

Chapter 17 - Linnaean Classification

I. Linnaean classification - standardized how organisms are named.

A. Taxonomy - way to classify/name organisms

1. classify based on physical/structural characteristics

Domain (most inclusive)

Kingdom

Phylum

Class

Order

Family

Genus

Species (least inclusive)

a. Most basic taxa (Revel) species

1.) species is defined as a group of organisms that can breed and produce offspring.

2. Naming - Binomial nomenclature 2 naming system (scientific name)

Genus Species

1st part Genus: always capitalized

2nd part species: always lowercase

Canis sapiens
Canis lupis

Dichotomous key: used to identify objects or organisms that have already been described by scientists

- made up of paired statements

Taxon (plural taxa)

group of organisms in a classification system

Humans

D: Eukaryota

K: Animalia

P: Chordata

C: Mammalia

O: Primates

F: Hominoidea

G: Homo

S: sapiens

Make a mnemonic device

Did

King

Phylum

Class

Order

Family

Genus

Species

fertile

B. Limits to Linnaean classification

1. not all organisms that look similar are closely related

2. molecular biology (genetics) is the most accurate way to classify.

Domains (most inclusive)

- 1. Archaea
- 2. Bacteria
- 3. Eukarya

Kingdoms

- Archaea (prokaryotes, live in extreme environments)
- Bacteria (prokaryotes)
- protista (ex: algae)
- fungi
- animalia
- Plantae