



Poronia radicata Hembrom, A. Parihar & K. Das, A new record from Maharashtra State, India

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Abstract

Family Xylariaceae is represented from India by 187 species belonging to 12 genera till date. Genus *Poronia* Willdenow ex SF Gray was reported for the first time from Kolkata in 2013. During the present mycological exploration, the species *Poronia radicata* Hembrom, A. Parihar & K. Das, a coprophillous member of family Xylariaceae was collected and studied. This is the second report from the Indian sub-continent and first from state of Maharashtra, India. Thus, it makes a new report to the fungi of Maharashtra.

Keywords: Maharashtra; Mycotaxonomy; *Poronia*; Xylariaceae.

1. Introduction

The genus *Poronia* Willdenow ex SF Gray is a coprophillous member of Xylariaceae that encompasses small, black, nail-like fungi (Rogers, 1979). It is characterized by long, underground, branched, rooting base; terminally branched stroma; cup-shaped, stipitate, perithecia; upper surface of stroma membranous, carbonaceous-black; asci cylindrical, eight spored; sporidia ellipsoid, brown, fimicolous. The species was reported for the first time in India from Howrah (West - Bengal). Present work describes it for the first time from Maharashtra State.

2. Material and methods

Fresh material was collected during rainy season; preserved by drying in oven and in 4% formalin; detail structures and micro-photography was done using research microscope and routine laboratory techniques; photographs were taken using Nikon digital camera; material was deposited in National Fungal Culture Collection of India, ARI Pune, M.S. and accession number obtained; SEM were obtained from Physics Department, Shivaji University, Kolhapur.

3. Result

Poronia radicata Hembrom, A. Parihar & K. Das (Text Plate 1: Fig. a - e; Plate 1: Fig. a - g)

Ascstroma stipitate, simple or branched, upper fertile part is disc shaped, supporting stalk holds heads and underground rooting bases. Height of the stroma is upto 1.5 to 3.5 cm, fertile head is 2mm (-10mm) x 2 (- 6) mm. Ascstroma is glossy and crusty, black (like charcoal) on the outer side and whitish within. Upper surface of the fertile part is rough due to perithecial openings; after drying- black, crusty, sometimes wrinkled. Perithecia globose to slightly elongated, on the upper part of the peltate disc, sunken below the thin black crust, 400 (-700) x 300(-350) μ m.

Asci- eight spored 35 (-42) x 5 (-7) μ m arranged in uni-seriate manner, cylindrical, stipitate, spore bearing. Ascospores 7.5 x 5 μ m, hyaline to dark in colour, rounded germ pore is present. Paraphyses 80 (-150) x 3 (-5) μ m, hyaline and septate.

Habitat: On dung, Gargoti, Dist. Kolhapur, M.S., India, 10th August, 2014, Anjali R. Patil, deposited in National Fungal Culture Collection of India, ARI, Pune, A.M.H. No. – 9663.

4. Discussion

The genus *Poronia* Willd. ex Gray, was erected to accommodate the taxa with “black carbonous perithecia embedded in a white fleshy hemi- spherical or discoid stroma, borne on a long or short stipe” (Ahmad, 1946; Hembroom, et.al. 2013). *Poronia* differs from its allied genera *Xylaria* and *Podosordaria* by its stalked stroma with capitate to flattened disc with embedded perithecia (Dennis, 1957a and b; Rogers, 1979; Hembroom, et.al. 2013). *Poronia* is characterized by upright stipitate fruit bodies; fertile part in the form of capitate to flattened disc on stalked stroma; stromata simple or branched; perithecia embedded in fertile parts, elevations evident or lacking; asci stalked, cylindrical with well-developed apical ring becoming blue in Melzer’s reagent; ascospores light to dark brown, asymmetrical, one-celled or unequally two-celled due to presence of hyaline cellular appendage with a short to long conspicuous or inconspicuous germ slit (Dennis, 1957 a and b; Hembrom, A. Parihar and K. Das (2013) described a new species *Poronia radicata*, from Acharya Jagadish Chandra Bose Indian Botanic Garden, Howrah, West Bengal, India. This species is characterized by long underground branched rooting base, terminally branched stromata, capitate with an expanded and flattened stromatal disc, absence of paraphyses and apical germ pore (at maturity) and comparatively small sized ascospores with rounded apical germ pore. Its comparison with the present specimen corresponds well, hence described as *Poronia radicata* Hembrom, A. Parihar & K. Das. (2013). It makes a new record to the fungi of Maharashtra.

