Phylogenetic models of historical biogeography to dispel the fog of deep time

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Historical biogeography increasingly depends on probabilistic phylogenetic models to reconstruct where ancestral species once lived. Standard approaches, however, rely almost solely on information about the present to reconstruct the past. More complex phylogenetic models that integrate paleogeographical, paleoenvironmental, and paleontological data promise to improve historical evolutionary inferences. This talk will feature analyses on plant radiations to illustrate how new evolutionary models that are designed to incorporate paleodata generate more realistic biogeographic and phylogenetic reconstructions.