

Taxonomy

What is **taxonomy**?

- **Taxonomy** is the branch of biology concerned with the grouping and naming of organisms
- Biologists who study this are called **taxonomists**

How did it start?

- People wanted to **organize** their world so they began **grouping**, or **classifying** everything they saw.

- Things that swim
- Things that fly
- Things that crawl
- Things that walk on four legs
- Things that chew their food
- Things that swallow food whole
- Things that are toxic

Why **classify**?

- To help us study the earth
- To help us organize all the species we discover . . .

- To give every species a name based on a **standard method** so scientists from different countries can talk about the same animal without confusion

Who is Carolus Linnaeus?

- Carolus **Linnaeus** was a Swedish botanist
- Developed a 7-level (**taxa**) **classification system** based on similarities between organisms

The Seven Level System

■ Kingdom

■ Phylum

■ Class

■ Orders

■ Family

■ Genus

■ Species

■ King

■ Phillip

■ Called

■ Oprah

■ For

■ Good

■ Spices

How does it work?

- There are 6 broad kingdoms
- **Every** living thing that we know of fits into one of the six kingdoms
- Each level gets more specific as fewer organisms fit into any one group

An animal is known by
two names...

- *Canis lupus* is the scientific name for a gray wolf.
- *Canis* is the **genus** name
- *lupus* is the **species** name
- This system uses a **binomial nomenclature**

Genus...

- A **genus** consists of a group of closely related species
- Other animals in the **Canis** group include dogs and coyotes
- The **genus** name is always **Capitalized**

Species...

- A **species** consists of animals that can mate and produce **fertile offspring**
- Only grey wolves are known as ***lupus***.
- The **species** name is always **lowercase**

Binomial Nomenclature

- **Bi** means two
- **Nomen** means name
- A **binomial nomenclature** is a classification system using **two names** to identify an organism

Human Taxonomy

- Kingdom - Animalia
- Phylum - Chordata
- Class - Mammalia
- Order - Primates
- Family - Hominidae
- Genus - Homo
- Species - sapiens