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HELIOCEPHALA, A NEW GENUS OF DEMATIACEOUS HYPHOMYCETES

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A new anamorph-genus, *Heliocephala*, with *H. proliferans* as type species, is described. It is characterized by erect conidiophores, bearing radiate heads of rostrate conidia.

During a study on microfungi from the Province of Orissa, India, the first two authors collected a remarkable, apparently unknown dematiaceous hyphomycete. It is described as follows.

Heliocephala V. Rao, K. A. Reddy & de Hoog, *gen. nov.*

Coloniae effusae, pallidae vel atrogriseae. Mycelium partim superficiale, partim immersum. Conidiophora primaria, macronemata, mononemata, simplicia, septata, secundaria et tertiaria conidiophora ferentia. Cellulae conidiogenae monoblasticae, discretae, determinatae, ampulliformes vel ovatae, in verticillos primarios, secundarios et tertiarios dispositae. Conidia solitaria, sicca, acrogena, obclavata, 2-septata, pedicellata, rostrata, disposita in primaria, secundaria et tertiaria capitula.

Species typica: *Heliocephala proliferans* V. Rao, K. A. Reddy & de Hoog.

Colonies effuse, light to dark grey. Conidiophores macronematous, mononematous, brown, bearing terminal conidiogenous cells which are monoblastic, ampulliform or ovoidal in dense, drepanoid arrangement. Conidia produced in radial, compact heads, dry, obclavate, 2-septate, rostrate, sometimes bearing heads of second or third order.

Heliocephala proliferans V. Rao & K. A. Reddy & de Hoog, *sp. nov.* — Figs. 1, 2

Coloniae effusae, pallide vel atro-griseae. Conidiophora erecta, singula terminaliter vel lateraliter ex hyphis vegetativis oriunda, simplicia, rigida, recta vel modice flexuosa; ad 210 µm longa, 3.0–3.5 µm crassa in parte basilari, 3.5–4.0 µm ad apicem. Cellulae summae binae majores, ovoideae, ad 3.5 µm latae, e quibus nonnullae cellulae conidiogenae ampulliformes oriuntur. Cellulae conidiogenae, monoblasticae, discretae, ampulliformes vel ovoideae, cellulo brevi terminatae. Conidia radiatim in capitulis compactis disposita, sicca, obclavata, 2-septata, cellula basilari minute verruculosa, apicali in rostrum subulatum vel filiforme, rectum vel fluxuosum vel uncinatum extensa; conidia in parte inferiore dilute brunnea, in parte distali pallidiora, (10–)15–50(–145) × 3.0–4.0 µm.

Typus: VMRL 800 (holotypus) = CBS H-1640 (isotypus), in folio plantae innominatae, Balimela, India, mensis Novembris anni 1980, a K. A. Reddy et V. Rao lectus.

Colonies effuse, light to dark grey, conidiophores under binocular pinhead-like. Mycelium partly superficial, partly immersed, composed of septate, branched, anastomo-

