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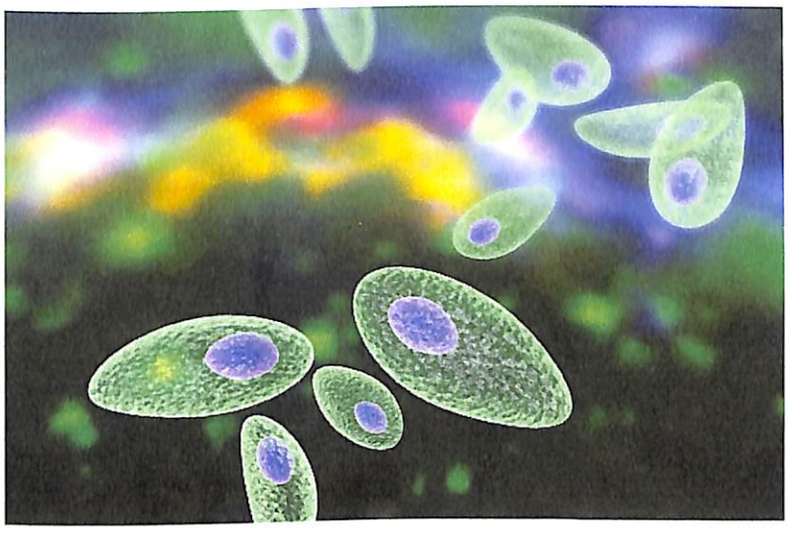
A study of Protozoan Diversity in Water Bodies



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INTRODUCTION

The protozoa *are* considered to be a subkingdom of the kingdom *Protista,* although in the classical system they were placed in the kingdom *Animalia* more than 50,000 species have been described, most of which are free living organisms, protozoa are found in almost every possible habitat. **Autan Van Leeuwenhoek** was the first person to see protozoa using microscopes, he constructed with simple lenses. Between 1674 and 1716, he described in addition to free living protozoa, several parasitic species from animals and *Giardia lamblia* from his own stools.

Protozoa are generally microscopic in size, they are found in freshwater, saltwater and damp soil while some are parasitic, symbiotic and commercial. They are called acellular or no-cellular because their bodies are not differentiated into cells; part of their bodies are specialized for various function, these parts are called organelles in contrast to the organs of Metazoa. Thus, protozoa may be regarded equivalent, not a metazoan cell, but to an entire metazoan. Protozoa forms a heterogeneous group, the members display an extreme diversity of structure, different types of symmetry and adaptations to various environments. Many protozoa are extremely complicated in structure. Some Protozoa form colony. A colony has several individuals either attached to each other or enclosed within a gelatinous envelope and joined together by protoplasmic connections.

A protozoan might be defined as an organism which is made up of a mass of protoplasm not divided into cells and which carries on all the vital activities of life such as locomotion, feeding, digestion, egestion, respiration and reproduction, etc. Although it is not divided into cells, it has specialization and division of labour within its cytoplasmic mass. It is enormous to think of protozoans as simple animals, for manyhave complited structures and are physiologically complex. In as much as Protozoa are not made up of cells, they represent what is called protoplasmic level of organization. From this standpoint and others, many biologists place them close to the plants and may be considered as connecting link between animals and plant.

RESULT AND OBSERVATION

Pond water will contain numerous type of microorganisms with a drop of the water carrying thousands of single celled organisms. Protozoa can be obtained from almost any habitat whereas the free living species can be found in water as well as most habitats. With the organisms found in pond water, protozoa makes up the bio film that coats sediment as well as other had surfaces. Their ability is to move and to make it possible for them to move from one place to another without heavily relying on water movement. As such, they can move around consuming other organisms, we were found some of the most common protozoa like : Euglena, Paramecium, Amoeba, Volvox, Arcella & Navicula.

CONCLUSION AND DISCUSSION

Within the kingdom Protista, there is a significant variation that would expectly acompany a group of organisms that has a singular, generalised unifyig factor of being eukaryotic an not classified under any of the other kingdoms. Protists vary in different ways and because of this the classification of this organism within it vary in size, nutitional stragities, locomotion, reproduction and much more, but such a focus would give specificity to an otherwise general topic. The general nature of the kingdom Protista can be observed from the lack of distinguished phyla. All eukaryotes can be classified in to supergroups that contain all protists : *Chromalverolata, Rhizoria, Archaeoplastida, Excavata, Amoebazoz And Opisthokonta.*

Organisms within the *Chromalverolata* are characterised by the process of secondary emdosymbosis. By which they may have arisen. Within this super group, is a more specific group of parasitic organisms called apicomplexans, which are characterised by the presence of an apical complex that enables the organism to invade the host. There are currently four strains of this parasite, P.falciparum, P.malarie, P. viva x that affects humans, though some have been observed in primates.

From our project work named "STUDY OF PROTOZOAN DIVERSITY" we can say that pond water refers to a standing body of water. This is usually smaller than a lake and any either be man made or natural. This water contains a variety of plants and animals life. While some can be seen with the naked eye, others are too small and wil require the use of a microscope to be able to properly observe them. So microorganism like common protozoa are mostly found in pond water. Protozoa can also be cultured in order to increase their number for observation.