Studies on Folliculous Fungi – XXVI - a new species and three new records

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1. Balladyna indica sp. nov. (Image 1)

Coloniae hypophyllae, tenues vel subdensae, patentiae, ad 10 mm diam., confluentes. Hyphae rectae vel subrectae, alternatim vel irregulariter acuteque vel laxe ramosae, laxe vel arte reticulatae, cellulae 19-36 x 6-8 μm. Appressoria dispersa, alternata vel unilateralis, concolora, ovata, oblonga, cylindracea, integra, recta, curvula vel uncinata, 11-20 x 6-8 μm. Setae myceliales nigrae, simplices, rectae, ad apicem acutae vel obtusae, ad 144 μm longae. Perithecia dispersa, globosa, ad initium stipitatis, sessilia ad maturitatem, ad 100μm diam. Ascii non visa. Ascosporae oblongae, conglobatae, nigrae vel brunnea, unisetae, fortiter constrictae ad septatae, 30-82 x 15-17 μm, parietus glabrus.

Colonies hypophyllous, thin to subdense, spreading, up to 10 mm in diam., confluent. Hyphae straight to substraight, branching alternate to irregular at acute to wide angles, loosely to closely reticulate, cells 19-36 x 6-8 μm. Appressoria scattered, alternate to unilateral, concolourous, ovate, oblong, cylindrical, entire, straight, curved to uncinate, 11-20 x 6-8 μm. Mycelial setae dark, simple, straight, acute to obtuse at the tip, up to 144 μm long. Perithecia scattered, globose, initially stipitate, later sessile, up to 100μm in diameter. Ascii not seen. Ascospores oblong, conglobate, dark brown, unisetae, strongly constricted at the septum, 30-82 x 15-17 μm, wall smooth.

Etymology: Named after the country, India

Material examined

Type: 13.xii.2003, On leaves of Rubiaceae member, Sairandhri, Silent Valley, Palghat, Kerala, India, coll. V.B. Hosagoudar et al. HClO 46695 (type), TBGT 2036 (isotype)

Date of online publication 26 July 2009
ISSN 0974-7907 (online) | 0974-7893 (print)

Editor: R.K. Verma

Manuscript details:
Ms # o2060
Received 13 September 2008
Finally accepted 19 June 2009


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Acknowledgement: The author thanks the Director, TBGRI, Palode for facilities.

Image 1. Balladyna indica sp. nov. on Rubiaceae member
1 - Infected leaves; 2 - Mycelial seta; 3 - Mycelial colony with black perithecia; 4 - Appressoria with hyaline spots; 5 - Developing stipitate peritheciun; 6 - Ascospore

(Mycobank # MB 513421).

This species is close to Balladyna deightonii Hans. (Hosagoudar 2004) in having more than 100μm long mycelial setae and 25μm long ascospores. However, Balladyna indica differs from it in having entire appressoria (Hosagoudar 2004). It also differs from B. rubicearum Hosag 1924, in having oblong and entire appressoria (Hosagoudar 2002).


Colonies epiphyllous, dense, crustose, smooth, up to 10mm in diameter, often cause yellow haloes around the colonies and also yellowing on the corresponding lower surface of the leaves. Hyphae partly superficial and partly immersed, superficial hyphae brown, septate, flexuous, irregularly branched at acute to wide angles, cells 12-35 x 3-4 μm. External mycelium enters the host through stomata extended up to palisade tissues. Conidiophores arise from the external mycelium, mostly deep brown to rarely dark, 0-3-septate, erect, often curved, simple, solitary, smooth, 25-52μm long; conidiogenous cells terminal, integrated, monoblastic, determinate; conidia brown, 0-3-septate, not constricted, straight to curved, cylindrical, obclavate, broadly rounded at the apex, truncate at the base,
wall smooth, 20-48 x 8-10 μm. Thyriothecia scattered to grouped, initially orbicular, later elliptic to elongated, simple, straight, curved, often X or Y shaped, astomatous, dehisce vertically at the centre, orbicular thyriotheca 100-120 x 90-100 μm, ellipsoidal thyriotheca 441-700 x 196-245 μm; ascospores conglobate, oblong, brown, uniseptate, constricted at the septa, 17-20 x 9-11 μm, wall smooth but becomes verrucose at maturity.

**Material examined**


Arx & Müller (1975) have placed Maurodothina G. Arnaud ex Piroz. & Shoemaker as synonym to Eupelte Syd. Sivanesan (1984) has stated that the genus Eupelte is similar to Maurodothina but differs from it in absence of conidigenous appressoria. Though this species was reported from India and South Africa (Sivanesan 1975), a detailed study was not made from the Indian collections and hence, the note.


(Image 3)

Colonies amphigenous, mostly hypophyllous, subdense to dense, associated with black colony forming fungi having unicellular appressoria. Hyphae ectophytic, brown, septate, slightly constricted at the septa, cells 8-10 x 4-7 μm, cells often supplemented with a pair of small, prominent, hemispherical lateral cells without haustorium. Conidiophores macronematous, mononematous, simple, brown, erect, mostly unicellular, 20-30 μm long, slightly taper towards the apex, 3-5 μm broad at the base, 1-3 μm broad at the apex; conidiogenous cells terminal, determinate, integrated. Conidia solitary, dry, simple, acrogenous, obclavate, rostrate, olivaceous brown, 11-18 μm long, 3-4 μm broad at the base, 1-6 μm broad at the broadest part, 1-2 μm broad at the tip of the beak, septa mostly 1-3 in number, horizontal, often oblique, wall smooth.
Material examined

The genus *Hansfordiella* Deighton represents five species and all are associated with the foliicolous lichen. This is an anamorph of the genus *Koordersiella* Hohn. (Kirk et al. 2001). *H. lichenicola* (Bat. & Maia) Deighton was known from Brazil, Ghana, Malaysia, Nigeria, Porto Rico, Sarawak, Sierra Leone, Tanzania, Trinidad and Uganda (Ellis 1971) and is known here first time from India and also forms a new generic record to India ( Bilgrami et al. 1991; Jamaluddin et al. 2004).


Colonies epiphyllous, brown, hyper parasite. Hyphae superficial, pale yellow, septate, branched, 2-4μm broad. Conidiophores arise from the sides of the hyphae, macronematous, mononematous, simple, straight to flexuous, septate, brown, up to 110μm long and 4-6μm broad. Conidiogenous cells monoblastic, terminal, integrated, percurrent, cylindrical. Conidia brown, solitary, dry, simple, straight to curved, obclavate, rostrate, truncate at the base, 1-3-septate, rarely slightly constricted at the septa, paler towards apex, 36-80μm long, 1-2μm broad at the base, 5-7μm broad at the middle, 3-4μm broad at the apex, often a germ tube produced either from the apex or from the base or rarely from both.

Material examined
12.xi.2003. Overgrowing on the colonies of *Cirsosia vateriae* on *Vateria indica* L. (Dipterocarpaceae), Jodupal, Madikeri, Coorg, Karnataka, India, coll. V.B. Hosagoudar HClO 46380, TBGT 2026.

This species was known on *Asterolibertia* sp. from Ghana, Sabah and Sierra Leone and is reported here on different fungus for the first time from India (Ellis 1976; Bilgrami et al. 1991, Jamaluddin et al. 2004)

References