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ABSTRACT

This paper describes four species of *Meliola* Fries. Out of these, *Meliola piperae* and *Meliola ochrocarpi* are new to science while *Meliola asclepiadacearum* Hansf. and *Meliola simillinae* Hansf. are the new records to India.

INTRODUCTION

In continuation of the studies of Indian Meliolaceae (THITE & KULKARNI, 1973, 1975, 1976; THITE & PATIL, 1978) the authors have collected number of sooty mould fungi from Western Ghats near Kolhapur. From these collections four fungi are identified as species of *Meliola*. On comparative studies of morphological characters and host specification two of them are found to be new to science and remaining two are being reported for the first time from India. The specimens have been deposited in the Herbarium Cryptogamiae Indiae Orientalis, Division of Mycology and Plant Pathology, Indian Agricultural Research Institute, New Delhi-12, India with herbarium numbers HCIO-33670 to 33673.

***Meliola piperae* sp. nov.**

Fig. 1

Coloniae hypophyllae, confluentes, 8 mm diam. Hyphae subrectae, cellulae Plerumque, 30–40 × 6–8.5 μm ramificatione opposita vel alternata, hyphopodia capitatae alterna, ellipticae, rectae integra, expansa, 10–13.5 μm diam. Cellulae stipitis cylindricae 6.5–10 μm cellulae capitatis rotundus, globosae, integrae 8–11 × 9–12 μm . Setal myceliales disposita circa perithecia simplicia, acutae 265 × 10–13.5 μm . Perithecia dispersa globosis, verruculosa 180–200 μm diametro.

Colonies hypophyllous, upto 8 mm in diameter, thin, confluent. Hyphae flexuous substraight: branching alternate or opposite, densely reticulate; cells mostly 30–40 × 6–8.5 μm . Capitata hyphopodia alternate, ellipsoid straight to curved measuring 10–13.5 μm in breadth. Stalk cells rectangular-cylindrical, 6.5–10 μm long; head cells globose to round 8–11 × 9–12 μm in diam. Mucronate hyphopodia rare. Mycelial setae numerous, elongate, sometime bent, grouped around perithecia, 265 × 10–13.5 μm . Perithecia verrucose, globose, 180–200 μm diam. Ascospores oblong to elliptical, four septate, 120–155 × 35–75 μm .

Type—Collected on the leaves of *Piper nigrum* L. (Family Piperaceae) at Amboli, Dist. Ratnagiri, Maharashtra, India, Nov. 1979 and deposited in Herbarium with No. HCIO 33672.

The present fungus differs from rest of the species in mycelial cells which are

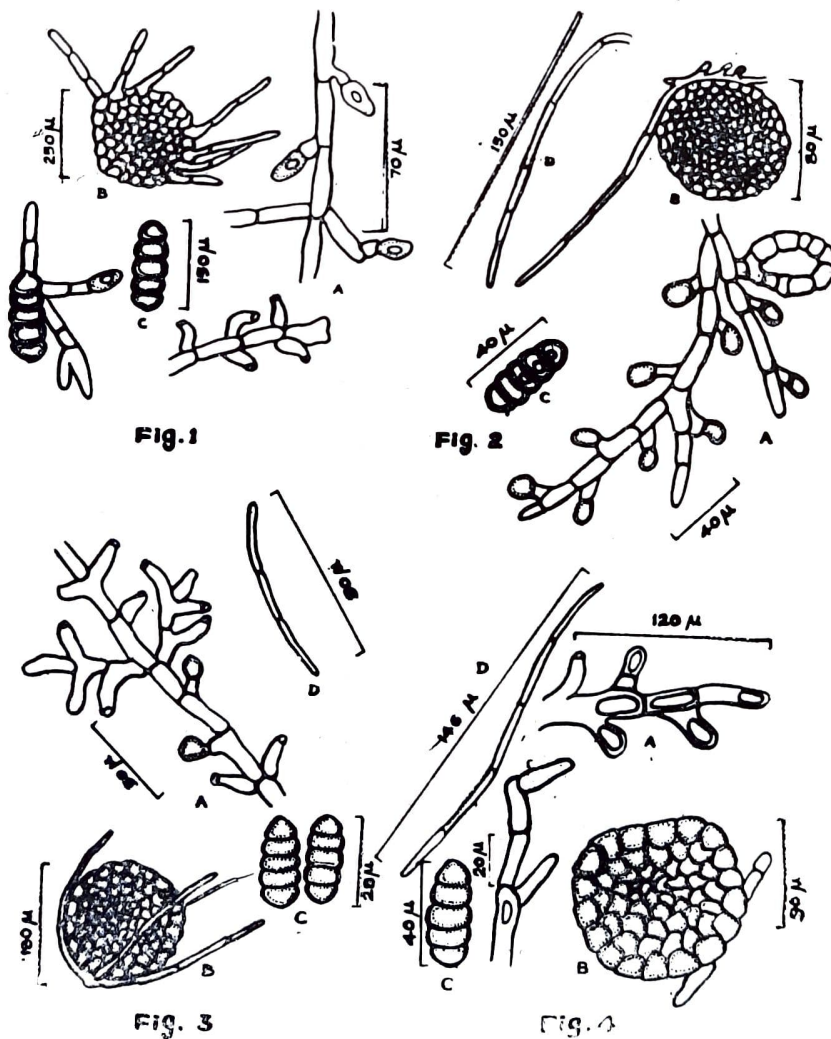
longer, i. e. 30-40 μm in length, capitate hyphopodia; rare or absence of mucronate hyphopodia and size of the ascospores.

