

***Hemicorynespora clavata*, a new hyphomycete (anamorphic fungi) from Cuba**

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Abstract – *Hemicorynespora clavata* sp. nov., found on a dead stem of an unidentified liana in Ciénaga de Zapata Biosphere Reserve, central Cuba, is described and illustrated. The presence of clavate, sometimes ellipsoidal, medianly 1-septate conidia with a protruding hilum differentiate this fungus from previously described species of the genus. The main diagnostic features of accepted species of *Hemicorynespora* are summarized in a table.

***Corynesporopsis* / microfungi / mycobiota / taxonomy**

Resumen – Se describe e ilustra *Hemicorynespora clavata* sp. nov., colectada sobre tallo de bejuco muerto indeterminado en la Reserva de la Biosfera Ciénaga de Zapata, Cuba central. Sus conidios claviformes, en ocasiones elipsoidales, de un septo medial y con un hilo basal protuberante, diferencian esta especie de otras descritas en el género. Se presenta una tabla con los caracteres principales de las especies aceptadas de *Hemicorynespora*.

***Corynesporopsis* / micromicetos / micobiota / taxonomía**

INTRODUCTION

During a survey of hyphomycetes from Ciénaga de Zapata Biosphere Reserve, central Cuba, an undescribed species of the genus *Hemicorynespora* M.B. Ellis was collected on a dead stem of an unidentified liana. The presence of clavate, sometimes ellipsoid conidia with a distinct hilum differentiate this fungus from other known species of the genus and is therefore described here as new. The type specimen and other specimens examined are deposited in the Mycological Herbarium of Ecology & Systematic Institute of Havana, Cuba (HACM).

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DESCRIPTION

Hemicorynespora clavata* Delgado, Mercado & J. Mena *anam. sp. nov. (Fig 1)

Coloniae effusae, pilosae, nigrae. ***Mycelium*** partim superficiale et partim in substrato immersum, ex hyphis septatis, laevibus, pallide brunneis, 2-4 μm latum compositum. ***Conidiophora*** macronematosa, mononematosa, simplicia, erecta, recta vel flexuosa, brunnea, crassitunicata, septata, laevia vel leviter rugosa, usque 150 μm longa, 4-6 μm lata; cum usque 3 percurrentibus proliferationibus. ***Conidiorum initium*** holoblasticum et difussum. ***Conidiorum maturatio*** ab initio synchrona. ***Conidiorum secessio*** schizolytica. ***Proliferatio*** enteroblastica percurrentis. ***Cellulae conidiogenae*** monotreticae, terminales, in conidiophoris incorporatae, cylindricae vel ellipsoideae, pallide brunneae vel brunneae, 12.5-21 (43.5) \times 2.5-4 μm . ***Conidia*** solitaria, acrogena, laevia, claviformia vel ellipsoidea, crassitunicata, brunnea vel rufulo-brunnea, 1-septata, 12-20 (14-16) \times 4-6 μm ; hilum distinctum.

Holotypus: CUBA, Matanzas provincia, Ciénaga de Zapata, Santo Tomás, in caulibus emortuis plantae scandentis ignotae, 17.III.1999, leg. G. Delgado (HACM 9763).

Colonies effuse, hairy, black. *Mycelium* partly superficial, partly immersed, composed of septate, smooth, pale brown, 2-4 μm wide hyphae. *Conidiophores* macronematous, mononematous, simple, erect, straight to flexuous, brown, thick-walled, septate, smooth to slightly roughened, up to 150 μm long, 4-6 μm wide, with up to 3 cylindrical to lageniform proliferations, sometimes with one submedian to proximal secondary septum. *Conidial initiation* holoblastic with maturation by diffuse wall-building. *Conidial maturation* synchronous with conidial ontogeny. *Conidial secession* schizolytic. *Proliferation* enteroblastic percurrent. *Conidiogenous cells* monotretic, terminal, integrated, cylindrical to ellipsoidal, pale brown to brown, 12.5-21 (-43.5) \times 2.5-4 μm . *Conidia* solitary, acrogenous, smooth, mostly clavate to ellipsoidal, rounded at the apex, thick-walled, medianly 1-septate, constricted at septum, brown to red-brown, mostly concolorous but often with the basal cell paler than the apical, 12-20 \times 4-6 μm , with a broad, distinct hilum.

