

***Massarina Multiseptata* sp.nov, A New Lignicolous Ascomycetes from Maharashtra State, India**

Bhise K.M., P.G. Reddy*

Department of Botany, R.B.N.B.College, Shrirampur. Ahmednagar (M.S.)
413709

Email bhisekrishna7@gmail.com

*Research Centre in Botany, P.V.P.College, Pravaranagar. Ahmednagar (M.S.)
413713

Email: r_pgopal@yahoo.com

Abstract

The present paper describes a new lignicolous species .i.e *Massarina multiseptata* sp.nov collected from Kalsubai forest in the Western ghat regions of Ahmednagar district (M.S.).The Specimen were deposited at Department of Botany P.V.P.College, Pravaranagar (Loni).

Keywords: *Massarina*, Pseudothecia, Asci, Ascospores.

1 Introduction

The Western Ghat is one of the mega biodiversity hot spot regions in India. Bhandardara, Harishchandragadh, Kalsubai and Ghatghar regions dominated with deciduous and semi-evergreen forests lie in the Sahyadri mountain ranges which form a part of Western Ghats in Ahmednagar district of Maharashtra state. These areas are also rich in the diversity of fungal flora.

Lignicolous ascomycetes species was encountered in Kalsubai forest area on dead stem of *Zizyphus* sp. during Jan.2010. The morphological features of this fungus support its placement in genus *Massarina* Sacc., unusual multi-transverse septate ascospores surrounded by gelatinous sheath distinguishes it from other species of *Massarina* and therefore described and illustrated as new species.

1.1 Study area:

The area under the represents a varied panorama with respect to vegetation due to varied topographical and climatic conditions. It is located in between 190 2'and

2009' North latitude and 7009'and 7305'East longitude. They are wide spread over an area of about 48 sq.km. Being a part of the Western Ghats, Sahyadri mountain ranges forms three offshoots in Ahmednagar district namely Kalsoobai range, Baleshwar range and Harishchandragad range [1].Soil in the study areas is derived from basalt rock as a result of weathering under tropical and semi-tropical climatic conditions. Climate is monsoonal in character with alternate occurrence of moist rainy, cold winter and warm summer seasons. Temperature in summer ranges in between 24.9°C to 36.1°C and in winter season, it is 6.9°C to 9.6°C up to the end January.An average annual rainfall is 1578.8 mm. About 82% of the annual rainfall is received due to the south-west monsoonal winds. The forest areas in the district is 1431 sq km forest area comes under the direct control of forest department of Ahmednagar.

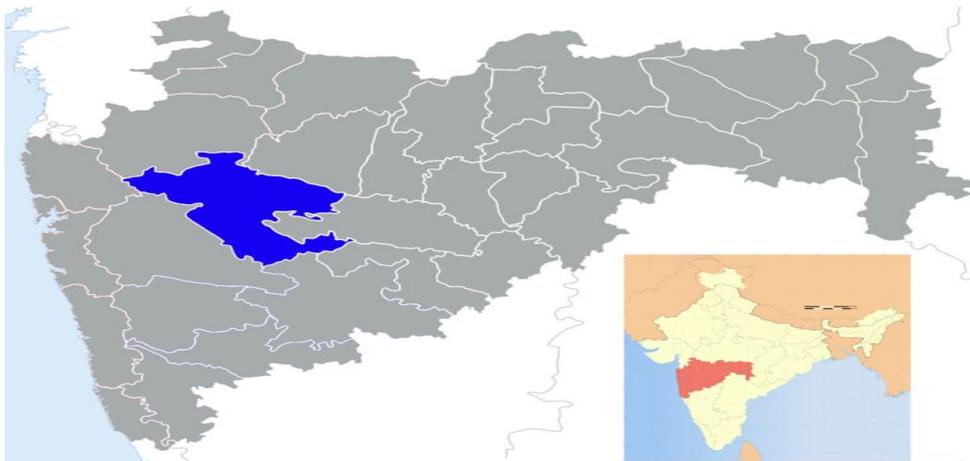


Fig1. Study area Map: Kalsoobai Mountain-Hill track

1.2 *Massarina multiseptata* Bhise and Reddy sp.nov

Pseudothecia aggregata sparsa sepratus, globosi to sub-globosi, immersa sparsa ostiolata Pseudothecial paries pseudoparenchymata brunneae metentes 350-380 X 155-200 μm . Paries lius ex pseudoparenchymata constatus atrobrunae ad nigrae, Asci bitunicati, clavati apice crassus octospori, ascospori ordinates irregularis in lateralis apicalis dimidio, asci metentes 190-195 X 15-17 μm . Ascospori hyalinae, septis numeroae transversis, ellipticae acuta apicae metentes 24-26 X 6-8 μm . Circumcintae vagina hyalinae utergur cellula rotundus. Pseudoparaphyse numerosae filiformes et hyalinae.

