

(17)
(15)
- Some of all species are mixotrophs

- It derives some of the nutrients from endosymbiotic algae (Chlorella), which is found to be carried in the cytoplasm of the cell.

Osmoregulation - It's carried out by -
Contractile vacuole

- It expel water from the cell to compensate the fluid absorbed by osmosis from its surroundings.

Contractile vacuole - varies in number from one to many, depending on the type of the species

Reproduction -

(1) Asexual - by Binary fission

- Macronucleus splits by a type of amitosis

- Micronuclei undergo mitosis

(2) Fission - Occur

(1.4.) Study of Protozoans:

Before studying Protozoa - one have to study his its systematic positions - like -

Phylum - Protozoa
Sub Phylum - Sarcinomastigophora
Class - Rhizopoda
Order - Amoebida
Genus - Amoeba
Species - Proteus.

Doc: - Xerox.

Distribution - According to the modern study of invertebrate classification, it's found that protozoan is found in all over the world, and exist at different climatic condition.

Habit and Habitat -

Identifying Characters Amoeba Proteus is found to be very widely omnipresent in distribution, i.e. its presence has been reported in all over the different part of the world. Inside the fresh water ponds, springs, lakes, pools, and even the slow running streams, it's found on the ~~bottom mud~~ or under side of aquatic vegetation or on the bottom of the mud. According to the findings of research it is rarely found in free water as because it

causes - meningococcal disease

(13)

Thus amoeba proteus is identified with his pseudopodial body feature.

PARAMECIUM

Dis:- Xenoc

The classifying feature of these animals are -

Phylum - Protozoa
Sub Phylum - ciliophora
class - ciliata
Sub class - Euciliata
order - Holotricha
Suborder - Trichostomata
Family - Parameciidae
Genus - Paramecium.

Distribution - It's distributed in all different parts of the world

Habit and Habitat - Found in fresh water ponds, rivers, lakes, pools and

2021/6/7 12:02

requires a substratum to glide on from place to place.

Identifying Characters -

- (1) Shape - Irregular
- (2) Pseudopodia - Simple or branched

Pseudopodia -

- Size - 250 to 600 microm in diameter
- Are blunt, finger like extensions of the ectoplasm containing endoplasm [Lobopodia]
- (3) Cytoplasm - differentiated into
 - 3.1. Ectoplasm - contains - Ectoplasmic ridges
 - 3.2. Endoplasm - contains - Nucleus, Food vacuoles, contractile vacuoles, water globules and crystals.

- (4) Plasma lemma - It's a thin, delicate, with permeable nature
- covers the entire body of the animals.

- (5) Nutrition - It's Holozoic.

- (6) Reproduction - ^{By} ~~It~~ Two ways
 - (1) By Binary fission
 - (2) By Multiple fission

Special Identifying features -

- (1) In Amoeba, a unique phylogenetic features has been reported
(2) Nature of Pathogenesis

Stream
- This animal is also been known as ciliate, as because of cilia found through out its body.

9 identifying features -

Shape - Elongated, cigar-shaped or spindle shaped

Body Cover with - Pellide
Pellide - It has series of ^{hexagonal depression for trichocysts.} polygonal or Δ
Body Membrane - Elastic and cuticular

Body Movement - Whiplash movement by their cilia

→ Each cilium has two

Phase - (1) Effective stroke - gets a fast stroke.

- Here the cilium is

relatively stiff

→ Recovery stroke - Here the cilium curls loosely to one side and sweeps forward in a counter-clockwise fashion.

→ Each cilia move in a coordinated fashion

Feeding :- Heterotrophic behaviour

- Feeds on bacteria & other small organism -