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Phylogeography and Cryptic Diversity of Slimy Salamanders (*Plethodon glutinosus* complex) in the Interior Highlands

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The presence of cryptic species can result in underestimates of biodiversity and hamper conservation efforts. The 16 species of Slimy Salamanders (*Plethodon glutinosus* complex) are distributed throughout the eastern United States and show little to no morphological variation, having been described primarily using genetic data. Three species, *P. albagula*, *P. kiamichi*, and *P. sequoyah*, are known from the Interior Highlands (Ouachita Mountains and Ozark Plateau), but our knowledge of species diversity and distributions in this region is based on genetic analysis of only 15 populations. To better understand biodiversity patterns, we collected salamander tissue samples from >200 localities throughout the Interior Highlands of Arkansas, Missouri, and Oklahoma and sequenced the mitochondrial *ND2* gene. Phylogenetic analysis revealed that: 1) the range of *P. kiamichi* is broader than previously recognized, 2) *P. sequoyah* is nested within *P. albagula*, 3) the range of *P. kisatchie*, a species from the West Gulf Coastal Plain of Louisiana and southern Arkansas, may extend into the region, and 4) an undescribed cryptic species may be present. Species divergences occurred during the Pleistocene, beginning ~2.5 million years ago. Our results indicate that the current understanding of diversity and distributions of species of the *P. glutinosus* complex in the Interior Highlands is inaccurate and in need of revision. Future work will incorporate nuclear loci and employ explicit analyses for delimiting species.