

SUPPLEMENTARY MATERIAL

Genetic and Ecogeographic Controls on Species Cohesion in Australia's Most Diverse Lizard Radiation

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Figure S1. Maximum likelihood phylogeny of *Ctenotus* based on the ddRAD SNP dataset.

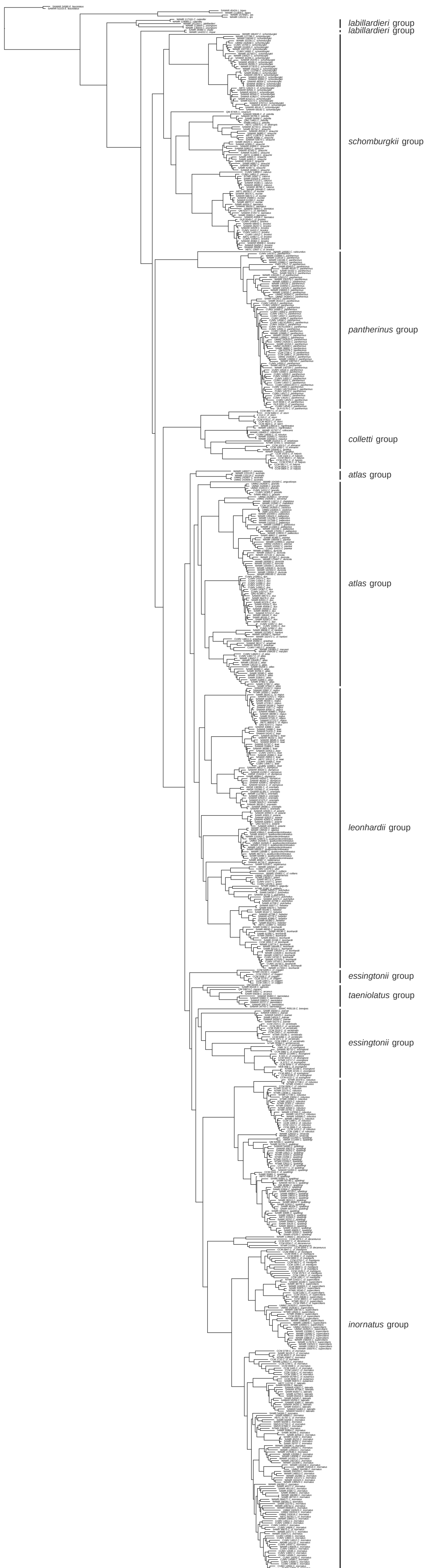


Figure S2. Results of the delimitation of operational taxonomic units (OTUs) in *Ctenotus*.

