

Ascomycetes of Maharashtra (India)

By Alaka Chipionkar

(M. A. C. S., Poona 4, India)

With 3 Fig. in the text.

During the rainy season (June—October) of 1966, the writer collected several ascomycetous fungi at different places in Maharashtra (India) some of which were determined as new to Science on the basis of critical comparative studies and host relationships. Three species of these fungi are presented here along with their latin diagnosis. Being new species, the type material is being deposited at C. M. I., Kew, Surrey, England and at I. A. R. I., New Delhi, India besides at the M. A. C. S. herbarium, Poona 4, India.

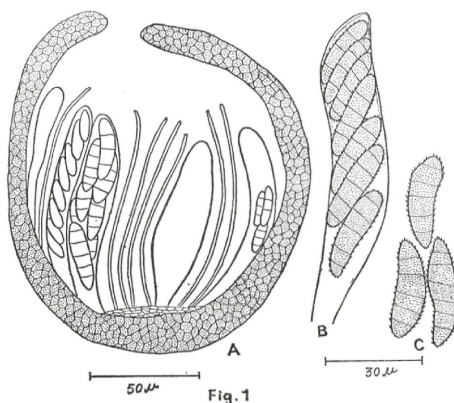


Fig. 1: *Leptosphaeria cosmosicola*. A. Peritheciium, B. Ascus, C. Ascospores.

1. *Leptosphaeria cosmosicola* sp. nov. Chipionkar.

This fungus was collected on dead twigs of *Cosmos sulphurens* producing black tar-like pustules which on microscopic examination revealed the presence of stromatic ostiolate locules with paraphysate asci and 4—6 celled brown ascospores on the basis of which it was

identified as a species of *Leptosphaeria*. There is no previous report of this fungus affecting the host genus *Cosmos*.

Perithecia in decolorationibus nigrescentibus dispersa, innata, globosa, ostiolata, $192 \times 160 \mu$; asci subnumerosi, cylindracei, 8-sporei, crasse tunicati $74-96 \times 22 \mu$; sporae monostichae, fusioideae, utrinque rotundatae, vix vel leniter attenuatae, rectae, raro inaequilatae vel leniter curvulae, 4—5-septatae, ad septa non vel lenissime constrictae, brunneae, $29.6-40.6 \times 7.4 \mu$, episporio minutissime serrulato; paraphyses filiformes, ascos aequantes vel paulo superantes.

Infection spots black, "tar-spot" like, scattered; 1 to 2 mm. Ascostroma dark black, scattered, innate, rounded, uniloculate, ostiolate; $192 \times 160 \mu$. Asci many, cylindrical, paraphysate, 8-spored, bitunicate produced in basal layer; $74-96 \times 22 \mu$. Paraphyses filiform, usually longer than or at least as long as the asci. Ascospores 8, monostichous, brown, 5—6 celled, cylindrical to fusoid, distinctly serrated, sometimes slightly curved; $29.6-40.6 \times 7.4 \mu$.

Leg. Alaka Chiplonkar at Katraj (Poona) on dried stems of *Cosmos sulphurens* on 6th Aug. 1966 M. A. C. S. Herb. No. 478 (Type).

The comparative figures show that the writer's collection of *Leptosphaeria* differs significantly from the type species in all respects, having smaller ascostromata as well as asci and much bigger ascospores. The distinctly serrated nature of the ascospores is also an additional distinctive feature which merits a new taxon to this collection. The association of spermatogonial bodies described for the type species was not observed in the writer's collection.

2. *Massarina cosmosicola* Sp. Nov. Chiplonkar.

This fungus was found in association with the earlier one on the same twigs of *Cosmos sulphurens* collected at the same time, with similar black specks which under microscopic proved to be different from *Leptosphaeria* — in having numerous asci, paraphyses only in younger locules, with hyaline 4-celled ascospores characteristic of the genus *Massarina*. Moreover all the eight ascospores were discharged as a single unit embedded as they were in mucilage.

Perithecia in decolorationibus dispersis nigrescentibus, elongatis evoluta, innata, ovoidea, $192-256 \times 144-171 \mu$, ostiolata; asci cylindracei, crasse tunicati, 8-sporei, $37-40 \times 7.4 \mu$; sporae monostichae, oblongae vel subfusioideae, utrinque late rotundatae, vix vel leniter attenuatae, hyalina, triseptatae, ad septa non vel lenissime constrictae, muco hyalino obvolutae, $7-12 \times 3.4 \mu$; paraphyses mox vietae et mucosae.

Infection spots scattered, dark black, elongated. Ascostromata oval, ostiolate, stromatic, uniloculate, embedded in the xylem tissue of the stem; $192-256 \times 144-171 \mu$. Asci cylindrical, bitunicate, produced from all the sides of the locule; $37-40 \times 7.4 \mu$. Paraphyses evanescent, disappearing in mature locules. Ascospores 8, hyaline, 4-celled, mono-

stichous, fusoid to oblong, held together in a mucilaginous matrix; $7-12 \times 3.4 \mu$.

