

rot of Chinese yam (*Dioscorea batata*) was caused by *Pythium ultimum*¹. The soft rot of the Chinese yam was reported to be associated with *Pythium* or *Phytophthora*² from Jamaica. Recently Harada³ reported that *Pythium* was the cause of the rot of Chinese yam in Japan. So far there is no record of *Pythium spinosum* causing tuber rot in *Dioscorea composita*. However, Thakur *et al*⁴ reported the rhizome rot of *Costus speciosus* (Smith) caused by *Pythium spinosum* from India. Thus, it is the first report of *Pythium spinosum* causing tuber rot of *Dioscorea composita*.

As a part of the control measure against this disease, ten fungicides namely Thiram, Captan, Brassicol, Blitox, Ceresan, Dithane Z-78, Benlate, Deconil, Dexon and Dithane M-45 were tried with their three different concentrations viz 0.1, 0.2 and 0.3%. Among these Dexan, Ceresan, Blitox, Thiram and Benlate were more effective.

The efficacy of each fungitoxicant was determined by measuring the radial growth of the test fungus in comparison to the growth in the control. The inhibition percentage was calculated by the formula of Vincent⁵: $I = 100(C - T)/C$ where *I* is inhibition, *C* is the growth of the fungus in control (without fungicide) *T*-growth in treatment.

Results showed that Blitox, Ceresan and Dexon were highly effective against the pathogen even at 0.1% concentration whereas Benlate and Thiram inhibited the radial growth of the pathogen only 80% at this concentration. Captan showed its effectiveness only at its 0.2% concentration. The rest of the fungitoxicants were not effective against this pathogen. With still lower dilution (0.05%) Ceresan and Blitox indicated 80% inhibition and Dexon 100% at 0.025.

Sincere thanks are due to Mrs S. Gupta for providing diseased and healthy tuber of *Dioscorea composita* for these experiments. Authors are grateful to Dr. Anthony Johnston, Director, C.M.I., London for identifying the pathogen.

17 August 1985; Revised 6 January 1986

1. Labrousse, F., *Rev. Plant Veg. et Entomol. Agric.*, 1931, 18, 65.
2. Hansford, C. G., *J. Jamaica Agric. Soc.*, 1923, 27, 965.
3. Harada, Y., Tomiuaga, T. and Temuriyama, A., *Bull. Faculty Agric. Horosaki Univ.*, 1982, 37, 66.
4. Thakur, R. N., Singh, P. and Sastry, K. S. M., *Indian J. Myco. Plant Pathol.*, 1978, 8, 229.
5. Vincent, J. M., *J. Soc. Chem. India London*, 1947, 66, 149.

A NEW SPECIES OF MYCOVELLOSIELLA RANGEL FROM INDIA

A. N. RAI, B. RAI* and KAMAL†

Department of Botany, Dr. H. S. G. University, Sagar 470003, India.

*Department of Botany, S. M. College, Chandausi 202412, India.

†Department of Botany, University of Gorakhpur, Gorakhpur 273001, India.

DURING frequent surveys of forests of Terai, U.P., the authors collected a foliicolous hyphomycetous fungus which has been described as a new species of *Mycovellosiella* as under:

Mycovellosiella myrtacearum A. N. Rai, B. Rai and Kamal sp. nov.

Maculae amphigenae; coloniae hypophyllae, satis magnae, irregulares, olivaceo-brunneae; hyphae superficiales vel ex parte immersae; hyphae repentes angustae 1.7–2.3 μ m diam., brunneolae vel subhyalinae, septatae, glabrae; estromaticae; conidiophora solitaria semimacronemata vel macronemata, brunneola, cylindrica, erecta, plus minus flexuosae, eseptata vel septata, plerumque ramosa, plus minus geniculata, cicatricibus minus distincte praedita, 13.8–39 \times 4–4.6 μ m; cellulae conidiiferae integratae, terminales, polyblasticae, sympodiales, pallide olivaceo-brunnea, cicatricibus, plus minus distinctis praedita; conidia solitaria vel rare catenata, sicca, acropleurogena, obclavata, subacuta vel rare obtusa, ad bases obconico-truncata, pallide olivaceo-brunnea, glabra, transverse 3-7-septata, hilo plus minus distincto praedita, 27.6–92 \times 1.7–2.8 μ m.

