

A Introduction to Taxonomy the science of classification

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Taxonomy – the science of classification

- Carolus Linnaeus (1707-1778)
 - father of classical taxonomy
- He devised a system of taxonomy called binomial nomenclature
 - two name naming system
 - genus and species
 - genus – always capitalized (Homo)
 - species – never capitalized, italicized (*sapiens*)

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Carolus Linnaeus (1707-1778) – father of classical taxonomy

- He based his system of classification on structural similarity
- Now we use molecular markers for our best determination of relatedness
 - Markers include DNA, proteins and amino acid content

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Examples of Our Classification System

	Classification	Man	Grasshopper	Ameba
more inclusive	Kingdom	Animalia	Animalia	Protista
	Phylum	Chordata	Arthropoda	Sarcodina
	Class	Mammalia	Insecta	Rhizopoda
	Order	Primates	Orthoptera	Amoebida
	Family	Hominidae	Acridiidae	Amoebidae
	Genus	Homo	Schistocerca	Amoeba
less inclusive	Species	<i>sapiens</i>	<i>americana</i>	<i>proteus</i>

Note italics

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Current Taxonomic Classification

- Kingdom - Archeobacteria
- Kingdom - Eubacteria
- Kingdom - Protista
- Kingdom - Fungi
- Kingdom - Animalia
- Kingdom - Plantae

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Viruses - living or non-living?

Outside of a host cell

- no nutrients needed
- no oxygen needed
- no activity
- no reproduction

Within a host cell

- take over the host cell
- use the host cell's organelles to produce viral nucleic acid and viral protein
- reproduce rapidly
- may kill host cell

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