Meliola ochrocarpi sp. nov.

Fig. 2

Infectio amphiphyllae tenues, 11 mm in diametro. Hyphae sub-rectae, undulatae, acutae, cellulae plerumque 20-32 \times 6-8 μm . Hyphopodias capitata, laterua, rectae, opposita, expansa 20-35 \times 8-15 μm . Cellulae stipitis cylindric 4-6 μm . Cellulae Hyphopodis mucronata mixta capitatis hyphopodiis, alternata vel opposita. 8-10 \times 4-5 μm . Setae myceliales dispositae circa perithecia, simplices, obtusal, 600-650 \times 8-12 μm . Perithecia dispersa, globosa, verruculosa 120-180 μm in diametro. Ascosporae oblongae vel obtusae 4-septatae; 40-45 \times 12-16 μm .

The fungus generally occurring in the form of diffused mass on both the surfaces of the leaves. Sometimes distinct colonies of 11 mm in diam seen. Hyphae substraight to undulate, loosely interwoven, branching alternate with acute angles. Mycelial cell mostly 20-32 \times 6-8 μm . Hyphopodia of both the types present, capitate hyphopodia alternate, straight, totally 20-35 \times 8-15 μm . Stalk cells cylindrical 4-6 μm long, head cells oblong-obovate, 8-10 \times 4-5 μm and mixed with capitate hyphopodia, alternate or separate and opposite. Mycelial setae few, scattered around perithecia.



Figs. 1-4 : (1) *Meliola piperae*, (2) *Meliola ochrocarpi*, (3) *Meliola simillinae* (4) *Meliola asclepiadacearum*. (A) : Mycelium ; B : Ascocarp ; C : Ascospore.

cia, straight, simple, pointed towards the apex $600-650 \times 8-12 \mu\text{m}$. Perithecia small, verrucose, globose, about $120-180 \mu\text{m}$ in diameter with stroma composed of smaller, thick walled cells. Ascospores few, elliptical, oblong, obtuse, with four septa, $40-45 \times 12-16 \mu\text{m}$, end cells rounded.

Type—Collected on the leaves of *Ochrocarpus longifolius* Bth. & HK. f. (Guttiferae) at Amboli, District Ratnagiri, Maharashtra, India, Nov. 1980 and deposited in herbarium with No. HCIO 33671.

The fungus differs from all other known species in having comparatively smaller, mucronate hyphopodia setae and perithecia both.

Meliola asclepiadacearum Hansf.

Fig. 4

Collected on the living leaves of *Asclepias* sp. at Radhanagari (Kolhapur), Nov. 1980 and deposited in herbarium with No. , HCIO 33670.

It differs from other species of *Meliola* by broader colonies, longer capitate hyphopodia and the size of the fructifications. It is a new record to India.

Meliola simillinae Hansf.

Fig. 3

Occurring on the living leaves of *Hemidesmus indicus* Br. (Asclepiadaceae) at Panhala (Kolhapur) October, 1980 and deposited in the herbarium with No. HCIO 33673. It is a new record to India.

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