

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 member 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 besides 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 $1600 \mu \times 800 \mu$. 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 $416-460 \mu \times 192-304 \mu$. Asci cylindrical, club-shaped, hyaline to sub-hyaline, stipitate, unitunicate, octosporous $38-45.6 \mu \times 7.22-7.6 \mu$. Ascospores allantoid, hyaline to olivaceous, measuring $11.4-15.2 \mu \times 3.8 \mu$.

Stromata dispersa innato-erumpentia, nigrescentia, tenuiter pulvinata, singularia, raro aggregata $1600 \times 800 \mu$; perithecia 4—8 in

quoque stromate, omnino innata, 416—640 \times 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-spори, 38—45.6—7.22 \times 7.6 μ ; spora plus minusve distichae, allantoideae, olivaceae 11.4—15.2 \times 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.

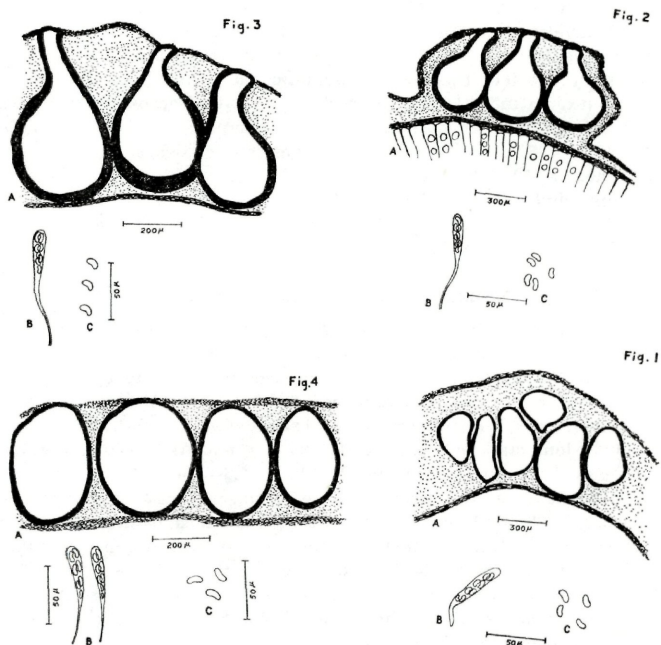


Fig. 1. *Diatrype helictericola*, A. Stroma showing perithecia, B. Ascus, C. Ascospores. — Fig. 2. *Diatrype viticis*, A. Stroma showing perithecia, B. Ascus, C. Ascospores. — Fig. 3. *Diatrype loranthi*, A. Stroma showing perithecia, B. Ascus, C. Ascospores. — Fig. 4. *Diatrype carrisae*, A. Stroma 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 \times 560—640 μ .

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 $336\text{--}448\ \mu \times 544\text{--}640\ \mu$. Asci cylindrical, club-shaped, hyaline, to sub-hyaline, stipitate, having long persistent stalk, unitunicate, octosporous, measuring $44\text{--}88\ \mu \times 4\text{--}6\ \mu$.

Ascospores allantoid, hyaline to olivaceous measuring $10\text{--}12\ \mu \times 2.8\text{--}4\ \mu$.

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

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 $1600\ \mu \times 960\ \mu$. Perithecia oval-shaped (egg-shaped) having elongated beak at the apex, measuring $272\text{--}400\ \mu \times 512\text{--}720\ \mu$, placed side by side within stroma 5 to 7 in number, dark brown. Asci cylindrical, hyaline to sub-hyaline stipitate, with long stalk, unitunicate, $68\text{--}80\ \mu \times 6\ \mu$. Ascospores allantoid, hyaline to olivaceous, measuring $10\text{--}12\ \mu \times 3.6\text{--}4\ \mu$.

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

Saprophytic on the bark of *Loranthus cuneatus* Heyne. Collected by J. S. Tendulkar at Tungreshwar, 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, $1760\text{--}1840\ \mu \times 560\text{--}640\ \mu$. Perithecia placed closely but separate from each other without beak at the tip, oval to rounded in shape $336\text{--}448\ \mu \times 224\text{--}352\ \mu$, placed

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

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

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

A c k n o w l e d g e m e n t

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