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Four new species of Diatrype from India

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With 4 figures

In the course of his mycological survey for Ascomycetes in and around Poona, the writer collected four new species of *Diatrype* on four different hosts viz. *Helicteris isora* L., *Vitex negundo* Linn. sp. pl., *Loranthus cuneatus* Heyne and *Carrisa congesta* Wight. at Khandala and Bassein, Maharashtra State, India, in the months of August and September 1969. Since no species of *Diatrype* had been previously reported on these four hosts, a detailed comparative study of the four collections was undertaken, the results of which are presented in this paper.

The genus *Diatrype* was established by Fries (1849) with *Diatrype disciformis* (Hofm.) Fr. as the type. The species of this genus are mostly found as Saprophytes on stems and barks of various hosts plants. Clements & Shear (1931) and Arx & Müller (1954) have included it under the family Diatrypaceae (Allantosphaeriaceae of Bessey 1950) of Sphaeriales whereas Luttrell (1951) and Martin (1961) consider it as a nember of Xylariales. In India seven species are reported, the recent contributions being of Tilak (1964), Ramachandra Rao (1966, 1966 a) and Anahosur (1969).

The three species described below were compared with the type *D. disciformis* and other Indian species and found to be significantly distinct in respect of dimensions besdes being on hitherto unreported hosts. The specaes accordingly are accommodated as new taxa.

(1) **Diatrype helictericola** Tendulkar sp. nov., Fig. 1.

Infection spots black, swollen in a cushion-like manner, scattered, bursting out through the bark, rarely aggregated, measuring 1600 µ × 800 µ. Perithecia separate, placed side by side in a stroma, generally 4 to 9 in number, dark brown with pseudoparenchymatous slightly thick walled cells of 2—3 layers, measuring 416— 460 µ × 192—304 µ. Asci cylindrical, club-shaped, hyaline to sub-hyaline, stipitate, unitunicate, octosporus 38—45.6 µ × 7.22—7.6 µ. Ascospores allantoid, hyaline to olivaceous, measuring 11.4—15.2 µ × 3.8 µ.

Stromata dispersa innato-erumpentia, nigrescentia, tenuiter pulvinata, singularia, raro aggregata 1600 × 800 µ; perithecia 4—8 in

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quoque stromate, omnino innata, 416—640 × 192—304 μ; pariete obscure brunneo, pseudoparenchymatico, e stratis 2—3 cellularum crassiuscule tunicatarum composito; asci numerosi, cylindracei vel subclavati, tenuiter tunicati, antice rotundati, postice in stipitem longiusculum attenuati, 8-spori, 38—45.6—7.22 × 7.6 μ; spoae plus minusve distichae, allantoideae, olivaceae 11.4—15.2 × 3.8 μ.

Saprophytic on the bark of *Helicteris isora* L. collected by J. S. Tendulkar at Khandala on 28. 8. 1969. M. A. C. S. Type No. 1138.

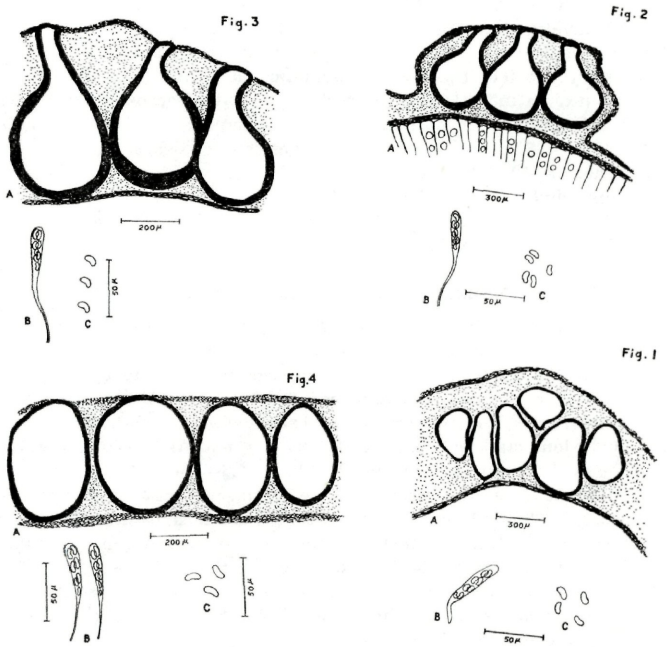

Fig. 1. *Diatrype helicteriocola*, A. Stroma showing perithecia, B. Ascus, C. Ascospores. — Fig. 2. *Diatrype viticis*, A. Stroma showing perithecia, B. Ascus, C. Ascospores. — Fig. 3. *Diatrype loranthi*, A. Stroma showing perithecia, B. Ascus, C. Ascospores. — Fig. 4. *Diatrype carrisae*, A. Stroma showing perithecia, B. Ascus, C. Ascospores.

(2) **Diatrype viticis** Tendulkar sp. nov., Fig. 2.

