

## *Pyrenopolyporus hunteri* - A new report to India

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### ABSTRACT

During exploration of *Xylariales* in forest regions of Chikkamagaluru District, we found *Pyrenopolyporus hunteri* being reported for the first time from India. The morphological description and photographs of stromata are provided based on collection.

**Keywords :** *Ascomycota*, diversity, *Hypoxylaceae*, Karnataka, taxonomy.

### INTRODUCTION

The family *Hypoxylaceae* belongs to order *Xylariales* (*Sordariomycetes*, *Ascomycota*). (Senanayake *et al.*, 2015; Dargan, 2016; Maharachchikumbura *et al.*, 2016). Majority of the *Hypoxylaceae* members are saprophytic, endophytic, symbiotic and pathogenic in nature. Earlier, the members of this family were classified under *Xylariaceae* (*Hypoxylodeae*) until detailed morphological, chemo-taxonomic and multi-loci phylogenetic studies were done (Daranagama *et al.*, 2018; Wendt *et al.*, 2018). *Hypoxylaceae* consists of 19 genera and *Pyrenopolyporus* is one among them. Globally, five species have been documented among them four species with molecular data (Hyde *et al.*, 2020). The characteristic features of the genus are massive stromata with vinaceous shades on the surface, long tubular perithecia, irregular ascospores and virgariella-like asexual morphs. During exploration of *Xylariales* in forest regions of Chikkamagaluru District, we found a species of *Pyrenopolyporus* viz., *P. hunteri*. Its description is presented based on morphological and microscopical studies. This is the first report of genus *Pyrenopolyporus* from India.

### MATERIALS AND METHODS

The studied specimen was collected from Dasarahalli village of Chikkamagaluru district, Karnataka and was brought to the laboratory in paper bags. The photographs of stromata were taken using a digital camera (Sony Cyber-shot). Macroscopic characters were examined under a stereomicroscope (Magnus). Microscopic features and measurements were made from slide preparations mounted in water, 10% KOH, and Melzer's reagent using compound microscope (Olympus CH20i). An herbarium specimen was deposited in Department of Botany, Kuvempu University, Shankaraghatta, Shivamogga, Karnataka, India.

### TAXONOMIC DESCRIPTION

*Pyrenopolyporus hunteri* Lloyd, *Mycol. Writ.* 5 (Letter 49): 705 (1917).

**Mycobank No. :** MB196536

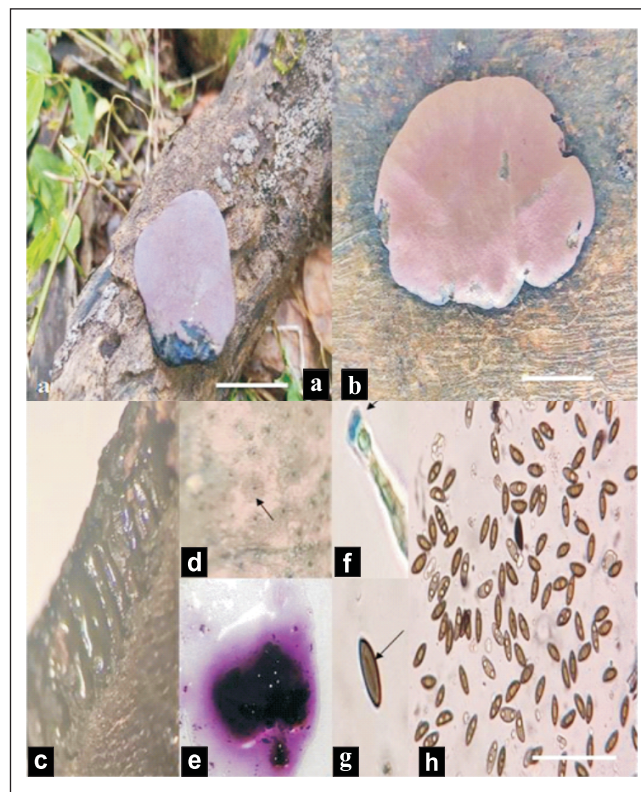
**Faces of fungi number :** FoF 02999

**Description :** Stromata shield-shaped, convex with crenate margins, plane, measures about 3-4 cm long 3-3.5 cm broad 0.5-1 cm thick. Surface brown with KOH- extractable pigment purple. Ascomata 0.2-0.6 mm diam. 1.2-1.8 mm

high, long tubular. Ostioles lower than the stromal surface and pointed. Asci fragmented, with J+ apical apparatus bluing in Melzer's reagent, discoid, 0.5-1.5  $\mu$ m high 2.0-2.7  $\mu$ m broad. Ascospores 10-12  $\mu$ m  $\times$  4.5-5.5  $\mu$ m, uniseiate, light brown to brown, ellipsoid-inequilateral with narrowly rounded ends with a straight germ slit less than spore-length. Perispore indehiscent in 10% KOH, episporium smooth.

**Habit and Habitat :** Grown on fallen bark of *Ficus racemosa* tree.

**Specimen examined :** India, Karnataka, Chikkamagaluru, Dasarahalli (13°23'14"N 75°45'12"E); Himani S. & Krishnappa M - 23 Sep 2020 (KUABHS-30).



**Fig. 1:** *Pyrenopolyporus hunteri* a) Stromata with substrate b) Close-up view of stroma c) Vertical view of stroma d) Stromal surface showing ostiole (arrow) e) KOH extractable pigment f) Apical ring bluing in Melzer's reagent (arrow) g) Ascospore showing short germ slit (arrow) h) Ascospores. Scale bars a-b = 3-4 cm, h = 10-12  $\mu$ m.

**CONCLUSION**

Genus *Pyrenopolyporus* possess similar macro morphological characters with genus *Daldinia* and *Hypoxylon* but differs in having virgariella-like asexual morph. It is also justified by chemotaxonomic and phylogenetic studies (Daranagama *et al.*, 2018; Wendt *et al.*, 2018). The morphological and microscopic characters of *Pyrenopolyporus hunteri* resemble with taxonomic description given by Wendt *et al.* (2017). Earlier records shows *hunteri* was recorded from Ghana, Argentina, Australia, Brazil and many more countries under different names. This is the first morphological record of the species from India.

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