

EYE-ROT OF *HIBISCUS CANNABINUS* L. (MESTA)

By

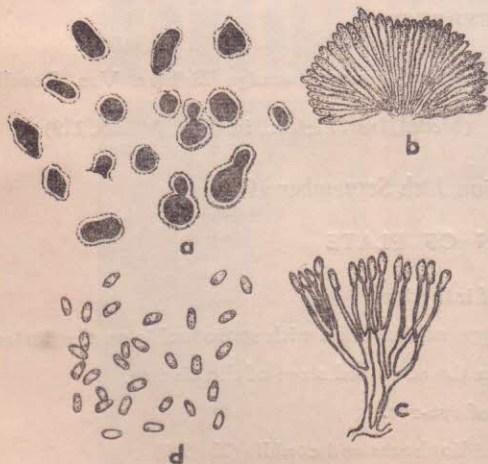
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Hibiscus cannabinus, the well known bast fibre plant is considered the nearest ally of Jute (*Corchorus capsularis* and *C. olitorius*). Consequently, the cultivation of *H. cannabinus* popularly known as Mesta (H. C.) is likely to be promoted in comparatively drier area where jute cannot be grown successfully. The improved variety of H. C. 583 has recently been released for the purpose. Under high humid conditions prevailing during August, incidence of disease in this crop was observed in the farm of Jute Agricultural Research Institute. The disease is considered to be important since the damage done to the plant is related to loss of fibre. The survey report by Muller & Van Eek (1939) as also available literature do not describe the disease; it is therefore considered new.

The disease is marked by necrotic spots on stem internodes and has been named 'eye-rot' disease because of the shape of the spots. At the

initial stage small circular spots, brownish red in colour appear on stem (Plate I, Fig. 1.) The edge of the spot above the axis of the stem gradually turns deep brown and elongates, finally assuming the shape of an eye. (Plate I, Fig. 4.). Later the lesion spreads and becomes large enough to girdle the stem while the shape is hardly altered. In an advanced stage the tissue around the focus of infection is killed and turn dull whitish brown; the fibre tissue cracks longitudinally and gets shredded. The woody tissue also is weakened through the infection and is somewhat exposed. Consequently the



Text-Fig. 1. Showing (a) Sporodochia with white ciliated margin; (b) filiform conidiophores; (c) ramose conidiophore with conidia and (d) hyaline conidia of *Myrothecium roridum*.

stem at this region breaks when high wind blows (Plate I, Fig.—3). When the stem breaks, a reddish brown discolouration of the pith is noticed. During this phase or somewhat earlier, small sporodochia develop in 2-3 concentric rings on the disintegrating bark (Plate I, Fig. 2) They are also found outside the rings sometimes.

Sporodochia are dark, superficial, sessile, setullose, scutellate to discoid and generally single with white cilia at the margin. Dimensions vary between 378 to 1060×333 to 757μ (TEXT FIG. 1-a). Conidia non-catenate, hyaline, one celled, ellipsoid to cylindrical, acrogenous on filiform ramose conidiophores measuring $3.44-6.88 \times 1.03-2.04 \mu$ (TEXT FIG. I, b, c, d & Plate I, fig. 5). In culture, on standerd P.D.A. the conidia measure $3.44-7.56 \times 1.72-3.44 \mu$ while the sporodochia measure $151-348 \times 121-303 \mu$.

Inoculation experiments by wounding the bark of the host were done with the fungus in culture (Plate I, figs. 6-7). Infection took place within seven days. It was, however, noticed that fresh isolates were much more vigorous in infecting the host than the old cultures during artificial inoculation. On reisolation, the same fungus came out in P. D. A.

The fungus has been identified as *Myrothecium roridum* Tode ex Fr.

Our grateful thanks are due to the Indian Council of Agricultural Research for providing all facilities at the Jute Agricultural Research Institute, Barrackpore and the Director, Commonwealth Mycological Institute, Kew, Surrey, England for helping in the identification of the pathogen.

