

ISOLATION OF *PYTHIUM* FROM LOWER LAKE OF BHOPAL¹*Bindu Nahar, ²K. W. Shah and ³Ranjana Singh¹Research Scholar and Asst. Professor of Gandhi P.R. College, Bhopal, (M.P) India.²Principal and Professor of Govt. P.G. College, Pipariya, (M.P) India.³Professor of Govt. M.V.M, Bhopal, (M.P) India.

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ABSTRACT

Madhya Pradesh is situated in the central part of India. Bhopal is the capital of Madhya Pradesh and also popular as City of Lakes. For study four sampling sites were selected in surrounding area of Lower Lake. This paper includes seven species *Pythium aphanidermatum*, *Pythium debaryanum*, *Pythium dissotocum*, *Pythium echinulatum*, *Pythium middletonii*, *Pythium proliferum* and *Pythium mamillatum* were reported from soil and water of Lower Lake.

KEYWORDS: *Pythium*, Lower Lake.**INTRODUCTION**

Lake ecosystem is an ideal home for biological activities of aquatic phycomycetes. *Pythium* is isolated during the investigation period March 2017 to February from Lower Lake of Bhopal. Exceptional advance work done by many investigators including Butler(1907),Coker and Patterson(1927),Drechsler (1930), Middleton (1943) and other. Present work explain systematic account of seven species of *Pythium*.

DESCRIPTIONS OF SPECIES**1. *Pythium aphanidermatum*** (Edson).Fitzpatrick Mycologia **15** (4): 168,20,July 1923.

A Manual of soil Fungi, p. 155, 1967.

(Plate 1, Fig. 1; Plate 2, Fig. 1).

Mycelium white, aseptate hyphae 6.2 μm in diameter; sporangia filamentous inflated mass, of branches; Oogonium terminal, smooth spherical, 20 μm in diameter; antheridia terminal usually monoclinal; Oospore thick walled, single, spherical, aplerotic 17.5 μm in diameter.

2. *Pythium debaryanum* (R.Hesse)

Inaug.Diss,Halle:14-34 (1874).

A Manual of soil p. 158, 1967.

(Plate 1, Fig. 2; Plate 2, Fig. 2).

Mycelium with abundant branching, short side branches thread like and curved. Sporangia always spherical terminal; Oogonia spherical and terminal on short side branch, smooth wall, 29.7 μm in diameter; antheridia stalked, not much swollen, straight, Oospore aplerotic, with a small eccentrically placed vacuole, 17.16 μm in diameters.

3. *Pythium. dissotocum* Drechsler.

J.Wash. Acad .20:398-418,1930.

Ind. Phyto.34: 234-236,1981.

(Plate 1, Fig. 3; Plate 2, Fig. 3).

Hyphae slender, coenocytic, hyaline 2.5 μ in diameter; Sporangia filamentous undifferentiated from vegetative mycelium; Oogonia in chain, terminal, 25 μ in diameter occasionally with papilla; Oospore not completely filling the oogonium. 16 μ in diameter; Antheridia usually monoclinal, rarely diclinal or androgynous.

4. *Pythium echinulatum* Matthews.

Studies on the genus Pythium,p. 101-103(1931)

Gilman,p.160 (1957);Waterhouse,p.25(1967);Watanabe,p.69(2002)

Description of Fungi,p.361-362.

(Plate 1, Fig. 4; Plate 2, Fig. 5).

Mycelium well developed, white branched 6.3 μm thick; Sporangia spherical to cylindrical 23 μm in diameter; Oogonia terminal or intercalary, spherical to cylindrical, 25 μm long with 16 μm in diameter with well define protuberances; antheridia hypogynous; Oospores aplerotic, one in each Oogonium 19.8 μm in diameter.



1



2



3



4



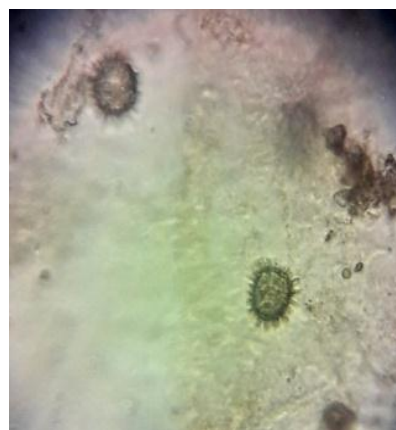
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6



