

## Contribution to our Knowledge of Ascomycetes of India-XXIII

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In the earlier papers (1960—68) 82 ascomycetes have been described from India. The present paper deals with the description of *Dictyodothis acaciae* sp. nov. on *Acacia catechu* W. & A.; *Dictyodothis greviae* sp. nov. on *Grewia* sp.; *Dothideopsella phyllanthae* sp. nov. on *Phyllanthus* sp.; *Metameris petrakii* sp. nov. on *Bougainvillea spectabilis* Willd. and *Microdothella caesalpinae* sp. nov. on *Caesalpinia bonducella* Fleming. These collections have been described as new to science on the basis of comparative morphological studies and host relationship.

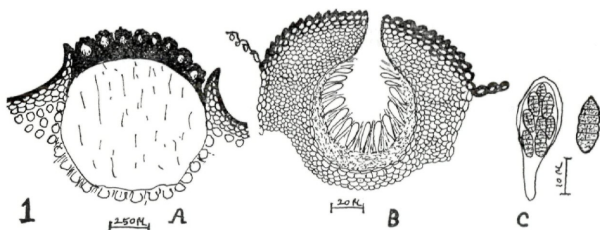


Fig. 1. *Dictyodothis acaciae* sp. nov. — A. V. S. of stroma, locules and host tissue. — B. Vertical section of locules Magnified. — C. Ascus and acrospores

### 83. *Dictyodothis acaciae* sp. nov.

Stroma erumpens, basi albida, pediformi innatum, superne hemisphaericum, nigrum, pluriloculatum, 600—800  $\mu$  diam.; loculi monostichi, globosi, in maturitate aperti, 76—95  $\times$  76—83  $\mu$ ; asci clavati, stipitati, crasse tunicati, 8-sporei, 27—30  $\times$  11—12  $\mu$ ; sporae clavatae, brunneae, transverse 3—5-longitudinaliter 2—3-septata, medio valde constrictae, 14—16  $\times$  4—6  $\mu$ ; paraphyses numerosae, filiformes.

Stroma erumpent, black, differentiated into lower white sterile layer which forms the foot like structure and the upper circular to semicircular black fertile region, pluriloculate, 600—800  $\mu$  across, locules many surrounded by stromatic tissue, spherical or ball like, opening on the surface by a channel, locule polyascus, 76—95  $\times$  76—83  $\mu$ . Asci club shape to clavate, bitunicate, stipitate, 8 spored, paraphysate, 27—30  $\times$  11—12  $\mu$ . Paraphysis numerous filiform, Ascospores club shaped, brown, muriform

strongly constricted in the middle, with 3—5 transverse septa and 2—3 longitudinal septa,  $14-16 \times 4-6 \mu$ .

Collected on dead bark of *Acacia catechu* W. & A. at Ramling in the month of Jan. 1968. Leg. S. B. K a l e.

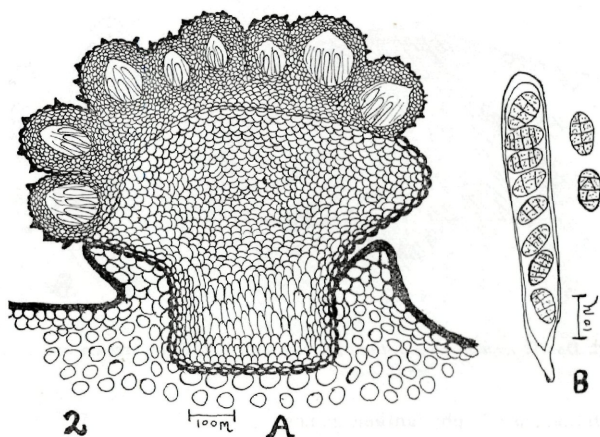


Fig. 2. *Dictyodothis grewiae* sp. nov. — A. Vertical section of stroma and locules. — B. Ascus and ascospores

#### 84. *Dictyodothis grewiae* sp. nov.

Stroma erumpens, basi pediformi innatum, hemisphaericum, nigrum,  $750-950 \mu$  diam., in superficie ob verrucas minutissimas, dentiformes asperulum; loculi numerosi, globosi vel subglobosi, in maturitate aperti,  $84-103 \mu$  diam.; asci cylindraceo-clavati, crasse tunicati, 8-sporei, breviter stipitati,  $57-64 \times 8-10 \mu$ ; sporae monostichae, olivaceae, oblongae vel ellipsoideae, transverse 3—6-longitudinaliter, 2—5-septatae, ad septa omnia constrictae,  $9-10 \times 6-8 \mu$ ; paraphyses filiformes.