Text Plate.1: *Poronia radicata* Hembrom, A. Parihar & K. Das.

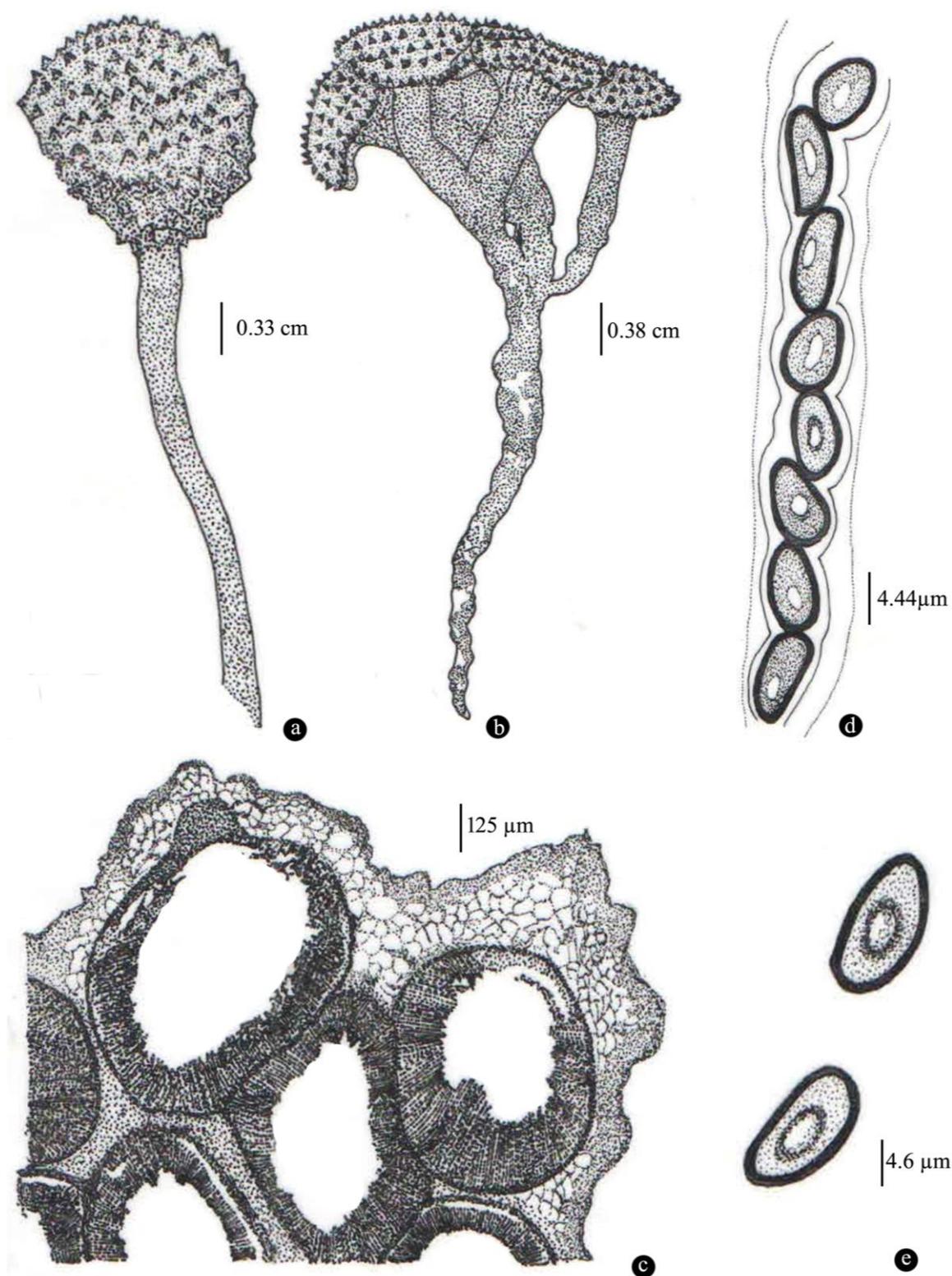


Fig. 1: a) Single Ascostroma. b) Branched Ascostroma. c) Perithecia. d) Ascus. e) Ascospore, Scale Bar=1 cm.

