

A NEW SPECIES OF MYROTHECIUM

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During a collecting trip for microfungi in Andhra Pradesh, India, the senior author collected an unusual fungus showing characteristics of both *Myrothecium* Tode: Fr. and *Sarcopodium* Ehrenb. Recent taxonomic accounts are available for both genera (e.g. Tulloch, 1972; Sutton, 1973, 1981; Ellis, 1971, 1976; Matsushima, 1971, 1975, 1981; Nag Raj & George, 1960). The genera comprise sporodochial or somewhat synnematosous hyphomycetes forming conidia in slimy masses from densely aggregated phialides. In *Sarcopodium* the hymenium is interspersed with often coiled, branched, pigmented, mostly echinulate setae, whereas in *Myrothecium* the setae, if present, occur at the periphery of the conidioma and are straight, unbranched, hyaline or pale, and usually smooth-walled.

The present fungus has cupulate sporodochia from which large, straight, hyaline, smooth-walled peripheral setae grow out rapidly, each soon becoming covered by a weft of emerald green, echinulate hyphae structurally resembling the setae of *Sarcopodium*. We regard with Tulloch (1972) the hyaline peripheral setae and the marginal hyphae surrounding the sporodochium as the crucial characteristics in this group of fungi and therefore favour the accommodation of this apparently undescribed species in *Myrothecium* rather than in *Sarcopodium*. This classification is further supported by the green, later black, macroscopic colour of the conidiomata; most *Sarcopodium* species are pinkish to brown (Ellis, 1976; Sutton, 1981). The new species is described as follows:

Myrothecium bisetosum Rao & de Hoog, *spec. nov.* — Fig. 1

Coloniae in agar farina avenacea confecto 24°C sub luce post 10 dies ad 95 mm diam., albae, lanosae. Sporodochia plus minusve aggregata, circularia, saepe confluentia, ad 2 mm diam., primum smaragdina, deinde nigrescentia, e conidiophoris subhyalinis vel dilute viridibus dense aggregatis et circulo plectenchymatico hypharum marginalium constantia; hyphae marginales plus minusve parallelae, crassitunicatae, verrucis regularibus, olivaceo-brunneis obtectae, septis tenuibus, 10–20 µm distantibus divisae, 3.7–4.2 µm latae. Setae hyalinae ex hyphis marginalibus oriundae, hyalinae, leves vel irregulariter incrustatae, 1.5–2.0 µm crassitunicatae, ad 950 µm longae, 5.0–7.5 µm latae, sursum apicem hebetem versus ad 4–5 µm angustatae, cito hyphis marginalibus verrucosis dense intricatae. Conidiophora parallela dense compacta, (sub-)hyalina, e cellulis 7–10 × 2.0–2.5 µm constantia, phialides cylindricae, 8–14 × 2.0–2.5 µm, in summo angustatae, collari inconspicuo vel paulo divergente praeditae. Conidia hyalina, levia et tenuitunicata, subhyalina, bacilliformia vel obclavata vel anguste ellipsoidea, 5.8–7.2 × 1.8–2.2 µm.

