



---

**MYXOMYCETES PHYSARUM PANHALENSIS: A NEW RECORD  
FROM PANHALA DISTRICT KOLHAPUR, MAHARASHTRA,  
INDIA**

---

**R. R. Tembhurne**

*Department of Botany,*

*Sangola Mahavidyalaya, Sangola.*

**DOI - 10.5281/zenodo.10431929**

---

**Abstract:**

*The present research study is carried out from Pahala tehsil of Kolhapur district of Maharashtra state. Geologically, this area comes under the Deccan volcanic area mainly constitutes basalt rock. The physiographical point of view this study area shows considerable diversity of various types of vegetation scattered into three main physiographic divisions that is hilly areas, plain as well as low lands and foot hills. Such geographical conditions are best suited for the growth and development of fungi by utilizing sources for their growth from the waste material like decaying logs as well as living plants parts. In present study new species *Physarum panhalensis* was recorded from India first time.*

---

**Keywords: *Myxomycetes, Fruiting Body, Sporangia, Capillitium.***

---

**Introduction:**

Myxomycetes are a cosmopolitan group of occupies different habitats such as, flower-bed, lawns, damp and mist places, logs, old woods, plant material, decaying organic matter, etc. Slime molds are restricted to such substratum. Another more recently recognized, specialized niche is dead branches attached to living trees. The important taxonomic treatises available on slime moulds include Lodhi (1934), Martin & Alexopoulos (1969), Alexopoulos (1973, 1978), Farr (1976), Thind (1977) and Lakhanpal & Mukherji (1981).

Myxomycetes also a dense group of organisms found in a number of habitats including all living and non-living plants parts with lawns, dungs, damp places, on old woods, floral buds and other plant material which are totally decomposed. For the manipulate of myxomycetes some important taxonomist literature are cited here Mundkur BB (1938), Roy TC (1959), Vasudeva RS (1962), Lodhi (1934), Martin & Alexopoulos (1969), Alexopoulos (1973, 1978), Farr (1976).

The climate of the study area was moist and humid condition having

deciduous forests with a diversity of fungi developed on various substrates like living and non-living organic material. Thus considering all these aspects present study was conducted from the Panhala is a tehsil of Kolhapur district.

### Study Area:

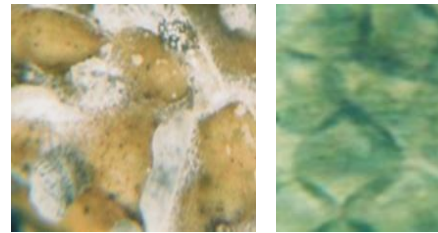
Panhala is a tehsil place around this periphery number of villages are located, this area lies between the 16° 39' and 16° 58' North latitude and 73° 48' and 74° 14' East longitude in the above place of Panchganga basin, this study area scattered near about 43 km east-west and 36 km north-south, total area occupied by 568.8 sq km. In district Kolhapur Panhala tehsil incorporated with pune division of Maharashtra state. The study area is about 49.38 per cent come under this division including with undulating, highly rugged relief, moderate and high hills of Sahyadri ranges. Foot hills is second division lies southern part of the Panhala-Vishalgarh range a height nearly 540 to 600 m, it covers 44.69 per cent study area. The plain and low lands having altitude below 540 m, major part drained by the rivers towards east and to produce silt. Climate in this area always remain cool, moderate temperature and percentage of rainfall very high. Temperature require in the summer season is 33.5°C, in winter minimum temperature is 12.7°C and the annual

**R. R. Tembhurne**

temperature ranges from 27.4°C to 20.55°C with average range of temperature of 10.15°C. In the said environment myxomycetes like slime mold are grow on the plant debris, decaying logs, floral parts as well as vegetative parts of the plants Alexopoulos (1973, 1978) and, Farr (1976).

### Results:

In the present study, *Physarum panhalensis* of Myxomycetes was first time newly recorded from the research area.



a

b

*Physarum panhalensis*  
(Nanir & Tembhurne sp. nov.) Fig.-a, b,  
a-Habit, b-Spores

### Description:

Distinct feature of the species are – 1) fruiting sporangiate and short plasmodiocarps. 2) milky or pearly white. 3) peridium smooth folded or corrugated, thick, milky or pearly white. 4) heavy deposit of lime at folds. 5) massive deposition of pearly white hypothallus which form more or less cushion below the fruiting and extend beyond fruiting. 6) nodes are large and mostly globose discoid and smooth.

In spores character and fruiting habit it is very close to *P. cinereum* Schum., *P. ovisporum* G. Lister, *P. vernum* Somm. ex Fries and *P. sessile* Brandza. But none of these species have the characters of peridium, hypothallus and nodes exhibited by this species.

#### Discussion:

In Panhala tehsil require very much cool, moist due to heavy rain fall in every place of talukawith this suitable and favourable environment microorganism are better to grow in this region. *Physarum panhalensis* Nanir & Tembhurne sp. nov.(2003) newly recorded species for the first time from this area.

#### Conclusion:

In the Certain study region south side of the hill steep slope is observed as compared to north side, during the season of South-West monsoon, south region of the hill received heavy rainfall as compared to northern slope of the hill, due this better condition more moisture level is required it is very much helpful for the growth of microorganism like myxomycetes.

#### References:

1. Alexopoulos, C.J. 1973 : Myxomycetes. In *The Fungi* IV. B.,Ainsworth G.C.A. Sussman and F.K. Sparrow (Eds.),

Academic Press New York, p. 39-60.

2. Farr, M. L. 1976 : Flora Neotropica, Myxomycetes. *The New York Bot.Gard. N. Y.Mon.*16.
3. Lakhanpal, T. N. & K. G. Mukerji. 1981 : Taxonomic studies of Indian Myxomycetes- I *I.Trans. Mycol. Soc. Jap.*, 22 (1),81-87.
4. Lodhi SA 1934 – Indian slime molds (Myxomycetes) (Being Descriptions of the species collected by Late Mrs. Drake) University of Punjab, Lahore, reprinted by: Sushma Publications 318 - A, Dehradun (1981), 1–34, Plate I – XVII.
5. Martin GW, Alexopoulos CJ 1969 – The Myxomycetes. University of Iowa Press, Iowa, pp 560.
6. Mundkur BB 1938 – Fungi of India. Supplement – I. The Imperial Council of Agricultural Research. Science Monograph, 12, 1–54.
7. Roy TC 1959 – Fungi of Bengal. Bull. Bot. Soc. Bengal, Calcutta.
8. Vasudeva RS 1962 – Fungi of India Supplement – I. Indian Council of Agricultural Research, New Delhi, 1– 206.
9. Thind KS 1977 - The Myxomycetes of India. Indian Council of Agricultural Research, New Delhi, page no. 1–452.