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Mycocitrus Moller- A New Genus Record from India

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An interesting Pyrenomycetous new genus *Mycocitrus* Moller and its species viz. *Mycocitrus phyllostachydis* (Syd.) Doi belonging to the family Hypocreaceae of the order Hypocreales is illustrated and described. The genus has been recorded for the first time in India hitherto, and its described species found parasitically on the additional host viz. *Ischaemum diplopogon* Hook (Fam.: Poaceae).

Keywords: Hypocreaceae, *Mycocitrus*, new to India, Pyrenomycetes

INTRODUCTION

During our taxonomical study of fungi, we had the opportunity to study interesting collection of parasitic Pyrenomycetes collected from Dapoli (Dist.-Ratnagiri) Maharashtra. The culms of *Ischaemum diplopogon* Hook (Fam.: Poaceae) is infected by the genus *Mycocitrus* Moller. The genus is known by 8 species (<http://www.indexfungorum.org>, 31 July, 2023) all of which are strictly graminicolous. Rossman *et al.* (1999) provided the key of the species of *Mycocitrus* described on the species of Bamboo. The genus is characterized by perithecia immersed more or less completely in a compact stroma; stromata super white, very large, tuberous, arising from a foot-like base; perithecia produced in successive generations forming several layers embedded in the stroma; asci cylindrical, unitunicate, long, non-paraphysate and 8-spored; ascospores two-celled, elliptical, hyaline, smooth or rough. It is not reported from India and thus, it is a new generic record to the fungi of India.

MATERIALS AND METHODS

The collected specimens of the fungus on the culms of grasses were critically studied by usual

laboratory methods and identified with the help of up-to-date available literature to their respective genera and species along with their host specificity. The specimens have been deposited in Herbarium Cryptogamae Indiae Orientalis (HCIO), New Delhi, and their duplicates in Mycological Herbarium, Department of Botany, Shivaji University, Kolhapur (Maharashtra State, India) under W. I. F. (Fungi of Western India).

RESULTS AND DISCUSSION

Mycocitrus phyllostachydis (Syd.) Doi, *Bull. Nat. Sci. Mus. Tokyo*, 10 (1): 31-36, 1967; Fig. 1(A-E) and Fig. 2 (1-5).

Basio. : *Ustilaginoides phyllostachydis* Syd., *Mem. Herb. Boiss.* 4: 5, 1900.

= *Hypocreopsis phyllostachydis* (Syd.) Miy and Har., *Bot. Mag. Tokyo*, 24:333, 1910.

= *Shiraiella phyllostachydis* (Syd.) Hara, *Bot. Mag. Tokyo*, 28: 402, 1914.

Stromata grayish-white when young, protuberant at the nodal region of the culms, roughened with deeply embedded perithecia which are filled with old ascospores and mycelia, upto 1-1.5 cm in diameter; mycelia more or less radiately arranged but interwoven at random in some part of stromata, 2.3-4 µm thick; Perithecia completely immersed in the stroma, globose or vertically elongated, pseudoparenchymatous wall, covered

