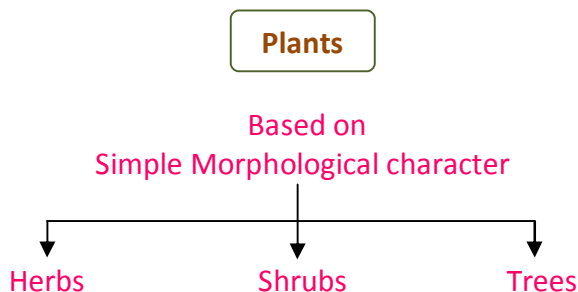
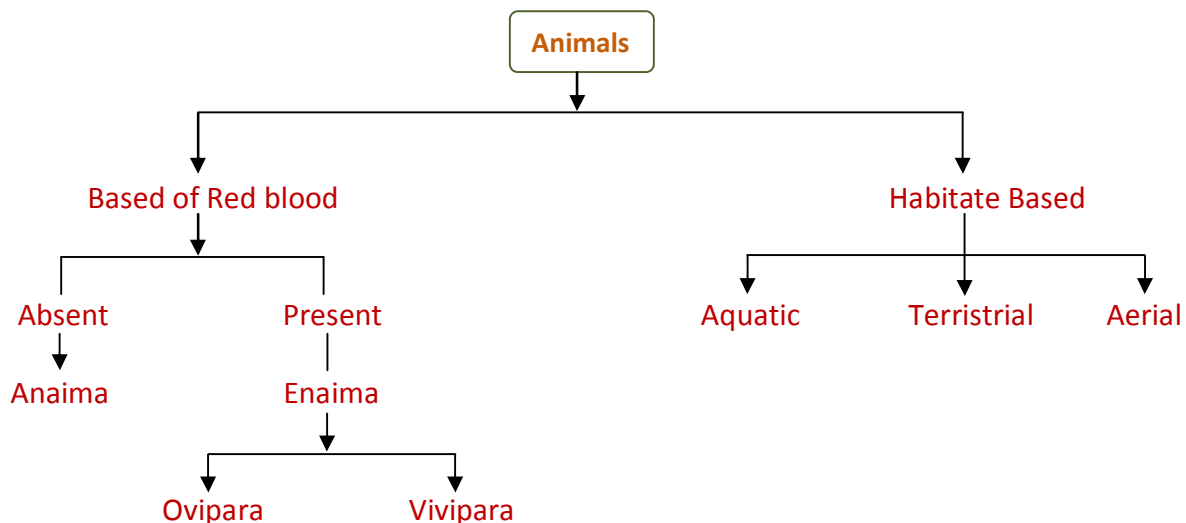


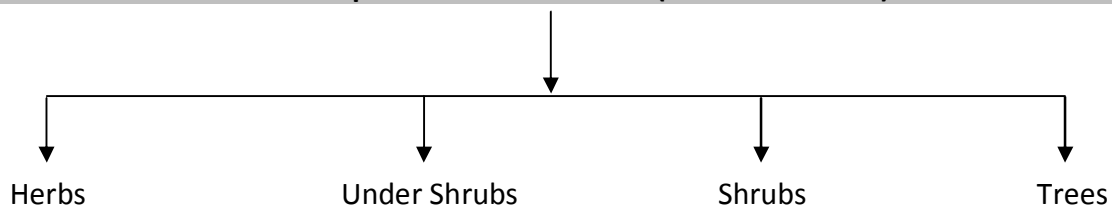
Biological Classification

Aristotle classification

- ✓ Aristotle – father of Biology & Zoology
- ✓ Divided the Plants and Animals



Theophrastus Classification (Classified Plants)



Theophrastus - Father of Botany & ancient plant taxonomy
 Book name - 1. Historia Plantarum (1st Book of Botany)
 2. Causes of plant
 3. Enquiry into plants

Two Kingdom Classification

- ✓ By Linnaeus (father of taxonomy & Systematic Botany)
- ✓ Book name – Systema Naturae (1735)
- ✓ 2 kingdom classification

Character	Plants	Animal
Cell wall & Central vacuole	Present	Absent
Plastids	Present	Absent
Nutrition	Autotrophic	Heterotrophic
Locomotion	Absent	Present
Organ System	Absent	Present
Response against external stimuli	Slow	Fast
Examples :	Bacteria, BGA, Fungi mosses, Ferns, Gymnosperm & Angiosperms	Protozoa and metazoan

Objection : This system does not distinguish between

(a)	Unicellular & multicellular organism	<p>3 Kingdom Classification</p> <p>Proposed by Haeckel Introduce new kingdom – PROTISTA</p>
(b)	Prokaryotes & Eukaryotes	<p>4 Kingdom Classification</p> <p>Proposed by H.F Copeland Introduce new kingdom – MONERA</p>
(c)	Photosynthesis and non photosynthetic organisms	<p>5 Kingdom Classification</p> <p>Proposed by R.H. Whittaker Introduce New Kingdom FUNGI (MYCOTA)</p>