Figure S2 A. *Ctenotus atlas* group

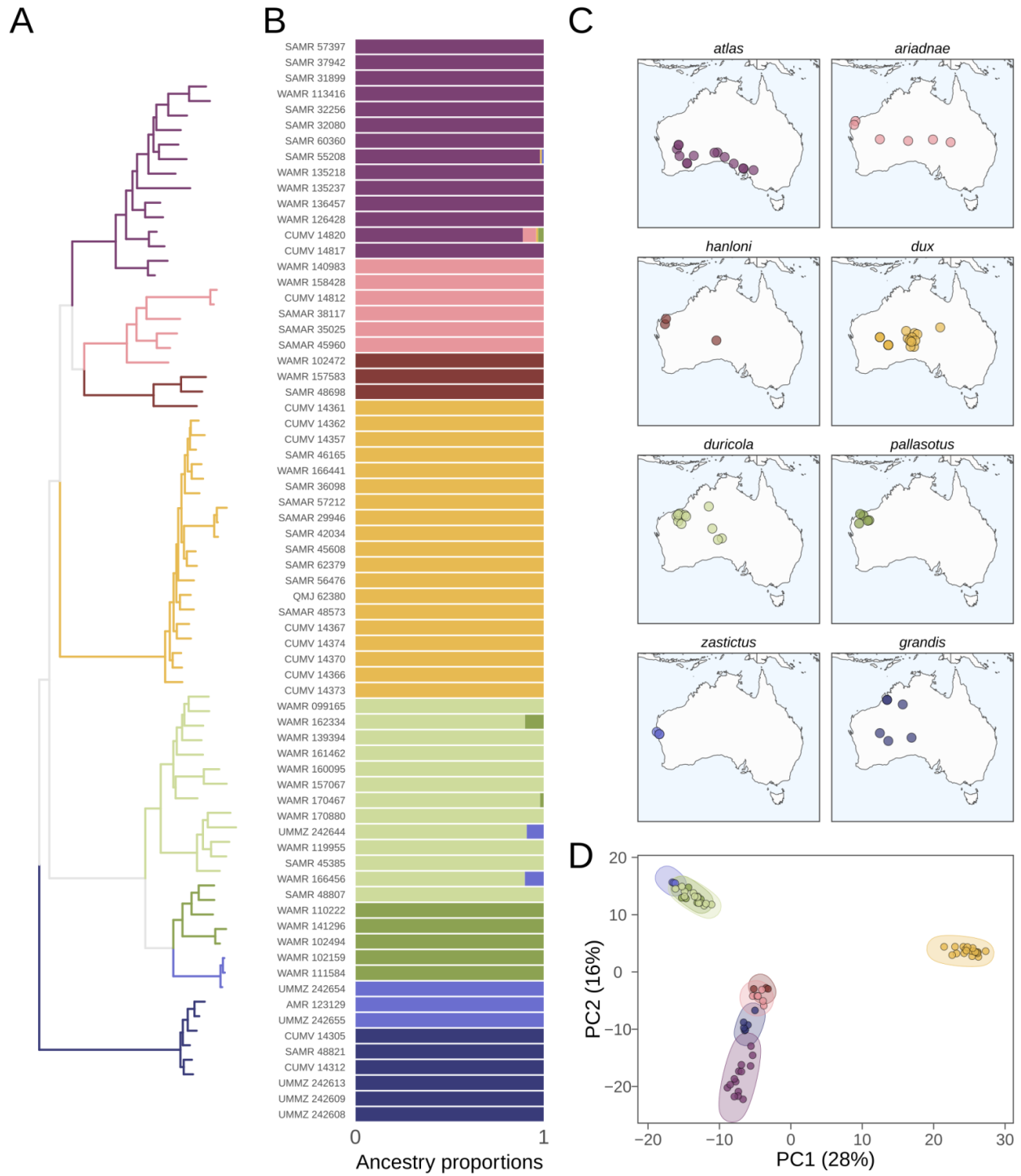


Figure S2 B. *Ctenotus colletti* group

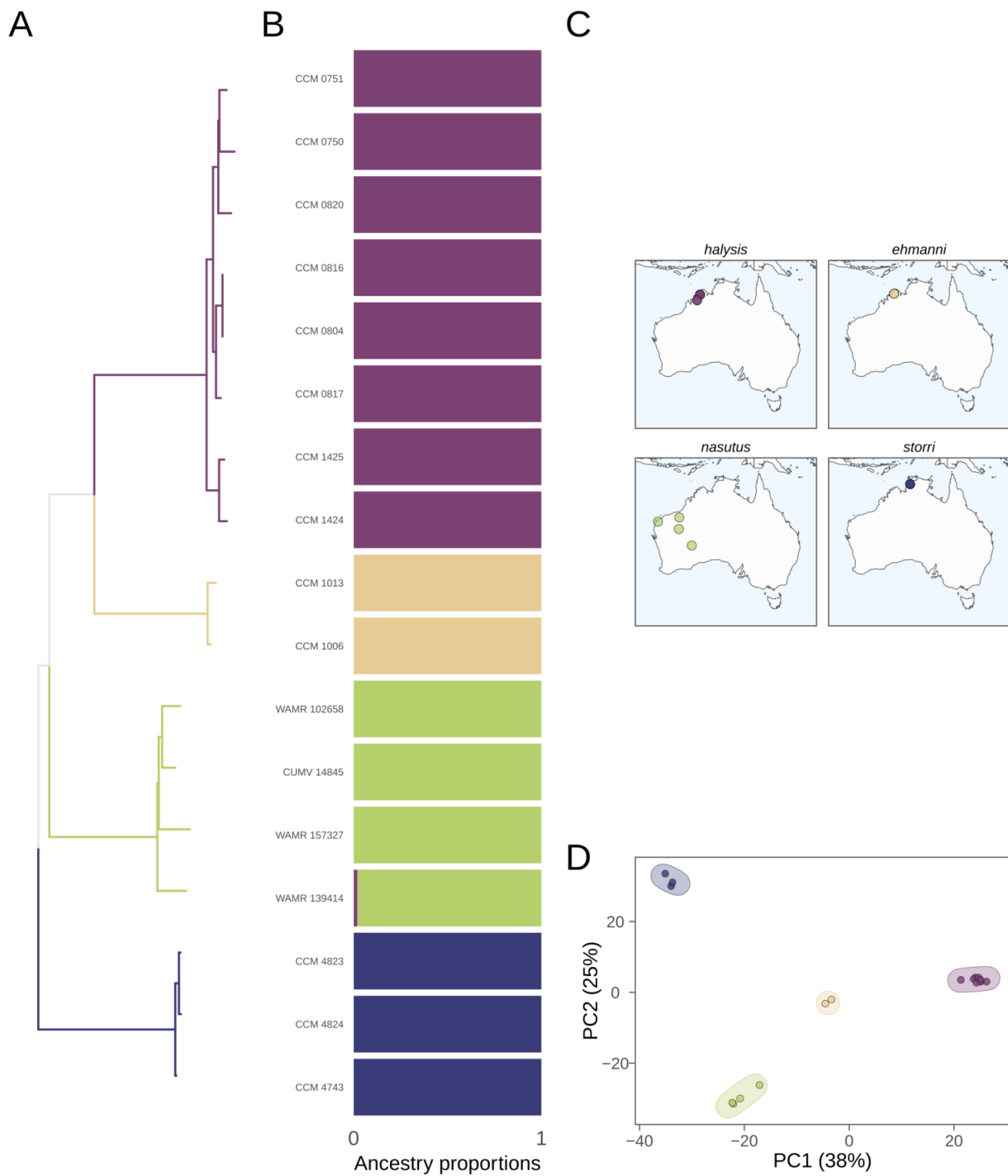


Figure S2 C. *Ctenotus essingtonii* group