Infection spots black, cushion-like bursting out through the bark, placed more or less closely to each other, 1040—1221 μ × 560—640 μ.

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Perithecia more or less rounded with upper dark-brown beaklike structure, generally three in number, placed side by side within stroma, having a wall of pseudoparenchymatous slightly thick walled cells, 2—3 layers. Perithecia measuring 336—448 μ × 544—640 μ. Asci cylindrical, club-shaped, hyaline, to sub-hyaline, stipitate, having long persistent stalk, unitunicate, octosporous, measuring 44—88 μ × 4—6 μ.

Ascospores allantoid, hyaline to olivaceous measuring 10—12 μ × 2.8—4 μ.

Stromata innato-erumpentia, nigrescentia, pulvinata, plus minusve aggregata, 1040—1232 × 560—640 μ; perithecia ovoidea, in ostiola cylindraceo-clavata, punctiformiter erumpentia sed non prominula aberuptiuscule contracta, plerumque 3 in quoque stromate, 336—448 × 544—640 μ, pariete pseudoparenchymatico, e stratis 2—3 cellularum subcrassiuscule tunicatarum composito; asci cylindraceo-clavati, antice rotundati, postice in stipitem longum attenuati, tenuiter tunicati, 8-spori, 44—88 × 4—6 μ sporae incomplete distichae, allantoideae, olivaceae, 10—12 × 2.8—4 μ.

Saprophytic on the bark of *Vitex negundo* Linn. Collected by J. S. Tendulkar at Khandala, Maharashtra State, India on 28. 8. 1969, M. A. C. S. Type No. 1139.

(3) **Diatrype loranthi** Tendulkar sp. nov., Fig. 3.

Infection spots black, cushion-like, bursting out through the bark, more or less closely placed, measuring 1600 μ × 960 μ. Perithecia oval-shaped (egg-shaped) having elongated beak at the apex, measuring 272—400 μ × 512—720 μ, placed side by side within stroma 5 to 7 in number, dark brown. Asci cylindrical, hyaline to sub-hyaline stipitate, with long stalk, unitunicate, 68—80 μ × 6 μ. Ascospores allantoid, hyaline to olivaceous, measuring 10—12 μ × 3.6—4 μ.

Stromata innato-erumpentia, nigrescentia, pulvinata, plus minusve aggregata, 1600 × 960 μ; perithecia obscure brunnea, ovoidea in ostiola longiuscule cylindracea, punctiformiter erumpentia sed non prominula abruptiuscule contracta, 5—7 in quoque stromate, 272—400 × 512—720 μ; asci cylindraceo-clavati, antice rotundati, postice in stipitem longiusculum attenuati, tenuiter tunicati, 68—80 × 6 μ; sporae allantoideae, olivaceae, 10—12 × 3.6—4 μ.

Saprophytic on the bark of *Loranthus cuneatus* Heyne. Collected by J. S. Tendulkar at Tungareshwar, Bassein, Maharashtra, India, on 11. 9. 1969, M. A. C. S. Type No. 1140.

(4) **Diatrype carrisae** Tendulkar sp. nov., Fig. 4.

Infection spots black, cushion to sub-cushion, some spots crustaceous, bursting out through bark, scattered, 1760—1840 μ × 560—640 μ. Perithecia placed closely but separate from each other without beak at the tip, oval to rounded in shape 336—448 μ × 224—352 μ, placed

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side by side within the stroma, 4 to 6 in number. Asci cylindrical, hyaline to sub-hyaline, stipitate, having long persistent stalk, unitunicate, measuring 72—76 μ × 4—8 μ Ascospores allantoid, hyaline to olivaceous, measuring 12—14 μ × 2—3.6 μ.

Stromata dispersa, innato-erumpentia, nigrescentia, tenuiter pulvinata vel crassiuscule crustacea, 1760—1840 × 560—640; perithecia dense stipata, ovoidea, 336—440 × 224—352 μ, plerumque 4—6 in quoque stromate; asci cylindraceo-clavati, antice rotundati, postice in stipitem longum attenuati, tenuiter tunicati, 72—76 × 4—8 μ; sporae allantoideae, olivaceae, 12—14 × 2—3.6 μ.

Saprophytic on the bark of *Carrisa congesta* Wight. Collected by J. S. Tendulkar at Tungareshwar, Bassein, Maharashtra, India on 11. 9. 1969, M. A. C. S. Type No. 1141.

Acknowledgement

The writer is deeply indebted to Prof. M. N. Kamat for his valuable guidance, to Dr. G. B. Deodikar, the Director, M. A. C. S., for laboratory and library facilities, to the Ministry of Education, Government of India for financial assistance and to Dr. F. Petrak for his help in Latin rendering of the new species, and to Shri D. N. Nagpure, the Artist of this Institute, for the preparation of figures.

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Digitale Literatur/Digital Literature

Zeitschrift/Journal: Sydowia

Jahr/Year: 1970/1971

Band/Volume: 24

Autor(en)/Author(s): Tendulkar J. S.

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