

Protista general characteristics essay sample



**ASSIGN
BUSTER**

- * Eukaryotic
- * Unicellular
- * Microorganisms
- * Asexual/sexual reproduction
- * Flagella & Cilia with 9+2 microtubules

ORIGIN

* The term “ protist” is derived from the Greek protiston, meaning the “ first of all ones.” * Individual protists tend to be quite small, either unicellular or an undifferentiated multicellular mass. At one point, “ Protista” encompassed everything that wasn’t an animal or plant, until the advent of cellular biology which noted fundamental differences between bacteria and the rest of life. * Now bacteria are a separate category from protists.

GROUPS

- * Animal-like Protists

(Mastigophorans, Sarcodines, Sporozoa, Ciliates) * Fungus-like Protists

(Myxomycota, Acrasiomycota)

- * Plant-like Protists

(Euglenophytes, Chrysophytes, Dinoflagellates)

ANIMAL-LIKE PROTISTS

Protists that are classified as animal-like are called protozoans and share some common traits with animals. All animal-like protists are heterotrophs. Likewise, all animal-like protists are able to move in their environment in order to find their food. Unlike, animals, however, animal-like protists are all unicellular.

SUB-GROUPS:

* Mastigophorans – Protists with flagella; mitotic division * Sarcodines – Protists with pseudopods ; by binary fission (mitosis) *

Sporozoa – Parasitic protists; do not move on their own * Ciliates – Protists with cilia; reproduces asexually (binary fission) or sexually (conjugation)

ECONOMIC IMPORTANCE OF PROTOZOANS

1. Food

Protozoa provide food for insect larvae, crustaceans and worms, which are taken by large animals like fishes, lobsters, clams, and crabs, which are eaten by man. 2. Symbiotic Protozoa

Certain protozoa like *Trichonympha* and *Colonympha* etc. live in the gut of termites which help in the digestion of cellulose. 3. Insect Control

Several protozoa control harmful insects by persisting their bodies. 4. Helpful in Sanitation

A large number of protozoa living in polluted water feed upon waste organic matters and thus purify it. 5. Oil Exploration

Petroleum is organic origin. The skeletal deposit of *Foraminifera* and *Radiolaria* are often found in association with oil deposits. In this manner they help in the exact location of oil. 6. Scientific Study

Many protozoa are used in biological and medical researches. *Acanthamoeba*, *Tetrahymena* etc. used in nutritional research. The effects of various foods and poisons have been investigated on this protozoan.

PLANT-LIKE PROTISTS

Plant-like protists are autotrophic. They can live in soil, on the bark of trees,

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in fresh water, and in salt water. These protists are very important to the Earth because they produce a lot of oxygen, and most living things need oxygen to survive. Furthermore, these plant-like protists form the base of aquatic food chains.

SUB-GROUPS:

* euglenophytes - Unicellular, photosynthetic, single flagellum *

chrysophytes - Unicellular, photosynthetic, chlorophyll a and c *

dinoflagellates - Unicellular, two spinning flagella, chlorophyll a and c

Economic Importance (PROTISTA)

Protists are very important in biological and economic point of view. They are useful in the following manners: * Source of food:

Some protists such as kelps are edible and may be used to overcome shortage of food in world. * Source of commercial products:

Many marine protists are also source of many useful substances like algin, agar, carrageen and antiseptics. * Source of medicines:

Sodium laminaria sulphate is used as a blood coagulant. Fucoidin and heparin are the algae products, which are also used as blood coagulants.

Lyngbya produces an anticancer compound.

* Source of mineral:

Kelps are rich in sodium, potassium, iodine etc. They are good source of these minerals. * Biological research:

Protists are also used in biological researches e. g. Chlorella is unicellular non-motile green algae. * Primary Producer of Aquatic Ecosystem:

Most of the protists are primary producers of the aquatic ecosystem thus

they play a basic role in food chains, providing food and oxygen to other organisms. * Pathogens: Most of the organisms belongs to this group are pathogenic organisms. They cause many diseases in man or in vegetables and fruits like it cause late blight potatoes in potatoes and causes diseases in some fishes.