Stroma erumpent, black, with upper fertile region and lower foot like structure, pluriloculate,  $750-950 \mu$  across, surface rough with teeth like outgrowths, locules many in single layer, globose to subglobose, pluriascus, opening by a channel  $84-103 \mu$  across. Asci cylindrical-clavate, 8 spored, bitunicate, short stalked  $57-64 \times 8-10 \mu$ , paraphysate. Paraphysis filiform. Ascospores greenish brown, uniseriate, oblong to ellipsoid, muriform, 3—6 transverse septa and 2—5 longitudinal septa, constricted at each septum,  $9-11 \times 6-8 \mu$ .

Collected on dead stem of *Grewia* sp. at Ramling in the month of Jan. 1968. Leg. S. B. K a l e.

The genus *Dictyodothis* was erected by Theissen & Sydow (1915) with *D. berberis* as the type species. The genus remained unrepresented in the Indian Flora and with the description of these two species is now represented by two species.

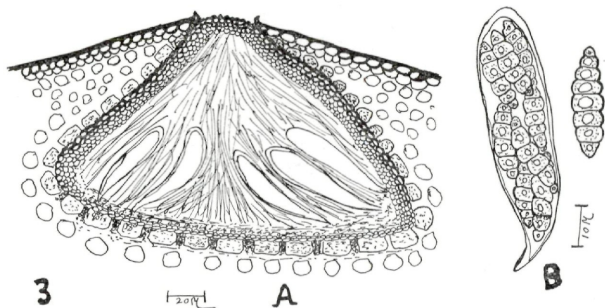


Fig. 3. *Dothideopsella phyllanthae* sp. nov. — A. V. S. of stroma and locules. — B. Ascus and ascospores

#### 85. *Dothideopsella phyllanthae* sp. nov.

Stroma innatum, erumpens, nigrum, uniloculatum, perithecio simile sed sine pariete distincto, in maturitate poro apertum,  $114-152 \times 190-266 \mu$ ; asci clavati, stipitati, crasse tunicati, 8-sporei,  $60-75 \times 15-19 \mu$ ; sporae irregulariter distichae, primum hyalinae, postea brunneae, ellipsoideae vel fusoideae, plerumque curvulae, transverse 5-7-septatae,  $14-16 \times 10-11 \mu$ , in quaque cellula guttula oleosa praeditae; paraphyses filiformes.

Stroma innate, erumpent, black, uniloculate, locule perithecium like but lacks definite separating wall, opening at maturity by a pore, each; locule pluriascus,  $114-152 \times 190-266 \mu$ . Asci clavate, stipitate, 8 spored, bitunicate, paraphysate,  $60-75 \times 15-19 \mu$ . Paraphysis filiform. Ascospores initially hyaline later turning brown, ellipsoid to fusoid, curved, transversely septate, septa 5-7  $\mu$ , irregularly biseriata,  $14-16 \times 10-11 \mu$ , with oil drop in each cell.

Collected on dead stems of *Phyllanthus* sp. at Apsinga in the month of Jan. 1968. Leg. S. B. K a l e.

The genus *Dothideopsella* was erected by Hoehnel (1915) with *D. agminalis* as the type species. A i n s w o r t h (1961) considered it as synonym of *Leptosphaeria* Ces. & de Not. and treats it under the Sphaeriales probably considering it as true perithecium. The present studies, however, suggest the clear locular nature of the genus.

86. *Metameris petrakii* sp. nov.

