

# SLIME MOLD

Protozoan fungi

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# *Introduction*

- Slime moulds were formerly included amongst mycetozoa or fungus-animals.
- However, they are included in the division of gymnomycota by mycologists.
- Because of their protistan nature, these microbes are also called protistan fungi.

# Characters

- They lack chlorophyll.
- They are surrounded by the plasma membrane only; vegetative phase lacks cell-wall. However, the spores have the cellulose cell walls.
- At one stage of the life cycle they have amoeboid structure (i.e., vegetative body plasmodial).
- The slime moulds live usually amongst decaying vegetation. They commonly occur on lawns and moist fields.
- They exhibit wide range of colouration.

# Characters

- They are saprophytes and have phagotrophic mode of nutrition. Parasitic forms are not known (Bold et al., 1987).
- Both asexual and sexual modes of reproduction are present. They produce spores within sporangia. A spore possesses a cell wall of cellulose.
- The slime moulds resemble both protozoa and the true fungi.
- They are like protozoa in their amoeboid plasmodial stage and similar to true fungi in abundant spore formation.

# Types

**SLIME MOLDS**

***Acellular Slime  
Moulds***

***Cellular Slime Moulds***

**Labyrinthulomycota**

# *Structure and Life Cycle*

## ***Habitat:***

- The acellular slime moulds are commonly found on dead and decaying leaves, twigs, logs of wood and the other decaying vegetable matter.
- They prefer to grow in damp places rich in decaying vegetable matter in the forests a little after and during the rainy seasons.

# *Acellular Slime Moulds*

## *(Plasmodial Slime Moulds)*

- Somatic diploid phase is wall-less multinucleate protoplasm called Plasmodium.
- It may be coloured variously.
- Plasmodium creeps over the surface of substratum with the help of pseudopodia.
- The chief mode of nutrition of Plasmodium is saprotrophic, absorbing the organic food from the decaying organic matter (substratum of Plasmodium).
- Plasmodium also feeds on bacteria, protozoa, spores of fungi and other microorganisms through ingestion and engulfing (i.e., phagotrophic or holozoic nutrition).

- Under unfavorable conditions such as drought or too much cold, the Plasmodium divides to form many multinucleate cysts.
- Sometimes even whole plasmodium forms a hard dormant structure called sclerotium.
- On the return of favorable conditions, the cyst or the sclerotium liberates the multinucleate diploid plasmodium.
- Thus, these structures serve for perennation.



# *Life Cycle*

- Formation of Sporangia:
- Formation of Spores:
- Liberation of Spores from the Sporangia:
- Germination and Sexual Reproduction:
- Formation of Plasmodium:

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# *Formation of Sporangia*

- Formation of Sporangia:
- Formation of Spores:
- Liberation of Spores from the Sporangia:
- Germination and Sexual Reproduction:
- Formation of Plasmodium:

# References:

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**Thank You!**

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