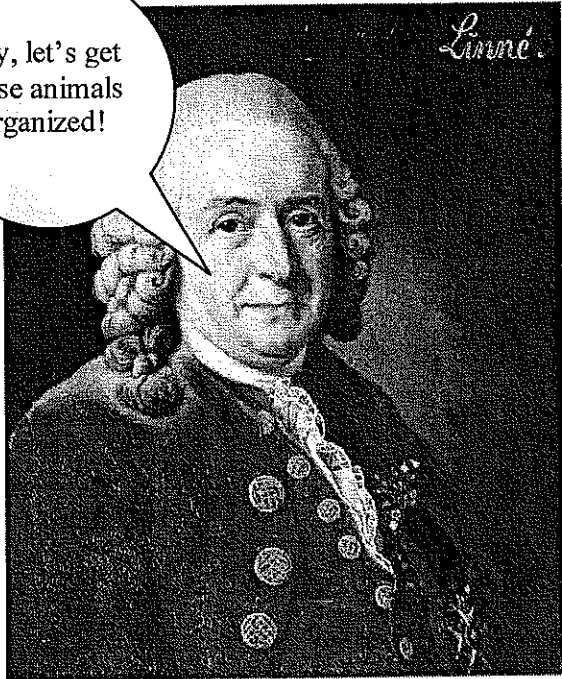


Lesson 2. Organizing the Animals: How It Happened

Back in the 18th century, a Swedish man named Carolus Linnaeus thought it was important to organize living things, and he developed a system to do just that. He started out interested in plants, but he ended up ordering all life as he knew it. We still use the essence of his system today. Scientists are constantly refining the system based on new knowledge. Who knows? Maybe you will make a change in how animals are organized!



Hey, let's get these animals organized!

Putting animals in order like this is called taxonomy. The taxonomists — people who name animals — use a book called the *International Code of Zoological Nomenclature*, or ICZN, to tell them the rules for classifying animals.

Linnaeus's system has seven levels:

1. Kingdom
2. Phylum
3. Class
4. Order
5. Family
6. Genus
7. Species

Every animal on the planet, down to the most microscopic creature you can imagine, can be classified according to this system.

You can remember the order the system comes in with one of the following phrases. The first letter of each word is the first letter of the level of classification. Pick the one you like the best and practice saying it five times.

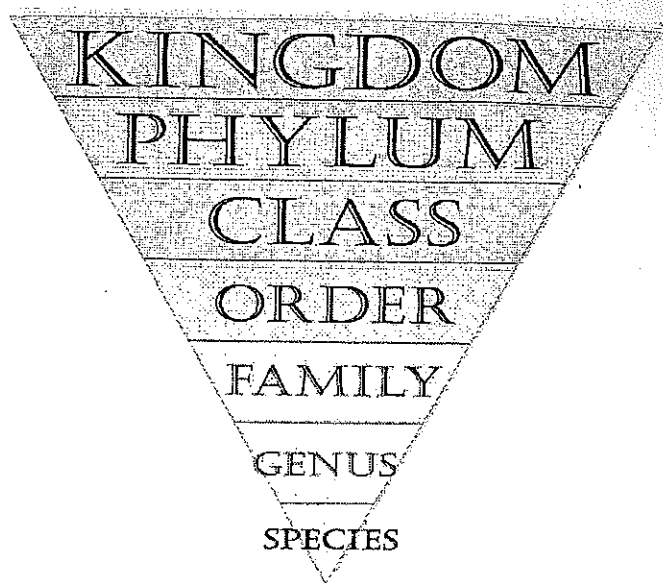
King Phillip, come out, for goodness' sake!

King penguins congregate on frozen ground sometimes.

X Keep ponds clean or frogs get sick.

Let's look at each level, and an example using one common animal.

These levels start out broadly — that means the top levels have the most animals, and they get narrower and narrower as you go down. So, by the time you get to the species, there is only *one type* animal in the group. You can imagine these levels as an upside-down triangle.



Kingdom: Generally, scientists agree there are six kingdoms. The animal kingdom (called Kingdom Animalia) is just one of those. In case you're interested, the others are

Achaebacteria, Eubacteria, Protists, Fungi and Plants.

Originally, Linnaeus only identified two kingdoms: plant and animal. Some scientists think that viruses should have their own kingdom, but currently they are not included under this system.

Phylum: Within the animal kingdom, the animals are divided into more than 30 phyla (which is the plural of "phylum"). You might be interested in Phylum Chordata — it's the one humans and all animals with backbones are in (do you see how "chordata" looks like the word "cord" — like spinal cord?). Phylum Arthropoda contains insects, spiders and other animals with segmented bodies, like shrimp. Arthropods have their skeletons on the outside of their bodies (think of the hard shell of a lobster) and other characteristics in common.

Class: The third level of classification is class. For example, Phylum Chordata has classes in it like birds, mammals (Mammalia) and reptiles.

Order: The next level, or rank, is order. Orders are smaller groups within the different classes. Lepidoptera is the order of moths and butterflies. Carnivora is the order within Mammalia that has the most diversity in animal size.

Family: The fifth rank of classification is family. (When you get to this rank, people sometimes disagree about which family an animal belongs to, so you may find that different sources tell you different things. This can even happen with orders.) The family for dogs is Canidae.

Genus: This rank looks like "genius," doesn't it? It's the second-to-last rank, and a genus may have only one or two animals in it. If animals are in the same genus, they are really closely related. In fact, you may not be able to tell them apart just by looking at them! When we write the name of the genus, we capitalize it and italicize it. For example, the genus of dogs (and wolves, too!) is *Canis*.

Species: If animals can breed together successfully, they are a species. When an animal is called by its scientific name, then that means it is being identified by its genus and species. We use a lowercase letter and italics for the species. The scientific name of dogs is *Canis familiaris*; however, the scientific name of wolves is *Canis lupus*.