

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

L. N. NAIR & V. P. KAUL

Department of Botany, University of Poona,
Poona - 411 007, India

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

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

Plagusis 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 and 350 \times 9-10 μ m. Peritheciis dispersis, atris, globosis, verrucosis, usque ad 240 μ m diam. Sporis 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. - Capitulate hyphopodia alternate, bent, about 25-80 μ m long. - Stalk cell and head cell of the capitulate 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 capitulate hyphopodia clavate, usually bent, ovate, angulose at times lobate, versiform, about 12-20 \times 9-19 μ m. - Mucronate hyphopodia mixed with capitulate 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 capitulate cell (Fig. 1, F) to produce a capitulate hyphopodium.

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

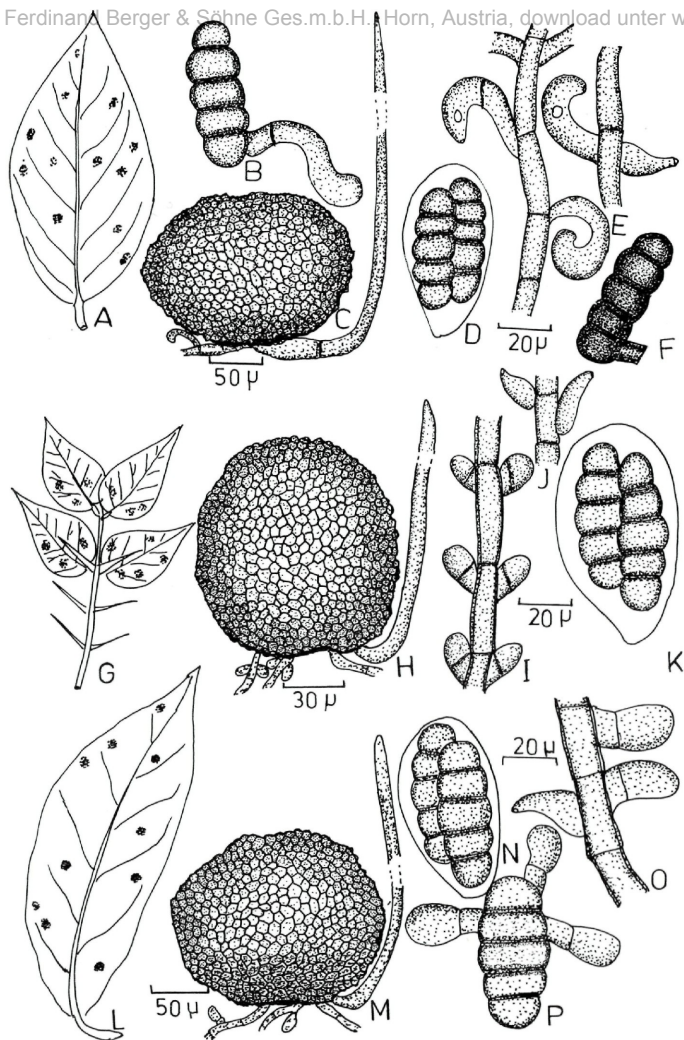


Fig. 1. A-F. *Meliola coilocosa* sp. nov.: A. Infected leaf of *Canthium dicoccum* (GAERTN.) MERR. - B. Germinating ascospore. - C. Perithecium with mycelial seta. - D. Ascus with two ascospores. - E. Hyphae with capitate and mucronate hyphopodia. - F. Ascospore.

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 μm cr., cellulis plerumque 18–34 μm longis, oppositis, remotissime ramosis. Hyphodiis capitatis oppositis, globosis, rotundatis vel angulosis, 15–18 μm longis, cellula basali cuneata, 5–6 μm longa. Hyphopodiis mucronatis conoideis vel ampullaceis, 14–20 \times 8.5–10 μm . Peritheciis dispersis, atris, globosis, usque ad 180 μm diam. Setulis laxis, 320–400 \times 9–10 μm , ad apicem acutis, stipitatis, simplicibus. Sporibus subellipsoideis, obtusis, 4-septatis, constrictis, 45–50 \times 13–16 μm . 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 μm . – Capitulate hyphopodia opposite, antrose, about 15–18 μm long. – Stalk cell of capitulate hyphopodia cuneate, 5–6 μm long. – Head cell of capitulate hyphopodia globose, entire or sometimes rounded-angulose, 10–12 \times 8.5–10 μm . – Mucronate hyphopodia few, mixed with capitulate hyphopodia, opposite or alternate, conoid to ampulliform, 14–20 \times 8.5–10 μm . – Perithecia scattered, globose, 180 μm in diameter. – Mycelial setae grouped around perithecia, few, simple, acute, septate, 320–400 \times 9–10 μm . – Ascospores subellipsoid, obtuse, 4-septate constricted at septa, 45–50 \times 13–16 μm .

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

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 μm . – 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.

The authors are indebted to Dr. M. S. BALAKRISHNAN, former Head of the Department, for his help and encouragement and to Dr. S. B. DAVID, Head of the Department, for the facilities.

References

- BILGRAMI, K. S., JAMALUDDIN & RIZWI, M. A. (1979). Fungi of India. Part I. – Today and Tomorrow's Printers & Publishers.
- BUTLER, E. J. & BISBY, G. R. (1931). The Fungi of India. – Sci. Monogr. Imp. Coun. Agric. Res. 1: 1–237.
- HANSFORD, C. G. (1961). Meliolineae, a monograph. – Beih. Sydowia, Ann. Mycol, Ser. II, 2: 1–806.
- THITE, A. N. (1973). Taxonomical, cytological and developmental studies of some Indian fungi. – Ph. D. thesis – Shivaji University, Kolhapur.
- VASUDEVA, R. S. (1960). The Fungi of India. – 552 pp. The Indian Council of Agricultural Research, New Delhi.

ZOBODAT - www.zobodat.at

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Sydowia](#)

Jahr/Year: 1983

Band/Volume: [36](#)

Autor(en)/Author(s): Nair Lizzie N., Kaul V. P.

Artikel/Article: [Indian Meliolineae: Two new species and a new variety of Meliola. 204-207](#)