

Contribution to our Knowledge of Ascomycetes of India XXVIII

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With 4 Figs.

The present paper constitutes further studies of the ascomycetes and deals with the description of some new species of ascomycetes eg. *Diatrype fici* sp. nov. on *Ficus glomerata* Roxb., *Didymosphaeria munkiana* sp. nov. on *Ficus glomerata* Roxb., *Massarina kamatii* sp. nov. on *Colebrookia oppositifolia* Baker, & *Quaternaria indica* sp. nov. on *Echinops echinatus* DC. These have been presented as new to science on the basis of comparative morphological studies & host specificity.

106 *Diatrype fici* sp. nov.

Stroma dark, perithecia embedded in the stroma, globose to subglobose $400-550 \times 225-390 \mu$, ostiolate, ostiole obconical, periphysate, wall of the perithecium pseudoparenchymatous, many layered. Asci $50-85 \times 5-8 \mu$, numerous, 8-spored, arising from base & sides of the perithecium, cylindrical, unitunicate, with a minute, but relatively distinct apical ring, paraphysate, paraphyses disintegrating at maturity. Ascospores biseriate $8-12 \times 1.6-2.4 \mu$, allantoid, hyaline to light yellow.

Perithecia stromati nigrescenti innata, globosa vel subglobosa, $400-550 \times 225-290 \mu$, ostiolo breviter cylindraceo, antice saepe parum incrassato, periphysato punctiformiter erumpente sed vix prominulo praedita; pariete pseudoparenchymatico, pluristratoso; asci numerosi, clavati, antice rotundati, postice in stipitem longiusculum paulatim attenuati, tenuiter tunicati, paraphysati, 8-sporei, $50-85 \times 5-8 \mu$; sporae distichae, cylindraceae, plus minusve allantoideae, pallide luteolae, $8-12 \times 1.6-2.4 \mu$.

Collected on dead stems of *Ficus glomerata* Roxb. at Khandala, May 1970, Leg. V. K. Jadhav.

The stroma of this species is often associated with the imperfect stage *Sphaceloma* de Bary. It may be mentioned that majority of the species of *Sphaceloma* de Bary described earlier are folicolous while the present one is bark inhibiting.

With the addition of this species the total number of Indian species of *Diatrype* is now 7.

107 *Didymosphaeria munkiana* sp. nov.

Perithecia completely embedded in host tissue, globose to subglobose $450\text{--}550 \times 300\text{--}390\ \mu$, solitary or in groups of 2–3 forming epistroma with the epidermis of the host, ostiolate, ostiole periphysate. Asci cylindrical, stipitate $95\text{--}140 \times 11\text{--}15\ \mu$, unitunicate, 8-spored, paraphysate. Ascospores uniseriate to irregularly biserial, $12\text{--}19 \times 5\text{--}6\ \mu$, two-celled, constricted at the septum, brown to dark brown in colour.

Perithecia matrici omnino innata, globosa vel subglobosa, $450\text{--}550 \times 300\text{--}390\ \mu$, solitaria vel 2–3 sub clypeo epidermali aggregata,

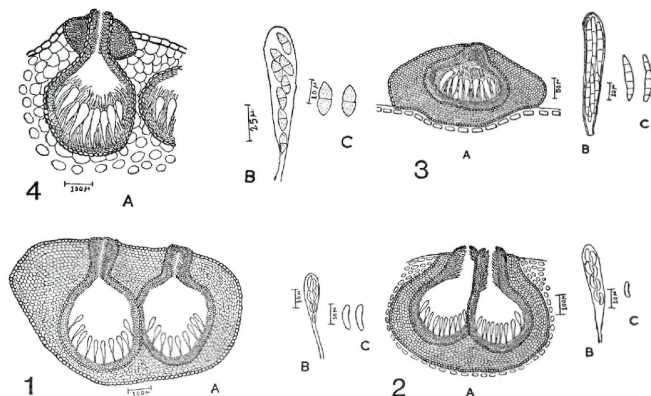


Fig. 1. *Diatrype fici* sp. nov. — A. Section through the stroma. — B. Ascus. — C. Ascospores. — Fig. 2. *Didymosphaeria munkiana* sp. nov. — A. Section through the ascocarp. — B. Ascus. — C. Ascospores. — Fig. 3. *Massarina kamatii* sp. nov. — A. Section through the stroma. — B. Ascus. — C. Ascospores. — Fig. 4. *Quaternaria indica* sp. nov. — A. Section through the stroma. — B. Ascus. — C. Ascospores.

ostiole breviter cylindraceo punctiformiter erumpentia; asci subnumerosi, cylindraceo-clavati, antice late rotundati, postice in stipitem brevem angustati, tenuiter tunicati, 8-sporei, $95\text{--}140 \times 11\text{--}15\ \mu$; sporae monostichae vel incomplete distichae, oblongae, utrinque abruptiuscule attenuatae, tunc fusosideo-oblongae, rectae vel inaequilaterae, medio septatae, ibique lemiter constrictae, brunneae vel obscure brunneae, $12\text{--}19 \times 5\text{--}7\ \mu$.