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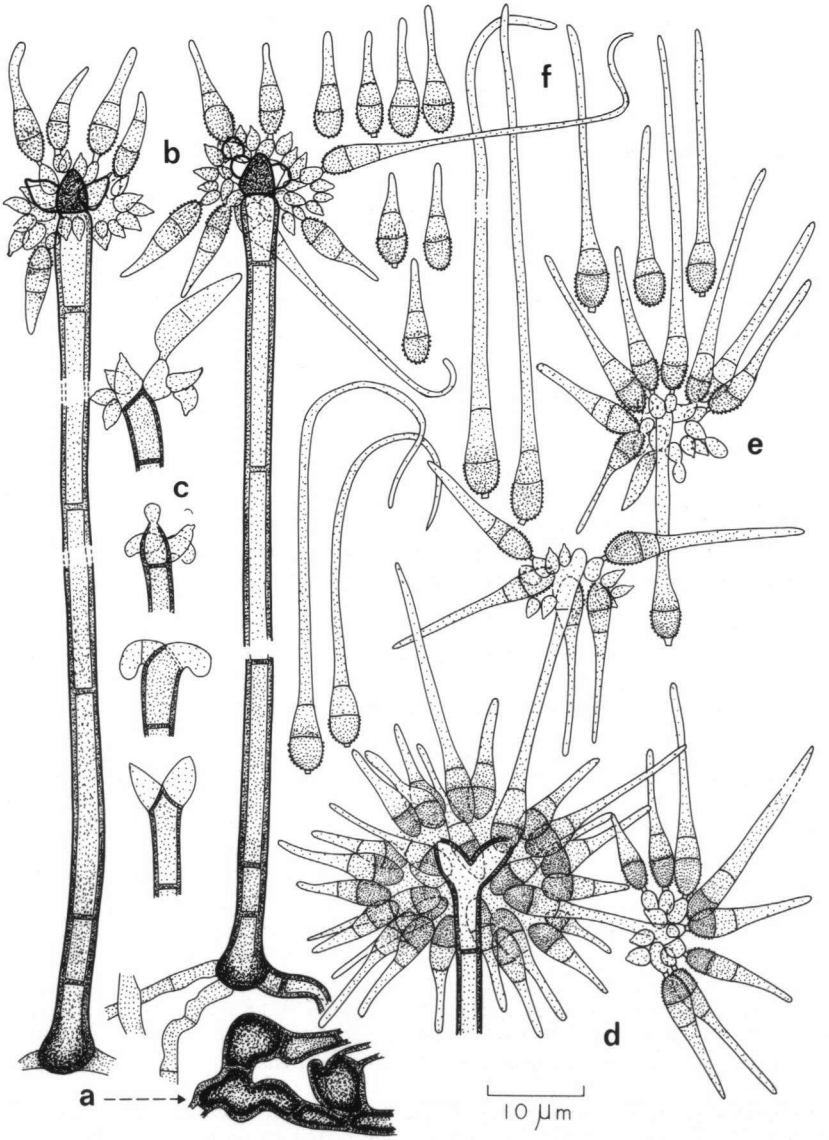

Fig. 1. *Heliocephala proliferans*, VMRL 800 on the natural substrate. — a. Mycelium. — b. Conidiophores with primary whorls of conidiogenous cells and conidia. — c. Development of conidiogenous cells. — d. Apex of primary conidiophore with primary head of conidia bearing secondary conidiophores. — e. Secondary conidiophore bearing secondary whorl of conidiogenous cells and conidia. — f. Conidia.

