Kingdom of animal

Characteristic of animal

Classification of animal

The importance of Human Diseases

The importance of Human Diseases:

Animal are a major group of muticellulor eukaryotic organisms of the kingdom.

Animalia or metazoo. Their body plan eventually become fixed as they develop, although some undergo a prvcess of metamorphosis later on in their life. Animals are eukaryotic muiticellular and heterotrophic organisms Linnaeus original scheme that there are seven (7) classes to this kingdom. More of them in vertebrates. Animals differ in development and body form. Distinguishing characteristics include number of primary germ layers [diploblastic or triploblastic], presence and type of body cavity [coelomate, a coelomate, and pseudocoelomate], and body symmetry [radial symmetry with oral or aboral ends ,or bilateral symmetry cephalization].

The kingdom Animalia

Animals are eukaryotic, multicellular (sometimes unicellular), heterotrophs whose cell do not have cell walls. More than 1 million species are known, most of them invertebrates, Animals differ in development and body form. Distinguishing characteristics include number of primary germ layers (diploblastic, or triploblastic), presence and type of body cavity (coelomate, acoelomate, and psedeucoelomate), and dody symmetry (radial symmetry with oral or aboral ends, or bilateral symmetry with cephalization).

Animal phyla

1- Phylum Protozoa:

Protozoa are unicellular eukaryotic organisms, may classified in kingdom called (protista). They are found in moist habitates, and they include free – living and parasitic forms. Most species of protozoa are heterotrophic organisms that obtain nutrients by process of phagcytosis. The protozoa may be classified into groups (classes) include:

1- **Class Sarcodina**: consists of protozoa that move by pseudopodia, most sarcodina are free – living like (Ameoba) or parasitic E.g. (Entamoeba histolytica) which cause the disease (amebic dysentery).

Ameoba: the amoeba call has irregular shape, contain ectoplasm (the outer portion of the cytoplasm), and endoplasm (the inner portion of the cytoplasm), it moves by amboid movement (by pseudopodia), which also are used for feeding (surrounds the food with its pseudopodia forming food vacuole in process called endocytosis). Also contains (contractile vacuole) an organelle that expels from the cell. And it reproduces asexually by binary fission.

2- **Class Zoomastigina**: consists of protozoa that move by flagella, eg. Trypanosome species that cause African sleeping called (trypanosomasis) which transmitted by tsetse fly, and leishmaniadonovani which is transmitted by sand fly and causes the leishmaniasis, and Giardia lamblia causes giardiasis.

3- **Class Sporozoa**: which unable to move in the adult form, the sporozoa have complex life cycles in which they develop a spore, and all sporozoa are parasites in humans or other animals eg.

Plasmodium which causes the disease malaria that transmitted by Anopheles mosquito, this parasite causes extensive damage to red blood cells in a victim.

2- Phylum Porifera

It's made up of sponges, sessile invertebrates that have no true tissues. Simplest sponges are hollow cylinders, the bode wall of a sponge is composed of two layers of cells, the body supported by a skeleton made of a network of protein fibers called spongin, and spicules (tiny hard particles of calcium carbonate or silicon dioxid, its shape like spine), collar cells lining the inside of sponge having flagella, drawing a current of water into the sponge through pores in body wall, water leaves through the osculum an opening at the top of sponge. Sponges feed by filtering small organisms and organic matter out of the water that passes through their body. Nutrients are distributed through the body amebocytes which crawl about within the body wall. Sponges can reproduce asexually, through budding or regeneration, as well as sexually, most sponges are hermaphrodite (single animal can produce both ova and sperms).

3- phylum Cnidari

This animals can be either sessile polyps or swimming medosae. Some cnidaria alternate between polyp and medosae their life cycles. The body of a cnidarian is diploblastic (consists of two cell layers, an outer epidermis an inner gastrodermis separated by jelly like mesoglea. Cnidarians have cells called cnidocytes, which contain organelles known as nematocysts, when a cnidocyte is stimulated, its nematocyst ejects a filament that can paralyze or ensnare prey. Cnidarians feed by capturing small animale with their nematocysts and pushing the animal into their gastrovascular cavity with their tentacles.

