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A new species of *Heliocephala* from Vietnam

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Abstract —*Heliocephala vietnamensis* sp. nov., a hyphomycetous fungus collected on decaying leaves of an unidentified plant, is described and illustrated. It is distinguished by determinate apical cluster of conidiogenous cells and obclavate to sub-navicular, 3-septate, pale brown conidia.

Key words — anamorphic fungi, systematics, leaf litter

Several samples of dead plant material colonized by anamorphic fungi were collected in a dense monsoon tropical forest in Vietnam. Among these samples was a conspicuous *Heliocephala* species, which is herein described and illustrated.

Taxonomy

Heliocephala vietnamensis Melnik & R.F. Castañeda, **sp. nov.** Figs 1,2

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Differs from *Heliocephala elegans* and *H. triseptata* by conidial shape, number of septa and size.

Type: Vietnam, Dong Nai, Cat Tien National Park, right bank of the Dong Nai River, near to *Ficus* sp. plot, a dense monsoon tropical forest, 11°26′N 107°25′E, on decaying leaves of unidentified plant, 2 January 2011, coll. Yu. Novozhilov, (**Holotype**: LE 261853).

Etymology: Latin, *vietnamensis*, refers to the country where the fungus was found.

Colonies on the natural substrate effuse, hairy, amphigenous, brown. Mycelium mostly superficial composed of septate, branched, dark brown, smooth-walled

Fig 1. *Heliocephala vietnamensis* (ex holotype LE 261853). A. Conidia. B. Conidiophore, conidiogenous cell and attached conidia. Scale bars = 10 µm.

hyphae, 1.8–2.8 µm diam. Conidiophores distinct, single, cylindrical, erect, straight, 210–340 × 6–8 µm, 14–16 µm wide at the base, 7–12-septate, bearing a conidiogenous apparatus at the apex consisting of 3–6 irregular-campanulate

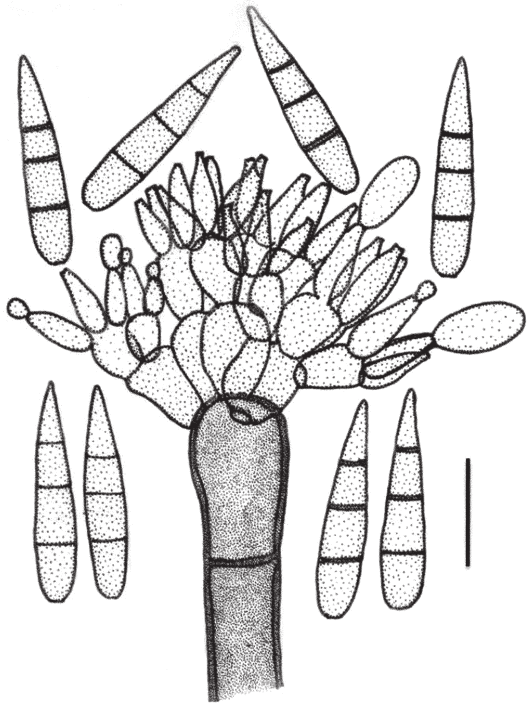

Fig 2. *Heliocephala vietnamensis* (ex holotype LE 261853).
Conidiogenous cells and conidia. Scale bar = 10 μm.

to irregular-doliiform or cuneiform primary and secondary branches (metula-like), pale brown, 3–4 × 3.5–4.0 μm. Conidiogenous cells monoblastic, discrete, determinate, delicate, lageniform, 1.7–3.0 × 1.5–2.5 μm, pale brown, smooth, forming a compact cluster at the ends of the branches. Conidial secession schizolytic. Conidia solitary, acrogenous, obclavate to navicular, 3-septate, pale brown, 14–17 × 2.8–3.8 μm, smooth-walled, dry. Teleomorph unknown.

Note: The genus *Heliocephala* V. Rao et al. (Rao et al. 1984) was based on *H. proliferans,* which was distinguished by the production of compact clusters of discrete, lageniform, monoblastic conidiogenous cells arising more less radially or closely fasciculate from short secondary or tertiary branches (metula-like) at the apex of the conidiophores. The conidia are obclavate, long or short rostrate, septate, pale brown, with an unusual germination of the apical cell to form a secondary cluster of conidiogenous cells.

Heredia et al. (2011), who emended *Heliocephala* after molecular and morphological studies of some *Heliocephala* species and the closely similar *Holubovaniella* R.F. Castañeda (Castañeda 1985), considered *Holubovaniella* a synonym of *Heliocephala*. They provided a key to the species and expanded the generic concept of *Heliocephala* to accommodate taxa with indeterminate conidiophores with several extensions of the main axis and solitary conidia produced by the same kind of conidiogenesis. Following Heredia et al. (2011), *Heliocephala* comprised six species: *H. elegans* (R.F. Castañeda) R.F. Castañeda & Unter., *H. gracilis* (R.F. Castañeda) R.F. Castañeda & Unter., *H. natarajanii* Kumaresan & M. Sriniv., *H. proliferans* V. Rao et al., *H. triseptata* Heredia et al., and *H. zimbabweensis* Decock et al.

Among the previously described *Heliocephala* species, only *H. elegans* and *H. triseptata* are similar to *H. vietnamensis*, but *H. elegans* (Castañeda-Ruiz 1985) has indeterminate conidiophores with several clusters of short branches and intercalary conidiogenous cells on the axis before each extension and olivaceous conidia that are obclavate to lecythiform with a shortly rostrate apical cell, mostly 2-septate, 8–25 × 3–4 µm. *H. triseptata* (Heredia et al. 2011) has conidia that are obclavate or navicular to broadly fusiform, rostrate, 15–27 × 3.5–4.5 µm with a 10–14 µm long rostrum. Neither species can be confused with *H. vietnamensis*.

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