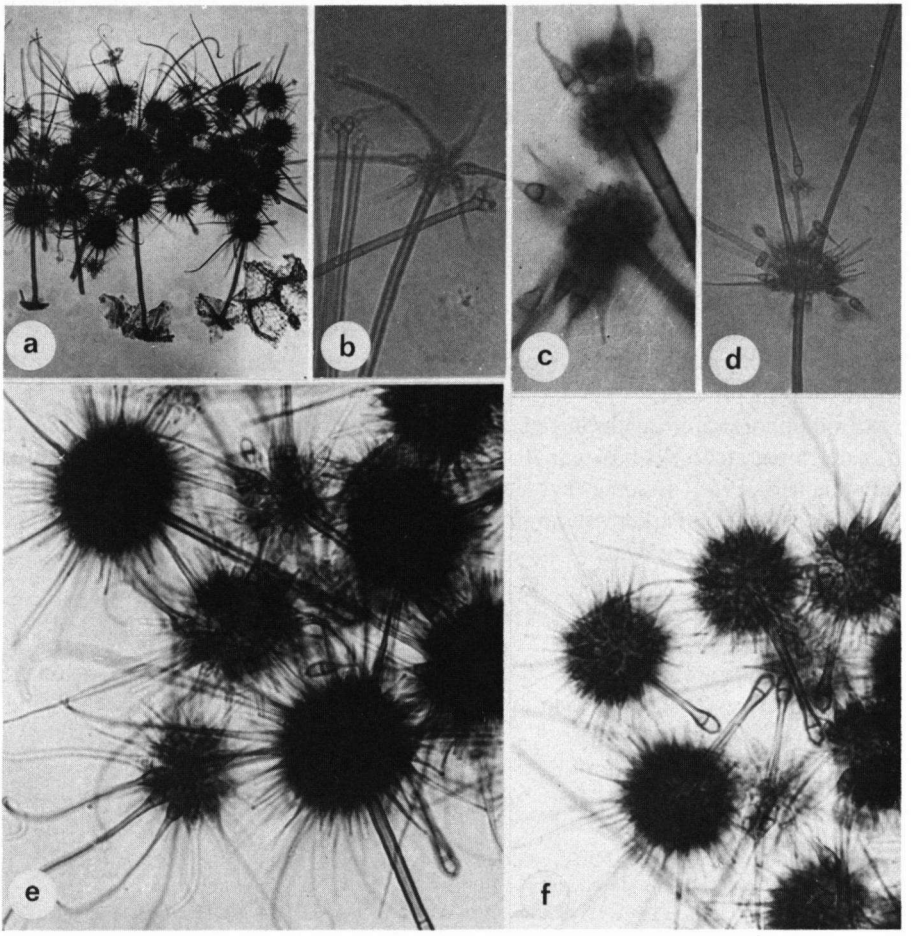

Fig. 2. *Heliocephala proliferans*, VMRL 800 on the natural substrate. (a, × 280; b–f, × 1120).

sing, smooth, subhyaline to pale brown, 1.5–3.5 μm thick hyphae, cells later becoming thick-walled. Conidiophores erect, arising singly, terminally or laterally from undifferentiated hyphae, unbranched, stiff, straight or slightly flexuous, septate; the first two septa very close, others remote, last septum formed just below the apex; basal cell swollen, conical, dark brown, 5.0–9.5 μm thick, stipe up to 210 μm long, regularly 3.0–3.5 μm wide above the base, 3.5–4.0 μm wide at the apex. Conidiophores ending in large, ovoidal subtending cells up to 3.5 μm diam., from which a number of ampulliform conidiogenous cells arise, or bearing two short, downwardly curved or hooked, 1–2 celled branches, the cells of which transform into conidiogenous cells from which conidiogenous cells of second order are produced in dense, more or less drepanoid arrangement. Conidiogenous cells monoblastic, discrete, ampulliform or ovoidal with short necks,

determinate, smooth- and thin-walled, first formed cells are brown to pale brown, later formed cells subhyaline. Conidia radially arranged in compact heads, dry, obclavate, 2-septate, basal cell minutely verruculose, median and terminal cells smooth-walled, the apical cell drawn into a sharp, straight, subulate or long, continuous, filiform, flexuous or unciform rostrum. Conidia pale brown below, gradually becoming subhyaline towards apex of rostrum, (10–)15–50(–145) μm, sometimes up to 200 μm long, 3.0–4.0 μm wide. A few (1–4) conidia from a primary head develop a single septum in the lower part, rostrum remaining continuous, or form a second septum in the middle or near the apex of the rostrum, and are then transformed into secondary conidiophores which apically produce secondary heads of conidiogenous cells.

Type specimen.—VMRL 800 (holotype) = CBS H-1640 (isotype), on unidentified rotten leaf, Balimela, India, *K. A. Reddy and V. Rao*, Nov. 1980.

Heliocephala is characterized by erect, mononematous conidiophores bearing discrete, ampulliform or ovoidal, determinate, monoblastic conidiogenous cells in more or less drepanoid arrangement. The anamorph genus bears some similarity to *Uncispora* Sinclair & Morgan-Jones (1979) in having obclavate, rostrate, hooked conidia. In *Uncispora* the conidiophores are usually in fascicles or synnematous, very rarely solitary, and the ultimate, integrated cells bear conidia on rather broad scars. *Edmundmasonia* Subram. (Subramanian, 1958) is somewhat similar in having light conidiogenous cells in drepanoid arrangement on darker primary cells, but the fertile system has much looser branching and the conidia are clavate.

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