

**RESEARCH REPORT****A Rare Myxomycetes *macbrideola* from Amravati, Maharashtra****Hande DV\*, Suradkar KP and Kadu SR**

Department of Botany, Shri Shivaji Science College Amravati (M.S.) -444603, India.

\*Corresponding Author Email: [dvhande@gmail.com](mailto:dvhande@gmail.com)**Manuscript details:**

Received: 24 August, 2013  
 Revised: 04 December, 2014  
 Revised Received: 30 December 2013  
 Finally accepted: 15 January, 2014

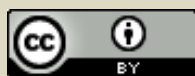
Date of publication (online):  
 30 March, 2014

ISSN: 2320-964X (Online)  
 ISSN: 2320-7817 (Print)

**Editor: Dr. Arvind Chavhan**

**Citation:** Hande DV, Suradkar KP and Kadu SR (2014) A Rare Myxomycetes *Macbrideola* From Amravati, Maharashtra, *International Journal of Life Sciences*, 2 (1): 93-95.

**Copyright:** © Hande DV, Suradkar KP and Kadu SR, This is an open access article under the terms of the Creative Commons Attribution-Non-Commercial - No Derivs License, which permits use and distribution in any medium, provided the original work is properly cited, the use is non-commercial and no modifications or adaptations are made.

**ABSTRACT**

In due course of mycological survey of Amravati District, many interesting fungi have been collected; among these a rare *Myxomycetes macbrideola* has been reported in present article. For their specific identification, morphological characters and dimension of various fruiting bodies were studied and compared with already described one. These collections proved to be distinct as such described here rare species. The Exsiccati of these fungi have been deposited in Ajrekar Mycological Herbarium of Agharkar Research Institute, Pune under their respective accession numbers. The present paper deals with description of *Macbrideola*.

**Key word:** Myxomycetes, *Macbrideola*, Amravati

**INTRODUCTION**

Myxomycetes have been known for their fruiting bodies since at least the middle of the seventeenth century, but most species tend to be rather inconspicuous or sporadic in their occurrence and thus not always easy to detect in nature. Most surveys for these organisms have focused on those species characteristically associated with coarse woody debris. The myxomycetes found in this microhabitat often occur in great profusion, typically producing fruiting bodies of sufficient size to be easily detected in the field (Martin and Alexopoulos, 1969; Stephenson *et al.*, 1999). Approximately 900 species are currently known (Lado, 2005–2010). *Macbrideola* is one of the important genus of Myxomycetes having the special characters like Sporangia typically minute, stipitate, peridium membranous, translucent, early evanescent or persistent, stipe hollow, tubular, typically translucent, often with a yellow base, extending into the sporangium as a columella, capillitium present or absent, when present, varying from a few short branches of the columella to a very open globose net, typically arising from the tip of the columella, spores dark in mass, pallid, brown, or violet brown by transmitted light.

**MATERIALS AND METHODS****Study area:**

During the mycological survey this Myxomycetes species was collected from the Pohara, region of Amravati district of Maharashtra state.

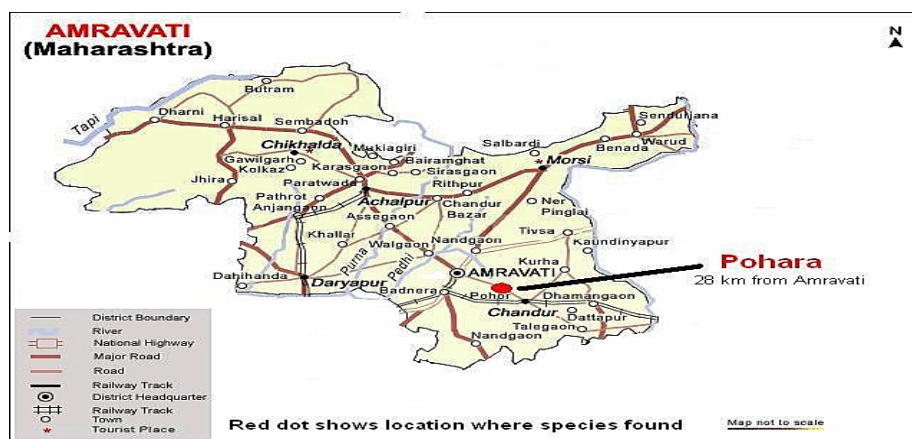


Fig. 1: Map showing location where present *Macbrideola* species was found

**Sampling method**

During mycological survey of Amravati district, the authors collected many interesting fungi, among various collections a rare Myxomycetes *Macbrideola* reported in this paper. The moist chamber cultures were prepared in the manner described by Harkonen (1981). For moist chambers, substratum pieces were placed on filter paper in Petri dishes, with the pieces touching but not overlapping each other and with the outer side of leaf upside. Distilled water adjusted to pH 7.0 was added to each culture. All cultures were maintained 2

months under diffuse daylight and at room temperature (22-23 °C). On five occasions (days 2, 6, 11, 21 and 40 after start) the chambers were checked with a high magnification dissecting microscope.

**RESULTS AND DISCUSSION**

Macroscopic and microscopic feature of the sample were determined in the laboratory. The morphological characters examined included fruiting bodies, shape, size and colour of spore, capillitium colour and branching and stalk colour.