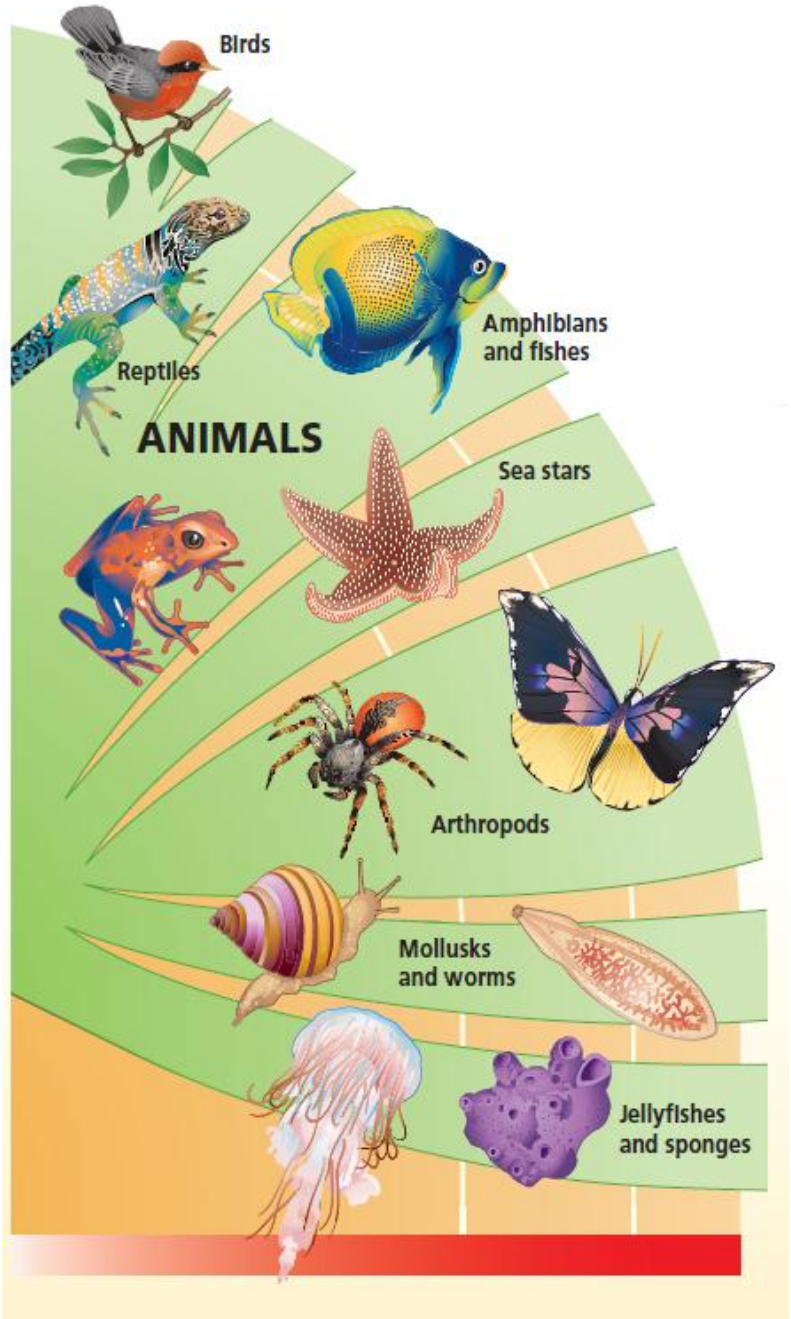
1- **Class hydrozoa**: live as polyps, medosae, or mixed colonies of polyps and medosae. Eg hydra exist only as polyps, they live in fresh water, range 1 to 4 cm in length they attach to rocks or water plants by their sticky base. Generally hydra reproduces asexually by budding, or sexually (the hydra is hermaphrodite).

4- <u>Phylum platyhelminthes (flat worms):</u>

Their bodies are triploblastic (develop from three germ layers), they have bilaterally symmetrical bodies, with dorsal and ventral surface, right and left sides, and anterior and posterior ends, since flat worms don't have a hollow cavity between the endoderm and the mesoderm they belong to acoelomates. Most flat worms have a gastrovascular cavity, a gut with single opining, these cephalized animals also have excretory, nervous, and reproductive system.

1- **Class Trematoda**: consists of parasitic fluckes, which have complex life cycles in which they alternate between two types of hosts: a primary host, from which the adults drive their nourishment and in which sexual reproductive occurs, and an intermediate host, from which the larvae drive their nourishment, some fluckes live in the internal organs of their host, while others live on the external surface of their host.

E.g. Fasciola hepatica (sheep liver flucke): this worm looks like a plant leaf, the mouth lies in the center of anterior muscular disc called (oral sucker) near to it in the ventral side there is another disc called ventral sucker (which connects the worm with the host body). The worm is hermaphrodite, and it reproduce asexually (forming sporocysts in the lamnaea a snail), and sexually (cross – fertilization in the liver of the sheep).


Birds
Amphibians
and fishes
Reptiles
ANIMALS
Sea stars
Arthropods
Mollusks
and worms
Jellyfishes
and sponges

The End