

SYSTEMS OF CLASSIFICATION

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Carolus Linnaeus in 1758 divided all organisms into two kingdoms — Plantae and Animalia. Plants and Animals seemed different in different ways. This appeared to be a very logical way of classifying organisms.

- Plants can prepare their own food with the help of chlorophyll. Animals do not have chlorophyll.
- Plant cells have cell wall, while animal cells do not.
- Animals can move from one place to another place while plants cannot, they are fixed.

Such a Classification was not accepted / not followed by some of biologists, because some microorganisms showed features of both plants and animals, and could not be placed either in Plantae or in Animalia.

- x To solve the problem, a third kingdom, called Protista was created by Ernst Haeckel (1866). All unicellular organisms were placed in this kingdom.
- x Then two Superkingdom were created. One for Prokaryotes and other for Eukaryotes. In Prokaryotes (Lacking a true nucleus) all kind of Bacteria were included, Kingdom is Monera.
- x Creation of Monera did not solve all the problems

(2)

with classifying organisms. Fungi created the next problem. Like Bacteria they cannot perform photosynthesis, but they are Eukaryotic. They could neither be placed in Monera, nor in Protista (which includes photosynthetic Algae).

A new kingdom was then created for Fungi. Robert Whittaker (1969) is credited for the creation of kingdoms Monera and Fungi.

* The five kingdoms of Monera, Protista, Fungi, Plantae and Animalia includes all organisms except viruses. Viruses cannot really be called living organisms because they are unicellular.

* A virus is just a bit (segment) of DNA or RNA

* The Monera falls under the ~~Kingdom~~ Kingdom Prokaryotes.

* The other four kingdoms fall under superkingdom Eukaryotes.

* These five kingdoms of organisms are: —

1. Monera 2. Protista 3. Fungi 4. Plantae 5. Animalia

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The classification of organisms under the Five-Kingdom system → By the joint effort of various taxonomists, Ernst Haeckel, Carl Woese and Robert Whittaker.

Basis of Five Kingdom Classification

- * Body Organisation — (i) Types of cell.
(ii) No. of cell
(iii) Presence / Absence of cell wall
- * Mode of Nutrition → Autotrophic or Heterotrophic
- * The broad outline of this system is following: —

