

Divergence Population Genetics of Chimpanzees

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The divergence of two subspecies of common chimpanzees (*Pan troglodytes troglodytes* and *P. t. verus*) and the bonobo (*P. paniscus*) was studied using a recently developed method for analyzing population divergence. Under the isolation with migration model, the posterior probability distributions of divergence time, migration rates, and effective population sizes were estimated for large multilocus DNA sequence data sets drawn from the literature. The bonobo and the common chimpanzee are estimated to have diverged approximately 0.86 to 0.89 MYA, and the divergence of the two common chimpanzee subspecies are estimated to have occurred 0.42 MYA. *P. t. troglodytes* appears to have had a larger effective population size (22,400~27,900) compared with *P. paniscus*, *P. t. verus*, and the ancestral populations of these species. No evidence of gene flow was found in the comparisons involving *P. Paniscus*; however a clear signal of unidirectional gene flow was found from *P. t. verus* to *P. t. troglodytes* ($2Nm=0.51$).