Leg. Alaka Chiplonkar on dried stems of *Cosmos sulphurens*, at Katraj (near Poona) on 6th Aug. 1966, M. A. C. S. Herb. No. 479 (Type).

Review of literature showed that no species of *Massarina* has been reported on this host.

The writer's collection of *Massarina* differs from the type species

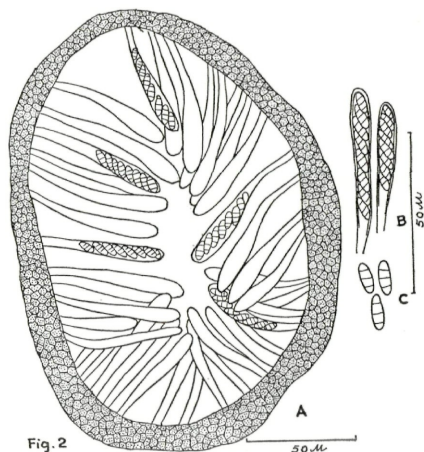


Fig. 2: *Massarina cosmicola*. A. Perithecium, B. Asci, C. Ascospores.

in having significantly smaller asci and ascospores, and thus merits accommodation as a new species. So far only 3 species of *Massarina* are reported from India. This constitutes the 4th Indian Species.

3. *Ophiobolus polygoni* Sp. nov. Chiplonkar.

This fungus was collected at Mahabaleshwar (elevation 4,500 ft) on dried stems of *Polygonum chinense* L. producing tar-like spots with stromatic fructifications containing numerous paraphysate asci and needle-shaped hyaline, x-celled ascospores, on the basis of which it was determined as a species of *Ophiobolus*.

Perithecia in maculis nigrescentibus, 1—5 mm diam. metientibus dispersa, globosa, obscura, innata, ostiolata, $160 \times 128-240 \times 320 \mu$; asci numerosi, cylindracei vel clavati, tenuiter tunicati, e peritheciis basitantum orti, 8-sporei, $55.5-81.4 \times 7.4-12 \mu$; sporae mono- vel incomplete

distichae, anguste elongato-fusoideae, hyalinae, utrinque paulatim attenuatae et acuminatae, plus minusve curvulae, raro rectae, 4-septatae, ad septa non constrictae, $18-41 \times 3.7 \mu$; paraphyses numerosae, fibrosae, simplices, ascos plerumque superantes.

Infection spots 1—5 mm, dark black, tar spot like, scattered, colli-colous; Ascostromata rounded, dark, stromatic, uniloculate, ostiolate, embedded; $160 \times 128-240 \times 320 \mu$. Asci many, cylindrical to club shaped, unitunicate, paraphysate, arising from the basal layer only; $55.5-81.4 \times 7.4-12 \mu$. Paraphyses numerous thread like, simple, often

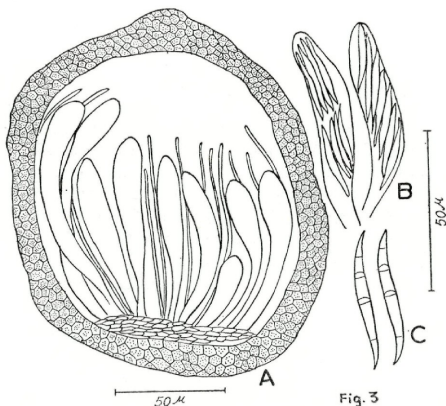


Fig. 3

Fig. 3: *Ophiobolus polygonii*. A. Perithecium, B. Asci, C. Ascospores.

longer than the asci. Ascospores 8, filiform, 4-septate, hyaline, monostichous to bistichous, typically guttulate; $18-41 \times 3.7 \mu$.

Leg. Alaka Chiplonkar on dried stems of *Polygonum chinense* L. at Mahabaleshwar, on 30th October 1966, M. A. C. S. Herb. No. 480 (Type).

The writer's collection of *Ophiobolus* is characterised by extremely small asci and ascospores besides being collected on a hitherto unreported host and has therefore been described as new to Science.

Acknowledgements: The writer expresses her thanks to Prof. M. N. Kamat for his help and guidance, to U. G. C. for financial aid, and to Dr. F. Petrak for latin diagnosis.

References

1. Saccardo, P. A. II: 14 (1883).
2. Saccardo, P. A. II: 153 (1883).
3. Saccardo, P. A. II: 338 (1883).

ZOBODAT - www.zobodat.at

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Sydowia](#)

Jahr/Year: 1968/1969

Band/Volume: [22](#)

Autor(en)/Author(s): Chiplonkar Alaka

Artikel/Article: [Ascomycetes of Maharashtra \(India\). 274-277](#)