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## A NEW SPECIES OF MYCOVELLOSIELLA RANGEL

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DURING a survey for the phytoparasitic fungi from the forest flora, an interesting fungus was collected. Detailed taxonomic studies showed it to be a new taxon of species rank. It is described below.

*Mycovellosiella fici* A. N. Rai et Kamal sp nov

Maculae hypogaeae, parvae, coalescentes et demum partem majorem folii tegentes, brunneae; coloniae hypophyllae, effusae, plus minus byssodeae, obscure brunneae; hyphae primariae immersae, septatae, ramosae, secundariae superficiales, septatae, glabrae, angustae; stromata debiliter evoluta, superficialia vel immersae, pseudoparenchymatica, fusco-olivacea, 10.8–43.2  $\mu\text{m}$  diam.; conidiophora laxe fasciculata, macronemata, mononemata erecta vel suberecta, recta vel flexuosa, septata, glabra, simplicia vel ramosa, pallide vel medio-olivaceae, 21.6–90  $\times$  3.6–4.5  $\mu\text{m}$ ; cellulae conidiiferae integratae, terminales, polyblasticae, sympodiales, indistincte cicatricosae; conidia simplicia, sicca, acropleurogena, subhyalina usque medio-olivacea, plerumque transverse septata, rare septo singulo oblique divisa, glabra, clavata usque obclavatocylindrica, ad apices subacuta vel obtusa, ad bases fere obconico-truncata, hilo subincrassato distincto praedita, 10.8–25.2  $\times$  3.6–6.3  $\mu\text{m}$ .

In foliis vivis *Fici hispidae* L (Moraceae); December 1979, Katarniaghat (West Baharaich Forest Division,

U.P., India); leg. A. N. Rai, KR 364, typus, IMI 246390.

Infection spots hypogenous, small, coalescing to cover major part of the leaf surface in due course, brown to dull brown; colonies hypophyllous, effuse, more or less cottony, dull brown; primary mycelium of hyphae immersed, septate, branched, narrow, secondary mycelium superficial, septate, smooth, narrow; stromata poorly developed, superficial or immersed, pseudoparenchymatous, dark olivaceous, 10.8–43.2  $\mu\text{m}$  in diam.; conidiophores loosely fasciculate, macronematous, mononematous, erect to suberect, straight to flexuous, septate, smooth, simple to branched, light to mid olivaceous, 21.6–90  $\times$  3.6–4.5  $\mu\text{m}$ ; conidiogenous cells integrated, terminal, polyblastic, sympodial, indistinctly cicatrized; conidia simple, dry, acropleurogenous, subhyaline to light mid olivaceous, mostly transversely septate, rarely with 1 oblique septum, smooth, clavate to obclavatocylindric, apices sub acute to obtuse, bases almost obconicotruncate, hila slightly thickened but distinct, 10.8–25.2  $\times$  3.6–6.3  $\mu\text{m}$  (figure 1).

On living leaves of *Ficus hispida* L (Moraceae); December 1979, Katarniaghat (West Baharaich Forest Division, Uttar Pradesh, India); leg. A. N. Rai, KR 364, type IMI 246390.

A survey of literature shows<sup>1–15</sup> that only one species *Mycovellosiella macluriae* (Ell et Langl) Deighton<sup>6</sup> has been described on the host family. On comparing the symptomatological and morphological features of the present fungus with those of *M. macluriae*, the former is found to differ from the latter so much so that it cannot be conspecific with the same.

Thus, the present collection deserves description as a new species.