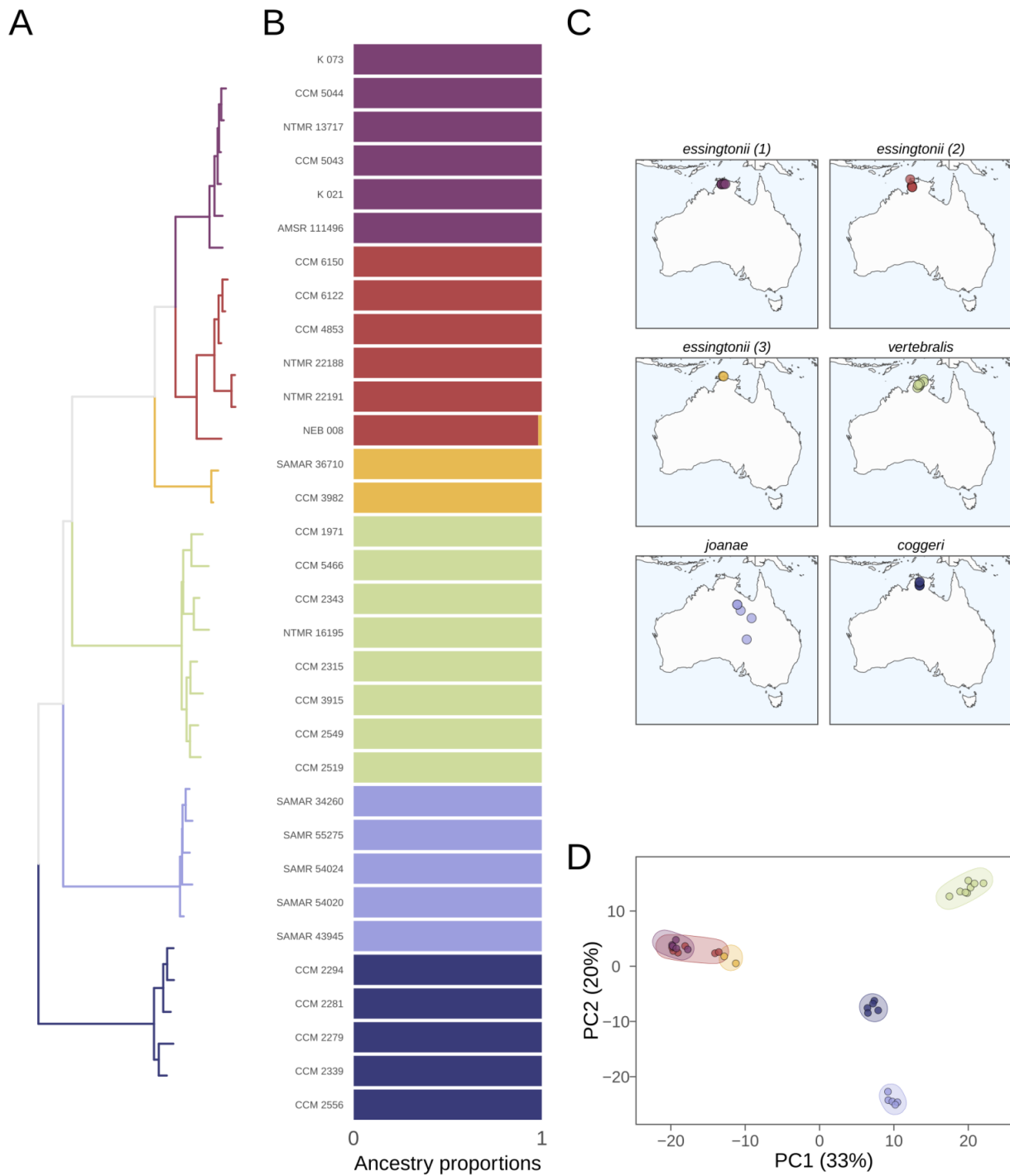


Figure S2 D. *Ctenotus inornatus* group

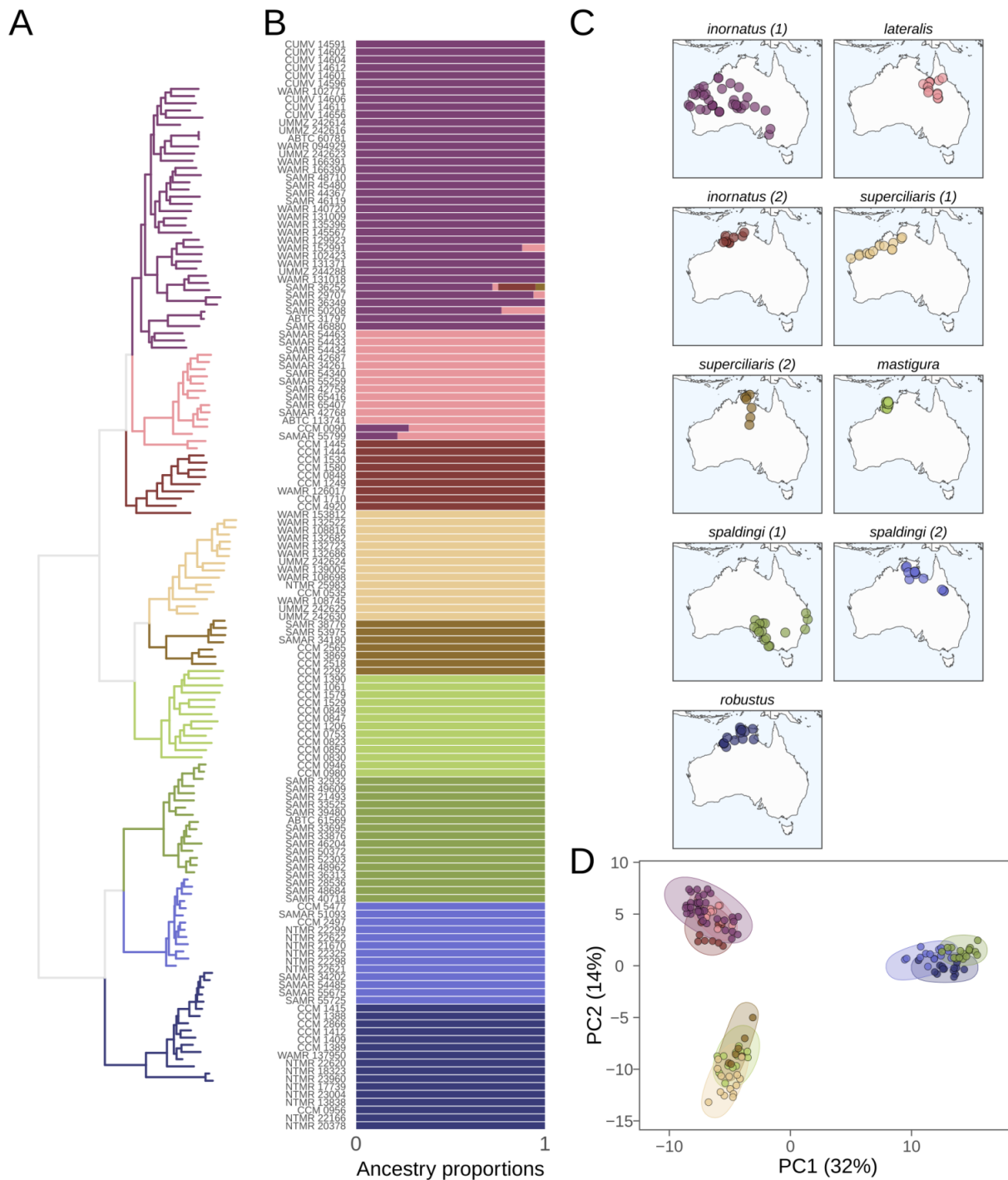


Figure S2 E. *Ctenotus leonhardii* group

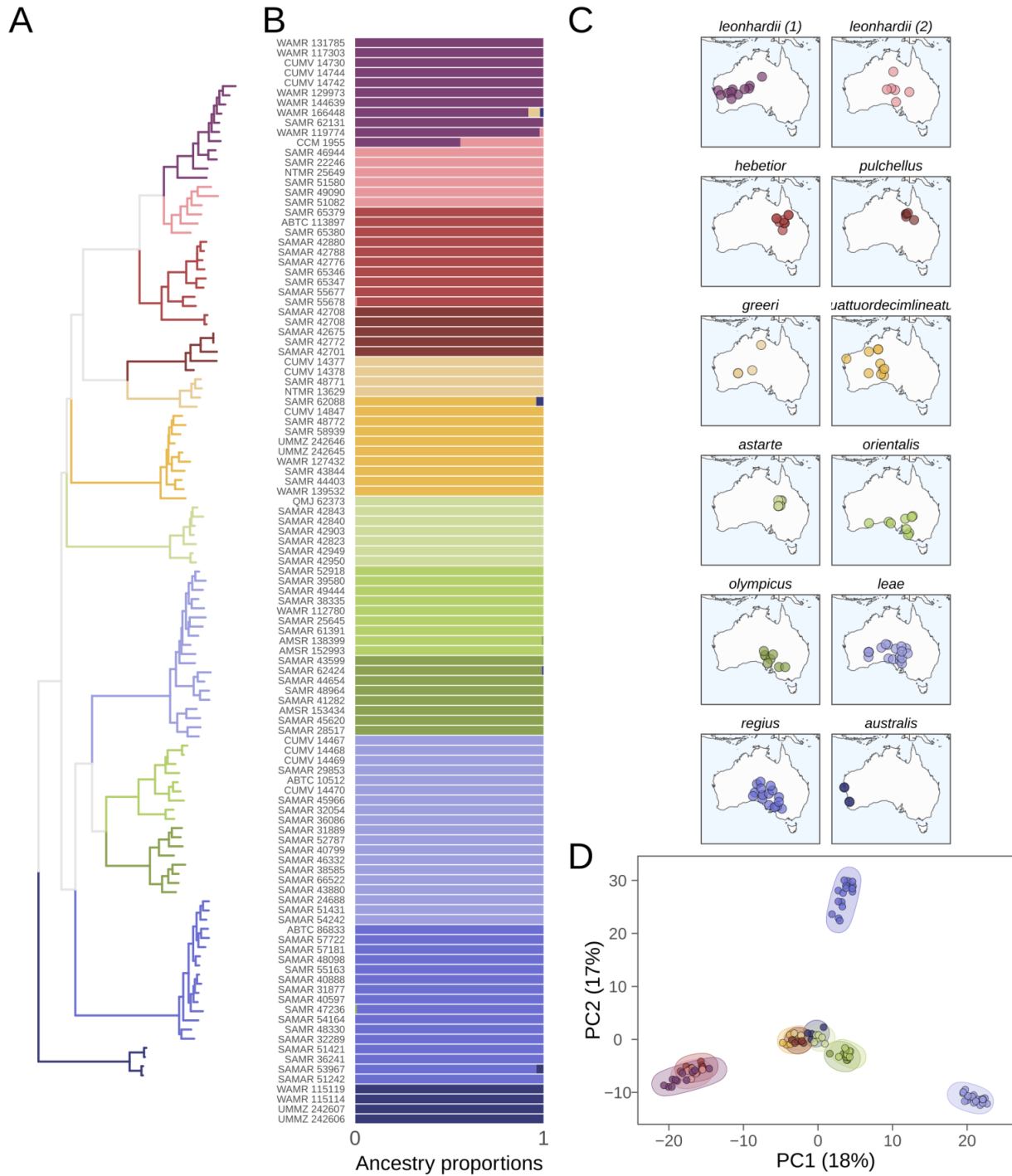


