A new species of *Ardhachandra* (hyphomycetes) from Vietnam

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A collection of a fungus belonging to the hyphomycete genus *Ardhachandra* was found on leaf litter of an unidentified broad-leaved tree in Vietnam and proved to be a new species, which is described as *A. vietnamensis*, illustrated and compared with allied species in the present paper.

**Key words** – Ascomycota – anamorphic fungi – new taxon – Southeast Asia

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**Introduction**
In 2010 and 2011, mycologists of the Komarov Botanical Institute, Russian Academy of Sciences (St. Petersburg) and Moscow State University carried out comprehensive explorations of mushrooms, aphylloroid basidiomycetes, discomycetes and myxomycetes in some areas of South Vietnam. The substrates of the collected samples of fungi and myxomycetes (leaf and branch litter, bark, fallen fruits, seeds, etc.) have been searched for the presence of anamorphic fungi. Some results of these studies have already been published (Mel’nik 2011, Mel’nik et al. 2012). A list of hitherto identified micromycetes includes names of about 150 species, almost all of them being hyphomycetes. Examinations of additional material from South Vietnam showed that several of the observed hyphomycetes may be new taxa. One of them, belonging to the genus *Ardhachandra* Subram. & Sudha, has been examined in detail and proved to be a new species.

**Methods**
Fresh samples collected during the course of field trips in Vietnam were dried at room temperature. The material was examined 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 of fungi under consideration. The examined specimen is deposited at LE.

**Results**
The following description is based on fungal material recently found in Vietnam on leaf litter of an unidentified deciduous tree which proved to be a new species.

*Ardhachandra vietnamensis* Melnik, *sp. nov.*

MycoBank, MB 801933.

Etymology – vietnamensis, referring to country where the fungus was found.
Figs 1–6 – Ardhachandra vietnamensis (ex holotype LE 261999): 1 conidiophore; 2 colony; 3, and 5 denticulate conidiogenous cells; 4 conidia in front and lateral views; 6 conidiophore with radially lobed base and conspicuously widened upper part. Bars: 1 = 50 μm; 2 = 500 μm; 3–6 = 25 μm.
Ardhachandrae prolatofusiformis similis, sed conidiophoris distincte longioribus, 70–470 μm, rhachibus flexuosis cum denticulis cardo- idibus (subcylindricis) et conidiis ellipsoidibus- fusiformibus, apice acuminato, basi rotundato, 23–35 × 8–10.2 μm, plananatis, lateraliter tannum modo 6–7 μm latis.

Colonies on the upper surface of leaf lamina, villous, effuse, dark brown. Conidiophores abundant, evenly scattered, solitary, macronematous, mononematous, with radially lobed base, 22–25 μm diam., septate (distance between septa 22–30 μm), not branched, straight, smooth, pale brown to olivaceous-brown, 70–470 μm long (including conidiogenous cells), 4–5 μm wide in the middle, 6.5 μm just above the radially lobed base, up to 6 μm in upper part just beneath the denticulate conidiogenous cells. Conidiogenous cells integrated, terminal, later becoming intercalary, sympodially proliferating, cylindrical, 26–110 μm long., rachis flexuous, with short peg-like (subcylindrical), perpendicular denticles, 2–3 μm diam., apex truncate. Conidia formed singly, smooth, pale brownish, aseptate, with conspicuous germ slit, in front view ellipsoid-fusiform with rounded base and acuminate apex (often abruptly attenuated), symmetrical, 23–35 μm × 8–10.2 μm, somewhat applanate, in lateral view narrowly fusiform, 6–7 μm wide. Teleomorph unknown.


Discussion

According to Seifert et al. (2011), the genus Ardhachandra Subram. & Sudha comprises four species on leaf litter of broad-leaved trees in Africa, Asia and South America. Onofri & Castagnola (1983) considered Ardhachandra a synonym of Rhinocladiella Nannf. Chen & Tzean (1995), disagreeing with the latter opinion, described the new species A. prolatofusiformes J.L. Chen & Tzean. The latter species resembles the fungus recently found in Vietnam, but differs in having shorter conidiophores (54.3–409 μm), with almost uniform width beneath the flexuous denticulate rachis. In addition, the denticles of the rachis are more or less conical (Chen & Tzean 1995: 364, Fig. 1), and the conidia are in front view oblong-fusiform, asymmetrical, guttulate, 19.4–33.2 × 5.4–8.5 μm, smooth or finely verrucose. All other species of Ardhachandra are morphologically quite distinct from the Vietnamese specimen. Due to the discussed obvious differences between A. prolatofusiformes and the Vietnamese collection, the latter undoubtly represents a different, probably tropical new species, described in this paper as A. vietnamenesis.

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References