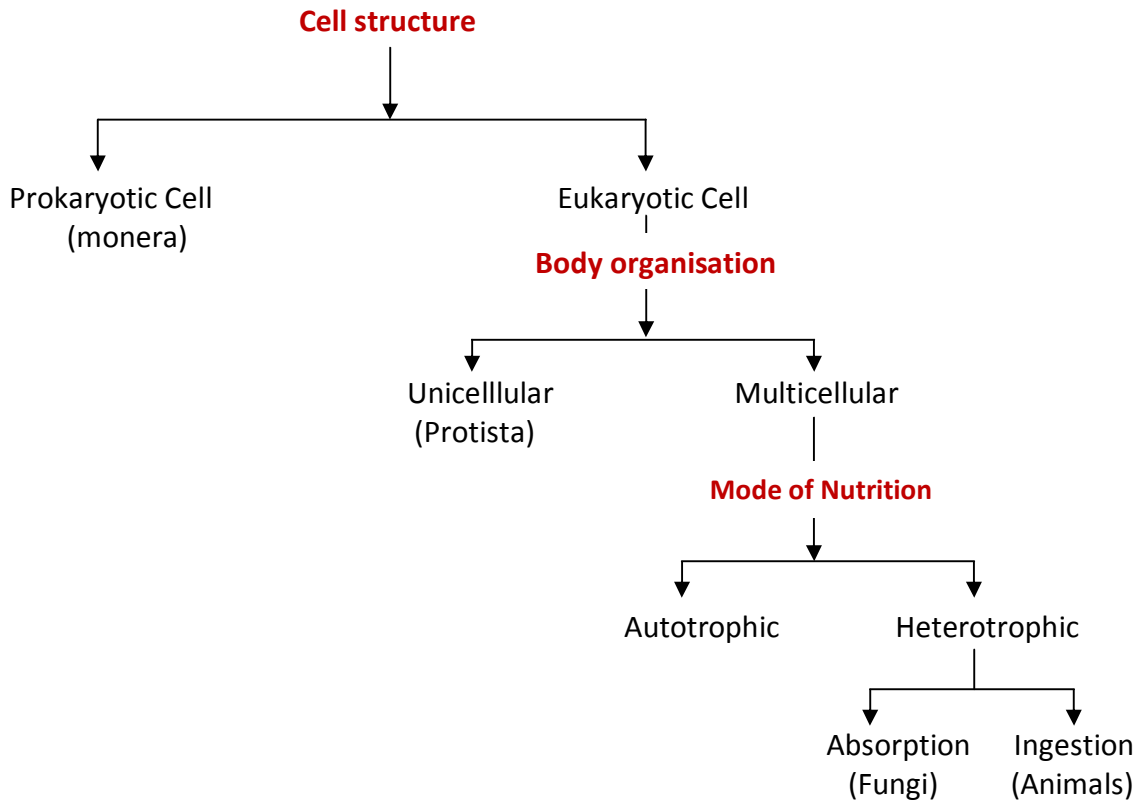
Five Kingdom Classification

Proposed by R.H. Whittaker (1969)

This classification mainly based on -

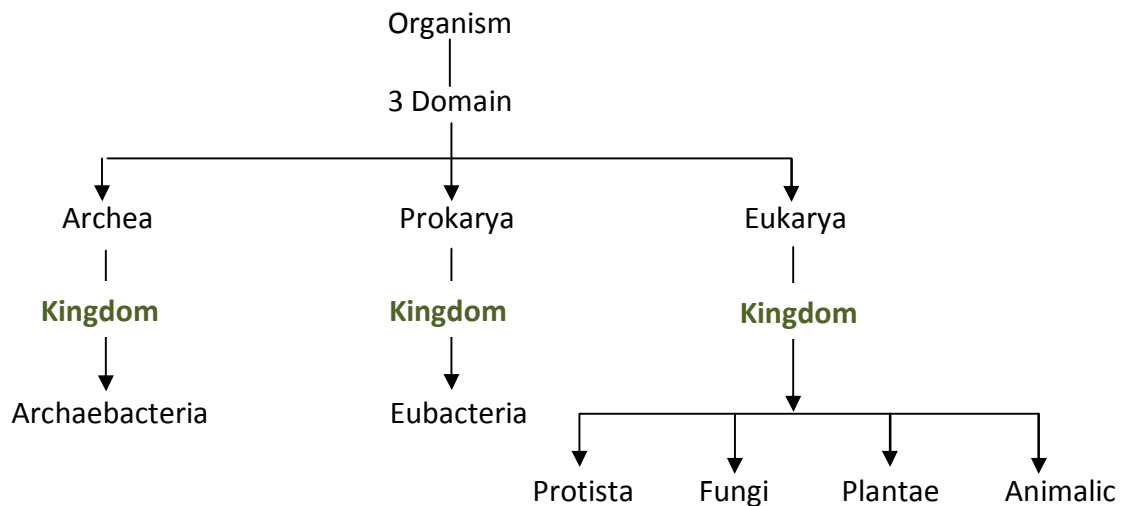
- a. Cell structure
- b. Body organisation
- c. Mode of Nutrition
- d. Phylogenetic relationship
- e. Reproduction

5 Kingdom Classification



6 Kingdom Classification

- ✓ Proposed by – Carl woese
- ✓ Classification based in the gene sequence of ribosomal RNA (16s – rRNA of 70s ribosome)



Differences between 3 Domain

Feature	Archea	Bacteria	Eukarya
Peptidoglycan in cell wall	Absent	Present	Absent
Membrane lipid structure	Branched	Unbranched	Unbranched
Introns	Present in some genes	Absent	Present
Amino acid that initiates protein synthesis	Methionine	Formyl-methionine	Methionine
Number of different RNA polymerases	Several	One	Several
Response to the antibiotics streptomycin and Chloramphenicol	Growth not inhibited	Growth inhibited	Growth not inhibited
Nuclear envelope	Absent	Absent	Present
Membrane – bounded organelles	Absent	Absent	Present