In foliis vivis *Psidii guava* Linn. (Myrtacearum); Mar., 1979; Tilkonia (South Gorakhpur Forest Division); leg. B. Rai, KR 173, Typus, IMI 235984.

Infection spots amphigenous; colonies hypophyllous, fairly large, irregular, olivaceous brown; mycelium of hyphae superficial to partly immersed, repent hyphae narrow, 1.7–2.3 μ m diam., light brown to subhyaline, septate, smooth; stromata absent; conidiophores solitary, semimacronematous to macronematous, cylindrical, erect, more or less flexuous, aseptate to septate, mostly branched, more or less geniculate with less distinct scars, pale brown, 13.8–39 \times 4–4.6 μ m; conidiogenous cells integrated, terminal, polyblastic, sympodial, cicatrized, pale olivaceous brown, conidial scars less distinct; conidia solitary to rarely catenate, ramo conidia rare, dry acropleurogenous, pale olivaceous brown, obclavate,

Table 1. Comparative account of *M. cajani* and *M. myrtacearum*

Species	Conidiophores size (in μm)	Structure	Conidia size (in μm)	Structure
<i>M. cajani</i> (Type species)	Very variable in length 1-3 near the base, broadening above to 4-7.	Much branched, climbing leaf hairs, pale or mid pale olivaceous brown.	20-30 \times 4-6	Mostly cylindrical, hyaline to mid pale olivaceous brown, 1-3 septate, scars conspicuous.
<i>M. myrtacearum</i> sp nov (proposed species)	13.8-39 \times 4-4.6	branched, pale brown.	27.6-92 \times 1.7-2.8	Obclavate, pale olivaceous brown, 3-7 transversely septate, scars less distinct.

