Journal on New Biological Reports **2**(3): 257-259 (2013) **ISSN 2319 – 1104 (Online)**

New record of *Torula herbarum* (Pers.) Link. on *Alternanthera sessilis* L.

Ramanuj Patel[1], Ajay Kumar Gond[1], A.K. Pandey[2] and Jamaluddin[1]

[1]*Department of Biological Sciences, R.D. University, Jabalpur (M.P.), India*
[2]*Chairman, MP Private Universities Regulatory Commission, Gyanbatika, Walmi Road, Bhopal, India*

(Received on: 28 February, 2013; accepted on: 22 April, 2013)

ABSTRACT

The present paper deals with a new record of *Torula herbarum* (Pers.) Link. on *Alternanthera sessilis* L. from India.

Key Words: *Torula herbarum, Alternanthera sessilis* L.*,* new record.

INTRODUCTION

Alternanthera sesslis L. is a problematic weed belonging to family Amaranthaceae. It is originated from tropical America but is now widespread in the tropics and subtropics of the world. It is perennial or under favorable circumstances a short lived annual plant, weakly erect with stems, or more commonly with lower stems with adventitious root at nodes, with many weakly erect branches, when inundate stems float lower stems may become partly hollow, may sometimes be tinged with purple longitudinal rows of hair on opposite sides of the stems, pubescent at nodes, bearing short petioles, leaves simple, opposite, sessile, variable in size and shape and small white flowers. During the survey in the winter season of 2008 – 2010 soyabean crop fields, Jabalpur, the authors found *T. herbarum* (Pers.) Link. caused disease on *A. sesslis.*

MATERIAL AND METHODS

The specimens were collected during winter sessions from Jabalpur, Madhya Pradesh, India. Microscopic slides were prepared in lactophenol and cotton blue stain. The mounted slides were examined under microscope and identification was based upto available relevant literature (Ellis 1971; Barnett and Hunter 1972; Subramanian 1952; Shrivastava 1964; Sarbhoy *et. al.* 1977; Agarwal & Sarbhoy 1984; Chatterjee & Sinha 1985; Rai 1976). The specimen have been deposited in the herbarium of the Mycological Research Laboratory, Department of Biological Sciences, R.D. University, Jabalpur, India, , under the accession no: FGCC# 374, HDBJ# RN-457, leg. R.N. Patel.

Corresponding author: ajaygond002@gmail.com

RESULTS AND DISCUSSION

The fungus has been recorded to develop black spots on dead stems, leaves and branches of *A. sessilis* in the winter season. In some cases its bark was removed as flecks and ultimately the exposed wood, penetrated by the fungus and caused decay. It forms effused colony which are discrete dark brown to blackish with velvety appearance. Its mycelium appeared superficial and immersed. The fungus caused decay of the soft wood of dead stem in branches of *A. sessilis*.

The colonies were variable in size, sometimes only a few mm diameter at others completely encircling stems and extending along them for several centimeters, olive when young and black when old, velvety (Fig.1A). Conidiophores micronematous or semi macronematous, straight or flexuous, 4.3 x 6-4 um thick except for the conidiogenous cells (Fig.1B). Conidia straight or slightly curved, more or less cylindrical, rounded at the ends, pale olive to brown, verruculose or finely echinulate, mostly 4-5 septate, strongly constricted at the septa, 12.9-17.3 x 4.3-6.4 um in size (Fig.1C).

T. herbarum (Pers.) Link. is considered to be a most cosmopolite fungus, is abundantly colonized on a variety of substrates in different parts of plant. This fungus has been commonly reported and developed saprophytic colonization in dead leaves, stems and branches. Agarwal & Sarbhoy (1984) reported this fungus on dead leaves and twings of *Phoenix dactylifera* from Rajasthan and Rao & Verghese (1980) reported on dead stem of *Polygonum* sp. from Kerala. It is also reported from soils (Agnihothurudu 1959). Sharma & Nema (1990) reported this fungus on dead stems of *Dolichos lablab* and *Thumbergia grandiflora* from

Figure 1: (A) *Torula herbarum* (Pers.) Link. on dead stem of *Alternanthera sessilis* L.; (B) Conidiophores with conidia (400X); (C) Figure 3: Conidia (400X).

Jabalpur. A review of literature (Bilgrami *et al.* 1991; Jamaluddin *et al.* 2004) indicated that *T. herbarum* (Pers.) Link. has not been reported on *A. sessilis*. Hence, this is a new record from India.

ACKNOWLEDGMENT

Authors are thankful to Head, Department of Biological Sciences, R.D. University, Jabalpur for providing laboratory facilities.

REFERENCES

Agarwal DK and Sarbhoy AK 1979. Studies on Dematiaceous hyphomycetes from India-V. Ind Phytopath 32: 633-634.

Agarwal DK and Sarbhoy AK 1984. New host records from dematiaceous hyphomycetes. Ind Phytopath 37: 586.

Agnihothurudu V 1959. Fungi isolated from rhizosphere-V. J. Madras Univ. 29: 155-181.

Barnett HL and Hunter BB 1972. *Illustrated genera of Imperfect Fungi.* Burgess Publishing Company.

Bilgrami KS, Jamaluddin and Rizwi MA 1991. *Fungi of India list and references,* Today and Tomarrow's Printers and Publishers. New Delhi. 499pp.

Chatterjee AK and Sinha MP 1985. Isolation of fungi from slime flux of some commercially importanat trees. Ind Phytopath 38: 372-374.

Ellis MB 1971. *Dematiaceous Hyphomycetes,* C.A.B. Common Wealth Mycological Institute, Kew Surrey, England.

Jamaluddin, Goswami MG and Ojha BM 2004. *Fungi of India* (1989-2001), List and references. Scientific Publishers, Jodhpur (India) 150pp.

Rai B 1976. Study of fungi on decaying leaves of *Saccharum munja* by differential washing technique. Pl Soil 44: 233-236.

Rao VG and Mani Verghese KI 1980. Fungi imperfecti from kerela, India-III. Biovigyanam 6: 167-172.

Sarbhoy AK, Agarwal DK and Varshney JL 1977. Dematiaceous hyphomycetes from India-III. Ind Phytopath 30: 574-575.

Sharma ND and, Nema S. 1990. New host records of fungi from India. Ind Phytopath 43(3): 477-481.

Shrivastava HC 1964. Some leaf spot fungi. Proc. Nat Acad Sci India 34(B): 188-196.

Subramanian CA 1952. Fungi imperfecti from Madras-I. Proc Nat Acad Sci India 36: 43-53.