

Plant Taxonomy

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Taxonomy

The science of
documenting
biodiversity



Importance



- Enhances our understanding of species
- Enhances our understanding of evolution

Five kingdoms

Plants



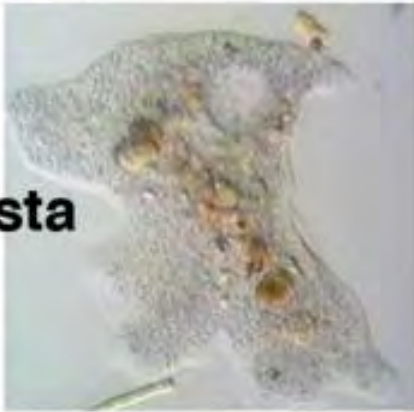
Fungi



Animals



Protista



eukaryotic



Monera

prokaryotic

Eukaryote has cells, with genetic material organized into a membrane-bound nucleus or nuclei

Prokaryote organisms are without a cell nucleus

Monera - bacteria

The Plant World

- Manufacture their own food
- Exist in diverse environments
- One-celled algae to huge sequoias
- Does NOT include fungi!!
- Lichen to mosses
- Spore producing ferns
- Flowering or seed-bearing plants

Scientific Names

- Binomial Nomenclature
 - Karl von Linne (Carolus Linnaeus)
 - Latin or Greek



Common Names

■ Advantages

- Often descriptive
- Easy to pronounce
- Easy to remember
- Familiar to people

■ Disadvantages

- No rules
- Not consistent
- Applied to various taxonomic levels
- May not exist for some plants

Hierarchy of the plant kingdom

Division (*-phyta*)

Class (*-eae,opsida*)

Subclass (*-ae*)

Order (*-ales*)

Family (*-aceae*)

Genus

Species

Plant Hierarchy Latin sample

Angiospermophyta

Dicotyledoneae

Asteridae

Polemoniales

Solanaceae

Lycopersicon esculentum

Plant Hierarchy English version

Flowering Plant Division

Two Seed Leaves Class

Aster Subclass

Phlox Order

Nightshade Family

Tomato Genus

Edible Species

Botanical Nomenclature - Genus

Eugenia



Coccoloba

- Generally singular nouns
- May be derived from other cultures/languages
- Commemorative a person or a place
- Italicized, uppercase

Binomial Nomenclature

- Species or Specific Epithet
 - Latin or Greek
 - Italicized or underlined
 - Descriptive

Examples: *rubrum* – red; *purpurea* – purple; *coriaceus* – thick or tough, leathery; *erectus* - upright

Binomial Nomenclature

Genus – *Eugenia*

Species - *foetida*

Common Name –

Spanish Stopper, Boxleaf
Stopper



Binomial Nomenclature

Genus - *Capparis*

Species - *cynophallophora*

Common Name – Jamaica
Caper

Can you name a relative of
this plant?



Binomial Nomenclature

Genus - *Coccoloba*

Species - *uvifera*

Common Name –
Seagrape

Can you name a relative of
this plant?



What is it?

- Leaf samples
 - Monocot or Dicot
 - Leaf arrangement
 - Leaf shape
 - Leaf base
 - Leaf tip
 - Leaf margin
 - Leaf type
 - Leaf texture