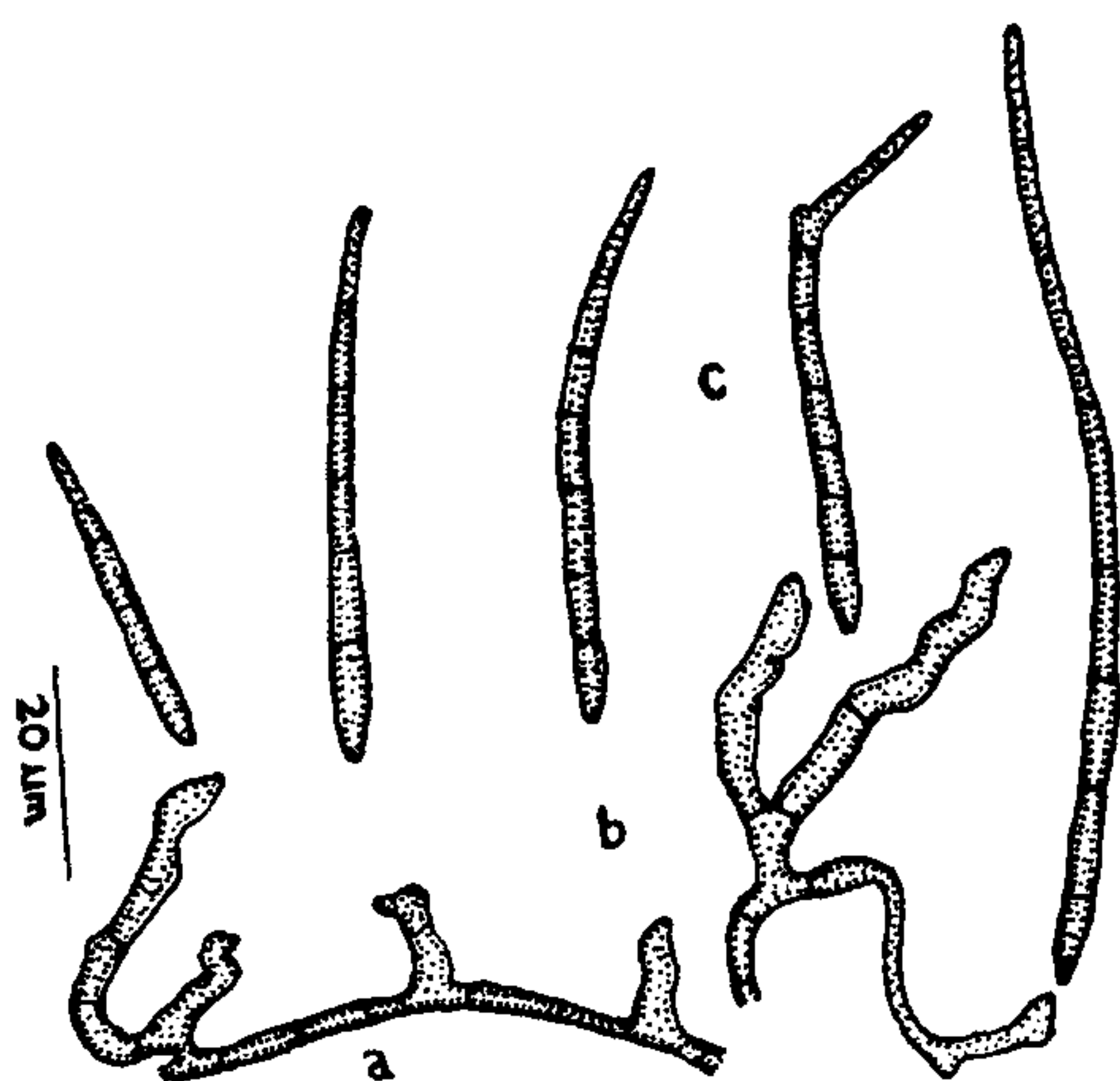


Figure 1. *Mycovellosiella myrtacearum* A. N. Rai, B. Rai and Kamal sp. nov. a. Mycelium, b. conidiophores, c. conidia.

subacute to rarely obtuse apices, obconicotruncate bases, smooth, 3-7 transversely septate, hila less distinct, 27.6-92 \times 1.7-2.8 μm (figure 1).

On living leaves of *Psidium guava* Linn. (Myrtaceae); March, 1979; Tilkonia (South Gorakhpur Forest Division); leg. B. Rai, KR 173, type, IMI 235984.

A reference to literature revealed that the present collection does not resemble any of the species of *Mycovellosiella* described so far¹⁻¹¹. Hence the type species is compared in table 1.

The authors are grateful to the Director, CMI, Kew, England for identifying of the associated fungus.

21 August 1985

1. Brown, L. G. and Morgan-Jones, G., *Mycotaxon*, 1977, 6, 261.
2. Deighton, F. C., *Mycol. Pap.*, 1974, 137, 71.
3. Deighton, F. C., *Mycol. Pap.*, 1979, 144, 56.
4. Ellis, M. B., *Dematiaceous Hyphomycetes*, CMI, Kew, England, 1971, p. 303.
5. Ellis, M. B., *More Dematiaceous Hyphomycetes*, CMI, Kew, England, 1976, p. 305.
6. Kamal and Singh, R. P., *Indian J. Mycol. Plant Pathol.*, 1981, 11, 1.
7. Kumar, P. and Kamal, *Curr. Sci.*, 1981, 50, 137.
8. Kumar, P. and Kamal, *Curr. Sci.*, 1982, 51, 846.
9. Rai, A. N., Kamal and Singh, S. K., *Curr. Sci.*, 1982, 51, 781.
10. Shaw, D. E. and Deighton, F. C., *Trans. Br. Mycol. Soc.*, 1970, 54, 326.
11. Sutton, B. C., *Mycol. Pap.*, 1973, 132, 143.

TWO NEW TAXA OF THE DESMID *XANTHIDIUM* EHR (CHLOROPHYCEAE) FROM KARNATAKA STATE (INDIA).

G. R. HEGDE

P.G. Department of Botany, Karnatak University,
Dharwad 580 003, India.

DURING 1978 a total of 51 collections were made in freshwater ponds and lakes situated in Shimoga district (13°17' and 14°39' N latitude and 74°38' and 76°04' E longitude) and Uttara Kannada district (13°53' and 15°32' N latitude and 74°04' and 75°05' E longitude) of Karnataka State. The collections are deposited in this Department (accession No. s KRNU-