Collected on dead stems of *Ficus glomerata* Roxb., at Udgir, March 1970, Leg. V. K. Jadhav.

The present species always showed associated imperfect stage *Phoma* Sacc., pycnidia embedded in host tissue. Müller (1956) has clearly shown the relationship of these stages by cultural experiments. However no cultural work was carried out to establish this relationship in the present studies & hence it is tentatively presented as an associated stage.

The genus *Didymosphaeria* Fkl., is similar to *Haplovalsaria* Hoehn., in major respects except the presence of epistroma in the later. However von Arx & Müller (1962) considered *Haplovalsaria* Hoehn. as the synonym of *Didymosphaeria* Fkl. The present investigations support the views of Arx and Müller.

The species has described after Dr. Anders Munk in recognition of his outstanding contribution to the Pyrenomycetes. With the addition of this species the total number of Indian species of *Didymosphaeria* Fkl. is now 7.

108 *Massarina kamatii* sp. nov.

Perithecia embedded in stroma, stroma black, measuring $135-190 \times 340-390 \mu$, perithecia globose to subglobose, $95-150 \times 200-240 \mu$, ostiolate. Asci clavate, bitunicate paraphysate, $64-85 \times 9.5-11.5 \mu$, originating from base of perithecial wall. Ascospores $26.5-34.5 \times 3.5-4.5 \mu$, hyaline, with a thin shining mucous sheath, transversely multiseptate, initially biseriata later on overlapping, irregularly.

Perithecia in stromate $135-190 \mu$ alto, $340-390 \mu$ lato, nigro evoluta, globosa vel subglobosa, ostiolata, $95-150 \times 200-240 \mu$; asci cylindraceo-clavati, antice rotundati, postice paulatim attenuati, sessiles, paraphysati, crassiuscule tunicati, 8-spori, $64-85 \times 9.5-11.5 \mu$; sporae distichae, fusoideae, utrinque paulatim plus minusve attenuatae, obtusiusculae vel subacuminatae, rectae vel leniter arcuatae, pluriseptatae, hyalinae, $26.5-34.5 \times 3.5-4.5 \mu$, muco hyalino, tenuissimo obvolatae.

Collected on dead stems of *Colebrookia oppositifolia* Baker at Castlerock Leg. B. V. Srinivasulu, 1966.

With the addition of this species the total number of Indian species of *Massaring* Sacc. is now 8.

The species has been dedicated to Prof. M. N. Kamat for his valued contribution to Indian Mykology.

109 *Quaternaria indica* sp. nov.

Stroma pustulate-effuse, black, circular, perithecia are in groups of 2 to 4, short necked, flask shaped, obliquely placed, $420-510 \times 300-360 \mu$, ostiolate, ostiole, periphysate, necks of perithecia not extruded beyond the surface of stroma., Asci $60-85 \times 4.5-6.6 \mu$, cylin-

drical, 8-spored, stalked, unitunicate, provided with an apical pore, paraphysate, paraphyses disintegrating at maturity. Ascospores $8-9.6 \times 1.6-2.4 \mu$, allantoid, hyaline to yellow, biseriate.

Stromata ambitu orbicularia, nigrescentia; perithecia 2-4 in quoque stromate, ovoidea, superne in ostiola breviter cylindraceo-conoidea, periphysata, punctiformiter erumpentia sed vix vel parum prominula constricta, $420-510 \times 300-360 \mu$; asci numerosi, cylindraceo-clavati, antice rotundati, postice in stipitem brevem paulatim attenuati, tenuiter tunicati paraphysati, $60-85 \times 9.5-6.6 \mu$, sporae distichae, cylindratae, utrinque obtusiusculae, vix vel brevissime attenuatae, plus minusve allantoideae, luteolae, $8-9.6 \times 1.6-2.4 \mu$.

Collected on dead stems of *Echinops echinatus* DC. at Aurangabad, March 1970, Leg. V. K. Jadhav.

The genus is a new addition to the generic list of India.

The type specimens have been deposited in the herbarium of Cryptogamiae Indiae Orientalis New-Delhi.

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References

- Bose, S. K. (1961): Studies on *Massarina* Sacc. & related genera. Phyt o. Z. 41: 151-213.
 Mukherji, K. G. & Kapoor, S. (1970): Fungi of Delhi VII. J. I. B. S. 48: 228-230.
 Müller, E. & J. A. von Arx (1962): Die Gattungen der didymosporen Pyrenomyceten, 288-293.
 Munk, Anders (1957): Danish Pyrenomycetes. Da. Bot. Ark. 17.
 Tilak, S. T. (1966): Contribution to our knowledge of Ascomycetes of India VII. Mycopath. et Mycol. Appl. 29: 125-128.
 — (1967): Contribution to our knowledge of Ascomycetes of India X. Mycopath. et Mycol. Appl. 32: 262-264.

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