**Classification**

**the species as natural unit**

-all classification systems recognize these
-most of the time clearly identifiable
-but intermediates and hybrids sometimes exist
-in those cases, species identities are difficult to establish.

**Classification**

**Definitions of species boundaries**

Hierarchical arrangement of species into larger groups

often reflects similarity of appearance

should reflect evolutionary relationships

**Characters**

**Distinguishing features of organisms that can be used in classification**

**Useful characters**

differ among groups (e.g. species)

are shared by several members of each group

**Example**— wings in insects (tetrapods)

silverfish do not have them

cockroaches, grasshoppers, flies, etc do

**Types of characters**

**qualitative**

presence or absence

color or pattern

**quantitative**

meristic— something that can be counted

metric— something to be measured