

Meliola vallaridis sp. nov. from Kerala, India

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Abstract

A new species of the genus *Meliola* has been described on the leaves of *Vallis solanacea* from Kerala. This new species differs from *Meliola tabernaemontanicola* in producing pathogenic effect on the host plant.

Keywords: black mildew, medicinal plant, *Meliola*, new species.

INTRODUCTION

The genus *Vallis* is an Indo-Malaysian element, comprising about ten species. Of these, *Vallis solanacea* is a large handsome climbing shrub found in Tropical Himalayas, spreads to Konkan Coast and to South. This plant is extensively cultivated for its scented flowers and medicinal properties in curing wounds, old sores, toothache, fixing loose tooth, its use in Ayurvedic medicines, etc. This plant was severely infected by a 'Black mildew' fungus on both surfaces of the leaves, petioles and on soft stems. The infected colonies were surrounded by yellow haloes and the corresponding opposite portion of the leaves turned yellow. In severe cases, infection resulted in shot-holes. Severely infected leaves turned yellow and resulted in withering of the leaves (Fig. 1). Critical examination of the fungus revealed that it is hitherto undescribed species of the genus *Meliola* (Fig. 2) and hence, the note.

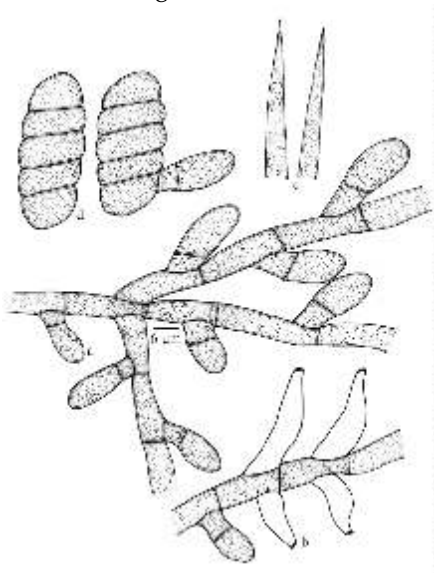


Figure 2. *Meliola vallaridis* sp. nov.

a-Appressorium, b-Phialide, c-Apical portion of mycelial setae, d-Ascospores

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Figure 1. a. *Vallis solanacea* infected with *Meliola vallaridis* sp. nov.
b. Infected leaves turned yellow and wither
c. Infection on stem and petioles

Meliola vallaridis sp. nov.

Coloniae amphigenae, plerumque epiphyllae, caulicolae, ramicolae, densae, crustosae vel velutinae, ad 2 mm diam., confluentes. Hyphae rectae, subrectae vel flexuosae, plerumque oppositae acutae vel laxe ramosae, laxe vel fortiter arte reticulatae, saepe formans teges solidus mycelialis, cellulae 11-18 x 4-7 μ m. Appressoria alternata, minusve 1% opposita, antrorsa vel subantrorsa, 17-22 μ m longa; cellulae basilares cylindratae vel cuneatae, 4-8 μ m longae; cellulae apicales ovatae, oblongae vel cylindratae, saepe angustatus ad apicem, integrae, 11-16 x 6-9 μ m. Phialides numerosae, appressoriis intermixtae, alternatae vel oppositae, ampulliformes, 13-22 x 4-7 μ m. Setae myceliales numerosae, dispersae vel juxta perithecia aggregatae, simplices, rectae, ad apicem acutae, ad 450 μ m longae. Perithecia dense dispersa, ad 165 μ m diam.; ascospores oblongae vel cylindratae, 4-septatae, fortiter constrictae ad septatae, 30-37 x 11-16 μ m.

Colonies amphigenous, mostly epiphyllous, caulicolous, ramicolous, dense, crustose to velvety, up to 2 mm in diam., confluent. Hyphae straight, substraight to flexuous, branching mostly opposite at acute to wide

angles, loosely to very closely reticulate, often form solid mycelial mat, cells 11-18 × 4-7 µm. Appressoria alternate, less than 1% opposite, antrorse to subantrorse, 17-22 µm long; stalk cells cylindrical to cuneate, 4-8 µm long; head cells ovate, oblong to cylindrical, often narrowed towards apex, entire, 11-16 × 6-9 µm. Phialides numerous, mixed with appressoria, alternate to opposite, ampulliform, 13-22 × 4-7 µm. Mycelial setae numerous, scattered to grouped around perithecia, simple, straight, acute at the tip, up to 450 µm long. Perithecia closely scattered, up to 165 µm in diam.; ascospores oblong to cylindrical, 4-septate, deeply constricted at the septa, 30-37 × 11-16 µm.

MATERIALS EXAMINED

On leaves of *Vallaris solanacea* (Roth.) Kuntze (Apocynaceae), TBGRI campus, Palode, Thiruvananthapuram, Kerala, February 8, 2007, Sabeena & al HCIO (type), TBGT 2832 (isotype); Jan. 5, 2001, H. Biju TBGT 867, HCIO 44580; Museum (Zoo), Thiruvananthapuram, Dec. 28, 2002, G. Rajkumar TBGT 1120, HCIO 44892.

DISCUSSION

Meliola tabernaemontanicola Hansf. & Thirum. was described on *Tabernaemontana* sp. from Balehonnur, Karnataka (Hansford and Thirumalachar, 1948). Kar and Maity (1972) collected *Meliola* sp. on *Vallaris solanacea* from Mallickput, West Bengal and attributed it to *M. tabernaemontanicola*. Hosagoudar (1996) procured the slide of the same from IMI (no. 139202) and also placed it under *M. tabernaemontanicola*. The present collections differ from the assigned species in causing pathological effect in producing yellow haloes around the colonies, infecting leaf petioles, soft and younger stem portions, causing 'shot-holes' and turning the infected leaves yellow and result in withering of such leaves.

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