Notes on some interesting Ascomycetous Fungi from India

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With 2 figures

In the course of taxonomic studies on the ascomycetous fungi from India the authors have come across three noteworthy fungi which are not so far been reported from India. The collections described in this paper have been deposited in Central National Herbarium (Cryptogamic Unit), Botanical Survey of India, Calcutta (CAL) and in the Herbarium of Swiss Federal Institute of Technology, Zürich (ZT).

1. **Thaxteriella indica** nov. spec.

Perithecia globosa, 360—500 μ diam., brunnea vel atra, superficialia, subiculo insidentia. Subiculum ex hyphis fuscis, 6 μ crassis compositus. Asci bitunicati, longe stipitati, clavati, 270—300 × 25—30 μ. Ascosporae fusoideae, 15—20 septatae, hyalinae, demum pallide flavae, 60—100 × 9—12 μ. Paraphysoides filiformes, hyalinae.

Hab. in ramis emortuis — India: Maharasthra, Dist. Satara, Mahabeleshwar, aprillum 1965, C. G. Dharne.

The black globose ascocarps measuring 360—500 μ in diameter are immersed in a subiculum which forms thick mat on the surface of the substratum. This is formed of smooth, dark brown, thick walled hyphae, measuring 6—7 μ in diameter. The wall of the ascocarp is composed of polygonal cells; it is rather solid when young, becoming brittle at maturity. The clavate bitunicate asci, 270—300 × 25—30 μ, have long flexuous stipes and are accompanied by hyaline, filiform paraphysoids. Each contains eight elongate fusiform, 15- to 20- septate ascospores with bluntly rounded ends and range 60—100 × 9—12 μ in size. The ascospores are hyaline at first, becoming yellow at maturity.

The genus *Thaxteriella* was proposed by Petrak (1924) with *Thaxteriella corticola* as its type species. It is a rather unknown genus. The type species was reported from Central America (Vega baja, Porto Rico) but the material has been misplaced during the second world war (Petrak 1953). Petrak's (1924) diagnosis for the genus can briefly

stated as: "The small black perithecia generally form larger or compact groups, superficially developped on the basal stroma or slightly embedded in it. The perithecia are completely closed but often possess smaller apical papillae which breaks open in an iregular fashion exposing the key shaped apical portion. Perithecial membrane is rather solid when young becoming brittle at maturity. The wall of the fructification is composed of dark brown parenchymatous tissue. The clavate thick walled asci have short stalks or are almost sessile. Each ascus contains eight cylindrical, slightly curved, many celled, hyaline to subhyaline ascospores. The paraphysoids are filiform and branched".

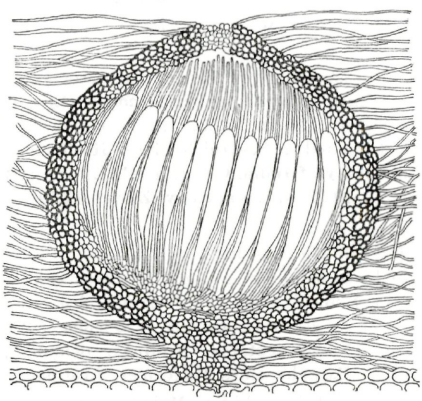

Fig. 1. Section through a perithecium of *Thaxteriella* indica 130 ×

Our material closely agrees with the above description. Some of the characters of *Thaxteriella* Petr., namely globose, black ascocarps, a subiculum formed of smooth, thick walled hyphae and bitunicate asci resemble *Herpotrichia* Fuck. (as treated by B o s e 1961). However it can be distinctly distinguished from the latter by the profuse development of the subiculum, by the sunken perithecia and the shape and septation of the ascospores. On the same basis P e t r a k (1953) has justly referred *Sphaeria pezizula* Berk. et Curt. to *Thaxteriella* and proposed the new combination *Thaxteriella pezizula* (Berk. et Curt) Petr. to which *Thaxteriella corticola* is synonymous.

Thaxteriella indica Dharne et Müller differs from the type species by its profusely developed subiculum and the larger size of the asci and the ascospores.

2. *Lophiotrema praemorsum* (Lasch) Sacc.

Michelia *1:* 513 (1879)

Material examined: On dead fallen twigs — India, Maharashtra, Poona, Febr. 1965, leg. C. G. Dharne.

The small dark coloured fructifications, measuring 400—500 μ which are at first sunken in the substratum, becoming superficial at maturity. The fruitbody is marked by narrow cleft. Its wall is composed of dark brown isodiametric cells. The bitunicate, stalked asci arise among numerous filiform paraphysoids. The size of the asci ranges from 80 to 95 μ in the length and from 12 to 15 μ in the thickness. The spindle

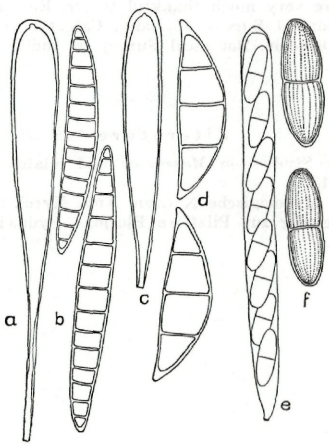

Fig. 2. *Thaxteriella indica* a) Ascus (250 ×) b) Ascospores (500 ×). *Lophiotrema praemorsum* c) Ascus (500 ×) d) Ascospores (1000 ×). *Valsaria spartii* e) Ascus (500 ×) f) Ascospores (1000 ×)

shaped, 38—45 × 10—12 μ hyaline ascospores with a medium septum bear hyaline appendages at each end. At maturity they become three septate.

Lophiotrema praemorsum has up to now only been reported from Europe. The Indian collection shows little variation from the European material but it has slightly larger ascospores and asci.

3. *Valsaria spartii* Maubl.

Bull. Soc. Mycol. France *21:* 88 (1905)

Material examined: Dead branches of leguminose host — India: West Bengal 24 paraganas, Diamond harbour, Jan. 1966, leg. C. G. Dharne.

The black flask shaped pseudothecia with long cylindrical necks are clustered within a pulvinate, dark stroma, imbedded in the bark. The stroma extends 1 to 6 mm across. The long cylindrical neck of the perithecium is lined all along inside with periphyses. The cylindrical, short stalked asci measure 125—160 × 10—12 μ and contain eight brown, 17—23 × 6—8 μ measuring, broadly elliptical, uniseriately arranged ascospores. These show a clear constriction at the single median septum and they are verrucose. The paraphyses are hyaline and filiform.

This fungs can hardly been separated from *Valsaria spartii* Maubl. found mostly on *Spartium junceum* L. in Southern Europe. It differs slightly in the size of ascospores and asci.

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