7



8

PLATE -1

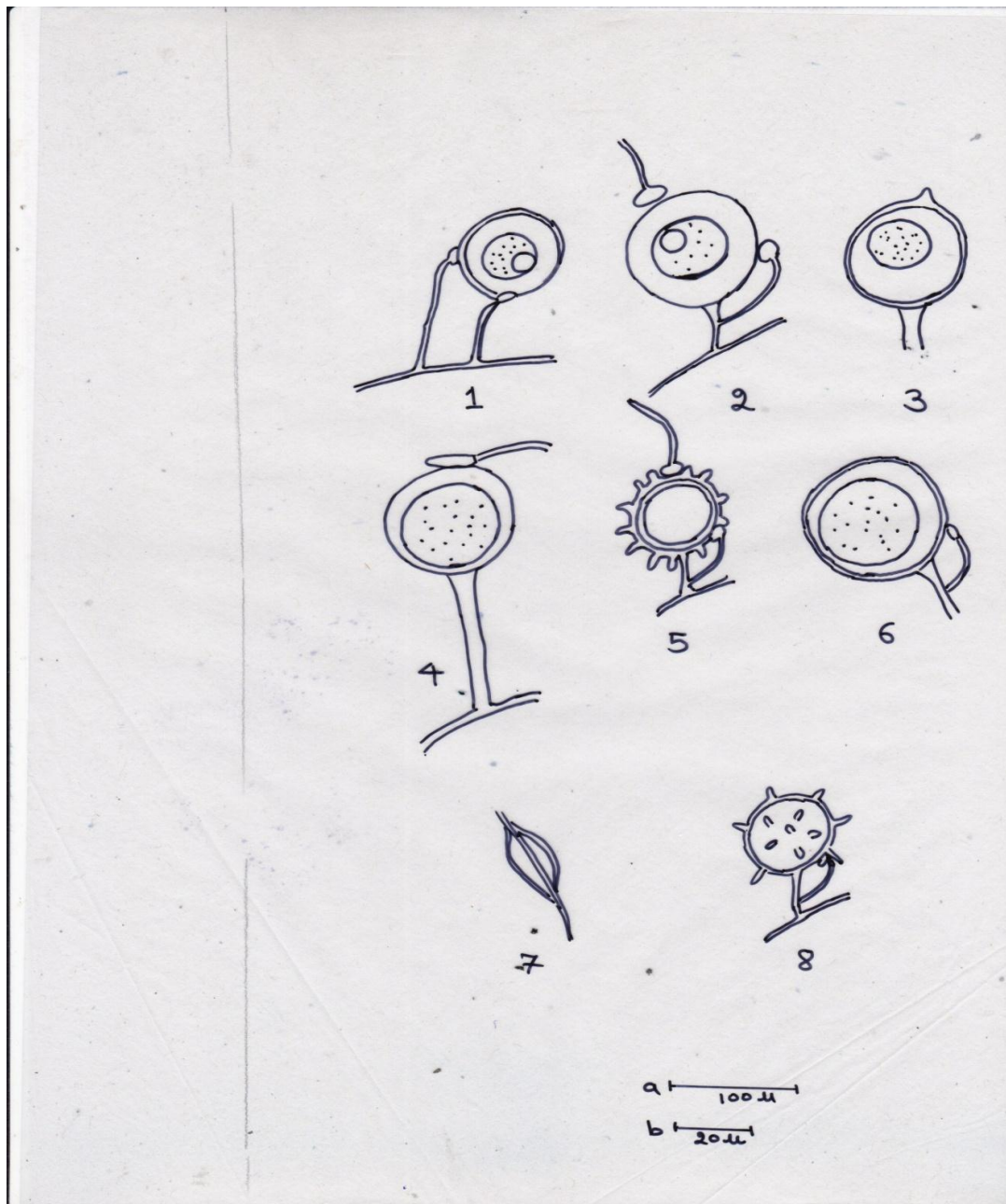


PLATE -2

5. *Pythium middletonii* Sparrow, Aquatic Phycomycetes.

Univ. of Michigan, Press, p.1038, 1960.

(Plate 1, Fig 5; Plate 2, Fig. 4).

Mycelium abundant, branched, coenocytic, hyaline; Sporangia spherical to ovoid, proliferating; Oogonia abundant spherical, smooth terminal 30 μm in diameter; antheridia 1-3 per Oogonium, hypogynous, typically monoclinal; Oospore aplerotic, single 22 μm in diameter.

6. *Pythium proliferum* de Bary.

A Manual of Soil Fungi p.156, 1967.

(Plate 1, Fig. 6,7; Plate 2, Fig. 6, 7).

Hyphae uniform 5.5 μm broad: sporangia terminal, spherical 32 μm in diameter, a short tube of discharge opposite stalk; Oogonia terminal 29.5 μm in diameter; Oospore spherical 17 μm in diameter, not falling Oogonium.

7. *Pythium mamillatum* Meurs,

Wortelrot, veroorzaakt door Schimmels uit de Gesl.

Pythium en *Aphanomyces*, Pyoefschr.Univ.Utrecht :39 (1928); Gilman,p.160(1957); Waterhouse, p.39(1968) ; Domsch et al.,Vol.1.p.686-6 87(1980)

(Plate 1, Fig. 8; Plate 2, Fig. 8).

Hyphae 8.5 μm in diameter; sporangia spherical 15.8 μm ; zoospore reniform; Oogonia terminal, spherical, 18.5 μm in diameter: with numerous obtuse-conical projections; antheridia monoclinal, usually single arising close to the oogonium; Oospores plerotic spherical, 15 μm diameter, wall thick.

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