Stroma innatum, erumpens, pluriloculatum,  $450-750 \times 250-365 \mu$ ; loculi globosi vel a latere plus minusve compressi,  $114-155 \times 112-160 \mu$ , ostiolo breviter rostellato praediti; asci numerosi, clavato-cylindracei, stipitati, crasse tunicati, 8-spore,  $72-80 \times 13-14 \mu$ ; sporae distichae, fusiformi-ellipsoideae, transverse 3-septatae, medio constrictae, leniter curvulae, in quaque cellula guttula oleosa ornata, mucro obvolutae,  $21-22 \times 5-6 \mu$ ; paraphyses filiformes, capitatae.

Stroma black, innate-erumpent, pluriloculate,  $450-750 \times 250-365 \mu$ , locules globular or laterally compressed, polyascus,  $114-155 \times$

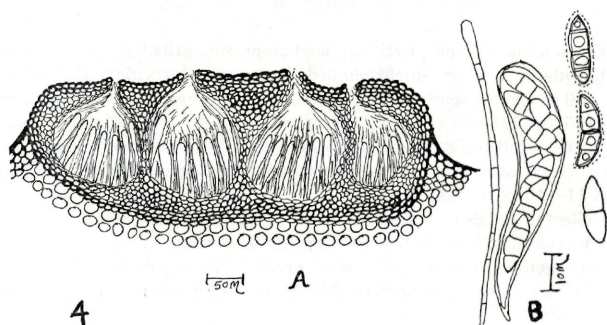


Fig. 4. *Metameris petrakii* sp. nov. — A. V. S. of Stroma and locules. — B. Paraphysis, ascus and ascospores

$112-160 \mu$ , opening by a neck like structure which forms a channel. Asci many, clavate, cylindrical, bitunicate, stipitate, 8 spored, paraphysate,  $72-80 \times 13-14 \mu$ . Paraphysis filiform, capitate, numerous. Ascospores hyaline, fusiform, ellipsoid, transversely septate, septa 3, deeply constricted in the middle, slightly curved, thick walled, with oil globule in each cell, biseriate,  $21-22 \times 5-6 \mu$ , with a mucous sheath.

Collected on dead stems of *Bougainvillea spectabilis* Willd. at Nizambad & Awarad in the month of Nov. 1967. Leg. S. B. Kale.

The genus *Metameris* was erected by Theissen & Sydow (1915) with *M. japonica* as the type species. The genus is an addition to the generic lists of India.

87. *Microdothella caesalpiniae* sp. nov.

Stromata late dispersa, subcuticularia, postea superficialia, mono- vel plurilocularia,  $152-175 \times 300-450 \mu$ ; loculi semiglobosi, in maturitate canali brevi aperti,  $105-135 \times 225-375 \mu$ ; asci ellipsoidei vel subglobosi crasse tunicati, stipitati, 8-spore,  $57-68 \times 19-23 \mu$ ; sporae

irregulariter ordinatae, hyalinae, continuae, ellipsoideae vel rhomboidales,  $11-15 \times 9-13 \mu$ ; paraphysoides sat numerosae.

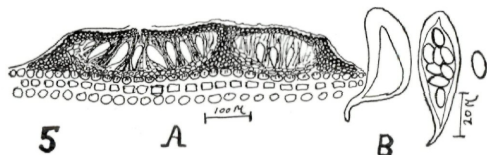


Fig. 5. *Microdothella caesalpiniae* sp. nov. — A. V. S. of stroma and locules. — B. Young and mature asci and ascospores

Stroma black, saprophytic on dead stem, subcuticular, later on superficial, wide spreading, shield shaped, mono- or pluricellular,  $152-175 \times 300-450 \mu$ , locules semicircular, poluascus, opening by a narrow channel,  $105-135 \times 225-375 \mu$ . Asci many ellipsoid to globoid, thick walled, bitunicate, stipitate, 8 spored,  $57-68 \times 19-23 \mu$  paraphysoids present. Ascospores hyaline, one celled, irregularly arranged, ellipsoid to rhomboidal  $11-15 \times 9-13 \mu$ .

Collected on dead stems of *Caesalpinia bonducella* Fleming at Ap-singa in the month of Jan. 1968. Leg. S. B. Kale.

The genus *Microdothella* was erected by Sydow (1914) with *M. culmicola* as the type species. The genus is an addition to the generic list of India.

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\*) Originals not seen.

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