Specimens examined: CUBA, Matanzas province, Ciénaga de Zapata, Santo Tomás, on a dead stem of unidentified dead liana, 17 March, 1999, G. Delgado (HOLOTYPE: HACM 9763); on dead branches and twigs of *Dalbergia* sp., 17 March, 1999, G. Delgado (HACM 9762); Santo Tomás Channel, on dead branches of unidentified tree, 18 March, 1999, G. Delgado (HACM 9767); Santo Tomás, on dead stems, 18 March, 1999, G. Delgado (HACM 9768).

DISCUSSION

Ellis (1972) established the genus *Hemicorynespora* for two hyphomycetes: *H. deightonii* M. B. Ellis, the type species, collected on dead branches of *Bersama paullinioides* in Sierra Leone and *Cladotrichum mitratum* Penz. & Sacc., previously transferred to *Spadicoides* by Hughes (1958) but considered congeneric with the type species as *H. mitrata* (Penz. & Sacc.) M B. Ellis. The genus is characterized by monotretic, integrated, percurrent

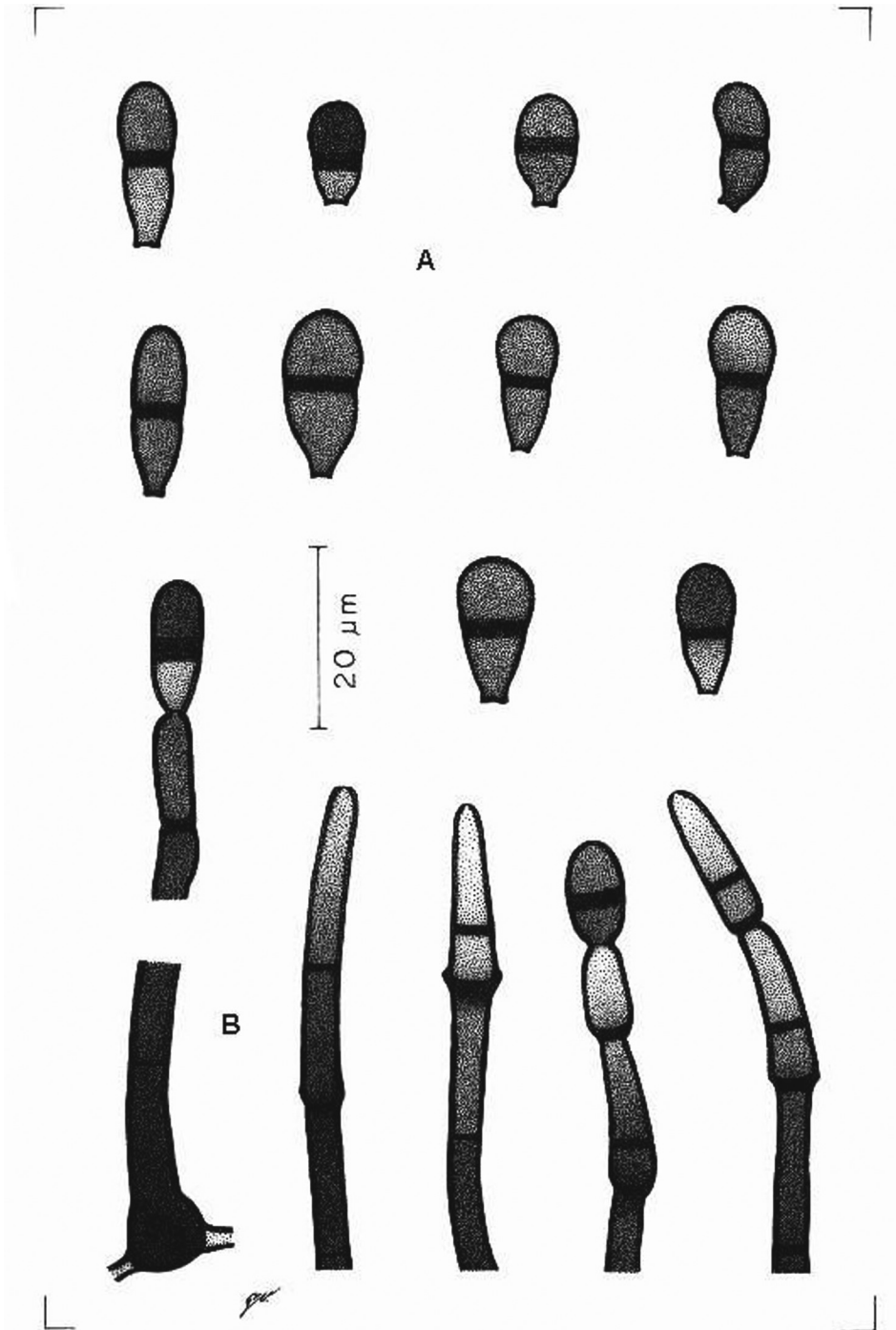


Fig. 1. *Hemicorynespora clavata*, HACM 9763. A. Conidia. B Conidiophores, conidiogenous cells with percurrent proliferations and attached conidia.