Figure S2 F. *Ctenotus pantherinus* group

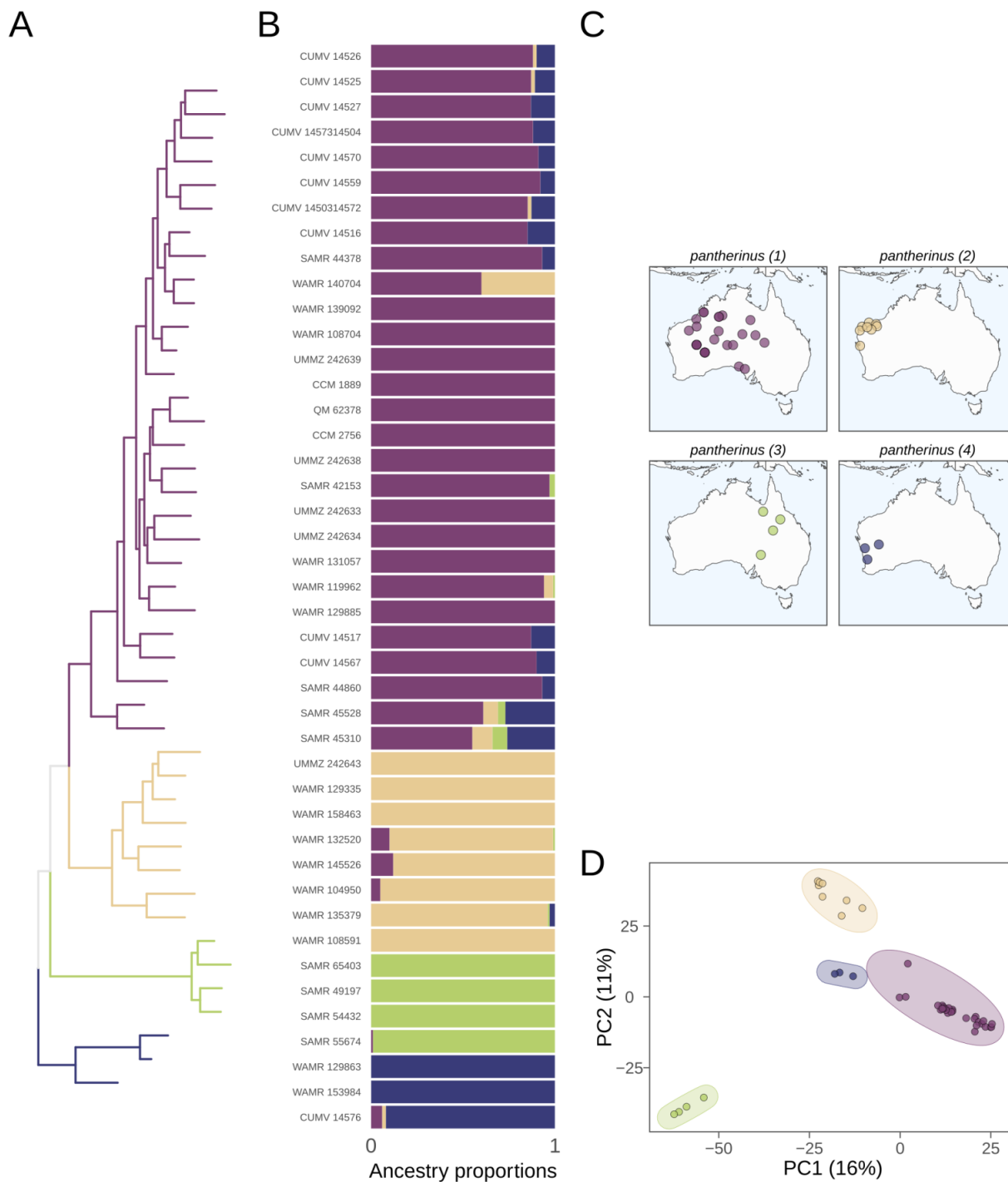


Figure S2 G. *Ctenotus schomburgkii* group

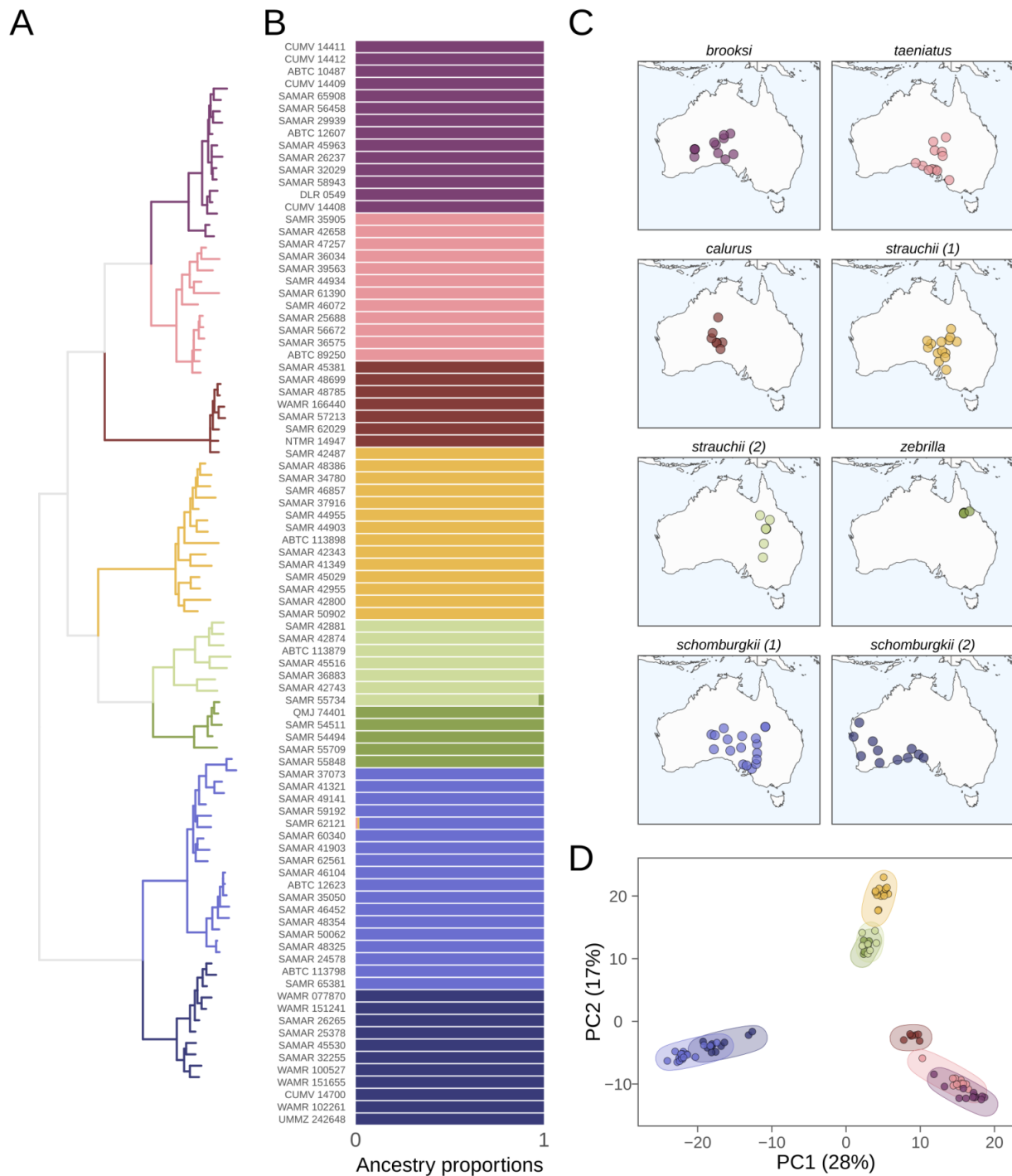


