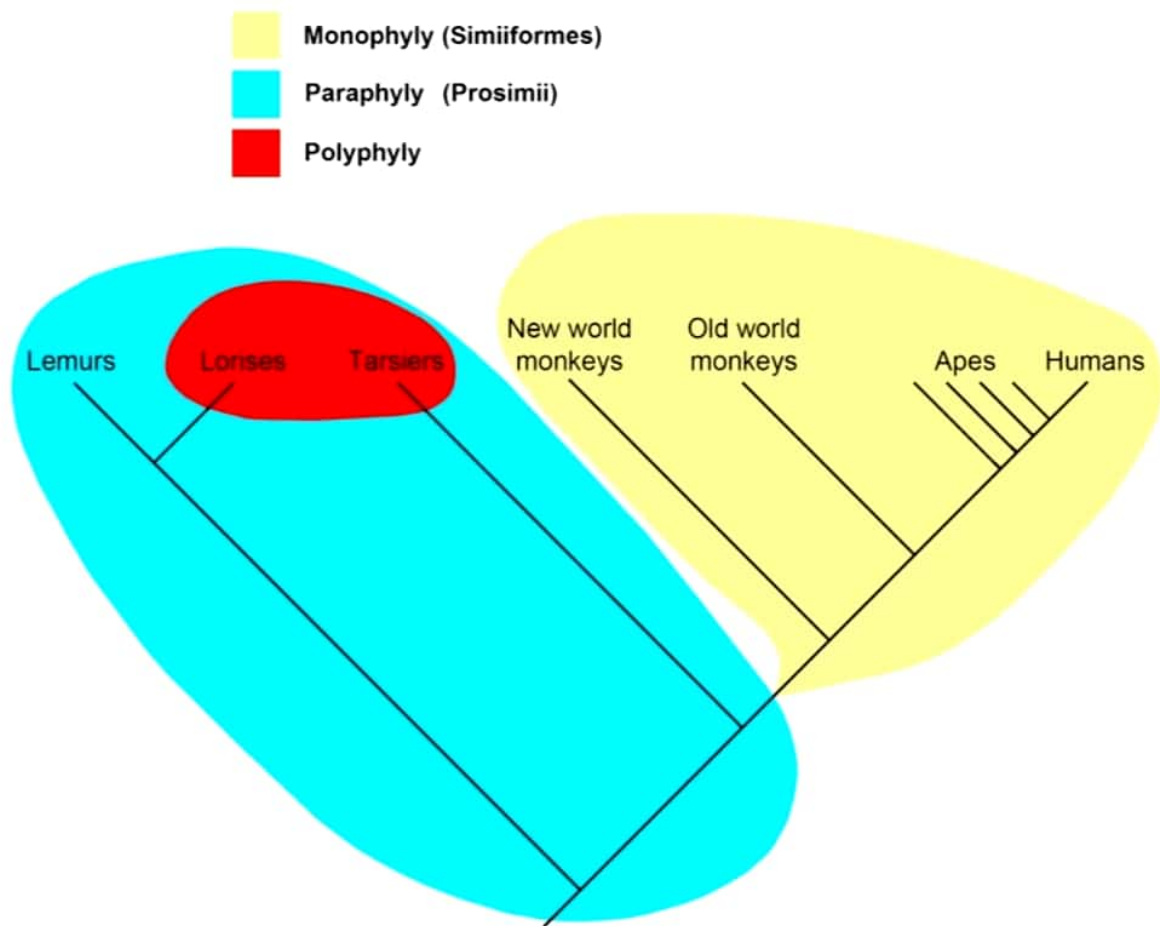


What is Monophyletic?

Monophyletic group is a group of organisms that includes an ancestral species and its entire descendent species. Monophyletic group is also known as a **clade**. A clade is a natural kind of a group that is very important in phylogenetic classification. Monophyletic groups are created based on the shared derived characteristics. Hence, monophyletic group can visualize relationships among the organisms in a [phylogenetic tree](#).



What is Paraphyletic?

Paraphylatic group is a group of organisms that consist of an ancestral species and some of its descendant species. Not all the descendent species are included in this group. Paraphyletic group is nearly monophyletic. The paraphyletic group is created based on the [symplesiomorphy](#). Some well known paraphyletic taxa are Pisces and Reptilia.

