Two new *Meliola* species from China

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*Meliola fabri* parasitic on *Castanopsis fabri*, and *Meliola hosagoudarrii* parasitic on *Tutcheria microcarpa* are described and illustrated as new species.

**Key words:** *Meliola fabri*, *Meliola hosagoudarrii*, Meliolaceae.

**Introduction**

Fungi in the genus *Meliola* (Meliolaceae), are obligate parasites on higher plants that are widely distributed in the tropical and subtropical regions. Although attempts have been made to culture these fungi, both in the laboratory and on host plants (Hansford, 1961; Thite and Patil, 1975; Goos, 1978), no one has yet succeeded in doing so. The genus *Meliola* is similar to the *Amazonia*, *Appendiculella*, *Asteridiella* and *Irenopsis*, but it differs from these genera of Meliolaceae in having hyphal setae on the mycelium and lacking vermiciform appendages and setae on perithecial surface (Hansford, 1961). *Meliola* is the largest genus of the family Meliolaceae. Over 1000 species of *Meliola* have been described and over 230 species have been reported from China (Hu *et al.*, 1996, 1999; Kirk *et al.*, 2001; Song *et al.*, 2002).

Specimens of meliolaceous fungi deposited in the Herbarium of Guangdong Institute of Microbiology (HMIGD), Guangzhou (China) were examined. Two new species are determined, and therefore described and illustrated here.

**Taxonomy**

*Meliola fabri* B. Song, T.H. Li & Y.H. Shen, *sp. nov.* (Figs. 1-3)

*Etymology:* in reference to the host, *Castanopsis fabri*.

*Coloniae* caulicolae, atrae, densae, velutinae, dispersae, ad 3 mm diam., raro confluentes. *Hyphae* brunneae, rectae vel undulatae, opposite vel alternate acuteque ramosae,

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dense reticulateae, cellulae 12-20 × 5-7 µm. *Appressoria* opposita vel 10% alternata, interdum dense posita, antrorsa, recta vel subrecta, 11-20 µm longa; *cellulae basis* subcyllindraceae, 3-6 µm longae; *cellulae apicalis* ellipsoideae vel oblongae, integrae, 9-14 × 7-10 µm. *Phialides* illis capitatis immixtæ, oppositæ vel alternatae, ampullaceae, 15-28 × 7-9 µm. *Setae myceliales* dispersæ vel aggregatae, numerosæ, atræ, simplices, rectæ vel leniter curvulae, apice acute, ad 290 µm longae vel 8-12 µm crassae ad basim. *Perithecia* aggregata, nigra, globosa, verrucosa, ad 140 µm diam. *Ascosporae* brunneaete, ellipsoideae vel subfusoidæae, utringue obtusæ, 3-septatae, constrictæ, 43-45 × 13-17 µm.

*Colonies* caulicolous, black, dense, velvety, scattered, up to 3 mm diam., rarely confluent. *Hyphae* brown, straight to undulate, opposite to alternate branching at acute angles, closely reticulate, cells 12-20 × 5-7 µm. *Appressoria* opposita, up to 10% alternata, often crowded, spreading, straight to nearly straight, 11-20 µm long; *stalk cells* nearly cylindricæ, 3-6 µm long; head cells ellipsoid to oblong, entire, 9-14 × 7-10 µm. *Phialides* mixed with appressoria, opposite to alternate, ampulliform, 15-28 × 7-9 µm. *Mycelial setae* scattered to crowded, numerous, black, simple, straight to slightly curved, acute at the apex, up to 290 µm long, 8-12 µm broad at base. *Perithecia* crowded, black, globose, verrucose, up to 140 µm diam. *Ascospores* brown, ellipsoidal to nearly fusiform, obtuse, 3-septate, constricted at septa, 43-45 × 13-17 µm.

*Material examined:* CHINA, Wuyishan, Fujian Province, on leaves of *Castanopsis fabri* Hance (*Fagaceae*), September 1980, Z.X. Chen (HMIGD 30951, holotype designated here).

*Notes:* The present species differs from other species of *Meliola* known on the members of the *Fagaceae* in having 3-septate ascospores. It is similar to *Meliola hippocrateicola* Hansf. & Deight., but differs from this species in having 3-lobate appresoria, and having smaller and differently shaped ascospores (oblong, 34-41 × 11-14 µm in *M. hippocrateicola*).

*Meliola hosagoudari* B. Song, sp. nov. (Figs. 4-7)

*Etymology:* in honour of V.B. Hosagoudar for his contribution towards the study of Indian Meliolales.

*Coloniae* amphigenæ, atræ, densæ, velutinae, dispersæ, ad 5 mm diam., raro confluentes. *Hyphae* brunneaete, rectæ vel undulatae, opposite acutæque vel wideque ramosæae, dense reticulatae, cellulae 20-40 × 6.5-8 µm. *Appressoria* alternata vel unilateralia, antrorsa, recta vel curvata, 20-37 µm longa; *cellulae basalis* cuneatae vel cylindraceae, 5-12 µm longae; *cellulae apicalis* ovatae vel ellipsoideae, lobatae vel angulosae, 15-25 × 17-20 µm. *Phialides* illis appressoria immixtae, interdum separatæ, alternatae vel oppositæ, ampullaceae, 13-16 × 6-7 µm. *Setae myceliales* dispersæ vel aggregatae, atræ, simplices, curvulae, subacutæ ad apicem, ad 480 µm longae vel basis 7.5-9.5 µm latae ad basim. *Perithecia* aggregata, nigra, globosa, verrucosa, ad 160 µm diam. *Ascosporae* brunneaete, curvatae, cylindraceae vel fusoidæae, obtusæ, 3-septatae, constrictæ, 70-77 × 16.5-18.5 µm.

*Colonies* amphigenæ, black, dense, velvety, scattered, up to 5 mm diam., rarely confluent. *Hyphae* brown, straight to undulate, branching opposite at an acute to wide angle, closely reticulate, cells 20-40 × 6.5-8 µm.

Appressoria alternate to unilateral, spreading, straight to curved, 20-37 µm long; stalk cells cuneate to cylindrical, 5-12 µm long; head cells ovate or elliptical, lobate or angulose, 15-25 × 17-20 µm. Phialides mixed with appressoria, or sometimes separate, alternate to opposite, ampulliform, 13-16 × 6-7 µm. Mycelial setae scattered or crowded, black, simple, curved, subacute at the apex, up to 480 µm long, 7.5-9.5 µm broad at the base. Perithecia aggregated, black, globose, verrucose, up to 160 µm diam. Ascospores brown, bent, cylindrical to fusiform, obtuse, 3-septate, constricted at the septa, 70-77 × 16.5-18.5 µm.

*Material examined:* CHINA, Chebaling, Guangdong Province, on leaves of *Tutcheria microcarpa* Dunn (*Theaceae*), March 1993, B. Song & Y.S. Ouyang (HMIGD 34010, holotype designated here).

*Notes:* *Meliola hosagoudarii* differs from other *Meliola* species known on the members of *Theaceae* in having 3-septate ascospores. *Meliola litseicola* Hansf. is similar to this new species, but differs in forming straight, ellipsoid and shorter (50-55 × 18-20 μm) ascospores.
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References


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