

RECORDS OF PYRENOMYCETES FROM WEST BENGAL

By

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Three Pyrenomycetous fungi have been collected and described from West Bengal, of which *Cordyceps hügelii* Corda and *Didymosphaeria striatula* Penz. et Sacc. are reported for the first time from India. *Massaria himalayense* Bose is first reported from West Bengal.

This present paper deals with three Pyrenomycetous fungi that have been collected during 1974-75 from different localities of West Bengal at an altitudinal range 4,225-6,275 ft. They belong to the genera : *Cordyceps* (Fries) Link, *Didymosphaeria* Cooke and *Massaria* de Notaris.

Specimens are deposited in the Department of Botany, Presidency College, Calcutta (PCC) and at the Research Branch, Biosystematics Research Institute, Saunders Bldg., C.E.F., Ottawa, Ontario, Canada (DAOM).

1. *Cordyceps hügelii* Corda. 136 et 207 et Icon. Fung. 4:44, f. 129, 1840.
(Plate I, Fig. A)

Stromata solitary, stalked, soft, yellowish brown, 13-15 cm long, fertile part slenderly cylindrical, gradually tapering towards the apex, 6.5-8.5 x 0.2-0.3 cm, simple or bifurcated, stalk slenderly cylindrical, smooth to furrowed; *perithecia* ovate to pyriform, minute, with papillate ostiole, densely packed around the central axis, up to the apex of the fertile part, easily separable from the axis, 308-364 x 238-280 μ ; *asci* narrowly cylindroclavate, stalked, p.sp. 207-210.4 x 3.7-7.4 μ with 14.8-18.5 μ long stalk, with a hyaline hemisphaeric apical cap with longitudinal slit, unitunicate, octosporous; *paraphyses* deliquescent when

mature; *ascospores* filiform, crowded in ascus, hyaline, transversely multiseptate, measuring $2.1-2.8 \mu$ in diam.

Habitat : arising from the thoracic region of larval stage of *Coleoptera* sp.
Localities : Palmajua (altitude : 4,225 ft.), Darjeeling, West Bengal ; Rangirum (altitude : 4,275 ft.), Darjeeling, West Bengal. Specimens studied : PCC 587. Leg. S. K. Gupta August 17, 1975 and PCC 777. Leg. S. K. Gupta, September 29, 1975.

2. *Didymosphaeria striatula* Penz. et Sacc., Malpighia, p. 227. 1901.

(Plate II, Figs. A-E)

Stromata clypeiform, black, suborbicular, 1-2 mm in diam., surface elevated by punctate ostiole, carbonaceous; *pseudothecia* solitary or two per stroma, immersed, subglobose to globose, $140-196 \times 448-532 \mu$, *asci* arising from the base and sides of the pseudothecia, cylindric, bitunicate, with rounded apex, short-stalked, measuring $103.6-133.2 \times 11.1 \mu$, slightly curved, octosporous, firmly intermingled with hyaline paraphysoids; *paraphysoids* always longer than the *asci*; *ascospores* fusoid, with tapering ends, measuring $18.5-22.2 \times 7.4 \mu$, equally 2-celled, constricted at septum, brown, obliquely uniseriate, thick-walled, longitudinally striated.

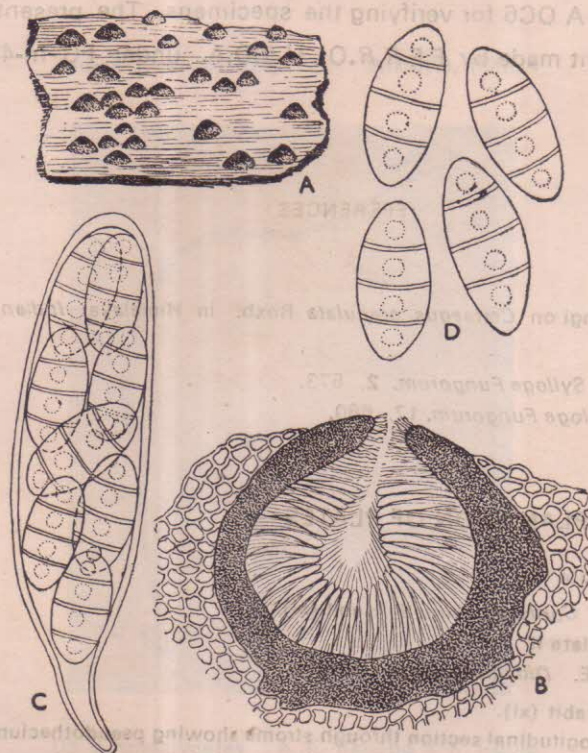
Habitat : on the rotten stem of *Bambusa* sp. Locality : Mochaki (altitude : 4,700 ft.), Darjeeling, West Bengal. Specimen studied : PCC 388 (= DAOM 167889). Leg. S. K. Gupta, August 19, 1974.

