

Ascomycetes of Coorg (India) III.

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This is the third contribution in the series published from this Laboratory on 'Ascomycetes of Coorg' and gives an account of 3 new species and 1 new record to India.

The type material has been deposited at Herb. Orientalis, New Delhi and C. M. I., Kew, England, besides the M. A. C. S., Poona-4 (India).

1. *Guignardia flacourtiæ* Anahosur sp. nov. (Fig. 1).

Maculae epiphyllae, dispersae, brunneae, orbiculares, usque ad 0.5 mm diam.; stromata sub epidermide evolta, nigra, usque 4-loculata, 356—488.8 μ longa; loculi hemisphaerici, basi applanata arte adnata,

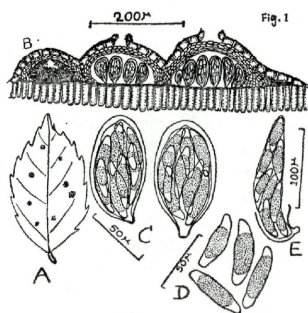


Fig. 1. *Guignardia flacourtiæ*.

A. Habit, B. Section of the Ascostromata, C. Asci, D. Ascospores, E. Ascus dehiscence.

superne strato pseudoparenchymatico, atro-brunneo tecta, omnino clausa, non ostiolata, 150—180 \times 100—200 μ ; asci ellipsoidei vel clavati, crassiuscule tunicati, subsessiles vel breviter stipitati, 8-sporei, 60—80 \times 40—48 μ ; sporae cylindraco-fusoideae utrinque plus minusve attenuatae et rotundatae, rectae vel leniter curvulae, hyalinae, continuae, utrinque appendice mucoso, distincte limitato obtuse conoideo auctae, 40.4—48.8 \times 12—16 μ .

Infection spots circular, scattered, brown, epiphyllous, upto 0.5 mm diam. Ascostroma black, multiloculate, upto 4 locules in each stroma, sub-epidermal, 356—488.8 μ long. Locules conical, with well developed clypeus, 150—180 \times 100—120 μ . Asci cylindro-clavatis, bituncate, with apical projection, pedicellate, octosporous, in basal layers, 60—80 \times 40—80 μ . Ascospores cylindrical to spindle-shaped, with hyaline disc-like gelatinous portion at both ends, hyaline, irregularly arranged, 1-celled, 40.4—48.8 \times 12—16 μ . Paraphyses, pseudoparaphyses or interthelial tissues lacking.

Parasitic on the leaves of *Flacourtia sepiaria* Roxb. (Flacourtiaceae) collected during Feb. 1967, M. A. C. S. Herb. No. 496 (Type).

This species is distinguished from the type by the multiloculate character of the stromata, quite bigger asci and distinctively characterised ascospores which are arranged irregularly in the ascus. Although the genus *Guignardia* V. & R. is characterised by the formation of uniloculate ascostroma, it may rarely produce multiloculate stromata even as in the allied genus *Mycosphaerella* as stated by Miller (1949) and *Parodiella* as reported by Ullasa (1968).

In the writer's collection, micro-conidial locules were also found in association with the ascostromata the nature of which needs further study.

2. *Mycomicrothelia indica* Anahosur, sp. nov. (Fig. 2).

Stromata subepidermalia, mox plus minusve erumpentia, hemisphaerica vel late conoidea, clypeo crasso tecta, 300—400 μ lata, 110—124 μ crassa; asci clavati vel cylindraceo-clavati, antice rotundati, postice in stipitem brevem attenuati, crasse tunicati, 8-sporei, 50—65 \times 12—16 μ ; sporae distichae, ellipsoideae vel oblongo-ovoideae, utrinque late rotundatae, antice vix vel parum, postice distincte attenuatae, rectae, obscure brunneae, paulo infra medium septatae, plus minusve constrictae, 16—20 \times 4—6 μ ; paraphyses numerosae, filiformes.

