

SHORT COMMUNICATION

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***Periconia chandoliensis* - A new microfungus from Western Ghats of India**

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Periconia chandoliensis sp. nov., collected on the leaves and stems of *Saccharum officinarum* L. from Chandoli National Park, Maharashtra, India is described and illustrated. This species is unique in its distinct proliferated and branched conidiophores.

Key words: Asexual fungi, biodiversity, branched conidiophores, proliferations

The Western Ghats or Sahyadri is a UNESCO World Heritage Site and is one of the eight hottest hotspots of biological diversity in the world. It is sometimes called the Great Escarpment of India (Anonymous, 2012). It has an exceptionally high level of biological diversity and endemism and is situated in the southern west coast of Indian peninsula and covers an area of about 1,60,000 km². The pristine natural forests, microhabitats, and tropical warm humid climate that prevail in the Western Ghats support many rare and new forms of fungi (Migon Piotr, 2010; Dubey and Moonambeth, 2013 a, b, c, 2014). Chandoli National Park is located between longitudes 73° 40' and 73° 53' E and latitudes 17° 03' and 17° 20' N near Sanghli in Western ghats of Maharashtra. It is located at the junction of the districts Sanghli Kolhapur, Satara and Ratnagiri and occupies an area of 317.67 km² (122.65 sq m) (Anonymous, 2008). During our ongoing surveys of foliicolous fungi in Chandoli National Park, Maharashtra, India an interesting hyphomycetes was collected from leaves of *Saccharum officinarum* L. The characters of their conidia and conidiogenous cells indicated they were appropriately placed in the genus *Periconia* but are not conspecific with any of the currently accepted species, therefore described as a new species (Ellis, 1971).

Samples of dried leaves were placed in paper and aluminium foil bags, taken to the laboratory, and prepared according to Castañeda–Ruiz (2005). Mounts were prepared in PVL (polyvinyl alcohol, lactic acid, and phenol), and measurements were made at different magnification. Photomicrographs were taken with the help of Nikon eclipse 50 i Microscope connected with Nikon DS– Fi 1 camera was used. Scanning Electron microscopic images were also captured captured by using Zeiss Scanning Electron Microscope Model EVO 18– 12 –97. The type specimen is deposited in Botanical Survey of India, Western Regional Centre, Pune with accession No. 134150 and the description has been deposited in Mycobank with no. MB814190 (Fig. 1,2,3).

Periconia chandoliensis sp. nov. Dubey
MycoBank: MB814190

Etymology – species named after the place of collection (Chandoli National Park, Maharashtra, India) where it was found.

Lesions brownish black on host tissues. Mycelium is superficial and is composed of 2.0 – 4.5 µm wide hyphae. The conidiophores stipe arise singly from the vegetative hyphae is erect, straight or slightly bent, unbranched or branched at the apex, brown, gradually becoming paler

