

Introduction

All living organisms are classified into 5 kingdoms. This classification is based on the fundamental principles established by the scientist Robert Harding Whittaker, who has made an enormous contribution to the study of the beings that inhabit our beautiful planet.

In this new article from PlanèteAnimal, we take a look at the classification of living beings into 5 kingdoms, along with the main characteristics of each.

The 5 kingdoms of living beings are :

- Kingdom of Monera,
- Kingdom of Protista,
- Kingdom of Mycetes,
- Plant kingdom
- Animal kingdom.

The 5 kingdoms of living beings

Robert Harding Whittaker was a leading American plant ecologist. He focused his research on the analysis of different plant communities. He also proposed classifying all living things into 5 kingdoms. Whittaker based his classification on

two fundamental characteristics:

- Classification of living beings according to their mode of nourishment: living beings can obtain nourishment through photosynthesis, absorption or ingestion. Photosynthesis is the mechanism used by plants to recover carbon from the air and produce energy. Absorption is a feeding method used by bacteria, for example. Ingestion simply means receiving nutrients through the mouth.
- Classification of living beings according to their level of cellular organization: on Earth, we find prokaryotic organisms, unicellular eukaryotes and multicellular eukaryotes. Prokaryotes are unicellular organisms, i.e. they consist of a single cell, and are characterized by the fact that they have no inner nucleus. beings float inside the cell. Eukaryotic organisms can be unicellular or multicellular (made up of many cells), the main characteristic of these organisms being that their genetic material is found within a structure called the nucleus, a structure found inside the cell or cells.

By linking the characteristics that make up the two classifications we've just seen, Whittaker has classified all living beings into five kingdoms: Monera, Protista, Mycetes, Plant kingdom and Animal kingdom.

Classification of the living world :

A/ Kingdom of Monera

The Monera kingdom is made up of unicellular prokaryotic organisms. Although the vast majority feed by absorption, some, like Cyanobacteria, are able to feed by photosynthesis!

The archaeobacteria are microbes that live in extreme environments, such as places with very high temperatures like hydrothermal vents or hydrothermal mounds on the ocean floor. We also find the "sub-range" of eubacteria, also known as "true bacteria". Eubacteria can be found in all the Earth's different environments, playing an important role in life on Earth, and some are even responsible for certain diseases.

B/ Protista kingdom

Within this kingdom are the so-called unicellular eukaryotic organisms, as well as certain simple multicellular organisms. Thus, within the protist kingdom, we find three "sub-regions" of protists:

- Algae: unicellular or multicellular aquatic organisms that photosynthesize.

Algae vary in size, from microscopic to over 60 meters long.

- Protozoa: unicellular organisms that are mainly mobile and feed by means of absorption (like amoebas), protozoa can be found in almost every type of environment on Earth. Protozoa include certain pathogenic parasites of humans and domestic animals.

- Yeasts: protists that absorb their food from dead organic matter. They are grouped into 2 distinct groups: mud-based molds and water-based molds. Most protists have a mushroom-like appearance and use pseudopods ("false feet") to move.

C/ Kingdom of Mycetes

The fungus kingdom is made up of multicellular eukaryotic organisms, which feed through the process of absorption. For the most part, they are decomposer organisms, secreting digestive enzymes and absorbing small organic molecules released by the enzymes. All fungi are found in this kingdom of living beings.

D/ Plant kingdom

This kingdom includes multicellular eukaryotic organisms that carry out the process of photosynthesis. Through this mechanism, plants produce their own food by capturing carbon dioxide and water. Plants don't have solid skeletons; in fact, each cell has a kind of wall that keeps it rigid.

What's more, members of the plant kingdom have sex organs that are also multicellular, forming embryos during their various life cycles. Organisms in this kingdom include mosses, ferns and flowering plants.

E/ Animal kingdom

This kingdom is made up of multicellular eukaryotic organisms. After passing through the mouth, food is directed to specialized cavities inside the body, such as the digestive system of vertebrates. None of these organisms has a cell wall, as can be observed in plants.

The main characteristic of animals is their ability to move from one place to another, more or less voluntarily. All the animals on Earth belong to this group, from sponges to dogs and human beings.