoglobifera* belongs to sect. *Diplorhinotrichum* (Höhn.) de Hoog [≡ *Diplorhinotrichum* Höhn.] (*Dactylaria* sect. *Dactylaria* comprises species with colourless conidiophores). There are different circumscriptions of *Dactylaria* and controversial discussions on its taxonomy, and comprehensive reassessments based on phylogenetic data are not yet available. However, *Diplorhinotrichum* is an established, generally recognized synonym of *Dactylaria* (Goh & Hyde 1997, Seifert et al. 2011). Almost all species of the latter genus form conidia without any appendages. *D. flammulicornuta* Pinnoi, E.B.G. Jones, McKenzie, K.D. Hyde (Pinnoi et al. 2003, cited and illustrated in Paulus et al. 2003 as "*D. flammae* Pinnoi et al"), described from Thailand on terrestrial petiole of *Nenga pumila*, is the only comparable species. The conidia are, however, much larger, 42.5–62.5 × 4.5–5 µm, 0–1-septate, cylindrical, and the conidia bear mucous flame-like terminal appendages, sometimes about the same length as the conidium. *Dactylaria* species with mucous globose appendages, as in *D. mucoglobifera*, have not yet been described. This structure agrees well with appendage type H in Nag Raj (1993). The appendages of the new Vietnamese species may be broken or dissolved, but they are mostly maintained and visible in dried herbarium samples, i.e. they are durable and not ephemeral.

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