

## Systematics Vocabulary, week 1

Systematics	• Convergence
Cladistics (also: phylogenetic systematics)	• Parallelism
Willi Hennig	• Reversal
Phylogenetic reconstruction	Monophyly (also: monophyletic taxon = “natural taxon”)
Classification	Paraphyly
Taxonomy	Polyphyly
Descent with modification	Taxon (plural: taxa)
Phylogeny	Terminal taxon
Character (including types of characters)	Higher taxon
Clade	Ingroup
Cladogram (also: evolutionary tree, tree)	Sister taxa (also: sister groups)
• Node, or branch point	Common ancestor
• Branch	Basal (general, primitive, ancestral) vs. derived (special)
• Internode	Bifurcating pattern of cladogenesis
• Root	Reticulate speciation
Lineage	Empirical vs. theoretical
Species	Ontogeny
Most recent common ancestor (MRCA)	Parsimony (Occam’s razor)
Assumptions	Simplest explanation (also: most parsimonious explanation)
Genotype	Paradigm shift (Kuhn 1970)
Phenotype	Punctuated equilibrium vs. phyletic gradualism
Recombination	Epistemology
Allele	Observation, hypothesis, conclusion
Mutation	Aposematic coloration
Mitochondrial DNA (mtDNA)	Character congruence
Natural selection	Corroboration: exact and partial
Fecundity	Consilient observations
Phylogenetic constraint	Induction
Inter- vs. intra-population variation	Authoritarianism (also: special knowledge)
Founder effect	Falsification
Synapomorphy	Polytomy
Autapomorphy (also: apomorphy)	Character evolution
Plesiomorphy	Character polarity
Symplesiomorphy	Tree length
Homologue (adjectival form: homologous)	Consistency Index
Homoplasy (adjectival forms: homoplastic, or homoplasious)	