What is Polyphyletic?

A polyphyletic taxon is a group of organisms that lack a common ancestor. The polyphyletic group consists of unrelated organisms who are descended from more than one ancestor. It is kind of an unnatural group of organisms. Normally when a polyphyletic taxon is found, it is reclassified since it is a totally unnatural assemblage.

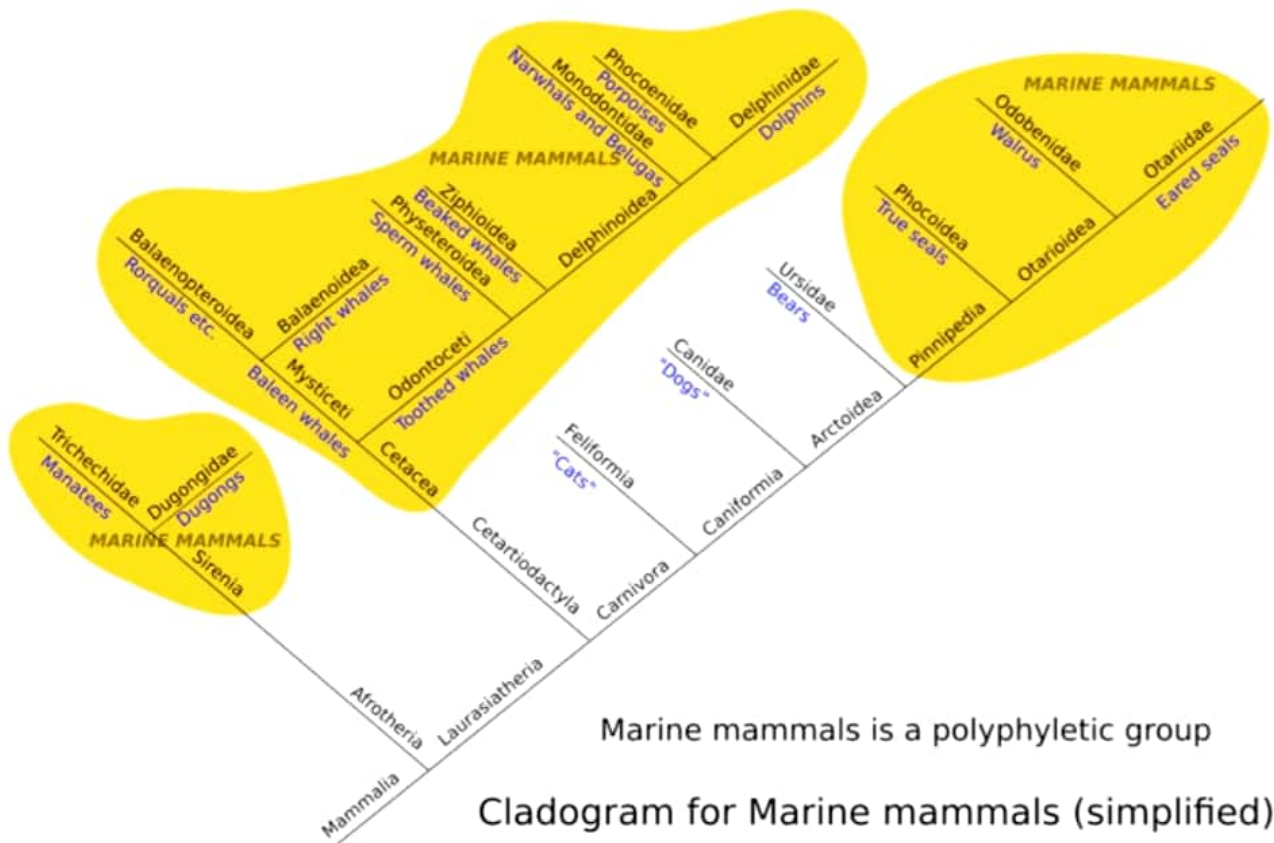


Figure 02: Polyphyletic group

Monophyly – the property of an *inclusive* group of organisms of shared common ancestry

Polyphyly – the property of being unrelated by descent

Paraphyly – the property of a group of organisms of shared common ancestry that *does not* include all of the evolutionary derivatives of that common ancestor

