

## Three new Species of *Myriangium* from India

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(With 3 Figures)

In the course of his mycological survey for Ascomycetes, the writer collected three species of *Myriangium* on three different hosts viz. *Tectona grandis* Linn. f. and *Anogeissus latifolia* wall both from 'Sinhagad' and on *Grewia teliaefolia* Vahl at Tungareashwar near Bassein, Maharashtra State, in the month of February, 1969. Since no species of *Myriangium* had been previously reported on the three hosts, a detailed comparative study was undertaken, the results of which are presented in this paper.

The genus *Myriangium* Mont. & Berk. was established by Montagne and Berkeley (1845), with *Myriangium duriaei* as the type species. Later (1849) they added *M. curtisii* and placed both species in the Lichen family, collemaaceae. The generic concepts included a multilocular apothecium with asci in single locules.

The order Myriangiales was established by Starback (1899) to include several apparently unrelated forms. The distinguished characters of the order are an angiocarpous fruiting body with asci arranged irregularly in a colourless plectenchyma and released by the breaking away of the covering layer. Theissen and Sydow (1917) enlarged the group still further, but retained the monascus locule as the chief character. Miller (1938) and Von Arx (1963) have reported on the taxonomic position of Myriangiaceous fungi. Thirumalachar and Narasimhan (1955) have recently reported on fungi belonging to these group from India.

Three species of *Myriangium* have been so far reported from India viz. *Myriangium cinchone* Rehm. and *M. duriaei* Mont and Berk in association with scale insects parasitizing *Cinchona regia* and *Morus alba* respectively. Recently Seshadri (1967) has reported *Myriangium bauhiniae* on the bark of *Bauhinia racemosa* Lam. collected by him from Poona, India.

The three species described below were compared with the type *M. duriaei* and other Indian species and found to be significantly distinct in respect of habit, nature of stroma, arrangement of locules within the stroma and dimensions besides being parasitic on hitherto unreported hosts. The species accordingly are accommodated as new taxa.

### 1. *Myriangium tectonae* sp. nov. Tendulkar, Fig. 1.

Stromata black, rigid, concave at base, convex at top, uniloculate, raised margin, hypostroma present. Locules elongated, convex, disc-like measuring  $1275\ \mu$  to  $1479\ \mu$  broad and  $255$  to  $340\ \mu$  in height.

Asci in uniascal cavities, globose to obovate, 8-spored, scattered in the locule  $34.2\ \mu$  to  $49.4\ \mu \times 30.4\ \mu$  to  $34.2\ \mu$ . Ascospores muriform with one longitudinal or vertical and 6 to 7 transverse constricted septa, yellowish brown measuring  $22.8\ \mu$  to  $26.6\ \mu$  in length and  $7.6\ \mu$  in breadth.

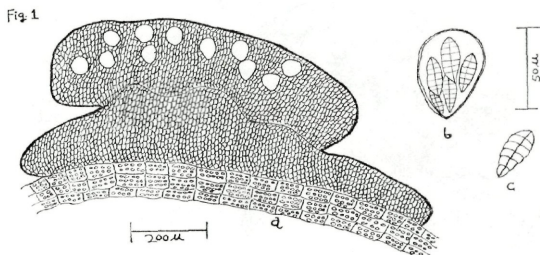


Fig. 1. *Myriangium tectonae* — a. Uniloculate stroma with asci in uniascal cavities scattered in the locule — b. Ascus — c. Ascospores

Stromata superficialia, dispersa, nigra, pulvinata, inferne concava, superne plus minusve convexa; hypostromate crasso, distincte prosenchymatico, arte adnato; loculi in superiore stromatis parte disciformi  $1275$ — $1479\ \mu$  lata,  $255$ — $340\ \mu$  crassa irregulariter dispositi, monasci; asci globosi vel ovoidei, sessiles,  $34.2$ — $49.4 \times 30.4$ — $34.2\ \mu$ ; sporae oblongo-ovoideae, antice rotundatae, vix vel leniter, postice distincte attenuatae, flavidae, transverse  $6$ — $7$ -longitudinaliter  $1$ -septatae, ad septa lemiter constrictae,  $22.8$ — $26.6 \times 7.6\ \mu$ .

Parasitic on the bark of *Tectona grandis* Linn. f. collected by J. S. Tendulkar at Sinhagad (Poona) on 15th February, 1969. M. A. C. S. Type No. 730.

### 2. *Myriangium arxii* sp. nov. Tendulkar, Fig. 2.

Stromata black, rigid, with convex base having distinctly raised margin, multiloculate (2 to 3), hypostroma present. Locules with subiculum, discoid, measuring  $578\ \mu$  to  $731\ \mu$  in breadth and  $255\ \mu$  to  $306\ \mu$  in height. Asci in uniascal cavities arranged in 2 to 3 tiers, globose to obovate, 8-spored, measuring  $45.6\ \mu$  to  $57\ \mu$  in length and  $38\ \mu$  to  $41.8\ \mu$  in breadth. Ascospores muriform, brown, with one vertical and 6 to 7 transverse constricted septa,  $22.8$  to  $41.8\ \mu$  in length and  $7.6$  to  $11.4\ \mu$  in breadth.