Ascostromata black, soft, sub-epidermal, becoming erumpent, uniloculate, ostiolate, conical, with highly developed clypeus, 310—400 μ broad and 110—124 μ high. Asci clavate, pedicellate, bituncate, in wall-layers, octosporous, 50—65 \times 12—16 μ . Ascospores ellipsoid to ovoid, dark-brown, unequally 2-celled, constricted at the septum, rounded at both ends, biseriolate, 16—20 \times 4—6 μ . Paraphyses abundant, filiform slender and hyaline.

Parasitic on the twigs of *Randia dumetorum* Lam. collected during October 1967, M. A. C. S. Herb. No. 498 (Type).

The writer's collectoin of *Mycomicrothelia* differs from *M. atomaria* and *M. macularia* in having significantly bigger ascostroma, asci and ascospores which are unequally 2-celled with a lignicolous habit. This is the second species of this genus reported from India, the first one being reported by Chaudhari and Rao (1963).

3. *Vestergrenia indica* Anahosur sp. nov. (Fig. 3).

Maculae epiphyllae, dispersae, obscure brunneae, orbiculares, usque ad 1 mm diam.; stroma globosum, uniloculatum, innatum, omnino clausum nec ostiolatum, clypeo atro, carbonaceo, 180—210 μ lato, 72—95 μ crasso tectum; asci clavati, crassiuscule tunicati, antice late rotundati, postice in stipitem longum paulatim attenuati, 98.4—210.8 \times 26—32 μ , aparaphysati; sporae distichae, oblongae vel oblongo-ovoideae, utrinque rotundatae, vix vel postice tantum leniter attenuatae, rectae vel inaequilatae, hyalinae, continuae, 22—28 \times 6—8 μ .

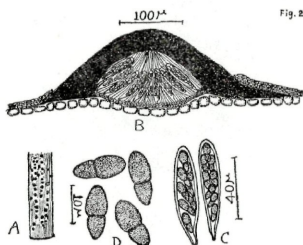


Fig. 2. *Mycomicrothelia indica*.

A. Habit, B. Section of the Ascostromata, C. Asci, D. Ascospores, E. Ascus dehiscence.

Infection spots dark-brown, epiphyllous, circular, scattered, upto 1 mm. diam. Ascostroma globose, separate, strictly uniloculate, innate, non-ostiolate, with well developed clypeus, 282.4 \times 321.4 μ diam. clypeus black, carbonaceous, broad, 180—210 \times 72—95 μ . Asci clavate, bitunicate, octosporous, in fascicles, pedicellate, with apical projection, 98.4—210.8 \times 26—32 μ . Ascospores oblong, slightly constricted in the centre, biseriata, hyaline, 1-celled, 22—28 \times 6—8 μ . Interthelial threads lacking.

Parasitic on the leaves of *Haeptaplureum venulosum* Sm. (Araliaceae) collected during October 1966, M. A. C. S. Herb. No. 497 (Type).

As no species of *Vestergrenia* Rehm. had been previously reported to parasitize the hosts of the genus *Haeptaplureum*, a comparison between the type species and the writer's collection revealed that the latter was significantly distinct in having bigger ascostromata, asci and ascospores with a highly developed clypeus. Besides, it has been collected on an unreported host and hence has been described as a new species.

4. *Microcyclus indicus* Tilak.

The writer collected the fungus at Coorg and the microscopic examination revealed the presence of spermatogonial chambers in association with the ascigerous state. The spermatogonia are conical, innate,

closely associated with the ascostromata, 120—160 × 70—95 μ . Spermatophores in wall layers. Spermatial bodies ellipsoid to cylindrical, 1-celled, hyaline, filling the cavity, 2 μ long. Tilak (1958) who originally reported this fungus was evidently unable to observe any such association in his collections made from Maharashtra. The exact nature of the association and importance could be ascertained through

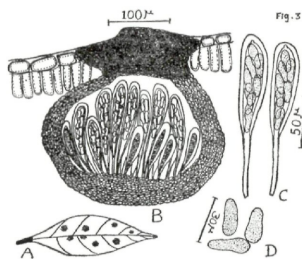


Fig. 3. *Vestergrenia indica*.

A. Habit, B. Section of the Ascostromata, C. Asci, D. Ascospores, E. Ascus dehiscence.

a detailed study into the development of the fungus which is in progress.

The material with spermogonial association is deposited at M. A. C. S. Herb. No. 502.

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