1.3 Taxonomy:

Pseudothecia spherical or hemispherical, which are irregularly scattered or aggregated, usually embedded in underlying tissues or erumpent. The wall of the ascocarp is made up of thick walled brown, polyhedral cells, which often form a clypeus. It measures about 350-380 X 155-200 μm . A simple pore is present which may be lined with small thick walled brown cells. This often forms dark, conical tissues. Asci bitunicate, thickened at the apex, short stalked, cylindrical to elongated, measures 190-195 X 15-17 μm , with mucilaginous sheath. Ascospores measures 24-26 X 6-8 μm . Hyaline fusiform, elliptical and straight or curved, pointed at tips, multiseptate, often surrounded by mucous sheath, which is sometimes evanescent. Pseudoparaphyses numerous, thin hyaline.

Since the morphological characters such as irregularly scattered spherical or hemispherical pseudothecia, multiseptate ascospores which are broader with hyaline pointed tips are different from known species, a new epithet "Multiseptata" has been proposed for the proposed new species.

2 Material Examined

Fungi is collected on dead stem of *Zizyphus* sp. during Jan. 2010 from Kalsubai forest of Ahmednagar district lying between 18° 2' and 19° 09' North latitude and 73° 09' and 75° 05' East longitude (M.S.) India.. Coll., K M. Bhise.

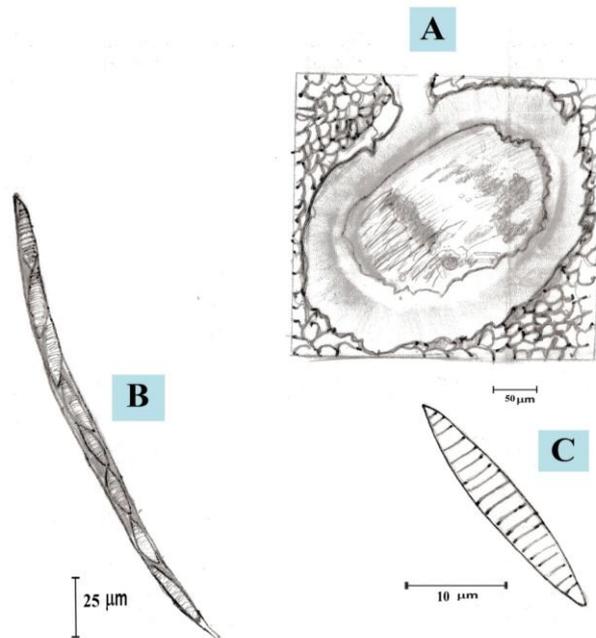
Acknowledgements

The authors are thankful to Dr. M.S. Patil (Retd.) Head, Department of Botany, Shivaji University, Kolhapur for confirming the identification of species. KMB is also thankful to U.G.C. for providing financial assistance under the faculty improvement programme.

References:

- [1] M.E. Barr, A classification of Loculoascomycetes Mycologia,71,(1979)935-57
- [2] S.K. Bose, Studies on Massarina Sacc. and related genera. Indian Phytopath. 41,(1961) 151-213.
- [3] P.M. Kirk, P.F.Cannon, J.C. David. and J.A.Stalpers, Ainsworth & Bisby's Dictionary of the fungi. 9th edn. CAB International, Wallingford, Oxn, UK (2001).
- [4] E.S Luttrell, Loculoascomycetes In:'The Fungi an Advanced Treatise'' IV.A Chapter 7:135-219. Edr. G.C. Aisworth et a., Academic Press, New York, (1973).
- [5] A. Munk, On Metasphaeria coccodes (Karst).Sacc and other fungi probably related to Massarina Sacc.(fam:Massarinaceae). Friesia,5,(1956)303-308.
- [6] B.V Srinivasulu.and P.G. Sathe, Genus Massarina from India. Sydowia 26, (1972)83-86.

Massarina multiseptata sp.nov.



A- Ascogonia Vts.
C- Ascospore

B- Ascus