

Indian Meliolineae: Two new species and a new variety of *Meliola*

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Abstract: - Two new species, *Meliola coilicosa* sp. n. and *M. balakrishnanii* sp. n. and the new variety, *M. buchenaviae* BATISTA var. *terminaliae* var. nov. are described from India.

1. *Meliola coilicosa* sp. nov. - Fig. 1, A-F

Plagus hypophyllis, tenuibus, subvelutinis, usque ad 4 mm. diam. Mycelio ex hyphis atrobrunneis, subrectis vel flexuosis, 6-8 μ m cr., cellulis plerumque 17-25 μ m longis oppositis vel irregulariter ramosis reticulatis intertextis composito. Hyphopodiis capitatis alternatis irregulariter curvatis, 25-80 μ m longis, cellula basali cylindracea, curvata, interdum 1-3 septata, 8-70 $\times$ 6-8 μ m, cellula apicali versiformi saepe uncinata vel curvata, 12-20 $\times$ 9-19 μ m, ovata et subintegra, varie angulosa vel sublobata. Hyphopodiis mucronatis dispersis, alternatis, ampullaceis, 15-28 $\times$ 7-11 μ m, setis mycelialibus dispersis, rectis, simplicibus, acutis, usque ad 350 $\times$ 9-10 μ m. Peritheciis dispersis, atris, globosis, verrucosis, usque ad 240 μ m diam. Sporibus atro-brunneis, cylindraceis, obtusis, 4 septatis, constrictis, 42 $\times$ 15-16 μ m. Hab. in foliis *Canthii diococci*. - Typus in herb. Poona.

Colonies hypophyllous, thin, slightly velvety and 4 mm in diameter. - Hyphae substraight to flexuous. - Cells of the hyphae mostly 17-25 $\times$ 6-8 μ m. Branching opposite or irregular and at varying angles, loosely interwoven, reticulate. - Capitate hyphopodia alternate, bent, about 25-80 μ m long. - Stalk cell and head cell of the capitate hyphopodia curved, very often coiled. - Stalk cells cylindrical, coiled or bent, 1-3 septate, 8-70 $\times$ 6-8 μ m, often resembling short mycelial branches. - Head cell of capitate hyphopodia clavate, usually bent, ovate, angulose at times lobate, versiform, about 12-20 $\times$ 9-19 μ m. - Mucronate hyphopodia mixed with capitate hyphopodia, alternate, ampulliform, 15-28 $\times$ 7-11 μ m. - Mycelial setae scattered, straight, simple, acute and about 350 $\times$ 9-10 μ m. - Perithecia scattered, verrucose, about 240 μ m in diameter. - Ascospores oblong, obtuse, 4-septate constricted, measuring about 42-50 $\times$ 15-16 μ m, germinate from terminal and adjoining cells to produce outgrowths with distinct stalk and a capitate cell (Fig. 1, F) to produce a capitate hyphopodium.

Habitat. On leaves of *Canthium diococcum* (GAERTN.) MERR. (*Rubiaceae*).

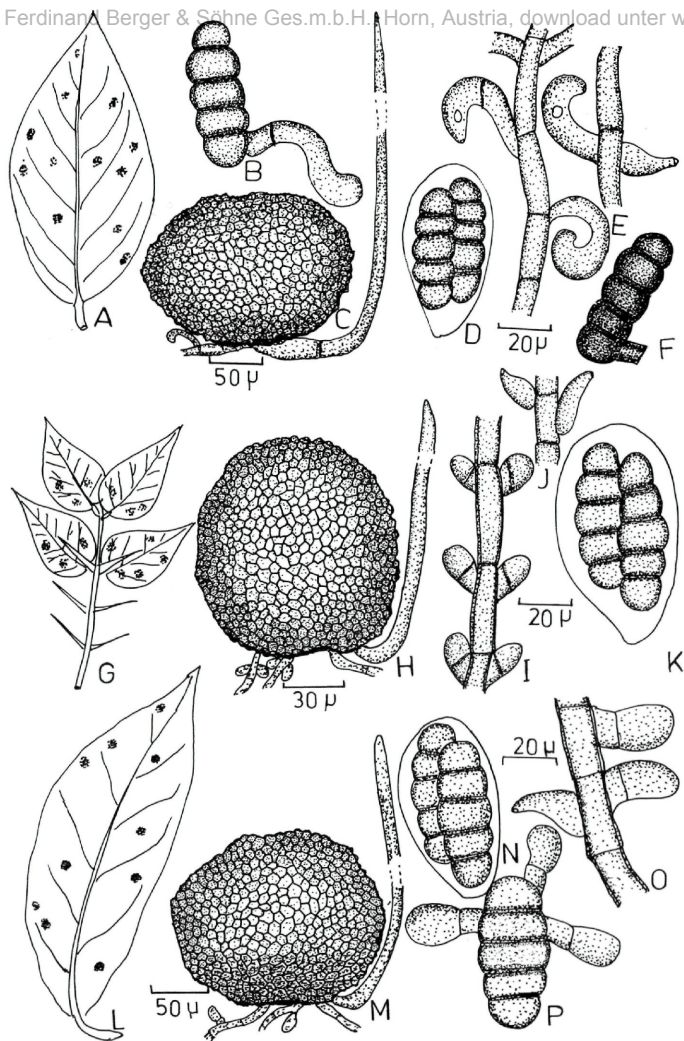


Fig. 1. A-F. *Meliola coilocosa* sp. nov.: A. Infected leaf of *Canthium dicoccum* (GAERTN.) MERR. - B. Germinating ascospore. - C. Perithecium with mycelial seta. - D. Ascus with two ascospores. - E. Hyphae with capitate and mucronate hyphopodia. - F. Ascospore.

