

## DEFINITIONS

**ANATOMY** - A detailed study or description of a specific structure, or a reference to a particular structure, without relating the part(s) studied to the composite animal form.

**MORPHOLOGY** - The science or study of the functional form of an animal. A relating of parts to the composite animal form.

**COMPARATIVE MORPHOLOGY** - A detailed study of the functional form of representative individuals within a phylogenetic series of animals especially when compared with an individual typical of the group.

**PHYLOGENY** - Refers to relationships among taxa; who descended from who.

**TYPICAL** - Agreeing with the usual, basic or broadly descriptive form representing a phylogenetic group.

**PRIMITIVE** - Ancient in occurrence; designating a structure or form which appeared early in the phylogenetic history of a species. [**Plesiomorphic; if shared with others symplesiomorphic**]

**SPECIALIZED** - A highly evolved form or structure; a modification occurring relatively late in the evolutionary history of an individual. [**Apomorphic; if shared with others synapomorphic; if not shared with others then called autapomorphic**]

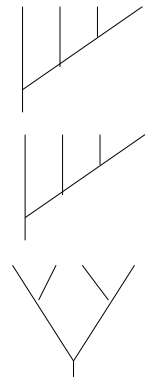
**VESTIGE** - A remnant of an ancient structure or system which is functionless in the present-day form.

**MONOPHYLETIC** - All members of group (taxon) have a common ancestor. A monophyletic group contains the common ancestor and all of its descendants. Such groups are characterized by the possession of synapomorphies.

**PARAPHYLETIC** - A group that contains the common ancestor and some, but not all, of its descendants. Such groups are characterized by the possession of plesiomorphies.

**POLYPHYLETIC** - Not all members of a particular group have a common ancestor. A group that contains some of the descendants of a common ancestor but not the common ancestor itself. Such groups are characterized by the possession of convergent characters.

**HOMOLOGY (Homologous)** - a structure on two different organisms that has the same origin, regardless of the function. For example, the wing of a bat and the arm of a human. Same origin, but different function.



**ANALOGY** - a structure that has a similar function, but a different origin. For example the wings in insects and the wings in birds. They serve the same function, but they are very different in origin.

**HOMOPLASY** - Structural similarities of characters are thought to have arisen at different times or from two different ancestors.

**PARALLEL (CONVERGENT) EVOLUTION** - a structure in two taxa that may have a very similar function, and also be very similar in structure, but have a different origin (or a different line of evolution). For example, Praying Mantids and Mantid flies are very similar in shape and form, but are in very different evolutionary lines.

