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Meliola thiyagesanii sp. nov. from Kodaikanal in Tamil Nadu

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Abstract

A new species, *Meliola thiyagesanii,* that was found to infect the leaves of *Polygalla arillata*, collected from the Kodaikanal forests is described and illustrated here.

Keywords : black mildew, fungi, India, kodaikanal, *Meliola*, new species

INTRODUCTION

Black mildews are the black colony forming fungi that belong to several taxonomic groups. Of these, Meliolales are characterized by having two celled appressoria, phialides, globose perithecia and with septate ascospores. This order represents two families: Armatellaceae and Meliolaceae comprising of eleven genera. Of these, the genus *Meliola* is distinct in having mycelial setae, and is represented by more than a thousand species in the world (Hansford, 1961; Hosagoudar *et al.*, 1997; Hosagoudar and Agarwal, 2008). During the survey of the foliicolous fungi in Kodaikanal shola forests, Southern India, we have collected the leaves of *Polygala arillata* infected with a black mildew fungus. Critical microscopic study of the infected leaves revealed that the fungus is a hitherto undescribed species of the genus *Meliola*. Hence, it is described and illustrated here in detail.

Meliola thiyagesanii V.B. Hosagoudar, V. Dhivaharan et R. Nithyatharani, sp. nov. (Fig.-1)

Etymology: This species is named in honour of Dr. K. Thiyagesan, for his devotion to the field of teaching.

Coloniae amphigenae, subdensae, ad 2 mm diam., confluentes. Hyphae subrectae vel flexuosae, opposite laxe ramosae, laxe reticulatae, cellulae 20-32 x 7-10 µm. Appressoria alternata, raro solitaria, recta vel curvula, antrorsa vel retrorsa, 22-27 µm longa; cellulae basilares cylindraceae vel cuneatae, 7-10 µm longae; cellulae apicales cylindraceae, globosae, integrae, angularis vel sublobatae, 15-17 µm long. Phialides appressoriis mixtus, opposite vel alternatim positae, ampulliformes, 17-20 x 7-10 µm. Setae myceliales dispersae, rectae, simplices, ad apicem obtusae, ad 360 µm longae. leniter constrictus ad septatae, 42-50 x 15-18 µm.

Colonies amphigenous, subdense, up to 2 mm in diameter, confluent. Hyphae sub-straight to flexuous, branching opposite at wide angles, loosely reticulate, cells 20-32 x 7-10 µm. Appressoria alternate, rarely solitary, straight to curved, antrorse to retrorse, 22-27 µm long; stalk cells cylindrical to cuneate, 7-10 µm long; head cells cylindrical, globose, entire, angular to sublobate, 15-17 µm long. Phialides mixed with appressoria, opposite to alternate, ampulliform, 17-20 x 7-10 µm. Mycelial setae scattered, straight, simple, obtuse at the tip, up to 360 µm long. Perithecia scattered, globose, up to 152 µm in diam.; ascospores cylindrical, 4-septate, slightly constricted at the septa, 42-50 x 15-18 µm.

Material Examined

On leaves of *Polygalla arillata* Buch. -Ham. ex D. Don (Polygalaceae), Kukkal Shola, Kodaikanal,Tamil Nadu, India, Nov. 21, 2007, R. Nithyatharani TBGT 4262b (type).

Five taxa of the genus *Meliola*, namely, *M. securidacicola* Hansf., *M. securidacicola* Hansf. var. *vanderystii* Hansf. and *M. kisantuensis* Hansf. on *Securidaca* sp. from Congo Belge, Porto Rico and Congo, and *M. carpolobiicola* Hansf. & Deight. and *M. carpolobiae* Hansf. are known on *Carpolobia* spp. from Sierra Leone, Gold Coast and Unganda (Hansford, 1961). *M. thiyagesanii* differs from all these five taxa in having alternate appressoria and simple and straight mycelial setae in contrast to opposite and dentate setae. Further, the host genera, *Carpolobia* and *Securidaca* are not known from the Western Ghats region (Santapau and Henry, 1984). This forms the first record of the genus *Meliola* on the members of the family Polygalaceae from India (Hosagoudar, 1996, 1998).

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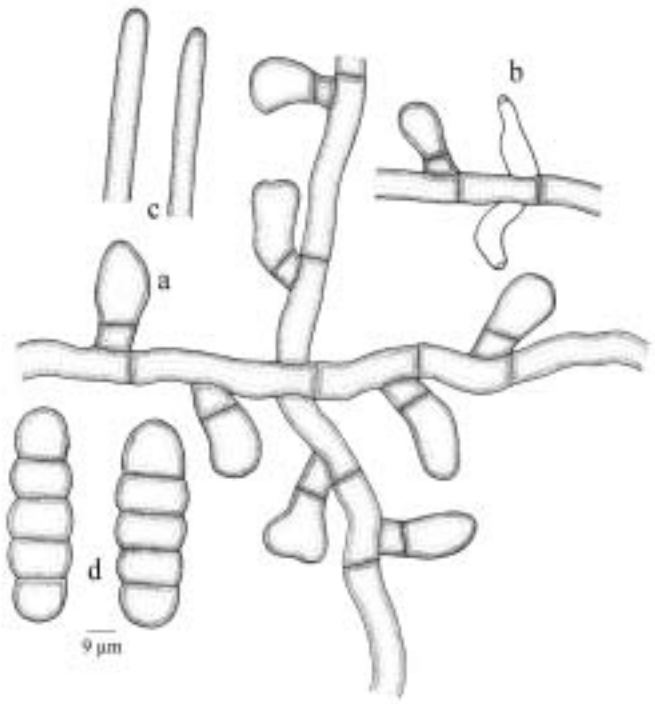

Figure 1. ***Meliola thiyagesanii*** **sp.nov**
a. Appressorium, b. Phialide, c. Apical portion of the mycelial setae, d. Ascospores.

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