Figure S2 H. *Ctenotus taeniolatus* group

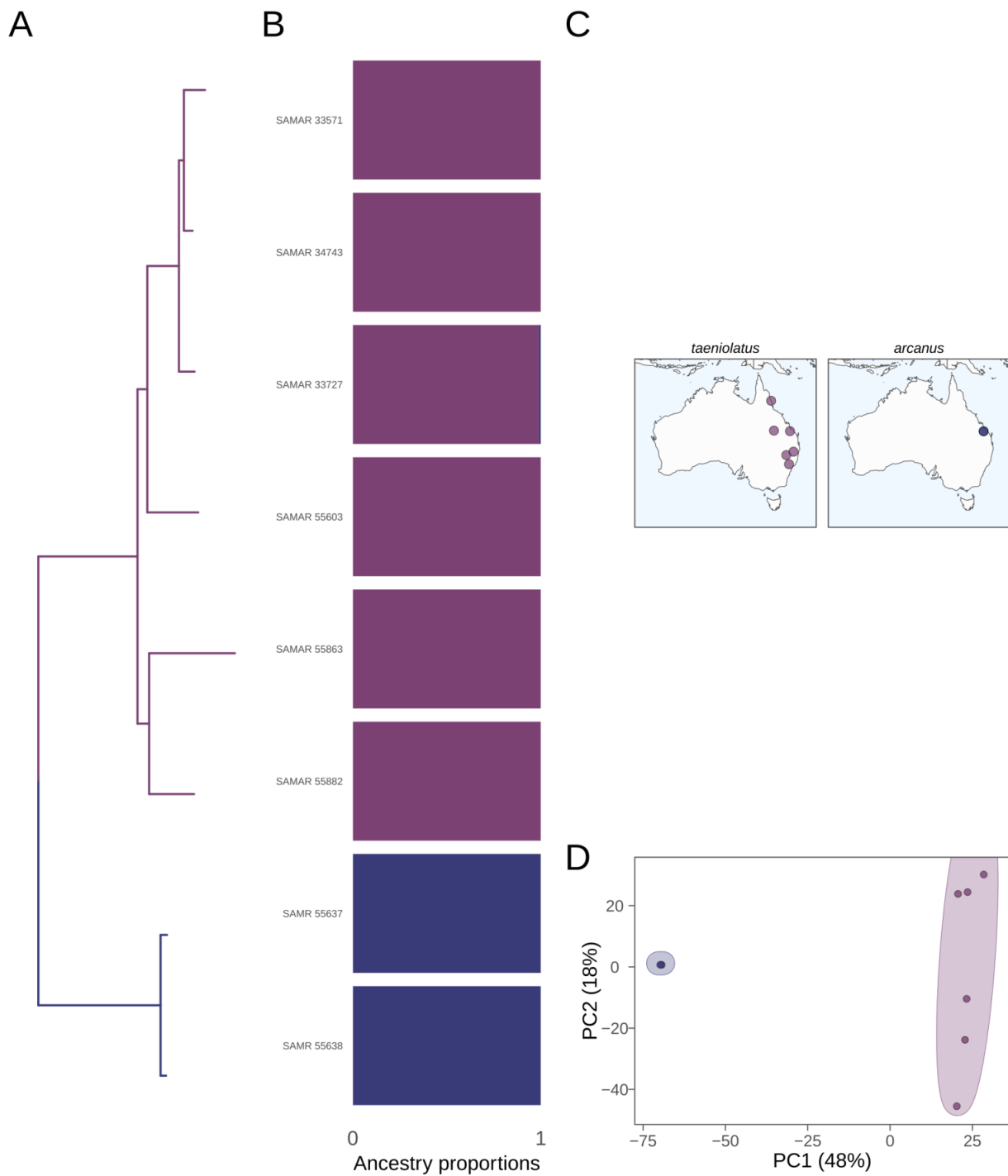


Figure S3. Results of the SNP-based genetic principal component analyses (PCA) for *Ctenotus*.

Colors as in figure S2.

