

**PARASITES ON *APHIS GOSSYPHII* G.:
INFESTING TARO AND TANNIA**

DURING the survey of insect and non-insect pests of taro and tannia and their natural enemies, at Central Tuber Crops Research Institute, Trivandrum, four different species of parasites, viz., *Aphelinus mali* Halde- man, *A. sp.* and *Coccophagus sp. nr. cowperi* Girault all belonging to Aphelinidae (Hymenoptera) and *Aphidencyrus aphidivorus* May. belonging to Encyrtidae (Hymenoptera) were noticed on *Aphis gossypii* G. (Aphididae: Hemiptera). The total parasitization in the field level ranged from 2 to 14%. Maximum parasitization was observed in the case of *A. mali* and *A. aphidivorus* and these were also recorded in Kakinada (Andhra Pradesh). From the review of literature, it is noticed that among these four parasites, *A. aphidivorus* and *Coccophagus sp.* are new records¹⁻⁶.

Central Tuber Crops
Research Institute,
Trivandrum 695 017,
April 28, 1980.

M. S. PALANISWAMI.
K. S. PILLAI.

1. Hamid, S., Shah, M. A. and Anwar, A. M., "Some ecological and behavioural studies on *Aphis craccivora* Koch. (Hemiptera: Aphididae)," *Tech. Bulletin, C.I.B.C.*, 1977, 18, 99.
2. Radke, S. G. and Barward, W. L., "New record of parasite *Aphidencyrus aphidivorus* Mayer (Encyrtidae: Hymenoptera) on *Rhopalosiphum maidis* Fitch. and the efficacy of the various insecticides on the host and effect on parasitism," *Indian J. Ent.*, 1978, 40 (1), 59.
3. Ramaseshiah, G. and Dharmathikari, P. R., "Aphelinid parasites of aphids in India," *Tech. Bull., C.I.B.C.*, 1969, 11, 156.
4. Sankaran, T., "A new aphid host of *Aphelinus mali* Haldeman in India," *Curr. Sci.*, 1967, 36 (8), 216.
5. Takada, H., "Studies of aphids and their parasites on cruciferous crops and potatoes—II. Life cycle," *Komiyu*, 1976, 44 (3), 366.
6. Thontadarya, T. S., Bhumannavar, B. S. and Govindan, R., "Parasitization of the safflower aphid by *Aphidencyrus aphidivorus* Mayer (Hymenoptera: Encyrtidae)," *Curr. Sci.*, 1976, 45 (22), 811.

**A NEW SPECIES OF *CERCOSPORA*
FROM INDIA**

Dioscorea alata L. has been reported to be a host of several species of *Cercospora*¹. During an investigation of phytopathogenic fungi, a follicolous hyphomycete was collected from North East India which proved to be a new species of *Cercospora*. Infection started

from the tip or margin of the leaves as yellowish lesion which later turned brown to reddish brown surrounded by a yellowish halo with black centres and distinct zonations. The fungus comes close to *Phaeoramularia dioscoreae* (Ellis and Martin) Deighton, but it is not assignable to that species as the conidia of the present fungus are small in size and conicotruncate at the base with fairly distinct scars. Moreover, the conidiophores of the present fungus are longer, 2-6 septate and often slightly broader at the geniculate tip in contrast to the short, 0-1 septate conidiophores with attenuated tips in *P. dioscoreae*. The present fungus is also near to *Pseudocercospora contraria* (H. and P. Sydow) Deighton but differs from it in having narrow and obclavato-cylindric conidia borne on the geniculate conidiophores with 2-5 distinct spore scars. In view of these distinct morphological characters the present fungus merits description as a new specific epithet, the description and illustrations of which are given below:

Cercospora golaghatii Saikia et Sarbhoy sp. nov.
(Fig. 1).

