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Additions to black mildews of Pakhal Wildlife Sanctuary, Telangana, Andhra Pradesh, India

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Andhra Pradesh is the fourth largest state in India by area with dense forests of 44,229km^2 and with 397km^2 of mangrove forests. The Srisailam Hill ranges are located in the middle of the state and the Tirumala-Tirupati hills are located in the south (17^{0}57'N & 79^{0}59'E). This state represents 5,400 flowering plants and the important forests are protected in four national parks and 22 wildlife sanctuaries. However, such an interesting state with the maximum area of Eastern Ghats is least explored for microfungi excepting the sporadic works on mycorrhizal fungi, rusts, powdery mildews and hyphomycetes. Hence, we have taken an interest in the systematic study of black mildews in the Pakhal Wildlife Sanctuary, around Pakhal Lake (Pakhal Kothaguda Forest Range in Warangal District and the present work is part of it.)

Asterina woodfordiae

V.P. Sahni, Mycopath. Mycol. Appl. 23: 330, 1964; Hosagoudar, Mycosphere 2: 771, 2012.

Material examined: TBGT 6401, 19.x.2012, on leaves of *Woodfordia fruticosa* (L.) Kurz (Lythraceae), Kamaram forest, Pakhal Kothaguda Forest Range, Warangal, coll. Md. Khaja Moinuddin.

This species is known from Jabalpur (Madhya Pradesh), Ratnagiri (Maharashtra), and is reported here for the first time from Andhra Pradesh.

Asterina combreti

Syd. & P. Syd., Engl. Bot. Jahrb. 45: 264, 1910; Hosag., Mycosphere 2: 659, 2012.

Material examined: TBGT 6402, 19.x.2012, on leaves of *Getonia floribunda* Roxb. [*Calycopteris floribunda* (Roxb.) Lam. ex Poir.] (Combretaceae), Kamaram forest, Pakhal Kothaguda Forest Range, Warangal, coll. Md. Khaja Moinuddin.

This fungus is common throughout the southern Western Ghats and is reported here for the first time from Andhra Pradesh.

Schiffnerula cryptolepidis

(M.S. Patil & Thite) S. Hughes, Pleomorphy in some hyphopodiate fungi, p. 133, 1987; Hosag., Plant pathology and quarantine 1: 177, 2011.

Material examined: TBGT 6403, 19.x.2012, on leaves of *Cryptolepis dubia* (Burm.f.) M.R. Almeida [*Cryptolepis buchananii* Roem. & Schult.] (Apocynaceae), Kamaram forest, Pakhal Kothaguda Forest Range, Warangal, Eastern Ghats, coll. Md. Khaja Moinuddin.

This species was known from the Western Ghats region of Maharashtra and is reported here for the first time from Andhra Pradesh.

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Prillieuxina ixorigena

Hosag. & Chandrapr., Indian J. Sci. Technol. 2: 18, 2009; Hosagoudar, Mycosphere 2: 787, 2012.

Material examined: TBGT 6404, 19.x.2012, on leaves of *Ixora pavetta* Andr. [*Ixora arborea* Roxb. ex Sm.; *Ixora decipiens* DC.; *Ixora parviflora* Vahl; *Ixora parviflora* var. *zeylanica* Hook.f.] (Rubiaceae), Kamaram forest, Pakhal Kothaguda range, Warangal, Eastern Ghats, coll. Md. Khaja Moinuddin.

This species is known from Kerala and is reported here for the first time from Andhra Pradesh.

***Sarcinella chloroxyli* sp. nov.**
Hosag., Moinud., Bagyan. & A. Sabeena
(Image 1, Fig. 1; MycoBank # 805910)

Colonies epiphyllous, thin to subdense, up to 2mm in diameter, confluent. Hyphae flexuous to crooked, branching irregular at acute to wide angles, loosely reticulate, cells 15–27x2–5 µm. Appressoria alternate to unilateral, ovate, globose, mammiform, broad based, entire, 5–10x5–10 µm; conidiophores micronematous, mononematous, 1–2 septate, 7–10x2–10 µm; conidiogenous cells terminal, monoblastic, cylindrical; conidia blastic, terminal, solitary, sarciniform, 2–5 celled, constricted at the septa, brown to charcoal black, 20–25x25–27 µm, wall smooth.

Material examined: TBGT 6406, 19.x.2012, on leaves of *Chloroxylon swietenia* DC. (*Flindersiaceae*), Kamaram forest, Pakhal Kothaguda Forest Range, Warangal, Eastern Ghats, coll. Md. Khaja Moinuddin.

This is the first report of a schiffnerulaceous fungus on the members of the family Flindersiaceae (Hosagoudar 2003, 2011).

