International Journal of
Life Sciences
International Peer Reviewed Open Access Refereed Journal

Int. J. of Life Sciences, 2022; 10 (2): 171-174
ISSN:2320-7817(p) | 2320-964X(o)

Research Article Open Access

Xylaria chilai sp. nov. from Chilai lake at Shibla Forest District Yavatmal, MS, India.

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Manuscript details:

Received: 26.03.2022
Revised: 10.04.2022
Accepted: 18.06.2022
Published: 20.06.2022

Cite this article as:
Kamble Swapnil K, MA Shahezad, Ninad Dharkar (2022) *Xylaria chilai* sp. nov. from Chilai lake at Shibla Forest District Yavatmal, MS, India, *Int. J. of Life Sciences*, 10 (2171-174.

Available online on http://www.ijlsci.in
ISSN: 2320-964X (Online)
ISSN: 2320-7817 (Print)

ABSTRACT

The present paper deals with the new species of *Xylaria chilai* sp. nov. reported from Chilai lake at Shibla forest district Yavatmal (MS) India. During mycological survey authors have collected different varieties of fungal flora from various places of the Chilai lake area. Teak wood is dominant vegetation in this forest. Shibla forest is a deciduous forest exploring many diverse groups of saprobic fungi. In due course authors come across with the interesting member of ascomycetes fungi. Out of which *Xylaria chilai* sp. nov. is reported as new on the basis of taxonomic identification.

Keywords: Taxonomy, Stromata, Perithecia, Asci, Ascospore.

INTRODUCTION

Yavatmal district in Maharashtra is rich in mycoflora. The main aim of mycological collection was to explore the diversity of mycoflora in Shibla forest around the Chilai lake. Chilai lake is located in Zari Jamani Tehsil of Yavatmal district in Maharashtra. *Xylaria* is a genus of ascomycetous fungi commonly found growing on dead wood. Some species are endophytes in many tropical plants. Sacs like perithecia, cylindrical, paraphysate, octosporus ascii, uniseriated brown elliptical ascospores are the characteristic features of *Xylaria*. On the basis of host specificity and detailed taxonomical and comparative study of already known species the species in this paper reported as new species. The detailed description is mentioned as follows.

MATERIALS AND METHOD

The collected specimens were wrapped in butter paper and brought to the laboratory. Fine sections were made by using a sharp razor blasé

and stained in lacto phenol mixed with cotton blue. The slide preparation was studied microscopically and with the help of relevant keys and literature (Bilgrami *et al.,*1991, Jamaluddin *et al.,*2004, Koyani *et al.,*2016, Konta *et al.,* 2020, Becker and Stadler 2021, Wolfgang Hinterdobler *et al.,* 2021).The material was deposited at the Mycological Herbarium Agharkar Research Institute Pune, India.

RESULT

***Xylaria chilai* sp. nov (Plate 1,Fig 1: a, b, c, d)**

(Etym : On the locality Chilai lake)

Stromata 2.15-7.8 x 0.97-3.7cm stipitate, occurs in clusters with a broader middle part and narrow at both ends. Black sub-spherical perithecia immersed in stroma 55-72 x 23-54 µm. Asci cylindrical and long 27-55 x 1-3 µm octosporus. Ascospores dark brown or black smooth 4-6 x 1-3 µm.

Collection examined:

Chilai lake Shibla forest on dead twig of *Tectona grandis* L.(Fam: Verbenaceae) Dt.14/8/2016 by Swapnil Kamble AMH.No.10247.

Table 1; Comparative account of *Xylaria* species.

Species	Sromata	Perithecia	Ascus	Ascospore	References
X.tectonae Pande & Waingankar	10-20 x 3.5-5cm	250-850 x 175-375 µm	------	11.5-15 x 3.8-5.7 µm	Pande & Waingankar (2004)
X.anisoplura Mont.ex.fr.	2 x 0.5-1cm	600-800 x 450-550 µm.	160-200 x 6-8 µm.	24-32 x 6-8 µm.	Pande (2008)
X.gigantae (Zipp. & Lev.) Fr.	10-12 x 2-3 µm.	-------	150 x 9 µm.	20-23 x 7 µm.	Randive & Jagtap (2013)
X.axiferae Mont.	------	390-650 x 325-455 µm.	85.28-114.8 x 3.28-6.56 µm.	16.4-22.96 x 3.28-6.56 µm.	Hande & Hiwrale (2013)
X.pallida Berk & Cooke	-------	195-364 x 195-338 µm.	49.2-65.6 x 3.28 µm.	6.56-13.12 x 3.28 µm.	Hande & Hiwrale (2013)
X.beilschmiediae G.Huang *et al.*	12-15 mm	330-500 µm.	138-165 x 6-8 µm.	12-14 x 4-5 µm.	Gu Huang *et al.* (2014)
X.follicola Gu Huang *et al.*	23-35 x 1-2mm	400-650 µm	120-137 x 5-9 µm	9-11 x 4-6 µm	Gu Huang *et al.* (2014)
X.semiglobosa Gu.Haung et al.	3-9 x 4-14mm	600-900 µm	212-237x9-16 µm	22-25x 6-7 µm	Gu Huang *et al.* (2015)
X.sphaerica Gu Huang *et al.*	1.3-1.5x 1-1.5mm	540-600 µm	118-128x 7-12 µm	12-13x 5-7 µm	Gu Huang *et al.* (2015)
X.jiangsuensis Gu Huang *et al.*	3-7.5cm x 0.5-1mm	450-570 µm	104-110 x 5-7 µm	16.5-20 x 4-5 µm	Gu Huang *et al.* (2015)
X.nigripes(Klotsch) Sacc.	4-8 x 0.2-.0.5cm	-------	60-70 x 4-5 µm	5.5-9.0 x 1.0-2.38 µm	Debnath *et al* (2018)
X.mellisii (Berk) Cook	------	286-507 x 260-286 µm	65=89 x 3.28-6.56 µm	13.12-16.4 x 3.28-6.56 µm	Becerril & Navarrete *et a*l (2018)
X.conica Wangsawat *et al.*	1.5-2.5mm x 0.9-2.4cm	0.3-0.5 x 0.3-0.9mm	150-168 x 6.4-8.8 µm	10.8-12.3 x 4.5-6 µm	Wangsawat *et al* (2021)
X.minima Wangsawat *et al.*	4.7-7.5cm	0.2-0.4mm	49.5-60 x 4.2-5 µm	5.8-6.8 x 2.7-3.2 µm	Wangsawat *et al.* (2021)
X.sihanonthii Wangsawat *et al.*	2.7-6.6cm x 2-5mm	0.3-0.6 x 0.4-0.7mm	77-120 x 4.4-6.1 µm	7.5-9.5 x 3.5-4.5 µm	Wangsawat *et al.* (2021)
X.chilai sp.nov	2.15 -7.8 x 0.97-3.7cm	55-72 x 23-54 µm	27-55 x 1-3 µm	4.6 x 1.3 µm	Understudy