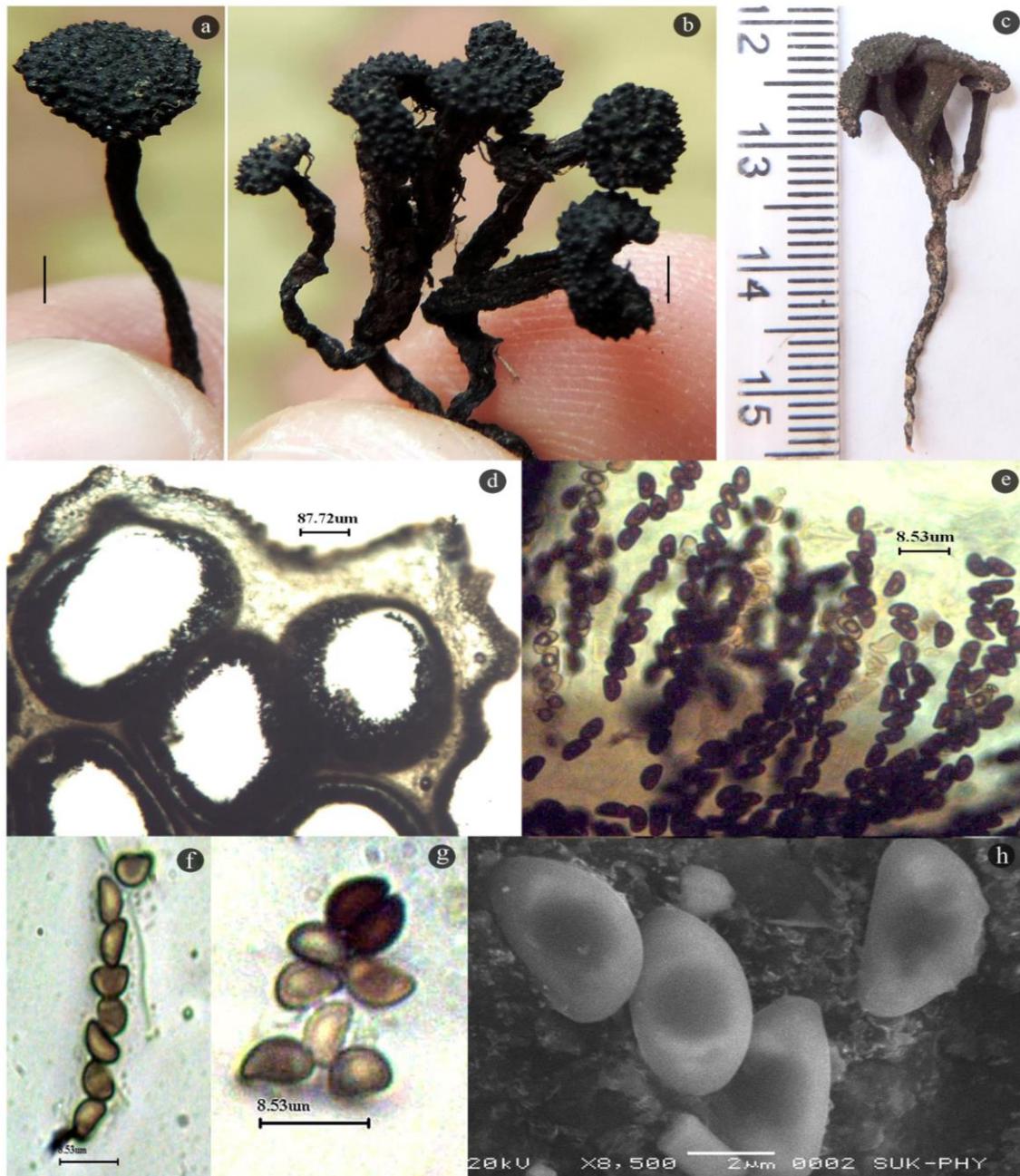
Plate no. 1: *Poronia radicata* Hembrom, A. Parihar & K. Das.

Fig. 2: (a-c) Single and branched Ascostroma, capitate head and rooting base. d) Papillate perithecia. e) Asci and Paraphysis inside the Perithecium. f) Single Ascus. (g-h) Ascospores. Scales a to c = 1 cm.

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