Stromata superficialia, pulvinata, nigra, inferne plus minusve applanata, superne convexa; hypostromate crasso, pseudoparenchymatico, arte adnato; loculi in stromatis parte superiori fertili 578—731  $\mu$  lata, 255—306  $\mu$  crassa di-vel tristichi, monasci; asci globosi vel ovoidei, 8-sporei, 45.6—57  $\times$  38—41.8  $\mu$ ; sporae brunneae, oblongae vel oblongo-fusoideae, utrinque plus minusve attenuatae, rectae, transverse 6—7-longitudinaliter 1-septatae, ad septa constrictae, 22.8—41.8  $\times$  7.6—11.4  $\mu$ .

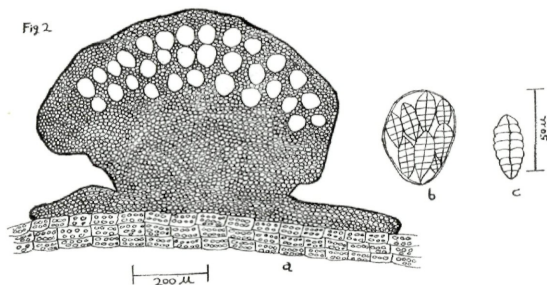


Fig. 2. *Myriangium arxii* — a. Multiloculate stroma with discoid locules with uniascal cavities packed in 2 to 3 tiers — b. Ascus — c. Ascospores

Parasitic on the bark of *Anogeissus latifolia* wall collected by J. S. Tendulkar at Sinhagad on 15th February, 1969. — M. A. C. S. Type No. 731.

The species is described as *Myriangium arxii* after Dr. Von Arx, Director C. B. S. Baarn (Holland) Netherlands in recognition of his outstanding contributions to the Ascomycetes.

### 3. *Myriangium grewiae* sp. nov. Tendulkar. Fig. 3.

Stromata black, rigid, with convex and distinctly raised top, multiloculate (3 or more), hypostroma present. Locules closely packed, irregular sessile, more or less discoid, measuring 306  $\mu$  to 620  $\mu$  in breadth and 170  $\mu$  to 204  $\mu$  in height. Asci in uniascal cavities, scattered in the locules, globose to obovate, 8-spored, measuring 45.6  $\mu$  to 57  $\mu$  in length and 26.6  $\mu$  to 41.8  $\mu$  in breadth. Ascospores muriform, brown with one vertical and 6 to 7 transverse constricted septa, measuring 26.6  $\mu$  to 51.8 in length and 9.5  $\mu$  to 11.4  $\mu$  in breadth.

Stromata superficialia, nigra, superne plus minusve convexa, multiloculata; hypostromati crasso, pseudoparenchymatico; loculi in stromatis parte superiori, 306—620  $\mu$  lata, 170—204  $\mu$  crassa inaequaliter distributi, monasci, asci globosi vel ovoidei, 8-sporei, crassiuscule

tunicati,  $45.6-57 \times 26.6-45.6 \mu$ ; sporae oblongae vel oblongo-fusoideae, utrinque plus minusve attenuatae, rectae raro inaequilatae brunneae, transverse 6-7-longitudinaliter 1-septatae, ad septa constrictae,  $26.6-41.8 \times 9.5-11.4 \mu$ .

Parasitic on the bark of *Grewia tiliaefolia* Vahl collected by J. S. Tendulkar at Tungareshwar near Bassein, Maharashtra State on 20th February, 1969. M. A. C. S. Type No. 732.

The genus is essentially known to parasitize scale insects. *M. cinchone* however, was reported on the bark of *Cinchona regia*. Later, Chona and Munjal (1950) reported close association between

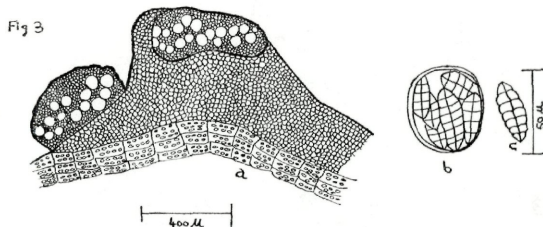


Fig. 3. *Myriangiium grewiae* — a. Multiloculate stroma with discoid locules and uniascal cavities scattered in the locules — b. Ascus — c. Ascospores

this fungus and scale insects parasitizing the bark of *Cinchona regia*. Recently, Seshadri (1967) has reported a parasitic species of *Myriangiium* on *Bauhinia racemosa* Lam. The three new species collected by the writer were found to parasitize bark and twigs of their respective hosts without any association of scale insects and were thus typically parasitic in habit.

The type material of the three new species is being deposited at New Delhi (India) and C. M. I., Kew, England.

#### Acknowledgements

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Artikel/Article: [Three new Species of Myriangium from India. 228-232](#)