



**ACHLYA: FIRST REPORT FROM WATER BODIES OF PACHMARHI DISTRICT  
HOSHANGABAD (M.P.) INDIA.**

**Ajaz Ahmad<sup>1\*</sup>, Ranjana Singh<sup>1</sup>, Suman Trivedi<sup>2\*</sup> and Sheikh Sayir<sup>2</sup>**

<sup>1\*,2</sup>Research Scholars Deptt. of Botany, Govt. MVM College Bhopal.

<sup>1</sup>Asstt. Professor Deptt. of Botany, Govt. MVM College Bhopal.

<sup>2\*</sup>Prof. and Head Deptt. of Botany, Govt. MLB girls P.G. (Auto.) College, Bhopal.

**Corresponding Author: Ajaz Ahmad**

Research Scholars Deptt. of Botany, Govt. MVM College Bhopal.

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**ABSTRACT**

Four species of *Achlyaviz. A. oblongata, A. oryzae, A. dubia, & A. caroliniana*, belonging to order Saprolegniales, family Saprolegniaceae and group Mastigomycotina were isolated from the water bodies of Pachmarhi District Hoshangabad (M.P.) India.

**KEYWORDS:** New record, Pachmarhi, Lotic water, Aquatic fungi, taxonomy.

**INTRODUCTION**

Pachmarhi is a hill station in Madhya Pradesh state of central India, situated at a height of 1100 m in a valley of the Satpura Range in district Hoshangabad. It was established by the Indian government and EPCO as a biosphere on March 3rd, 1999.

Aquatic fungi are those fungi which require aquatic environment to complete their life cycle. Fungi are important component of food chain and can colonize almost all the non-living organic matter. Though they are chiefly decomposers and play an important role in dissipation of energy and release of nutrients. Present study deals with 4 species of *Achlya* viz. *A. oblongata, A. oryzae, A. dubia, A. caroliniana*, belonging to order Saprolegniales, family Saprolegniaceae and group Mastigomycotina. Srivastava & Srivastava, Chowdhry & Aggarwal, Hasija & Khan, Khulbe and many other workers had reported *Achlya* species from different parts of the world. These species were reported first time from the water bodies of Pachmarhi District Hoshangabad M.P. India.

**MATERIALS AND METHODS**

- ▶ **COLLECTION:** Water samples including scum, foam, decaying leaves etc were collected monthly in the open bottles or plastic canes.
- ▶ **ISOLATION:** Various baiting materials previously sterilized by autoclaving are added in the petridishes, are incubated. A pinch of antibiotic is added to petridishes, to prevent from bacterial contamination. After 3 to 4 days, bait infected with the desired fungi are observed under the compound microscope.

- ▶ **IDENTIFICATION:** Identification of aquatic fungi was done with the help of manuals, monographs and published work of some eminent scientists like Coker and Mathew (1937), Hamid (1942), Sparrow (1942,1960), Johnson (1956), Coker (1923,1979), Srivastava and Srivastava (1977), Chowdhry and Agarwal (1980), Misra (1982), Khulbe, R.D. (2001).
- ▶ **PRESERVATION:** Preservation of fungal culture was done in the 1:1:1 ratio of formalin, alcohol, acetic acid.