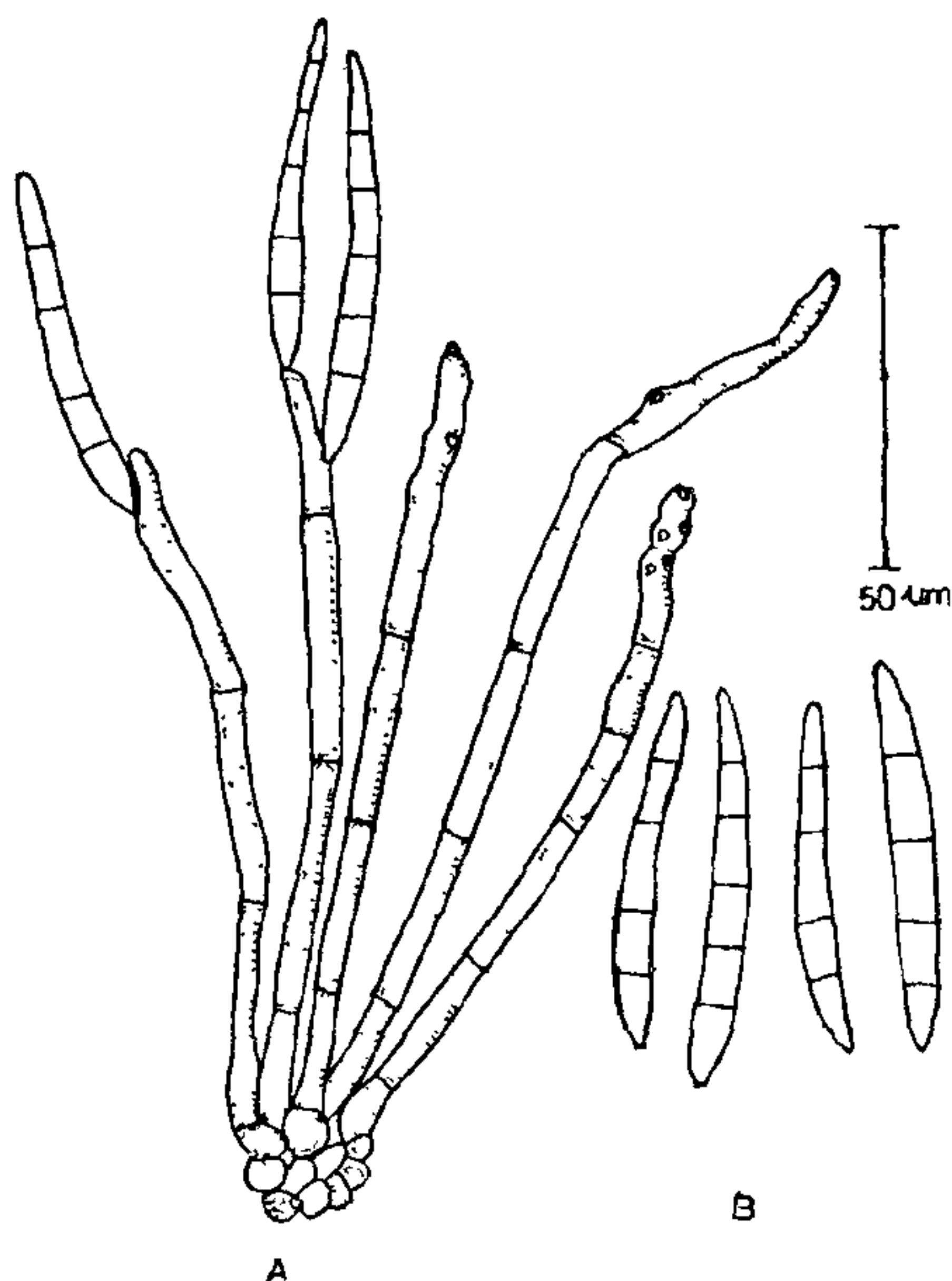


FIG. 1. A, Conidiophores. B, Conidia.

Laesiones in apice vel marginibus foliorum flavae dein brunneae, ex halone flavidule circumcinctae, in centro atrae clare zonatae; fructus hypophyllus profusus; stromata aegre evolute, cellulis paucis atrofuscis usque ad 24 μ diam. composita, plerumque fasciculata

fasciculis stipitibus 2-7 divergentibus estromate interdum singulatim enatis composita; conidiophora medio-aureo-brunnea vel griseobrunnea, apicem versus pallidiora, recta usque flexuosa vel undulata, pluries, geniculata spicae tritici similia, simplicia 2-6 septate, glabrotunicata, cicatricibus distinctis plerumque 2-5 praedita non attenuata, ad apicem conico-truncatum vel subconicam latiora (60.0-80.0-100.0 (-147.0) μ , longa, 4.0-5.5 μ lata; conidia obclavato cylindrica, recta vel curvata, parce attenuata, pallide aurantio brunnea, ad basim conico-truncata, cicatrice subdistincta signata, ad apicem conica vel subobtusa 3-7 (plerumque 4-5) septata, (36.0-48.0-60.0 (-78.0) μ longa, 4.2-6.0 μ lata.