Figure S3 A. *Ctenotus atlas* group

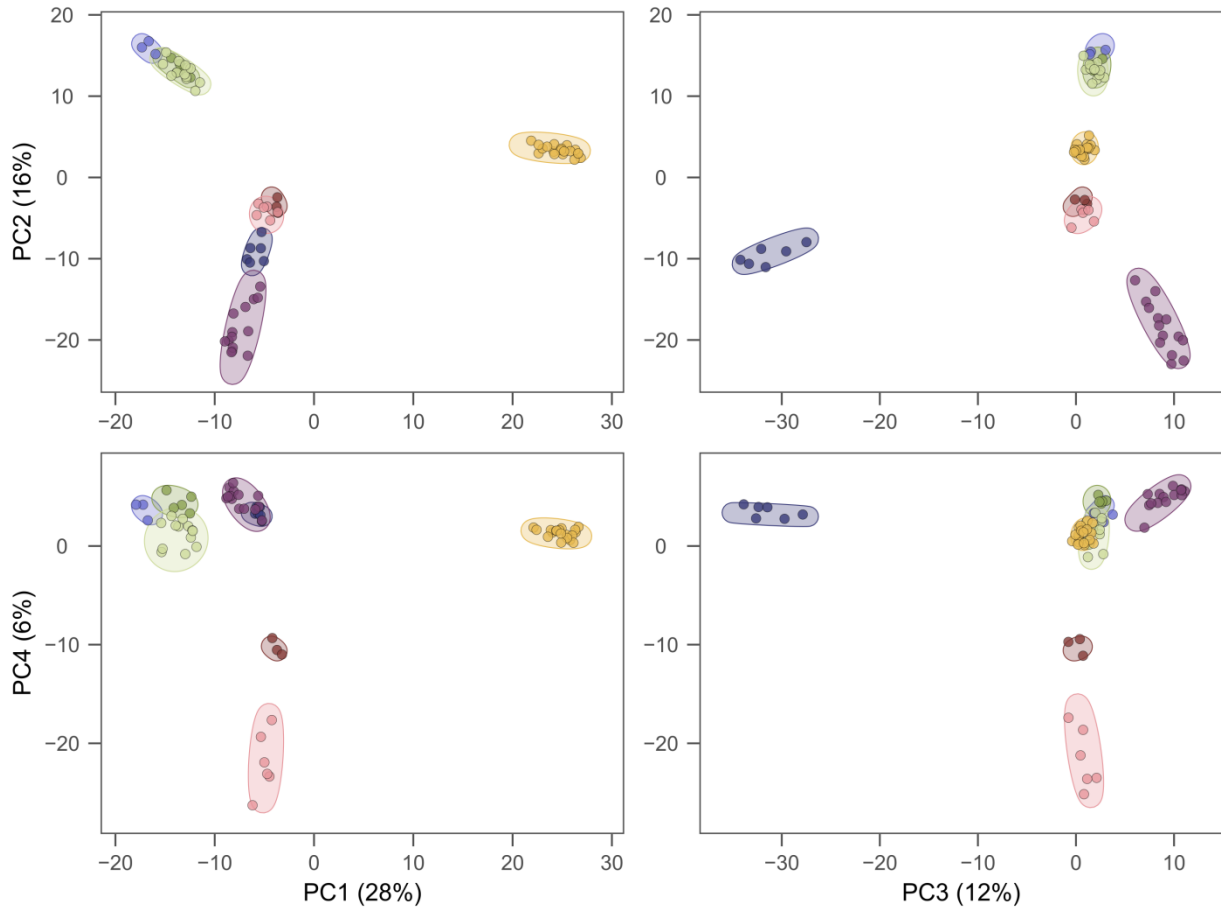


Figure S3 B. *Ctenotus colletti* group

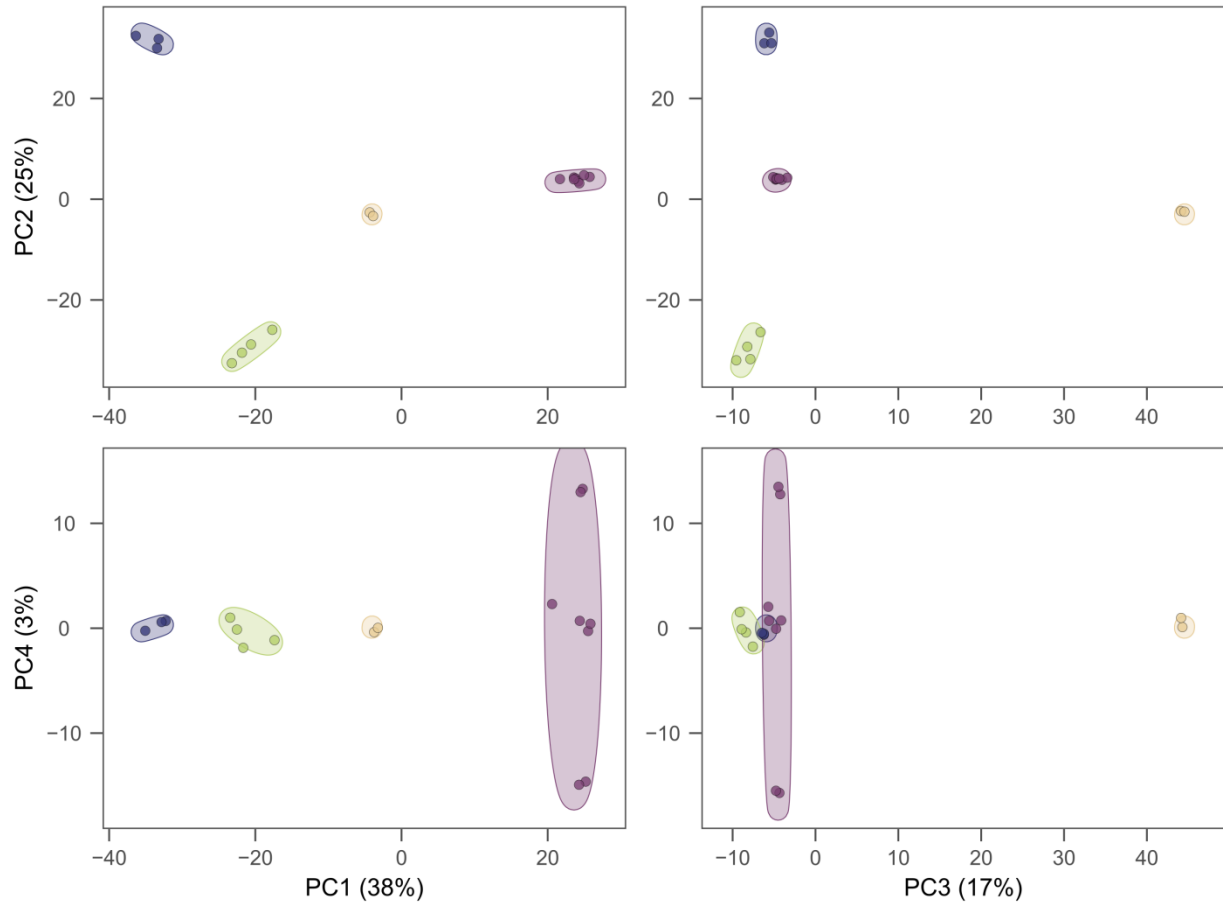


