

# Systematic Biology

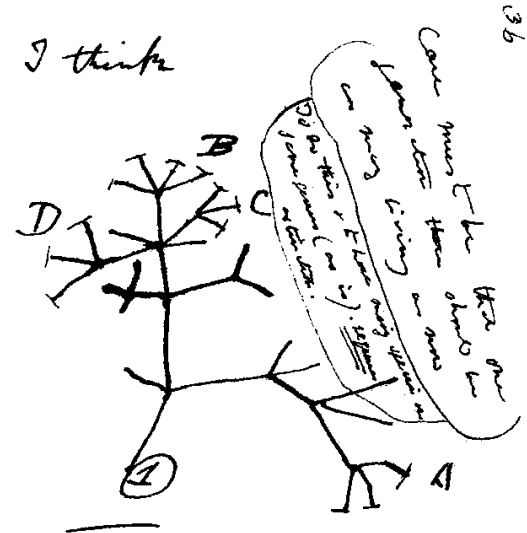
BIOS 4600/5600

(Formerly BIOS 4570/5570 Animal Systematics)

The Tree of Life is a wellspring of information for ecology, adaptation, molecular evolution, development, species formation, biogeography, & other fundamental biological processes. With advances in genomics and increases in computational power, our understanding of the Tree of Life has been revolutionized. At the same time, the methods used for including phylogeny in studies of ecology and evolution have expanded (and become more complicated).

Systematic Biology is not for budding systematists only. Rather, it is a course in phylogenetic biology for everyone. It includes sections on phylogenetic inference (from parsimony to Bayesian analysis to species trees) and the use of phylogenetic trees for studying evolutionary processes (comparative methods). In computer labs, we perform systematic analyses. We also practice skills that are of broad utility—such as Bayesian inference, information criteria, the Unix terminal, basic programming in R and Python, and other topics.

The course is aimed at graduate students, but interested undergraduates are welcome. Feel free to contact Dr. Kuchta with any questions.



then between A & B. various  
kind of relation. C + B. The  
finest gradation, B & D  
rather greater distinction  
than genus would be  
formed. - binary relation

Darwin's 1<sup>st</sup> phylogenetic tree

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