Image 1. *Sarcinella chloroxyli* sp. nov. symptoms produced on leaves of *Chloroxylon swietenia*

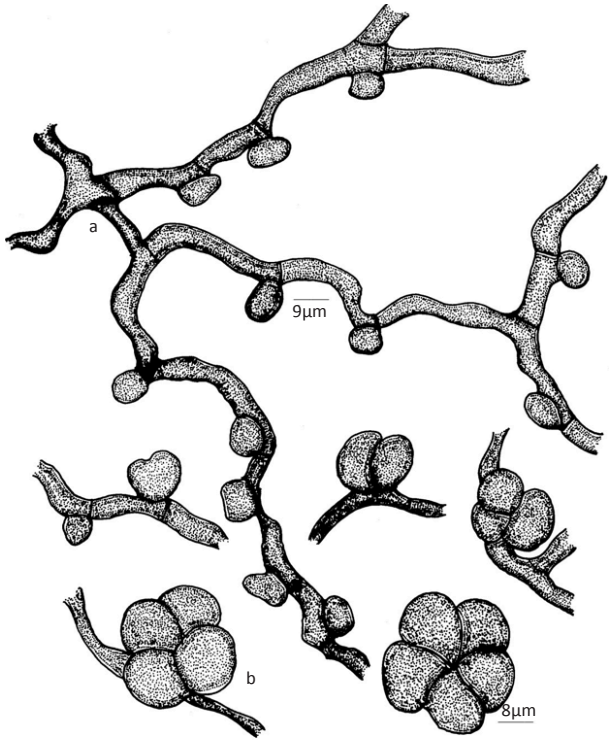

Figure 1. *Sarcinella chloroxyli* sp. nov.
a - Appressoriate mycelium; b - Conidia

Sarcinella gymnosporiae

Subhedar & Rao ex Hosag., Zoos' Print J. 17: 837, 2002; Hosag., Pl. Pathol. & Quarantine 1: 152, 2011.

Material examined: TBGT 6407, 19.x.2012, on leaves of *Maytenus emarginata* (Ruiz & Pav.) Loes. [*Gymnosporia emarginata* (Willd.) Thwaites] (Celastraceae), Kamaram forest, Pakhal Kothaguda Forest Range, Warangal, Eastern Ghats, Md. Khaja Moinuddin.

This fungus is known on this host genus from the Western Ghats region of Maharashtra and is reported here for the first time from the Eastern Ghats.

***Sarcinella strychni* sp. nov.**
Hosag., Moinud., Bagyan. & A. Sabeena
(Image 2, Fig. 2; MycoBank # 805911)

Colonies hypophyllous, thin, up to 2mm in diameter, confluent. Hyphae flexuous, branching irregular at acute to wide angles, loosely reticulate, cells 15–20 x 2–5 µm. Appressoria alternate to unilateral, globose, broad based, entire, 5–7 x 5–8 µm. Conidia of *Questieriella* straight to curved, pale brown, 3-septate, mostly scattered in the colonies, 30–37x7–10 µm. *Sarcinella* conidiophores produced laterally from the hyphae, single, straight, mononematous, 1–2 septate, 7–20x2–5 µm; conidiogenous cells terminal,

Image 2. Leaves of *Strychnos potatorum* infected with *Sarcinella strychni* sp. nov.

monoblastic, integrated, cylindrical. *Sarcinella* conidia blastic, terminal, solitary, ovate to globose, sarciniform, 2–6 celled, slightly constricted at the septa, brown to charcoal black, 20–30x17–27 µm, wall smooth.

Material examined: TBGT 6405, 19.x.2012, on the leaves of *Strychnos potatorum* L.f. [*Strychnos heterodoxa* Gilg; *Strychnos stuhlmannii* Gilg] (Loganiaceae), Kamaram forest, Pakhal Kothaguda Forest Range, Warangal, Eastern Ghats, coll. Md. Khaja Moinuddin.

Questieriella strychni Hosag. is known on this host genus from Karnataka and Kerala states (Hosagoudar 2011) but the present collection differs from it in possessing both *Questieriella* and *Sarcinella* states. Hence, it has been placed in a distinct species.

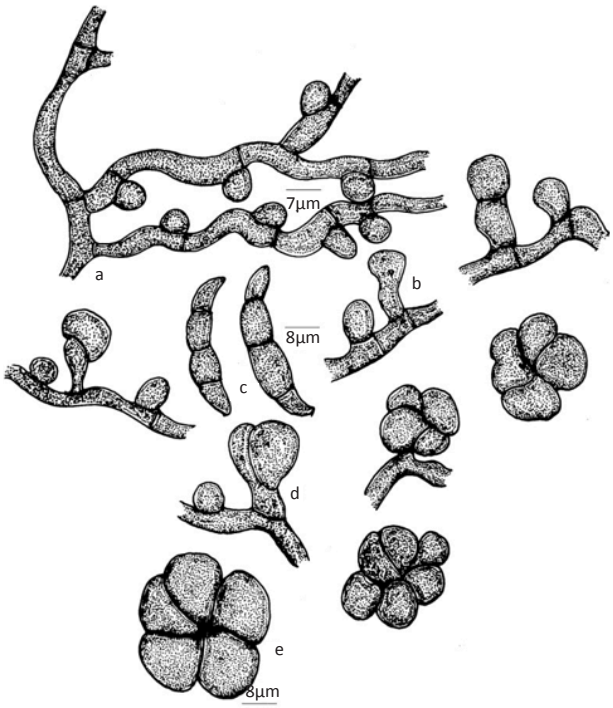

Figure 2. *Sarcinella strychni* sp. nov.
a - Appressoriate mycelium; b - Conidiophores of *Questieriella*; c - Conidia of *Questieriella*; d - Conidiophores of *Sarcinella*; e - Conidia of *Sarcinella*

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