Figure S3 C. *Ctenotus essingtonii* group

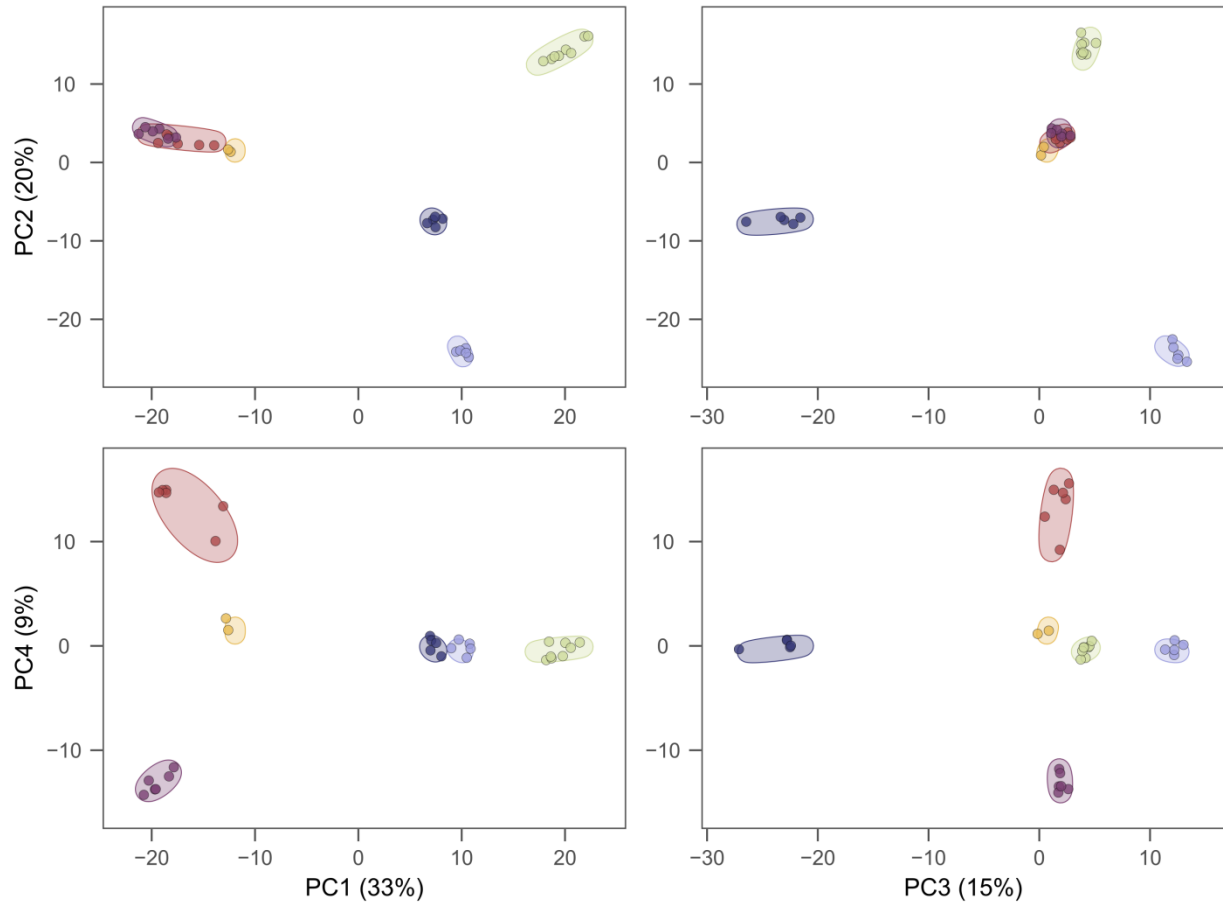


Figure S3 D. *Ctenotus inornatus* group

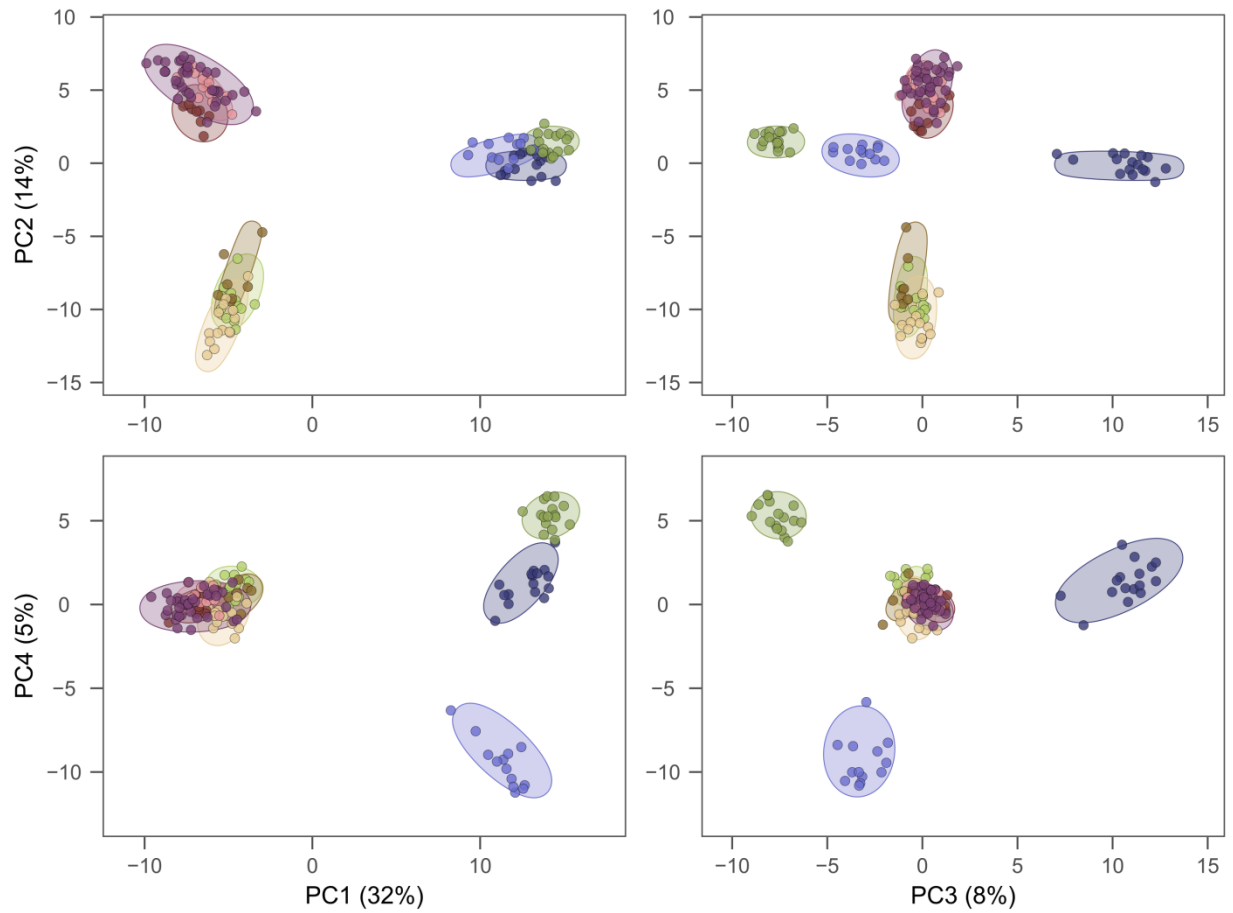


Figure S3 E. *Ctenotus leonhardii* group