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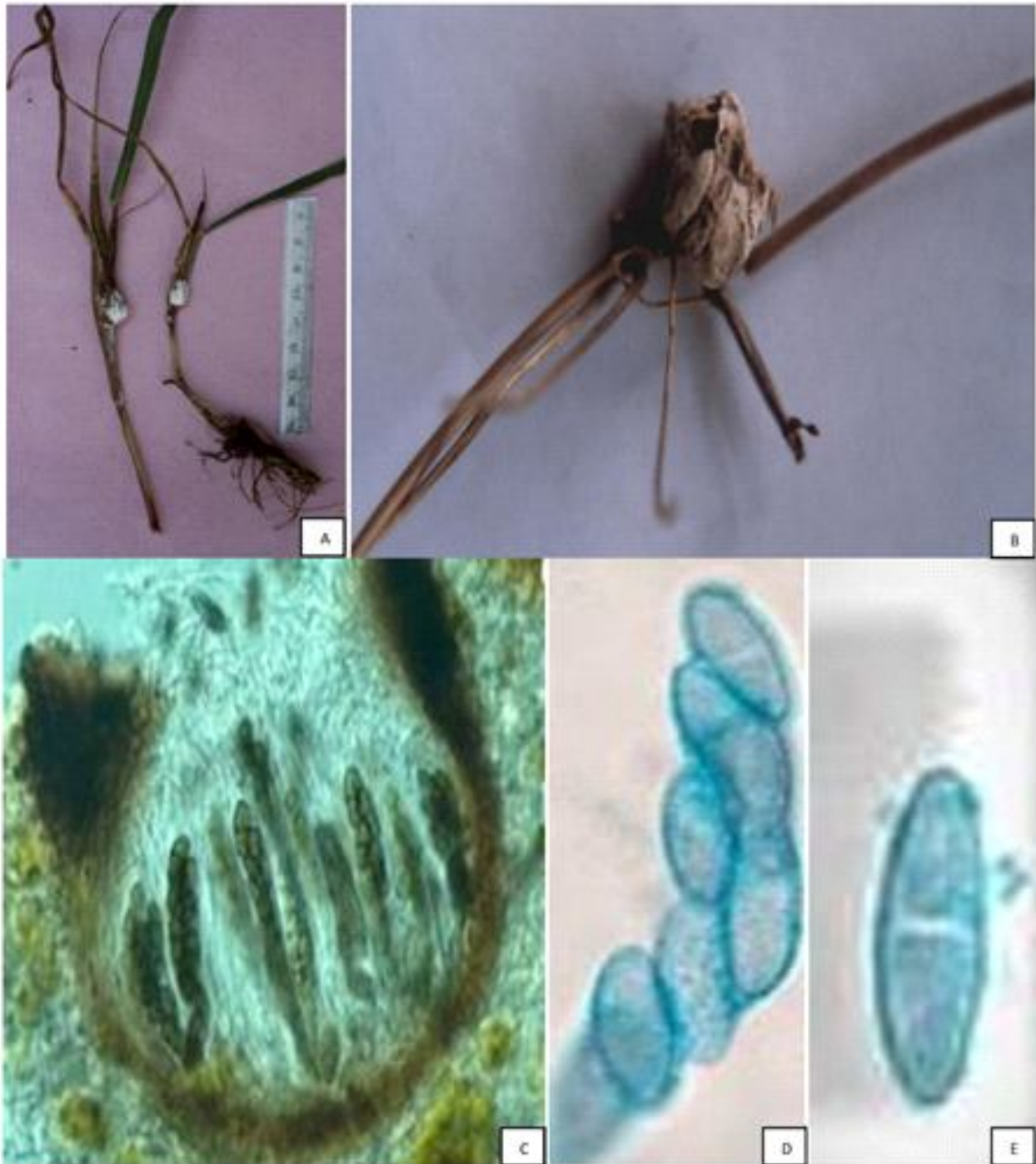


Fig. 1 : (A) The culms of *Ischaemum diplopogon* Hook infected by the *Mycocitrus phyllostachydis* (Syd.) Doi showing grayish-white nodal stomata. (B) Magnified stomata, (C) V.S. of stomata showing perithecium with asci and ascospores x 900., (D) Ascus with two celled ascospores x 81., (E) Ascospore x 180.

with an outer layer of yellowish, thick-walled cells, inner cells hyaline, thin-walled, up to 140-180 μm in vertical diameter; asci clavate or subcylindrical, hyaline, 45-60 μm long, and 5-6 μm in diameter, 8-spored; Ascospores didymosporous, elliptical, hyaline, smooth or roughed, 5-9 x 3-5 μm . Conidial state not seen.

Habit: Parasitic on the culms of *Ischaemum diplopogon* Hook (Fam.: Poaceae), Dapoli, (Dist.-Ratnagiri, M.S.), 14-8-1995, M.S.Patil, H.C.I.O. – 45588 and W.I.F. No. 1999.

