# 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 grewiae* 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.

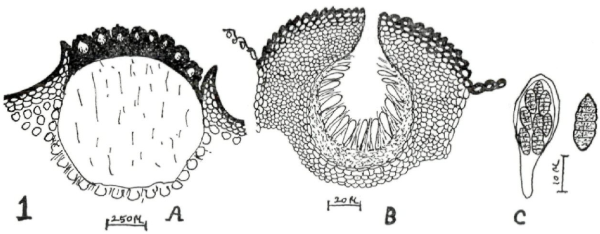


Fig. 1. *Dictyodothis acaciae* sp. nov. — A. V. S. of stroma, locules and host tissue. — B. Vertical section of locules Magnified. — C. Ascus and acrospores

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

Stroma erumpens, basi albida, pediformi innatum, superne hemisphaericum, nigrum, pluriloculatum, 600—800 μ diam.; loculi monostichi, globosi, in maturitate aperti, 76—95 × 76—83 μ; asci clavati, stipitati, crasse tunicati, 8-spori, 27—30 × 11—12 μ; sporae clavatae, brunneae, transverse 3—5-longitudinaliter 2—3-septata, medio valde constrictae, 14—16 × 4—6 μ; 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 μ across, locules many surrounded by stromatic tissue, spherical or ball like, opening on the surface by a channel, locule polyascus, 76—95 ×76—83 μ. Asci club shape to clavate, bitunicate, stipitate, 8 spored, paraphysate, 27—30 × 11—12 μ. 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 × 4—6 μ.

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

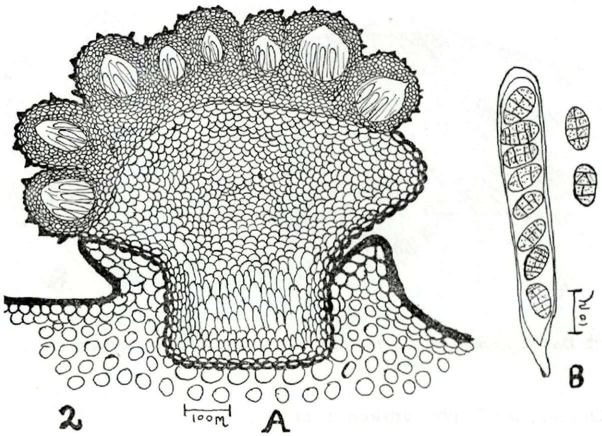


Fig. 2. *Dictyodothis grewiae* sp. nov. — A. Vertical section of stroma and locules. — B. Ascus and ascospores

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

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

Stroma erumpent, black, with upper fertile region and lower foot like structure, pluriloculate, 750—950 μ across, surface rough with teeth like outgrowths, locules many in single layer, globose to subglobose, pluri-ascus, opening by a channel 84—103 μ across. Asci cylindrical-clavate, 8 spored, bitunicate, short stalked 57—64 × 8—10 μ, 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 × 6—8 μ.

Collected on dead stem of *Grewia* sp. at Ramling in the month of Jan. 1968. Leg. S. B. Kale.

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.

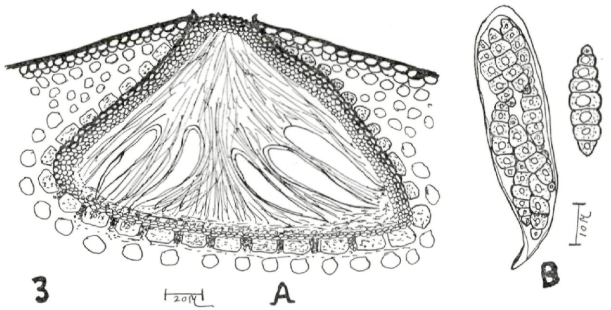


Fig. 3. *Dothideopsella phyllanthae* sp. nov. — A. V. S. of stroma and locules. — B. Ascus and ascospores

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

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

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

Collected on dead stems of *Phyllanthus* sp. at Apsinga in the month of Jan. 1968. Leg. S. B. Kale.

The genus *Dothideopsella* was erected by Hoehnel (1915) with *D. agminalis* as the type species. Ainsworth (1961) considered it as synonym of *Leptosphaeria* Ces. & de Not. and treats it under the Sphaeriales probably considering it as true perethecium. The present studies, however, suggest the clear locular nature of the genus.

86. **Metameris petrakii** sp. nov.

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

Stroma black, innate-erumpent, pluriloculate, 450—750 × 250—365 μ, locules globular or laterally compressed, polyascus, 114—155 ×

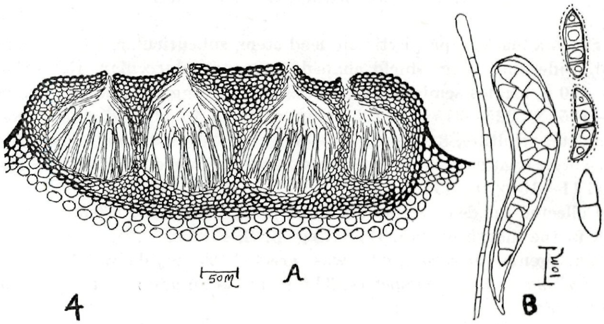


Fig. 4. *Metameris petrakii* sp. nov. — A. V. S. of Stroma and locules. — B. Paraphysis, ascus and ascospores

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

Collected on dead stems of *Bougainvilles 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 × 300—450 μ; loculi semiglobosi, in maturitate canali brevi aperti, 105—135 × 225—375 μ; asci ellipsoidei vel subglobosi crasse tunicati, stipitati, 8-spori, 57—68 × 19—23 μ; sporae irregulariter ordinatae, hyalinae, continuae, ellipsoideae vel rhomboidales, $11—15 \times 9—13\ \mu$; paraphysoides sat numerosae.

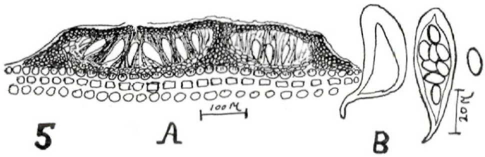


Fig. 5. *Microdothella caesalpiniae* sp. nov. — A. V. S. of stroma and locules. — B. Young and mature asci and ascospores

Stroma black, saprophytic on dead stem, subcuticular, later on superficial, wide spreading, shield shaped, mono- or plurocular, $152—175 \times 300—450\ \mu$, 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 Apsinga 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 eeen.