

The Enigma of Variation in the California Bear Scarabs

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The endemic California “bear scarabs” offer a model for examining highly variable lineages, revealing evolutionary mechanisms that generate variation. The phenotypically variable *Paracotalpa ursina* species complex is assessed using a combination of DNA data (nuclear AFLP and mitochondrial sequences), morphology, and niche modeling. We use the molecular data to examine discontinuities between populations and investigate the role of geography in genetic isolation among *P. ursina* morphotypes. Both molecular data sets suggest that the Transverse Mountain Ranges in California form a biogeographic barrier isolating populations and acting, in part, as a mechanism that promotes variation.