

A new *Balladyna* species from Kerala, India

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Abstract: A new species, *Balladyna salaciae*, infected the leaves of *Salacia oblonga*, collected from Silent Valley National Park of Palghat district in Kerala state has been described and illustrated in detail.

Keywords: *Balladyna*, new species, *Salacia*, Kerala, India

Introduction

During a survey of the foliicolous fungi in the Western Ghats region of Kerala state, a black mildew fungus was collected on the leaves of *Salacia oblonga* (Hippocrataceae) from the Silent Valley National Park of Palghat district in Kerala State. Microscopic examination of the fungus revealed the presence of unicellular appressoria, mycelial setae, globose ostiolate perithecia, having successively maturing asci with uniseptate brown ascospores. These are the characteristics of the genus *Balladyna*.

Taxonomy

***Balladyna salaciae* sp. nov.** (Fig.1)

Coloniae hypophyllae, densae, crustosae, ad 4 mm diam., confluentes. Hyphae subrectae vel undulatae, irregulariter acuteque vel laxe ramosae, arte reticulatae et formans rete mycelialis, cellulae 19-36 x 6-7 µm. Appressoria numerosa, alternata vel unilateralis, unicellularis, antrorsa vel retrorsa, recta vel curvula, integra vel leniter angularis, clavata, recta vel varia curvula, 12-19 x 7-10 µm. Setae myceliales numerosae, dispersae, simplices, rectae, flexuosae, ad apicem acute vel obtusae, ad 140 µm longae. Perithecia dispersa, moderatim numerosa, stipitata ad initio, subsessilis ad maturitatem, ovata, globosa, ostiolata, 100-150 x 60-80 µm; asci pauci, globosi vel ovati, paraphyses hyalini asci intersperses, 4-6 spori, bitunicati, 60 µm in diam., parietus crassus; ascospores conglobatae, oblongae, brunneae, uniseptatae, fortiter constrictae ad septatae, 28-36 x 14-17 µm, parietus glabrus.

Colonies hypophyllous, dense, crustose, up to 4 mm in diam., confluent and cover almost lower

surface of the leaves. Hyphae substraight to undulate, branching irregular at acute to wide angles, closely reticulate to form a mycelial net, cells 19-36 x 6-7 µm. Appressoria numerous, alternate to unilateral, unicellular, antrorse to retrorse, straight to curved, entire to slightly angular, clavate, straight to variously curved, 12-19 x 7-10 µm. Mycelial setae numerous, scattered, simple, straight, flexuous, acute to obtuse at the tip, up to 140 µm long. Perithecia scattered, fairly numerous, initially stipitate, later become subsessile, ovate, globose, ostiolate, 100-150 x 60-80 µm; asci few, globose to ovate, interspersed with hyaline paraphyses, 4-6 spored, bitunicate, 60 µm in diam., wall thick; ascospores conglobate, oblong, brown, uniseptate, strongly constricted at the septum, 28-36 x 14-17 µm, wall smooth.

Materials examined: On the leaves of *Salacia oblonga* Wallich ex Wight & Arn. (Hippocrataceae), Silent Valley National Park, Palghat, Kerala, India, June 17, 2007 Jacob Thomas & al HClO 48257 (type), TBGT 2996 (isotype).

The genus *Balladyna* belongs to the obligate biotrophs of the group 'Black mildews' and their host range is restricted to the members of the corresponding host family. This genus represents 15 species infected the members of the family Rubiaceae, Annonaceae, Strychnaceae and Verbenaceae (Hosagoudar, 2004). Since there is no report of the genus *Balladyna* on the members of the family Hippocrataceae, it is described here as a new species.

References

Hosagoudar VB (2004) Studies on foliicolous fungi- XI. The genus *Balladyna* Racib., based on literature. *J. Econ. Taxon. Bot.* 28, 202-208.

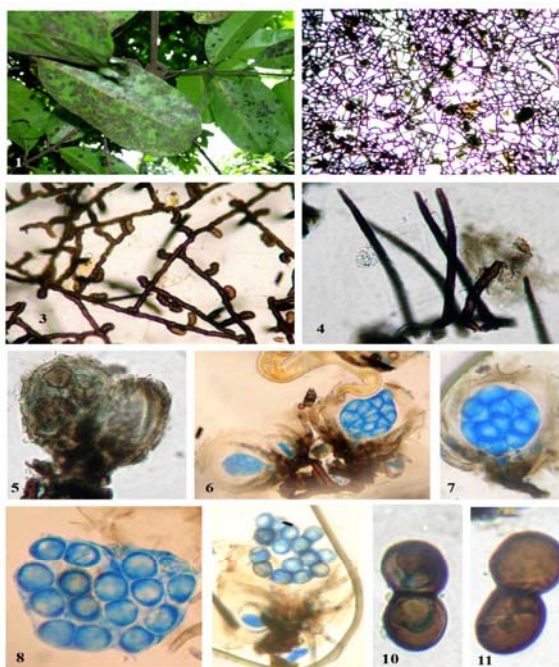


Plate-1. *Balladyna salaciae* sp. nov.

1. Infected Leaves, 2. Mycelial colony with perithecia, 3. Appressoria branched mycelium, 4. Mycelial setae, 5. Stalked perithecia, 6-9. Asci, 10-11. Brown ascospores

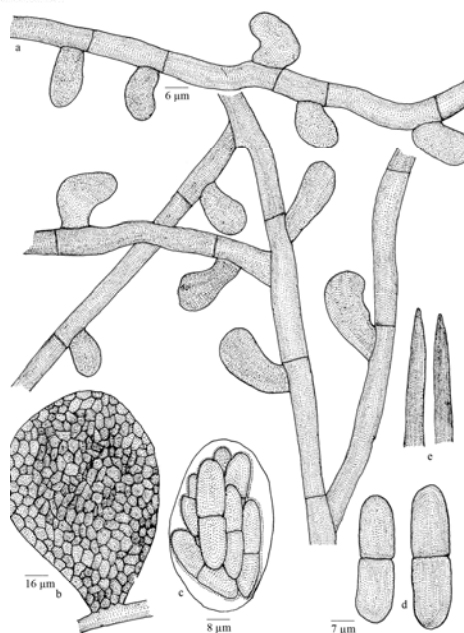


Fig. 1. *Balladyna salaciae* sp. nov.

a. Appressoria mycelium, b. Perithecia, c. Ascus, d. Ascospores, e. Apical portion of the mycelial setae