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THREE NEW BLACK MILDEWS FROM KERALA, INDIA

 V.B. Hosagoudar¹ & A. Sabeena²
^{1,2}Jawaharlal Nehru Tropical Botanic Garden & Research Institute, Palode, Thiruvananthapuram, Kerala 695562, India

¹Present address: Killa, Bilagi, Bagalkot District, Karnataka 587116, India

¹vbhosagoudar@rediffmail.com (corresponding author), ²asabeenarashed@gmail.com

During the study of foliicolous fungi of Western Ghats in Kerala State, authors could come across three black mildew fungi infected leaves of *Argyreia* sp., *Ficus* sp. and *Pavetta tomentosa*. Microscopic study of these fungi revealed that they are hitherto undescribed species. Hence, they are described and illustrated here in detail.

Asterina mananthavadiensis sp. nov.

(Fig. 1; MycoBank # 805653)

Colonies mostly epiphyllous, subdense to dense up to 3mm in diameter, confluent. Hyphae substraight to flexuous, branching opposite, alternate to irregular at acute to wide angles, loosely to closely reticulate, cells 17–27 × 3–5 µm. Appressoria, alternate, opposite to unilateral, antrorse to subantrorse, stellately lobate 7–12 × 5–10 µm. Thyriothecia scattered to grouped, orbicular, up to 130µm in diameter, stellately dehisced at the centre, margin fimbriate; asci globose to ovate,

octosporous, 20µm in diameter; ascospores conglobate, uniseptate, constricted at the septum, 12–17 × 7µm, wall smooth. Pycnothyria orbicular, similar to thyriothecia; pycnothyriospores unicellular, pyriform, ovate, oblong 12–17 × 7–10 µm.

Material examined: TBGT

6691 (holotype), 27.ii.2013, on leaves of *Argyreia* sp. (Convolvulaceae), Vellamunda, Mananthavady, Wayanad, A. Sabeena et al.

Asterina argyreiae is known on *Argyreia capitata* from Java (Hansford 1954). Because of its peculiarity of the appressoria it has been placed under the genus *Bheemamyces* (Hosagoudar et al. 2010). As such there is no *Asterina* species on the host genus *Argyreia*. *Asterina mananthavadiensis* differs from other *Asterina* species known on the members of family Convolvulaceae in having lateral and stellately lobate appressoria.

Etymology: Named after its collection locality.

Meliola ficigena sp. nov.

(Fig. 2; MycoBank # 805651)

Colonies epiphyllous, thin to subdense, up to 2mm in diameter, confluent. Hyphae substraight to undulating, branching opposite to unilateral at acute to wide angles, loosely to closely reticulate, cells 15–25 × 5–7 µm. Appressoria alternate, antrorse, closely antrorse, sub antrorse to retrorse, 12–17 µm long; stalk cells cylindrical to cuneate, 2–5 µm long; head cells ovate, globose, entire, 10–12 × 7–10 µm. Phialides

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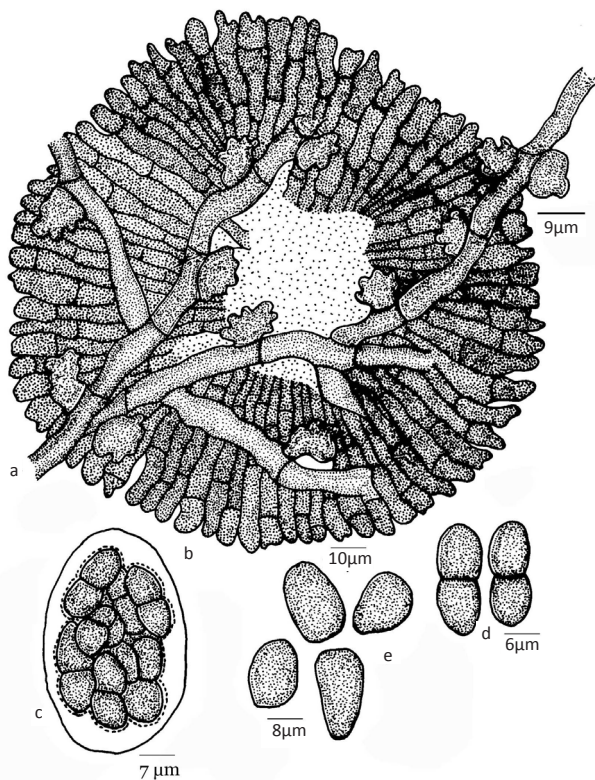


Figure 1. *Asterina mananthavadiensis* sp. nov.
a - Appressoriate mycelium; b - Thyriothecium; c - Ascus;
d - Ascospores; e - Pycnothyriospores

mixed with appressoria, opposite, ampulliform, 15–30 x 5–10 µm. Mycelial setae scattered, simple, straight, acute to obtuse at the tip, up to 800µm long. Perithecia scattered, up to 150µm in diameter; ascospores oblong to cylindrical, 4-septate, constricted at the septa, 37–42 x 17–20 µm.