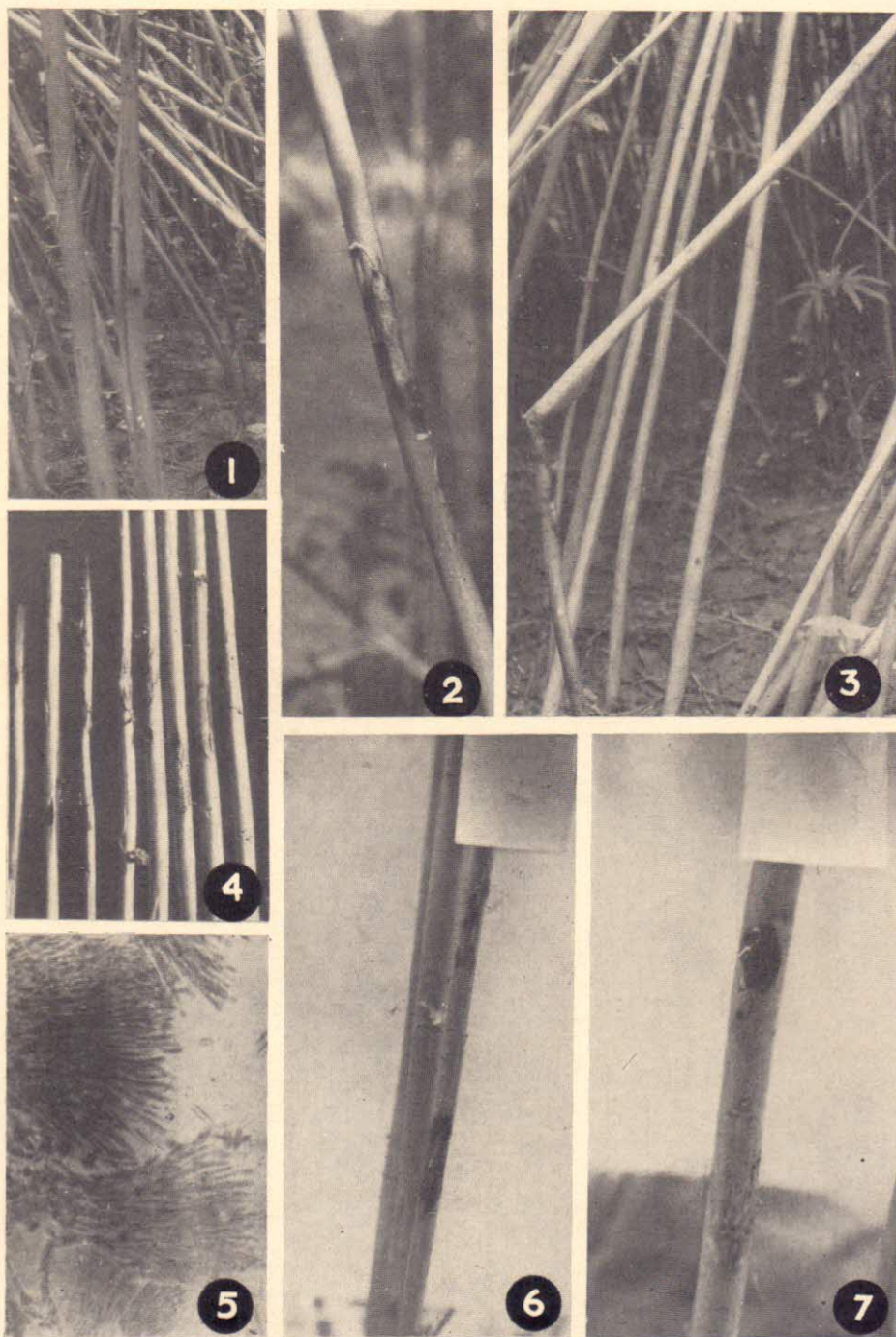
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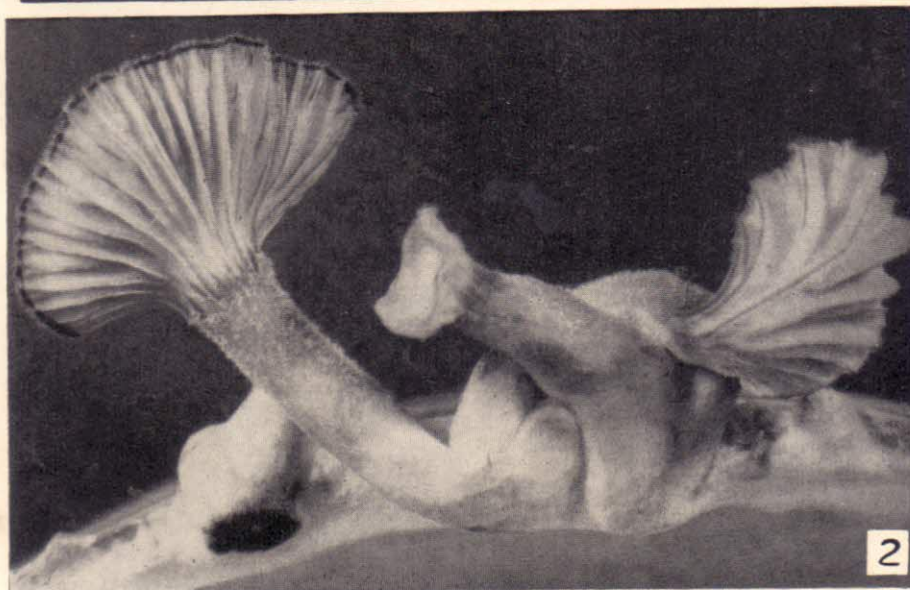
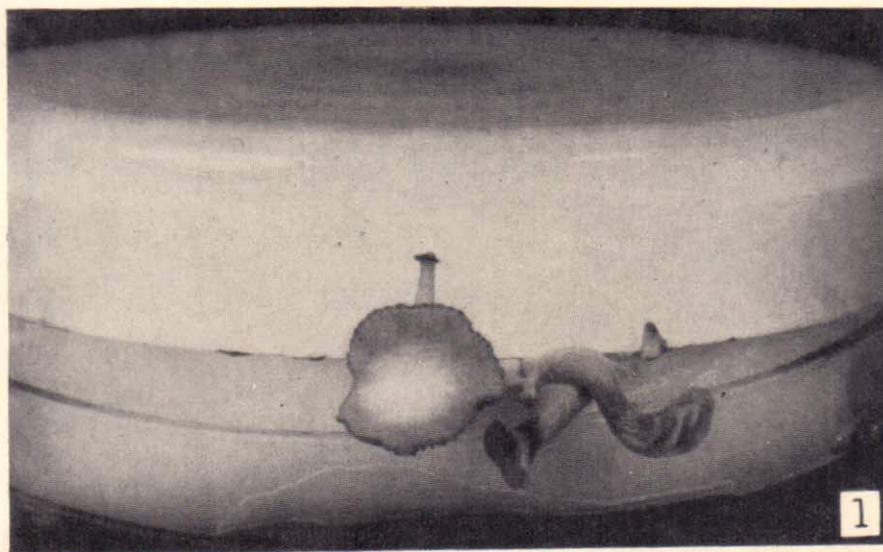
EXPLANATION OF PLATE

- Fig. 1. Mesta showing initial stage of infection.
Fig. 2. Mesta showing advanced stage of infection with sporodochia on the lesion.
Fig. 3. Mesta showing broken stem in the advanced stage of the disease.
Fig. 4. Mesta showing various stages of eye-rot.
Fig. 5. Photomicrograph showing conidiophores and conidia (X 580)
Fig. 6. Inoculated stem showing typical eye-rot after a fortnight (From a distance)
Fig. 7. Close-up of inoculated stem showing eye-rot.



On *Myrothecium roridum* Tode ex Fr.

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On *Lentinus praerigidus* Berk.

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