**RESULTS AND DISCUSSION**

- ▶ ***Achlya oblongata*** de Bary (Fig.1):- Mycelium stout and branched, gemmae present, zoospores discharge achlyoid, spores 12.5µm in diameter, oogonia abundant, large, borne laterally on main branch, oblong to subspherical 50-62.5µm smooth wall, oospores 7 in number, subcentric 25µm diameter.
- ▶ ***Achlya oryzae*** Ito et Nagai (Fig.2,3):- Main hyphae moderately stout, branched, 25µm in width, zoosporangia abundant 62.5µm in length and 37.5µm in width, gemmae and oogonia abundant, oogonia spherical 62.5µm in diameter, oogonia wall thin, smooth, oospores spherical, eccentric, 1-5 per oogonium 25µm in diameter.
- ▶ ***Achlya dubia*** Coker (Fig.4,5):- Hyphae stout 37.5µm thick, zoosporangia abundant, long, zoospores 12.5µm, oogonia many, not pitted 25µm in size, antheridia declinuous sometimes monoclinal, oospores eccentric, spherical 4-5 in number 30µm in diameter.
- ▶ ***Achlya caroliniana*** Coker (6,7,8):- Hyphae stout, zoosporangia cylindrical 37.5µm in diameter, encysted spores 12.5µm in diameter, oogonia

abundant 62.5µm in thick, spherical, smooth wall, not pitted, antheridia absent, oospores 1-2, 25µm in diameter, eccentric.

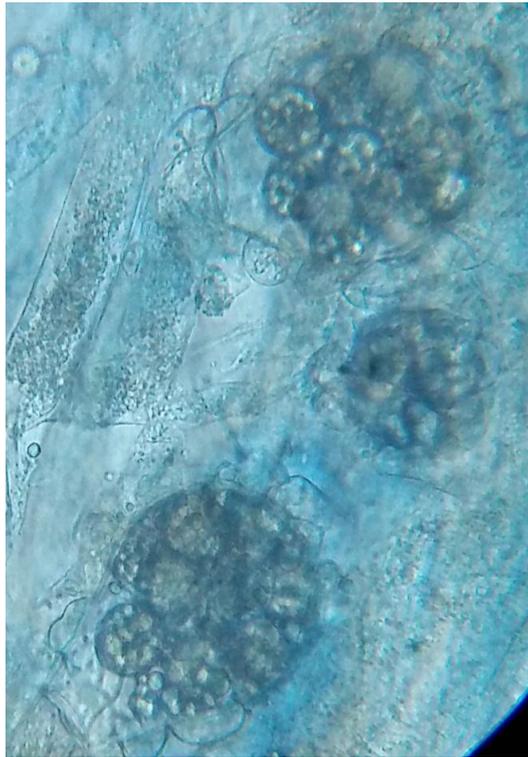


Fig 1.

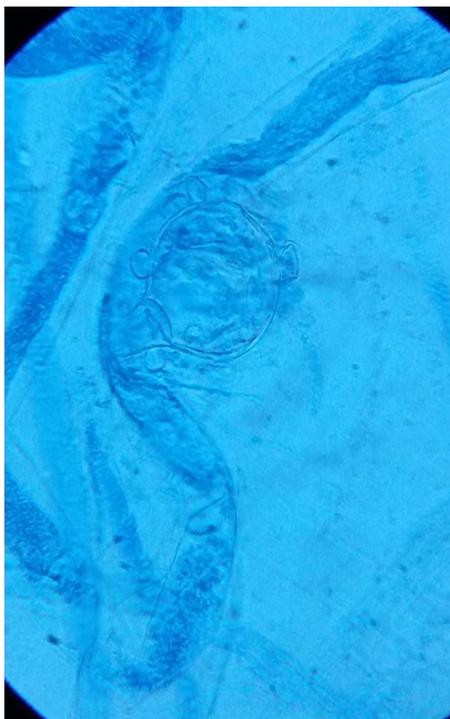


Fig. 2



Fig. 3



Fig. 4



Fig. 5

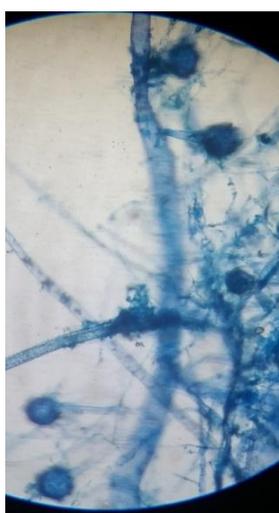


Fig.6



Fig.7



Fig.8

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