3. *Massaria himalayense* Bose, Indian Phytopath. 15: 141-155. 1962.

(Text-figure 1, A-D)

Pseudothecia scattered, immersed in the bark of the stem, globose to subglobose, measuring $504-756 \times 630-784 \mu$; pseudothecial wall clypeate in the upper part, dark brown to black, carbonaceous; *asci* arising from the base and sides of the pseudothecia, cylindroclavate, stalked and measuring $151.8-222 \times 26.4-37 \mu$, bitunicate, with thick and round apex, octosporous, intermingled with numerous filiform, hyaline paraphysoids; *ascospores* ellipsoidal, with round to tapering

ends, measuring $40.7-48.1 \times 18.5-22.2 \mu$, distichous, brown, 3-septate, each, cell containing single large guttule.



Text-figure 1

Massaria himalayense, A. Habit (x5). B. Logitudinal section through pseudothecium (x77). C. Ascus showing arrangement of ascospores (x440). D. Ascospores (x650).

Host : on the bark of living stem of *Bassia latifolia* Roxb. and on the bark of living stem of *Quercus spicata* Smith.

Locality : Gingter forest (altitude : 5,500 ft.), Darjeeling, West Bengal.

Specimens studied ; PCC 241. Leg. S.K. Gupta. June 25, 1974 and PCC 714 (=DAOM 167890). Leg. S.K. Gupta, August 30, 1975.

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REFERENCES

- Bose, S.K. 1962. Fungi on *Crataegus crenulata* Roxb. in Himalaya. *Indian Phytopath*, 15 141-155.
- Saccardo, P.A. 1883. *Sylloge Fungorum*, 2, 573.
1905. *Sylloge Fungorum*, 17, 680.

EXPLANATION OF PLATES

Plate I

- Fig. A. *Cordyceps hügelii*, Habit (xl)

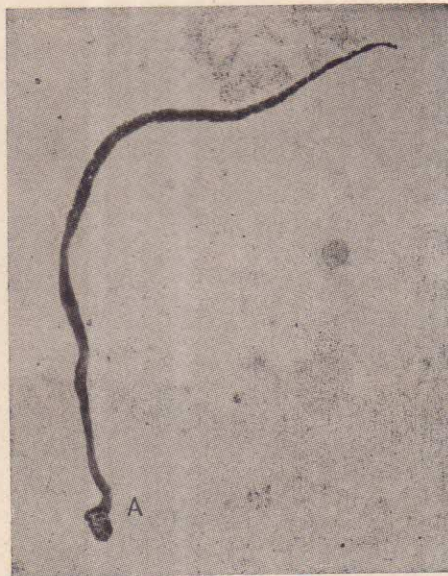
Plate II

- Figs. A—E. *Didymosphaeria striatula*,

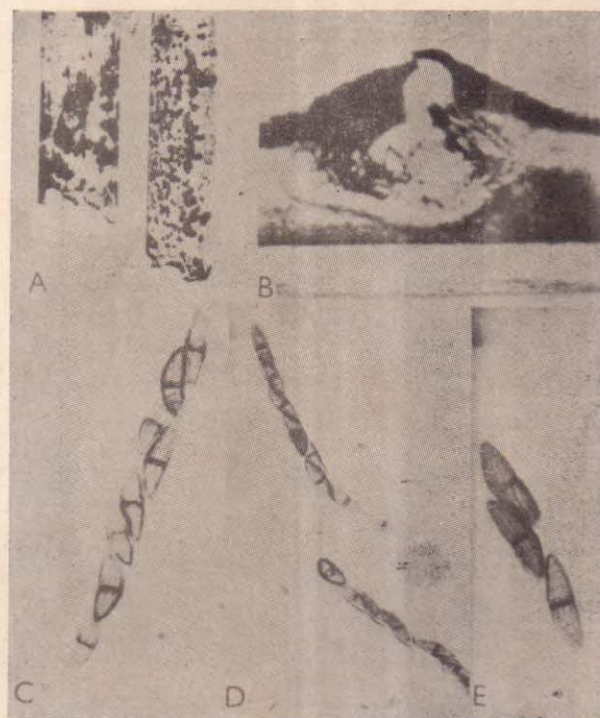
- A. Habit (xl).
- B. Longitudinal section through stroma showing pseudothecium (x95).
- C. Ascus showing arrangement of ascospores (x545).
- D. Asci (x360).
- E. Ascospores (x71.4).

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On Pyrenomycetes A. K. Kar and S. K. Gupta.



On *Pyrenomyces*

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