proliferating conidiogenous cells on simple, brown conidiophores with solitary, mid to dark brown conidia with or without darkly thickened septa.

A further eight species have been described within the genus, all from tropical countries. Four were found as saprobes on dead leaves or on dead rachides and petioles of palms: *H. naviculiformis* Matsush., collected on dead leaf of *Pandanus* sp. in Micronesia (Matsushima, 1981), *H. aseptata* reported from Cuba on dead petioles of unidentified palm (Holubová-Jechová, 1987), *H. biconica* Subram. and *H. obclavata* Subram., both on dead rachis of *Calamus rotang* L. from Singapore (Subramanian, 1992/1993). The remaining species were found growing on other fungi: *H. fusispora* Subram. on synnemata of *Melanographium citri* (Frag. & Cif.) M B. Ellis and *Didymobotryum korthalsiae* Subram., and *H. ovata* Subram., on synnemata of *Stachylidium* sp. in Singapore (Subramanian, 1992/1993); *H. rostrata* Mercado *et al.* found on unidentified conidiophores in Mexico (Mercado-Sierra *et al.*, 1997) and *H. multiseptata* Sivan. & H. S. Chang on perithecia of *Chaetosphaeria ampulliformis* Sivan. & H. S. Chang in Taiwan, probably as its anamorph (Sivanesan & Chang, 1997). All accepted species of *Hemicorynespora* and their conidial morphological features are listed in Table 1.

H. clavata is unique in having clavate, sometimes ellipsoidal conidia. Among *Hemicorynespora* species with medianly 1-septate conidia it shares certain features in common with *H. fusispora* Subram. and *H. biconica* Subram. in the morphology of the conidiogenous cells and the brown to reddish brown, obscure, medianly 1-septate conidia with a distinct hilum. However, *H. fusispora* has fusiform to obclavate-fusiform, longer conidia (15-30 μm) and shorter conidiogenous cells (15-18 (-23) μm), while *H. biconica* has biconic, narrowed and smoothly rounded at the apex, wider conidia (7.5-9.0 μm). Another fungus, *Corynesporopsis isabelicae* Hol.-Jech. (Holubová-Jechová, 1987) could also be compare with the new species as they both share the same conidial ontogeny and a similar conidial morphology. However, the conidia of *C. isabelicae* are larger ((24-) 27-43.5 μm), elongated-fusiform to naviculate, and often disposed in short chains.

Table 1. Conidial features of accepted *Hemicorynespora* species.

Species	Conidia		
	Shape	Size (μm)	Septation
<i>H. aseptata</i>	Elongate- naviculiforme	17-24 \times 3.5-5	0-septate
<i>H. biconica</i>	Biconic	10-20 \times 7.5-9.0	Medianly 1-septate
<i>H. clavata</i>	Clavate to ellipsoidal	12-20 \times 4-6	Medianly 1-septate
<i>H. deightonii</i>	Mitre-shaped, obovoid or ellipsoidal	22-26 \times 10-13	0-septate
<i>H. fusispora</i>	Fusiform to obclavate-fusiform	15-30 \times 4.5-6	Medianly 1-septate
<i>H. mitrata</i>	Mitre-shaped	18-25 \times 9-14	Asymmetrically 1-septate
<i>H. multiseptata</i>	Obovoid to obclavate	32-40 \times 15-17.5	4-5 septate
<i>H. naviculiformis</i>	Naviculiform	18-30 \times 6-7.5	Asymmetrically 1-septate
<i>H. obclavata</i>	Short obclavate, rarely fusiform	(21-) 27-32 \times 6-9	2-septate
<i>H. ovata</i>	Elongate oval	10-12 \times 4.5-9	0-septate
<i>H. rostrata</i>	Navicular or obclavate, rostrate	20-28 \times 4-8	Asymmetrically 1-septate

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