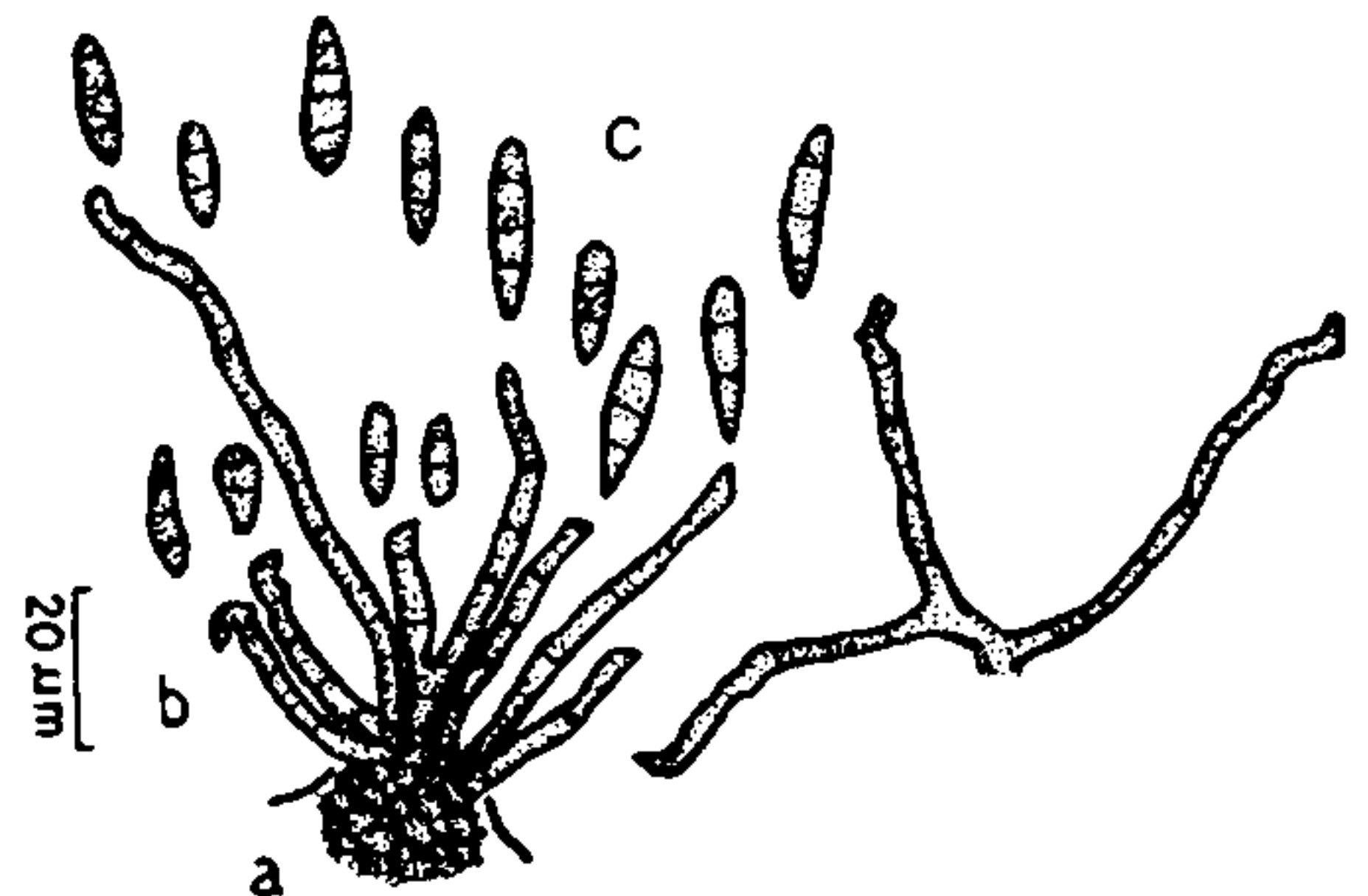


Figure 1. *Mycovellosiella fici* A. N. Rai et Kamal sp nov  
a. Mycelium, b. Conidiophores, c. Conidia.

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## OCCURRENCE OF *CYLINDROCLADIUM COLHOUNII* PEERALLY ON EUCALYPTS IN KERALA

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EUCALYPTS, the most productive crop in afforestation programme in the tropics and sub-tropics, was introduced on a large scale in Kerala to meet the requirements of pulp and fibre industries during the late fifties and early sixties. *Eucalyptus grandis* Hill ex Maiden and *E. tereticornis* Sm were the principal species selected to raise the commercial plantations, the former was confined more or less to the uplands and

the latter to the low lands. Fungal diseases have become a limiting factor in eucalypts plantations<sup>1</sup>. The most serious disease was the seedling blight caused by *Cylindrocladium spp*<sup>2</sup>. It causes heavy mortality, especially on unthrifty seedlings. In the nursery and out-planting the epidemic outbreak occurs during the middle of south-west monsoon (July-August). In the nursery where the seedlings are crowded the disease rapidly spreads by splash-dispersed airborne conidia produced on the diseased tissues, resulting in a blighted appearance of the whole stock within a week<sup>3</sup>. *C. quinqueseptatum* Boedijn and Reitsma is the most common species associated with seedling blight. In addition, 8 more species have been reported from Kerala<sup>4-7</sup>. *C. colhounii* Peerally is reported for the first time on eucalypts from India. This species was first isolated from the bark of *E. grandis* seedlings collected from Pamba Grassland Afforestation Division. Subsequently, it has been noticed in Kulamavu in Idukki District and Vazhachal in Trichur District. The pathogen was readily isolated in PDA. Relative pathogenicity with *C. quinqueseptatum* was tested on 10-week-old *E. grandis* container raised seedlings with an average leaf area index of 13.22. The screening was done both under controlled and field conditions. Seedlings were atomized to the point of run-off with the conidial suspensions having 225000 conidia ml<sup>-1</sup>. Under controlled conditions 25 seedlings were inoculated with each pathogen. Inoculated seedlings were kept in humid chambers; 50 seedlings were inoculated in the field. The weather was fairly wet. The blight severity was scored on the basis of the infection scale of 0-8; 0—healthy, 1—minute leaf spot, 2—leaf spot coalesced, 3—lesions on the main shoot, 4—defoliation ca. 25%, 5—defoliation ca. 50%, 6—defoliation ca. 75%, 7—complete leaf cast and 8—seedling dead. The infection index was worked out according to Horsfall and Heuberger<sup>8</sup>.

The efficacy of different fungicides in conidial germination of *C. colhounii* was evaluated. Conidia from 10-day-old culture were germinated in 100 ppm solution of Bavistin (2-(methoxyl carbamyl) benzimidazole), benzimidazole, daconil (chlorothalonil (tetrachloroisophthalonitrite), MK 23 ([N-(P-fluorophenyl) 2,3 dichloromaleimide]) and topsin M (thiophanate methyl) and in 1000 ppm solution of Bordeaux mixture. Conidia in tapwater were germinated as control. Observations were recorded on germination after 4 hr.

The culture has been deposited in CMI (Herb. IMI No.288672 and 288673) *C. colhounii* was first described from tea<sup>9</sup>. In PDA culture conidia from leaf and twig