G-K. *M. balakrishnanii* sp. nov.: G. *Capparis pedunculosa* WALL. infected leaves. - H. Perithecium with mycelial seta. - I. Hypha with capitate hyphopodia. - J. Hypha with mucronate hyphopodia. - K. Ascus with two ascospores.

L-P. *M. buchenaviae* BATISTA var. *terminaliae* var. nov.: L. Infected leaf of *Terminalia tomentosa* W. & A. - M. Perithecium with mycelial seta. - N. Ascus with two ascospores. - O. Hypha with mucronate and capitate hyphopodia. - P. Germinating ascospore.

Locality. – Mahabaleshwar, India, January, 1978., leg. V. P. K. & L. N. N.

This species of Meliola has the same host as *M. asterinoides* described by PATEL & al. (1949). But *Meliola asterinoides* has been assigned to *Amazonia* whereas *Meliola coilocosa* could not be included in this genus because of the presence of mycelial setae. *Meliola coilocosa* differs in its morphology from all the other species. This is therefore, a new species.

2. *Meliola balakrishnanii* sp. nov. – Fig. 1, G–K

Plagusis epiphyllis tenuibus, velutinis, usque ad 2 mm diam.; mycelio ex hyphis subrectis 6–8 μ m cr., cellulis plerumque 18–34 μ m longis, oppositis, remotissime ramosis. Hyphodiiis capitatis oppositis, globosis, rotundatis vel angulosis, 15–18 μ m longis, cellula basali cuneata, 5–6 μ m longa. Hyphopodiis mucronatis conoideis vel ampullaceis, 14–20 $\times$ 8.5–10 μ m. Peritheciis dispersis, atris, globosis, usque ad 180 μ m diam. Setulis laxis, 320–400 $\times$ 9–10 μ m, ad apicem acutis, stipitatis, simplicibus. Sporibus subellipsoideis, obtusis, 4-septatis, constrictis, 45–50 $\times$ 13–16 μ m. Hab. in foliis *Capparis pedunculosa*. – Typus in herb. Poona.

Colonies epiphyllous, thin, velvety, about 2 mm in diameter. – Hyphae substraight, branching opposite, subrectangular, loosely reticulate, cells of hyphae mostly 18–34 $\times$ 6–8 μ m. – Capitulate hyphopodia opposite, antrose, about 15–18 μ m long. – Stalk cell of capitulate hyphopodia cuneate, 5–6 μ m long. – Head cell of capitulate hyphopodia globose, entire or sometimes rounded-angulose, 10–12 $\times$ 8.5–10 μ m. – Mucronate hyphopodia few, mixed with capitulate hyphopodia, opposite or alternate, conoid to ampulliform, 14–20 $\times$ 8.5–10 μ m. – Perithecia scattered, globose, 180 μ m in diameter. – Mycelial setae grouped around perithecia, few, simple, acute, septate, 320–400 $\times$ 9–10 μ m. – Ascospores subellipsoid, obtuse, 4-septate constricted at septa, 45–50 $\times$ 13–16 μ m.

Habitat: On leaves of *Capparis pedunculosa* WALL. (Caparidiceae).

Locality: Mahabaleshwar, Maharashtra, India, January 1977, leg. V. P. K.

This represents a new species whose morphological characters differ from those reported from described taxa.

3. *Meliola buchenaviae* BATISTA var. *terminaliae* var. nov. – Fig. 1, L–P

Differt a typo hyphopodiis majoribus, setis mycelialibus et ascosporis dissimilibus. Hab. in foliis *Terminaliae tomentosae*. – Typus in herb. Poona.

Colonies amphigenous, thin, 2 mm in diameter or confluent. – Hyphae substraight. – Branches opposite, acute to wide angle and loosely reticulate. – Cells of hyphae mostly 18–28 $\times$ 8–9 μ m. – Capitulate hyphopodia alternate, spreading to subantrose,

straight or slightly bent, about 18.5–20 μm . – Stalk cells cylindrical, 8–9 μm long. – Head cell of capitate hyphopodia oblong to pyriform, 18–20 $\times$ 12–13 μm . – Mucronate hyphopodia mixed with capitate hyphopodia, opposite or alternate, ampulliform 18–22 $\times$ 12–13 μm . – Mycelial setae scattered, straight, septate, simple, with obtuse ends, about 300 $\times$ 10–12 μm . – Perithecia scattered, verrucose, about 240 μm in diameter. – Ascospores oblong, obtuse, four-septate, constricted at septa, 40–45 $\times$ 20–21 μm , two ascospores in each ascus, germinate from the terminal and adjoining cells to produce capitate hyphopodia (Fig. 1, P), produce three outgrowths which grow to from the colony.

Habit: On leaves of *Terminalia tomentosa* W. & A. (Combretaceae).

Locality: Mahabaleshwar, Maharashtra, India, January, 1978, leg. V. P. K.

Meliola buchenaviae was reported by BATISTA (1953) on *Buchenavia capitata*, Combretaceae. The proposed new variety from India differs from typical *M. buchenaviae* in both the size of the hyphopodia, mycelial setae and ascospores and its hostplant *Terminalia tomentosa* W. & A.

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