

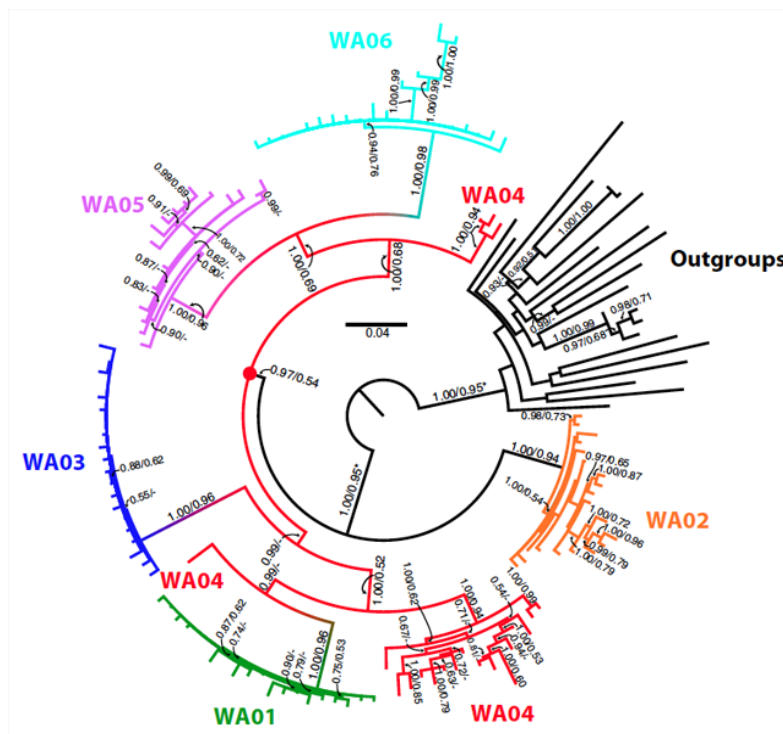
Molecular Phylogenetics

'Special topics in zoology':

BIOL 4933 (001), Tues/Thurs 8:00am – 9:20am

ISIS Numbers 8007/8008

Spring 2012



At the height of the H1N1 "swine flu" outbreak, stories circulated that H1N1 was an exotic combination of pig, human and avian influenza strains. How did scientists use DNA sequences to figure out that H1N1 was instead a hybrid of two common pig flu strains? Ten people who share the same dentist contract the HIV virus. How did forensic scientists figure out that five of the patients were infected by their dentist, and the other five were not? An unusual new insect species is collected in California. How do scientists use DNA sequences to figure out that its closest living relatives are from Japan, not the United States? How do scientists use information from morphological features, DNA and protein sequences to figure out how different species are related to one another? This course will introduce you to phylogenetics – the science of reconstructing the Tree of Life. This will be a hands-on course that will teach students how to build and interpret phylogenetic trees. The lectures will include readings and discussions about the underlying theory of phylogenetic analysis and its many applications. All participants will be expected to participate in classroom discussions of relevant primary literature.

Interested students should have a background in cell/molecular biology and evolutionary biology.

Please contact J. Silberman (jeff@uark.edu) or A. Alverson (aalverso@uark.edu) if you have any questions.