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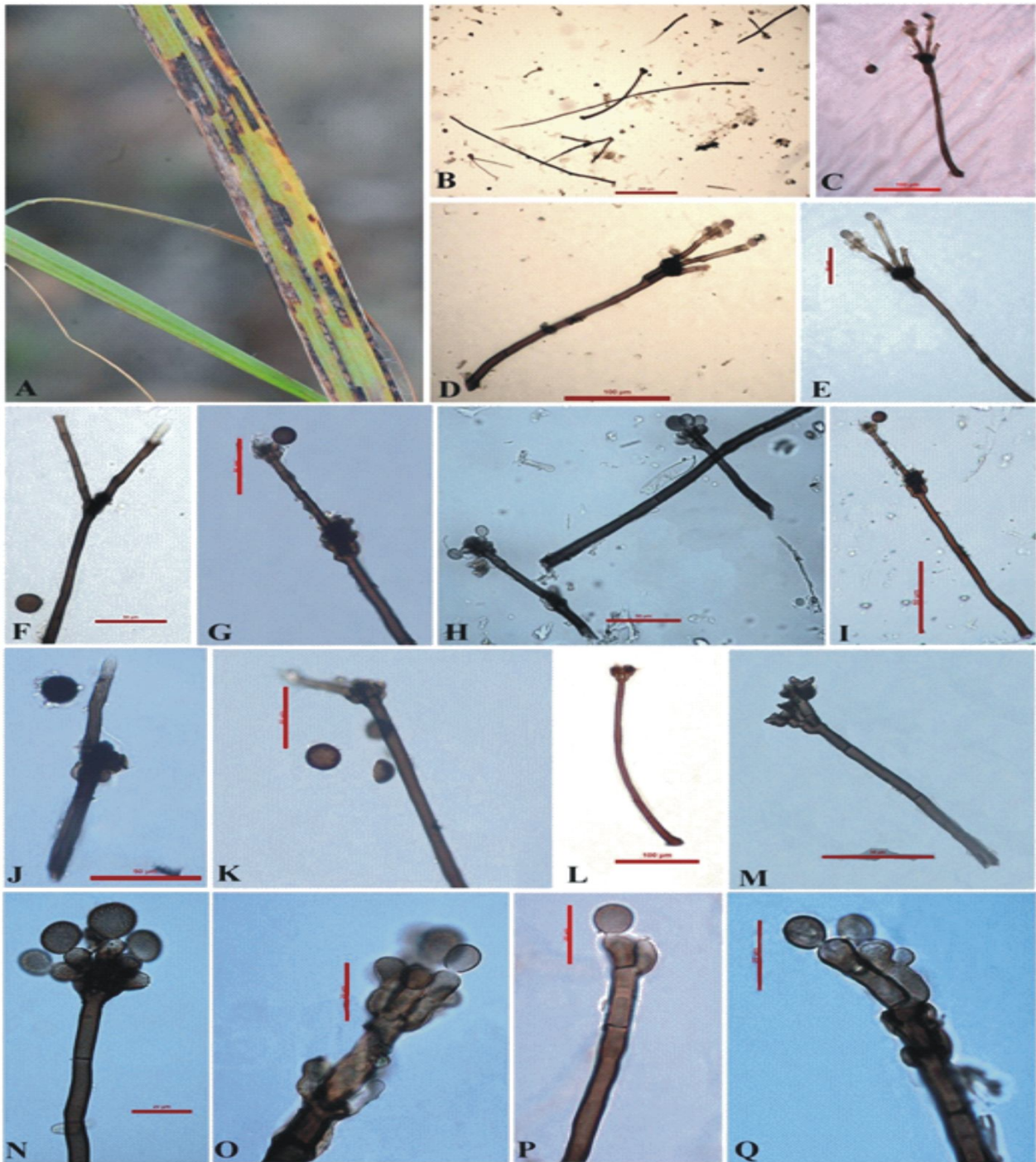


Fig. 1 : Microscopic images of *Periconia chandoliensis* sp. nov. A: Infected leaf of *Saccharum officinarum* L. B: Colonies.. C-K: Primary and Secondary conidiophores. L,M: Proliferations at the apical cell of primary conidiophoresw, N-Q: Conidiogenous cells and conidia. (Scale bar B= 200 μ m; C,D,L = 100 μ m; E-K,M = 50 μ m;N-Q = 20 μ m).

above, 3 – 5 septate, thick walled, smooth, up to 450 μ m long, 15 – 20 μ m broad at the base. The apex of ultimate cells of the primary conidiophores proliferates and which in turn again produces 2 - 3 secondary conidiophores. Secondary conidiophores up to 300 μ m long, smooth, brown, branched at the apex, which in

turn produces conidiogenous cells. Conidiogenous cells, monoblastic, discrete, ellipsoidal, 16.5 – 22 \times 6.0 – 8.0 μ m. The conidia are produced acropetally on conidiogenous cells in short chains of two or three globose to subglobose, verruculose, 0-septate, 18 – 22 μ m in diameter. Known distribution – Chandoli National Park,