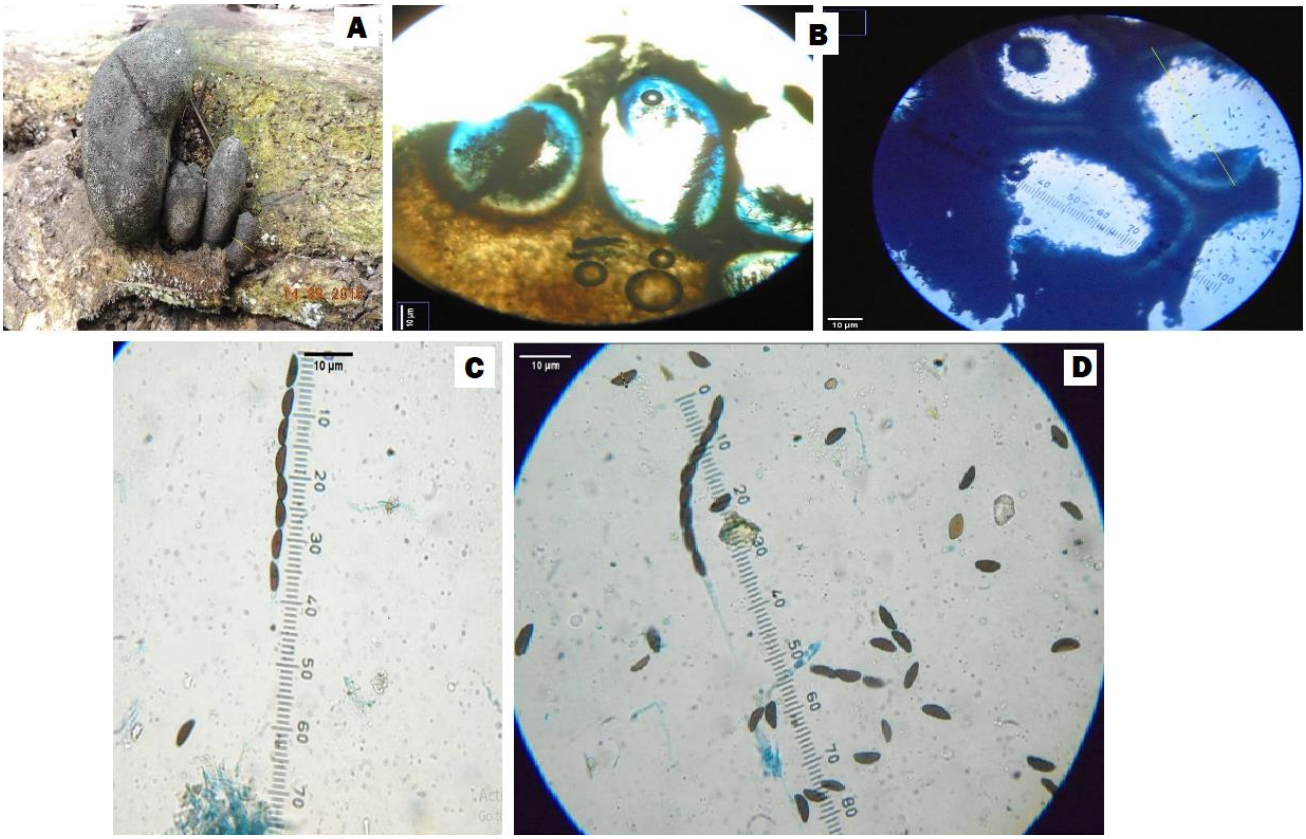

Plate :1 *Xylaria chilai* sp. nov. from Chilai lake at Shibla Forest District Yavatmal (MS) India. Plate 1.Fig. a) Habit b) Stroma & Perithecia c) Ascus with Ascospores d) Ascospores

CONCLUSION

Comparative taxonomic study of already reported species vide (Table-1) have shown that the stroma, perithecia, ascus and ascospores of the species understudy are smaller than existing species therefore treated as new species *X. chilai* sp. nov. and reported first time from Shibla forest.

Acknowledgement:
The author would like to express their deep thanks to Dr. S. K. Singh, Agharkar Research Institute Pune for their help

Conflicts of Interest: The authors declare no conflict of interest.

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