Operational Taxonomic Units and Characters

Operational Taxonomic Units – OTUs

The study of phylogeny begins with the selection of **taxa** or taxonomic groups to be analyzed. The group as a whole is called the study group or **ingroup**, and the individual unit taxa is termed as **O**perational **T**axonomic **U**nits, or **OTUs.**

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Character

Character is defined as a feature which varies from one organism to other. Two or more forms of a character are **character states**. One example of a character is petal color, for which two character states are purple and pink.

Unit Character is defined as a taxonomic character of two or more states, which within the study at hand cannot be subdivided logically, except for the subdivision brought about by the method of coding.

Homology is defined the occurrence of the same organ in different animals under every variety of forms and functions (Owen 1848).

Analogy is defined as the occurrence of a part or an organ in one animal which has the same function as another part or organ in a different animal (Owen 1848).

Morphocline

After the characters and character states have been selected and defined and their homologies have been assessed, the character states for each character are arranged in a sequence, known as a **transformation series** or **morphocline**.

References

Simpson, (2006). *Plant Systematics.* Elsevier Academic Press, USA.