

10 - Classification

Taxonomy

- The practice of classifying living things (strictly speaking)
- Typically utilizes the Linnaean Classification

Linnaean Classification

- Kingdom (broadest)
 - Phylum
 - Class
 - Order
 - Family
 - Genus
 - species (lowercase, most specific)
- Species names written as *Genus species* or abbreviated as *G. species*

Phenotypic Classification

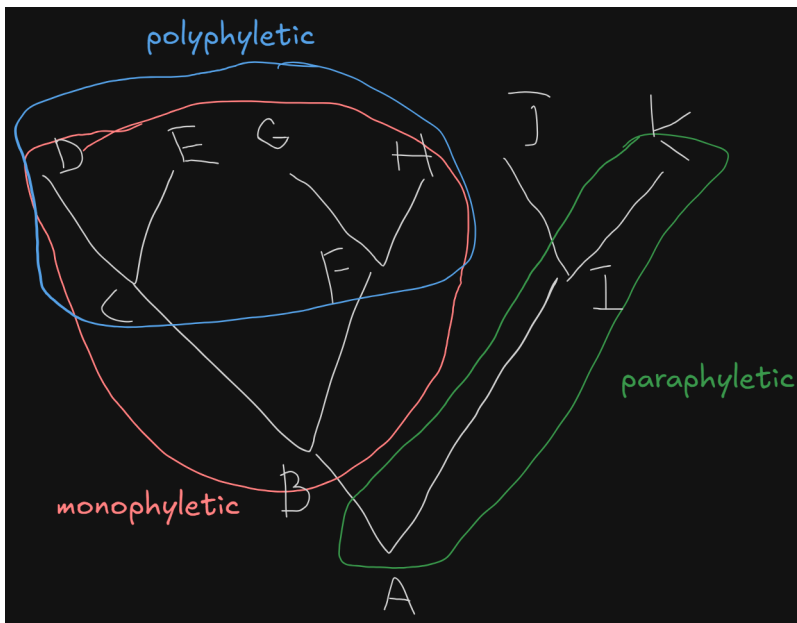
- Based on shared traits, this places similar looking organisms into distinct groups
- Phenotype (observed traits)

Phylogenetic Classification

- Based on both evolutionary and genetic relationships
- Genotype (genetic traits)

Clades

- Groupings of organisms based on their observed similar characteristics



Monophyletic Group

- A complete group of organisms and their most recent ancestor

Paraphyletic Group

- Like monophyletic, except it *excludes* particular descendants

Polyphyletic Group

- A group of organisms that are similar, but do not share a direct common ancestor, like marine mammals