**Table 1: Comparison with the other species of *Macbrideola*.**

Species name	Fructification (mm)	Sporangia (mm)	Spores (µm)	Author
<i>Macbrideola.cornea</i>	0.24-0.65	0.10-0.20	8.5-9.5	Lister & Cran (1967).
<i>M.decapillata</i>	0.18-0.66	0.05-0.13	7-9	Gilbert (1934).
<i>M.martinii</i>	0.5-0.6	0.08-0.15	6.5-7	Alexopoulos & Beneke (1952).
<i>M.scintillans</i>	0.22-0.35	0.09-0.22	8-9	Gilbert (1934).
<i>M.synspora</i>	0.35-0.95	-0.25	9.5-10.5	Alexopoulos (1958).
<i>M.macrospora</i>	0.3-2.0	0.12-0.3	12-14	Nannenga-Bremekamp (1991).

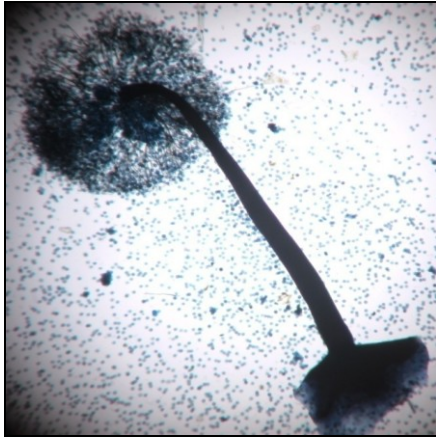


Fig. A

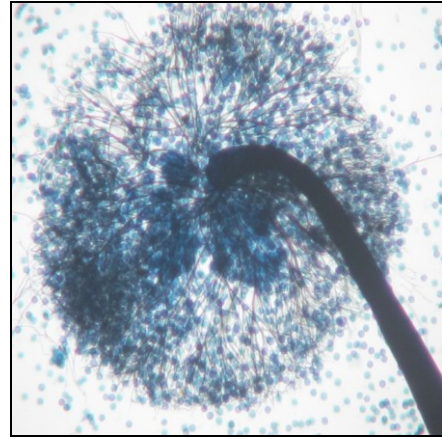


Fig.B

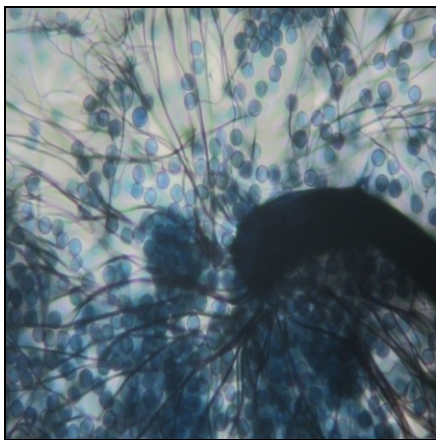
Fig. 2. (A-B) Shows growth of *Macbrideola* on dead leaf of *Ficus glomerata*. Roxb..



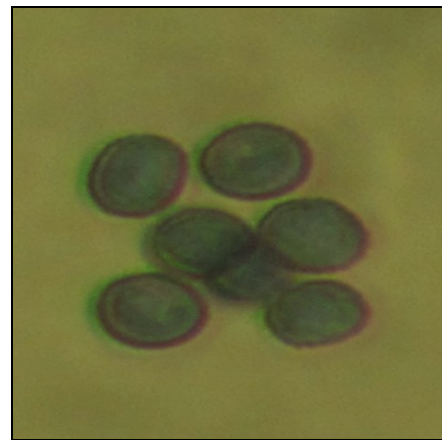
*Fructifications(sporangiate)*



*Sporangia*



*Capillitium arising from columella*



*Brown mass of spores*

Fructifications sporangiate, total height 0.74 - 0.86 mm, sporangia solitary, globose, scattered, dark brown, 0.1-0.2 mm in diameter stipe long, straight, slender, translucent, hollow, tubular, brownish yellow below, darker above, broad at base (0.06 mm) and tapering upward (0.01mm) arising from discoid hypothallus. Columella brown, cylindrical, marked by collar near sporangium where it meets stipe. Capillitium arising from main branches of columella, dichotomously forking branches turning in short, rigid, light brown branchlets. Spore brown in mass light brown in transmitted light, globose, 5.32 - 10.64  $\mu\text{m}$  in diameter. All these characters were compared with already described species (Table-1).

## CONCLUSION

From the description and comparison of the present *Macbrideola* species with other species, the author concluded that the present species is *Macbrideola macrospora*, which is a rare one and first time reporting from the Amravati region of Maharashtra.

## REFERENCES

- Alexopoulos CJ and Beneke ES (1952) New records of Myxomycetes of Michigan. *Papers of Michigan Academy of science, Arts and letters*, 38:3-7.
- Alexopoulos CJ (1958) Three new species of Myxomycetes from Greece. *Mycologia*, 50:52-56.
- Gilbert HC (1934) *Macbrideola scintillans*. University of Iowa Studies in natural history, 16:156
- Harkonen M (1981) Myxomycetes developed on litter of common Finnish trees in moist chamber cultures. *Nordic Journal of Botany*, 1(6):791-794.
- Lado C (2005-2010) An on-line nomenclatural information system of Eumycetozoa. <http://www.nomen.eu/mycetozoa.com>, accessed: 12.10.2011.
- Lister G and Cran (1967) Three new species of Myxomycetes, *Mycologia*, 59:112
- Martin GW, Alexopoulos CJ (1969) *The Myxomycetes*. University of Iowa Press, Iowa City.
- Nannenga-Bremekamp (1991) A guide to temperate Myxomycetes, *Nordic Journal of Botany*, 12(4): 500
- Stephenson SL, Landolt J, Moore D (1999) Protostelids, Dictyostelids and Myxomycetes in the litter microhabitat of the Luquillo Experimental Forest, Puerto Rico, *Mycological Research*, 103: 209-214.