The genus *Mycocitrus* Moller is known by only eight species. The type species *M. aurantium*

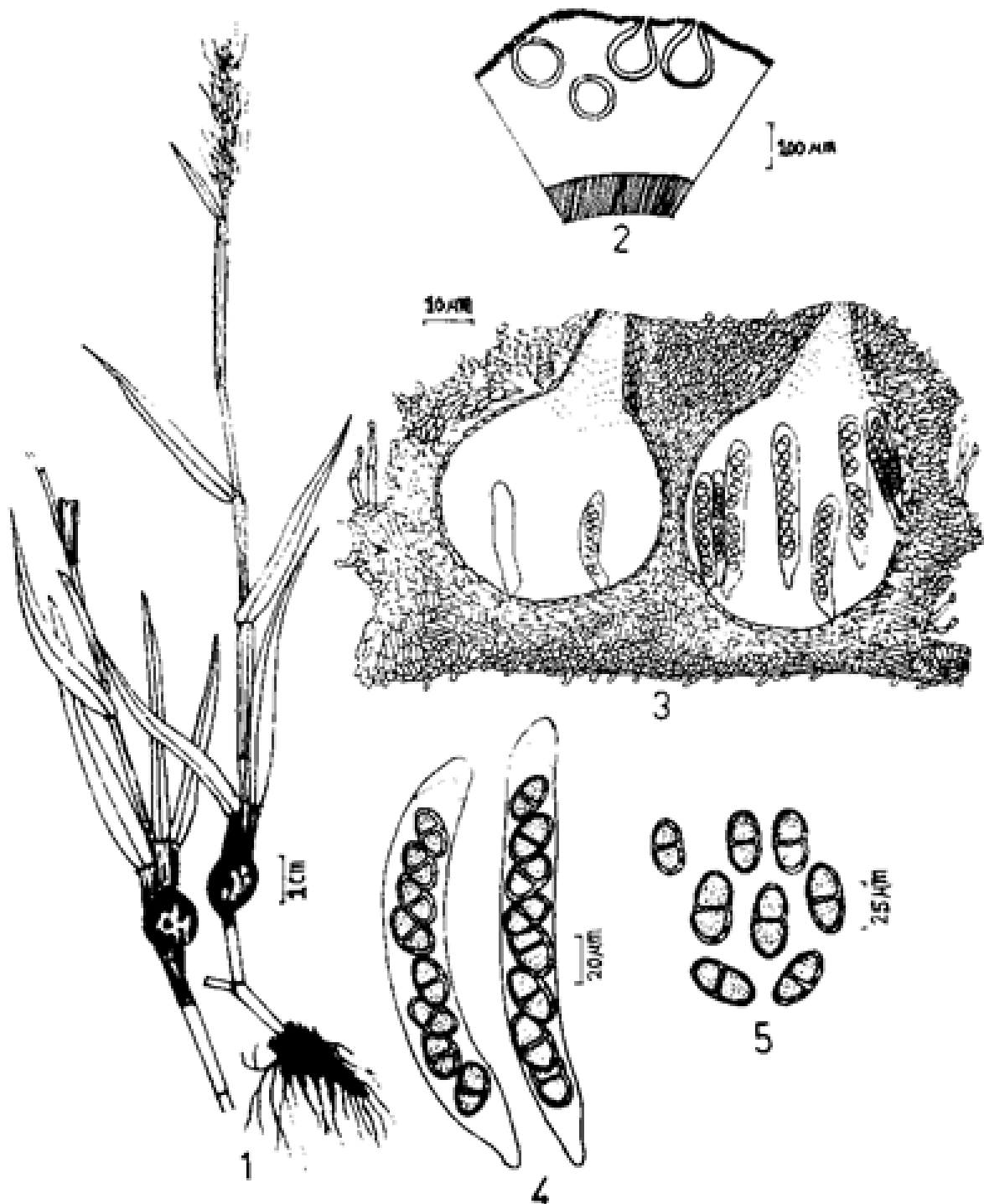


Fig.2 : Hand drawing of (1) Infected culms of *Ischaemum diplopogon* Hook showing grayish white nodal stomata, (2) V.S. of stomata showing perithecia, (3) Magnified V.S. of stomata showing perithecia with asci and ascospores, (4) Asci with two celled ascospores, (5) Ascospores

Moller reported from Brazil (Moller, 1901). This species reported by Doi (1967) viz. *M. phyllostachidis* (Syd.) Doi. on *Phyllostachys pubescens* and *P. nigra* from Japan.

Present collection collected on *Ischaemum diplopogon* Hook is morphologically matched well

to *Mycocitrus phyllostachydis* (Syd.) Doi, except host and size of the stomata and thus, referred to it. In India the genus *Mycocitrus* is not known. This makes a new generic record to the Fungi of India and *Ischaemum diplopogon* Hook. is the additional new host record from India.

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