

one kingdom becomes five, sorted by cell, food and body plan



Whittaker's five kingdom system, 1969 *

- replaced the old two-kingdom scheme, which forced bacteria and fungi awkwardly into "plants"
- every organism now sorts into Monera, Protista, Fungi, Plantae or Animalia
- the split rests on five criteria used together, never any one alone



four of the five kingdoms branch off here. Monera is the fifth, and the only prokaryote.

Five criteria behind the split

Cell structure

prokaryotic or eukaryotic, a defined nucleus or none

Body organisation

unicellular or multicellular, level of thallus organisation

Mode of nutrition

autotrophic or heterotrophic

Mode of reproduction

asexual or sexual

Phylogenetic relationships

the evolutionary ancestry linking the groups

The five kingdoms, one line each

Monera

prokaryotic, no nuclear membrane

Protista

unicellular eukaryotes, a boundary group

Fungi

heterotrophic, absorptive, cell wall of chitin

Plantae

autotrophic, cell wall of cellulose

Animalia

heterotrophic, no cell wall at all

one scheme, five kingdoms, five criteria:
learn the criteria and the kingdoms fall out on their own