Hab. in foliis *Dioscoreae alatae* L., Salikihat, Golaghat, Assam, 21-11-1977, Coll. U. N. Saikia (H.C.I.O. 32660 typus).

Fruiting hypophyllous and profuse. Stromata present but poorly developed, composed of few, pale to dark brown cells upto 24 μ m in diam. Conidiophores in fascicles of 2-7 divergent stalks arising from the stromata, mid-golden brown to olivaceous or greyish brown, pale towards the apex, straight or flexuous, geniculate several times often resembling the rachis of an earhead of wheat, simple, 2-6 septate, smooth-walled, with 2-5 distinct spore scars, not attenuated, apex often slightly wider than at the base, tip conico-truncate to sub-conic, (60.0-80.0-100.0 (-147.0) \times 4.0-5.5 μ m. Conidia obclavato-cylindric, straight to slightly curved, pale orange brown, 3-7 (mostly 4-5 septate; base conico-truncate with a fairly distinct scar, tip conical to sub-obtuse; measuring (36.0-48.0-60.0 (-78.0) μ m long and 4.2-6.0 μ m in breadth.

On *Dioscorea alata* L., Salikihat, Golaghat, Assam, 21-11-1977, U. N. Saikia, (H.C.I.O. 32660 type).

The authors are grateful to Dr. V. V. Chenu, Head, Division of Mycology and Plant Pathology, I.A.R.I., New Delhi 12, for providing the facilities, to Dr. E. Cash, New York, for the Latin diagnosis. The senior author is also thankful to the authority of the Assam Agricultural University, Jorhat, for sponsoring him to undergo higher studies leading to the present investigation.

Division of Mycology and
Plant Pathology,
Indian Agricultural Research
Institute,
New Delhi, 12, June 16, 1980.

U. N. SAIKIA.*
A. K. SARBHOY.

* Present address : Assam Agricultural University, Mycology Research Section, Jorhat 785 013.

1. Chujo, C., *A Monograph of the Fungus Genus Cercospora*, Ithaca, New York, 1953, p. 667.

2. Deighton, F. C., *Mycol. Pap.*, C.M.I., Kew, 1976, 140.

3. Ellis, M. B., *More Dematiaceous Hyphomycetes*, C.M.I., Kew, 1976, pp. 507.

SEXUALITY OF *POLYPORUS LEUCOSPONGIA* COOKE AND HARKNESS

MODERN mycologists^{3, 4, 6} consider the type of sexuality as an important character for solving taxonomic problems of fungi. Although sexuality of a large number of species belonging to different genera have already been determined, *Polyporus leucospongia* Cooke and Harkness has not been studied, so far, from this point of view. The present paper gives the result of interfertility study of *P. leucospongia*, a wood-inhabiting polypore of India and North America¹.

Twenty-five monosporous cultures were isolated from a fresh sporophore of *P. leucospongia* following the usual dilution method. The sporophore was collected from the campus of Visva-Bharati University, Santiniketan, West Bengal, India, on a dead stem of *Bambusa arundinacea* Willd. and it has been deposited in the Mycological Herbarium of the Visva-Bharati University under the number VBMH 79421. When all the cultures showed good growth they were examined thoroughly to find if there were clamp connections in any of these cultures. Absence of clamp connection was taken as confirmation of their monokaryotic nature. Ultimately 20 monokaryotic cultures were taken into consideration and were paired among themselves in all possible combinations on 2.5% malt agar slants. The culture tubes containing paired inocula were incubated at room temperature (28-32°C) for about a fortnight and then the line of contact between the paired mycelia was examined for the presence of clamp connections. The result of pairings has been presented in Table I where a plus sign (+) designates the presence of clamp connections and a minus sign (-) indicates their absence.

It will be evident from Table I that single-spore cultures from one sporophore of *P. leucospongia* fall into two groups on the basis of their ability to form clamp connections which mean that the species is heterothallic and possesses bipolar type of sexuality with allelomorphs for heterothallism at one locus only. The genetic constitutions of the two groups have been designated as A₁ and A₂ following Burdsall and Lombard³.

Mention may be made in this connection that *P. leucospongia* causes brown rot¹ and shows negative result on oxidase test². Therefore, *P. leucospongia* lends further support to the hypothesis of Nobles⁴ that in Polyporaceae, the species which possess bipolar type of sexuality are associated with brown rots and