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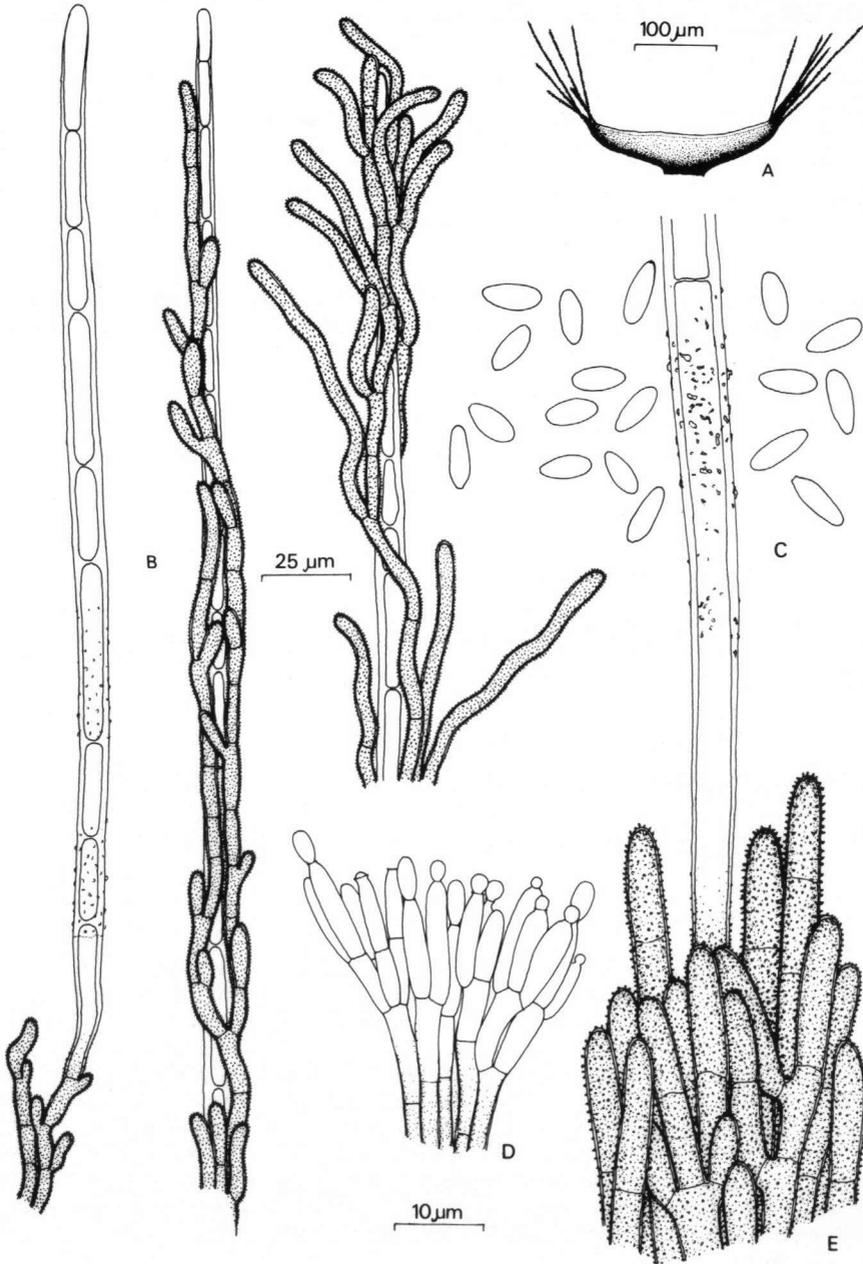


Fig. 1. *Myrothecium bisetosum*, CBS 459.82. — a. Sporodochia. — b. Setae in various stages of development. — c. Conidia. — d. Conidiophores. — e. Detail of marginal hyphae with seta.

Typus vivis CBS 459.82 exsiccatus Herb. CBS 1625, isotypus VMRL 1009, isolatus e parte interiore corticis putrescentis cuiusdam, Pranheeta Valley, Adilabad, A.P. in India, coll. a V. et A.C. Rao, 16 Jan. 1981.

Colonies on oatmeal agar under near-UV light at 25°C attaining 95 mm diam. in 10 days, white, lanose, later with pale pinkish reverse particularly at the centre; some local hyaline exudate may be produced; aerial hyphae fragile, hyaline; numerous spirally coiled hyphae present in the submerged mycelium. Sporodochia cupulate, in small local clusters mainly at the centre of the colony, circular in outline but often confluent, up to 2 mm diam., initially emerald green, later nearly black, composed of subhyaline to pale green conidiophores, surrounded by a plectenchyma of marginal hyphae; the latter are parallel, compacted, regularly thick-walled and verrucose with regularly spaced, olivaceous brown warts, emerald green, with thin septa, cells about $10-20 \times 3.8-4.2 \mu\text{m}$. Setae rapidly growing out from marginal hyphae, hyaline; walls $1.5-2.0 \mu\text{m}$ thick, smooth or with local, irregular, hyaline incrustation; setae $200-600(-950) \mu\text{m}$ long, $5.0-7.5 \mu\text{m}$ wide, tapering to $4-5 \mu\text{m}$ at the blunt apex, septate every $10-30 \mu\text{m}$, soon each seta becoming overgrown by a weft of marginal hyphae. Conidiophores parallel, forming a compact palissade, (sub-)hyaline, smooth- and thin-walled, often darker and with slightly thickened walls at the base, cells about $7-10 \times 2.0-2.5 \mu\text{m}$, branched repeatedly with 2-3 branches at each node, the ultimate branches are phialides. Phialides closely packed in a parallel layer, smooth- and thin-walled, cylindrical, $8-14 \times 2.0-2.5 \mu\text{m}$, narrowed at the tip, without collarette or slightly flaring. Conidia hyaline, smooth- and thin-walled, rod-shaped, obclavate or narrowly ellipsoidal, usually both ends rounded or with truncate base, $5.8-7.2 \times 1.8-2.2 \mu\text{m}$.

Type: CBS 459.82 = CBS herb. 1625 = VMRL 1009, on inner side of rotten bark, Pranheeta Valley, Adilabad, A.P., India, coll. V. and A.C. Rao, 16 Jan. 1981.

The species is easily recognized by its cupulate fructifications lined with two kinds of setae. Most species of *Myrothecium* are known from the Northern temperate zone (Tulloch, 1972). Agarwal (1980) described *M. viride* Agarwal from India, which has aetose sporodochia.

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