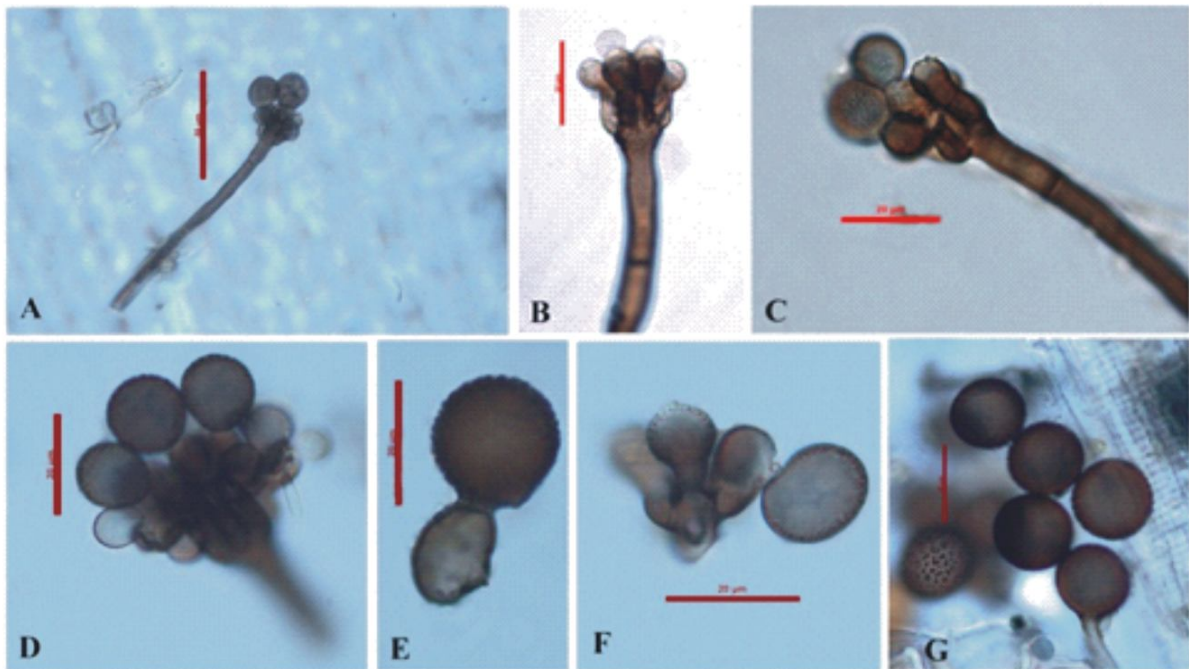


Fig. 2 : Conidiogenous cells and conidia of *Periconia chandoliensis* sp. nov. A-F: Conidiogenous cells and conidia. G: Conidia (Scale bar A = 50 µm; B-G= 20 µm).

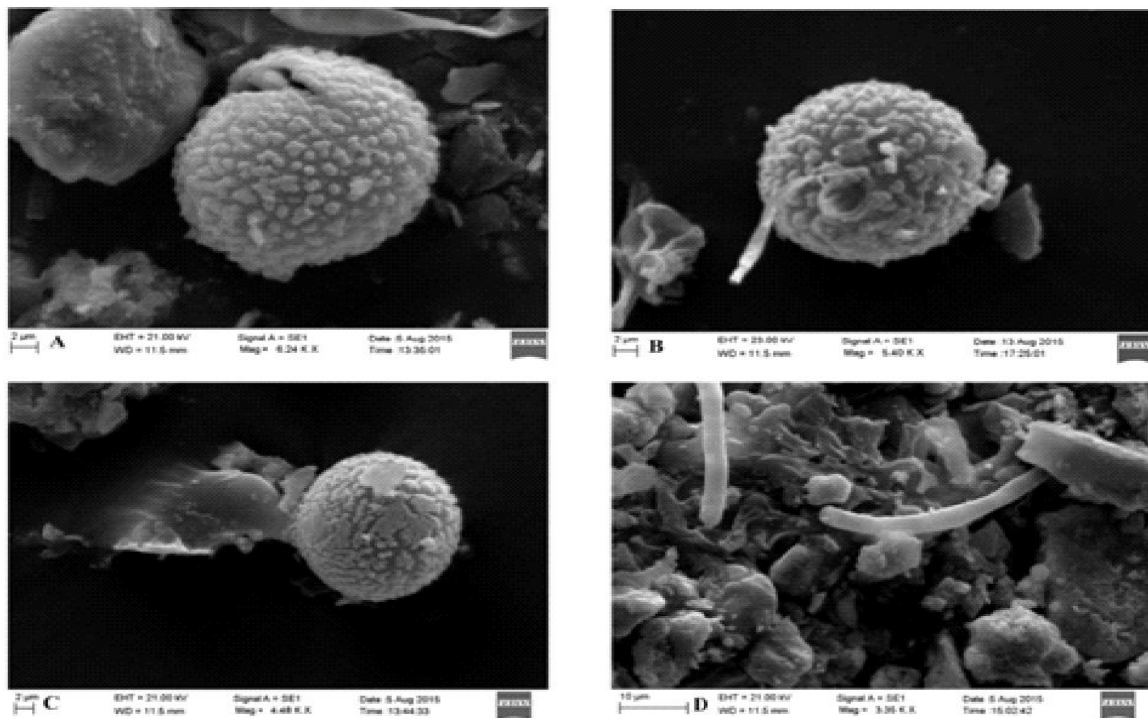


Fig. 3 : SEM images of *Periconia chandoliensis* sp. nov. A,B: Conidia. C: Conidiogenous cells and conidia. D: Conidiophores.

Maharashtra, India.

Material examined – India: Maharashtra, Chandoli National Park, dried leaves of *Saccharum officinarum* L. 11 Feb

2015, Rashmi Dubey, Accession No. BSI 134150.

Note: *Periconia* currently contains 185 valid species (Anonymous, 2016) and the criteria used

for species delimitation are primarily based on dimensions of conidiophores, conidiogenous cells and conidia. *P. chandoliensis* is distinct from earlier reported species in having primary conidiophores, which in turn after proliferation produces secondary conidiophores. There is a report of *P. sacchari* (Johnst, 1917) on *Saccharum officinarum* L. Poaceae), but the present taxon differs from *P. sacchari* in patterns of branching of conidiophores and dimensions of conidia and conidiophores.

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