

## Seven Species of *Curvularia* Isolated from Three Lakes of Bhopal

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### Abstract

A water borne Conidial fungi *Curvularia* were isolated from Sarangpani lake, Shahpura lake and Lower lake of Bhopal. Seven species were isolated during investigation period. They are *Curvularia clavata*, *C. intermedia*, *C. lunata*, *C. pallescens*, *C. prasadii*, *C. robusta* and *C. senegalensis*.

### Introduction :-

Bhopal the capital of Madhya Pradesh had a large number of water bodies. It is mainly famous as 'Lake City' for its various natural as well as artificial lakes. These lakes do not only fulfil the need of drinking water supply, household activities and fish culture but also increase the scenic beauty of the city. However, these water bodies are under great environmental stress due to pollution from various sources. Present paper deals with seven species of *Curvularia* belonging to order Moniliales, group Deuteromycotina. Species of *Curvularia* isolated from Sarangpani lake, Shahpura lake and Lower lake, are *Curvularia clavata*, *C. intermedia*, *C. lunata*, *C. pallescens*, *C. prasadii*, *C. robusta* and *C. senegalensis*.

Bilgrami *et. al.* (1985)<sup>-3</sup> isolated *Curvularia pallescens* during his work on ecology of river Ganges. Mishra (1985),<sup>-8</sup> Shukla (1988)<sup>-11</sup> and Nair (2001)<sup>-9</sup> reported *Curvularia lunata* in various fresh water streams and lakes, Goa.

Chauhan (1990)<sup>-4</sup> reported *Curvularia intermedia*, *C. lunata*, *C. pallescens* and *C. senegalensis* in Narmada river at Hoshangabad. Pandey (2005)<sup>-10</sup> reported *Curvularia lunata* and *C. pallescens* from Upper lake of Bhopal. Singh (2008)<sup>-12</sup> reported *Curvularia lunata*, *C. pallescens* and *C. senegalensis* from Lower lake of Bhopal.

### Material and Method

Collection of samples, isolation and preservation of fungi were done with the help of methods described by Webster and Descals (1981)<sup>-13</sup> and Agrawal and Hasija (1986)<sup>-1</sup>. Identification of fungi was done with the help of descriptions given by Gilman (1959)<sup>-7</sup>, Ellis (1971, 76)<sup>-5,6</sup> and Barnett and Hunter (1972)<sup>-2</sup>.

### Description

Colonies effuse, brown, grey or black, hairy, cotton or velvety. Conidiophores macronematous, mononematous, straight or flexuous, often geniculate, brown, usually smooth. Conidia solitary, simple, often curved, clavate, ellipsoidal, broadly fusiform, obovoid or pyriform with 3 or more transverse septa.

#### *Curvularia clavata* Jain. Fig.1

Colonies effuse, dark grey, velvety. Conidiophore macronematous, mononematous, brown. Conidiogenous cell polytretic, integrated, terminal sympodial. Conidia simple, straight, symmetrical, clavate usually with 3 transverse septa with paler end cells. Septa truly median, 17-25 X 7-11 μm thick; hilum not protuberant.

#### *C. intermedia* Boedijn Fig.2

Conidia with hilum, scarcely or not at all protuberant, conidia remain smooth walled, conidia predominantly 3 septate, middle septum usually zonate; mycelium branched, septate, conidiophore long, conidia elliptic curved, septa 2-3, middle cell broad and darker than other cell, middle septum not median, smooth, 18-32×8-16 μm thick; hilum not protuberant.

#### *C. lunata* var *aeria* Fig. 3

Conidia elliptic, curved, 2-3 septa. Size - length 18-32 μm, 8-16 μm thick.

#### *C. pallescens*, Boedijn Fig.4

Conidia with hilum scarcely or not at all protuberant, conidia remaining smooth walled predominantly, 3-septate middle septum not median. All conidial cell usually pale or very pale brown. Conidia usually straight or slightly curved, 17-32×7-12 μm thick.



**Fig.1** *Curvularia clavata*



**Fig. 2** *C. intermedia*



**Fig. 3** *C. lunata*



**Fig. 4** *C. pallescens*



**Fig. 5** *C. prasadii*



**Fig. 6** *C. robusta*



**Fig. 7** *C. senegalensis*

***C. prasadii* R. L. and B.L. Mathur Fig.5**

Conidia with hilum scarcely or not at all protuberant. Conidia remaining smooth walled, 3-4 septate, thick walled, 25-40×12-17 µm thick.

***C. robusta* Kilpatrick and luttrell Fig. 6**

Conidia with hilum scarcely or not at all protuberant remaining smooth walled, conidia predominantly 4 septate, conidia uncinuate, conidia averaging over 45µm long, over 20µm thick.

***C. senegalensis* (Speg.) Subram. Fig. 7**

Conidia with hilum scarcely or not all protuberant, conidia remaining smooth - walled conidia predominantly 4 and septate, conidia not uncinuate. Conidia averaging 24 µm long, 19-30 × 10-14 µm thick.

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