Materials examined: TBGT 6692 (holotype), PBL 285 (isotype), 27.iii.2009, on leaves of *Ficus* sp. (Moraceae), Nilakal, Pathanamthitta, Gireesh Kumar.

Based on the globose head cells of the appressoria, this species can be compared with *Meliola bangalorensis* Hansf. & Thirum., collected from the Western Ghats region of Karnataka (Hansford & Thirumalachar 1948; Hansford 1961). However, *Meliola ficigena* differs from it in having only entire head cells in contrast to lobed ones, and further, phialides are mixed with appressoria.

Etymology: Named after its host plant

***Prillieuxina pavettae* sp. nov.**

(Fig. 3; MycoBank # 805652)

Colonies mostly epiphyllous thin, up to 2mm in diam., confluent. Hyphae flexuous to crooked, branching

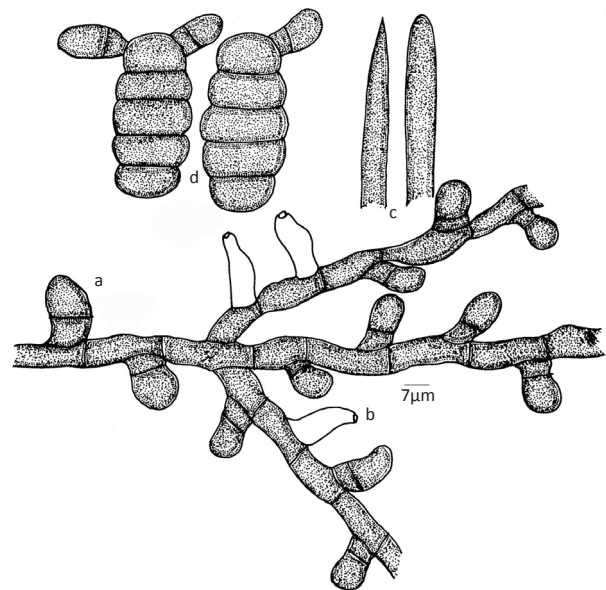


Figure 2. *Meliola ficigena* sp. nov.
a - Appressorium; b - Phialide; c - Apical portion of the mycelial setae;
d - Ascospores

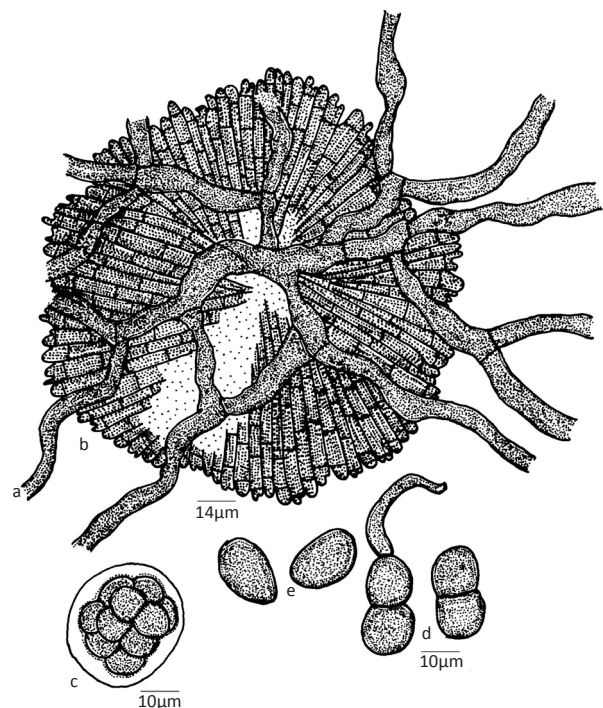


Figure 3. *Prillieuxina pavettae* sp. nov.
a - Mycelium; b - Thyriothecium; c - Ascus; d - Ascospores;
e - Pycnothyriospores

irregular at acute to wide angles, loosely reticulate, cells 12–25 x 5–7 µm long. Appressoria absent. Thyriothechia scattered, orbicular, up to 150µm in diam., stellately

dehisced at the center, margin crenate; asci globose, octosporous, up to 25µm in diameter; ascospores oblong, conglobate, uniseptate, constricted at the septum, 15–25 x 7–10 µm, wall smooth. Pycnothyria few, similar to thyriothechia; pycnothyriospores ovate, 20–25 x 10–15 µm.

Anamorph: *Asterostomula pavettae* Hosag. & A. Sabeena, *Mycosphere* 2(5): 837, 2012.

Material examined: TBGT 6693 (holotype), PBL 286 (isotype), 03.i.2011, on the leaves of *Pavetta tomentosa* Roxb. ex Smith (Rubiaceae), Chozhiyakkode, Kollam, Hosagoudar et al.

We could locate the teleomorph of this fungus and has been accommodated in a new species (Hosagoudar 2012).

Etymology: Named after its host plant.

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