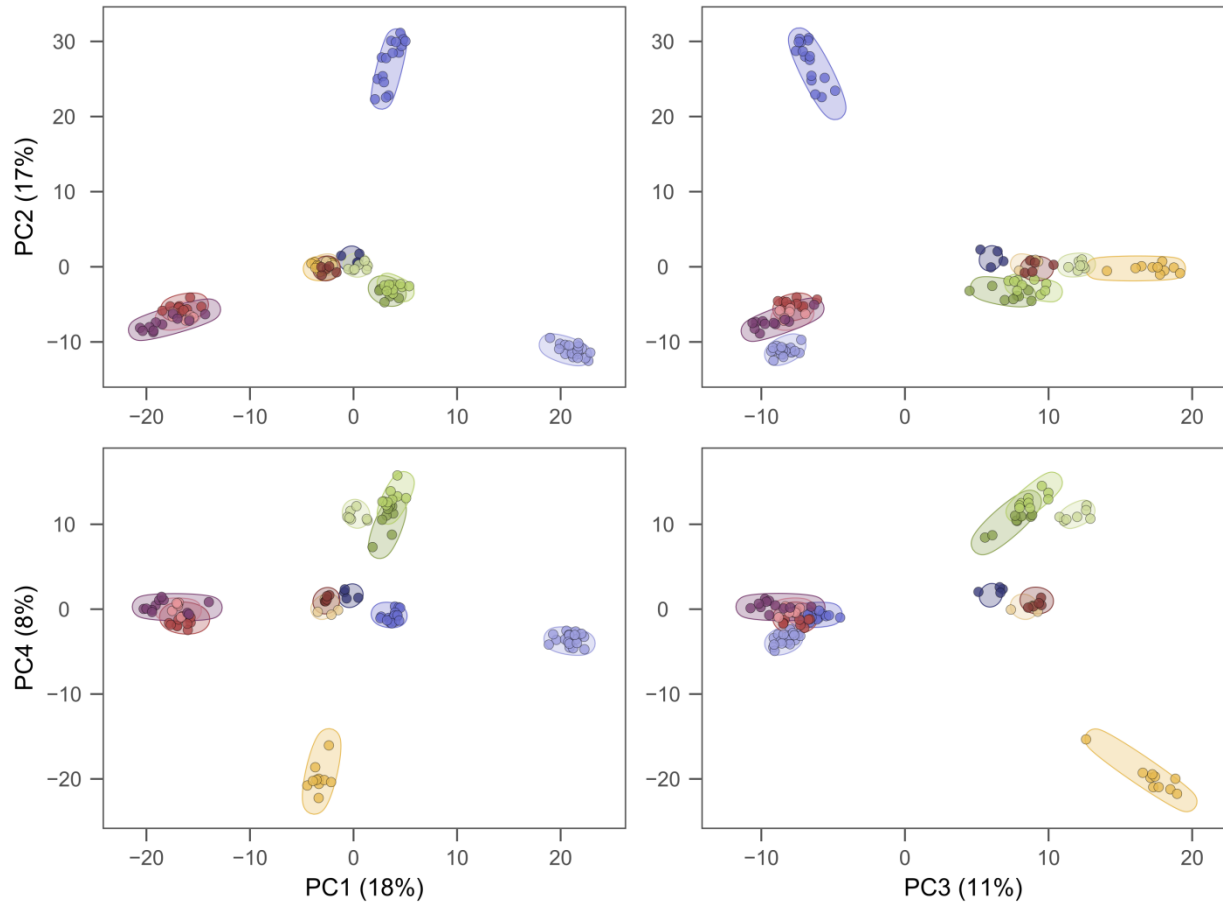


Figure S3 F. *Ctenotus pantherinus* group

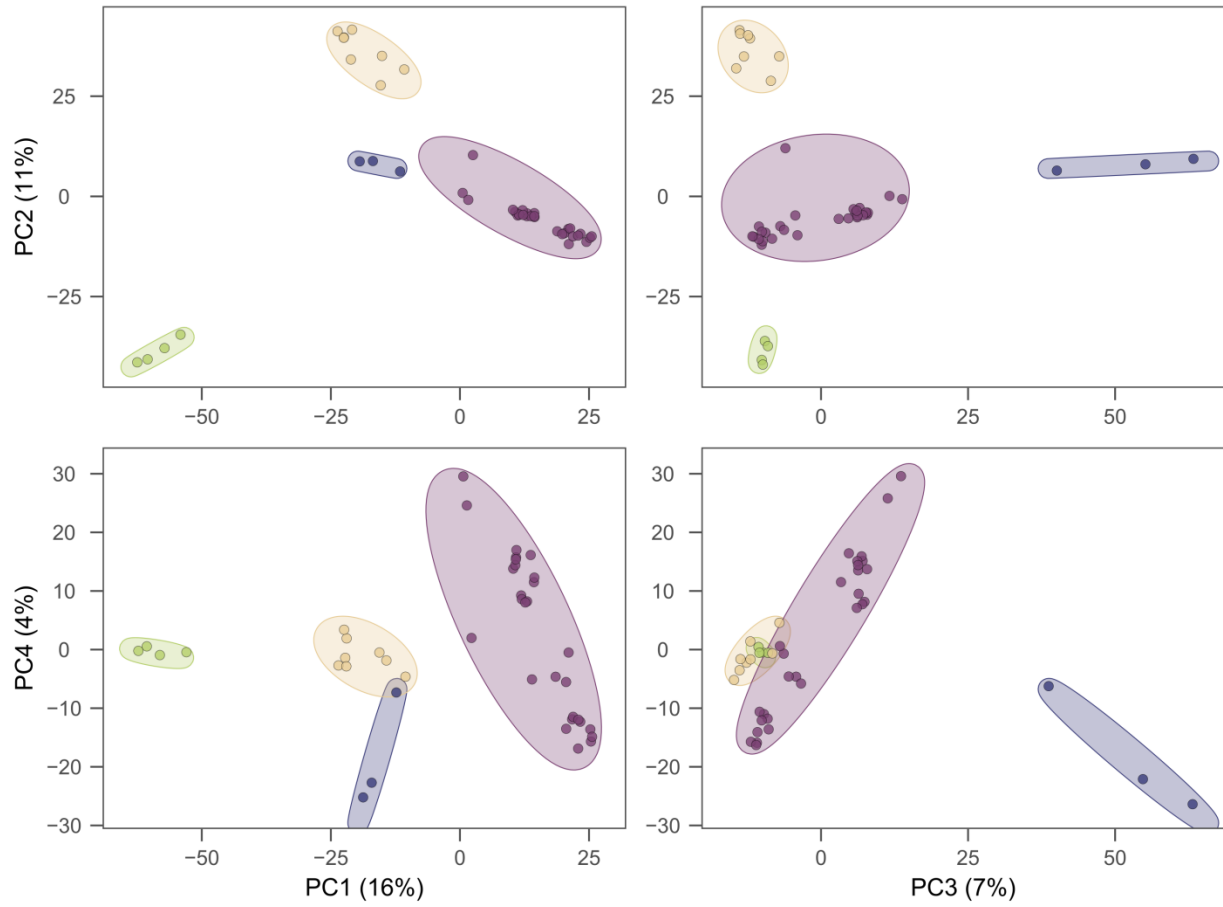


Figure S3 G. *Ctenotus schomburgkii* group

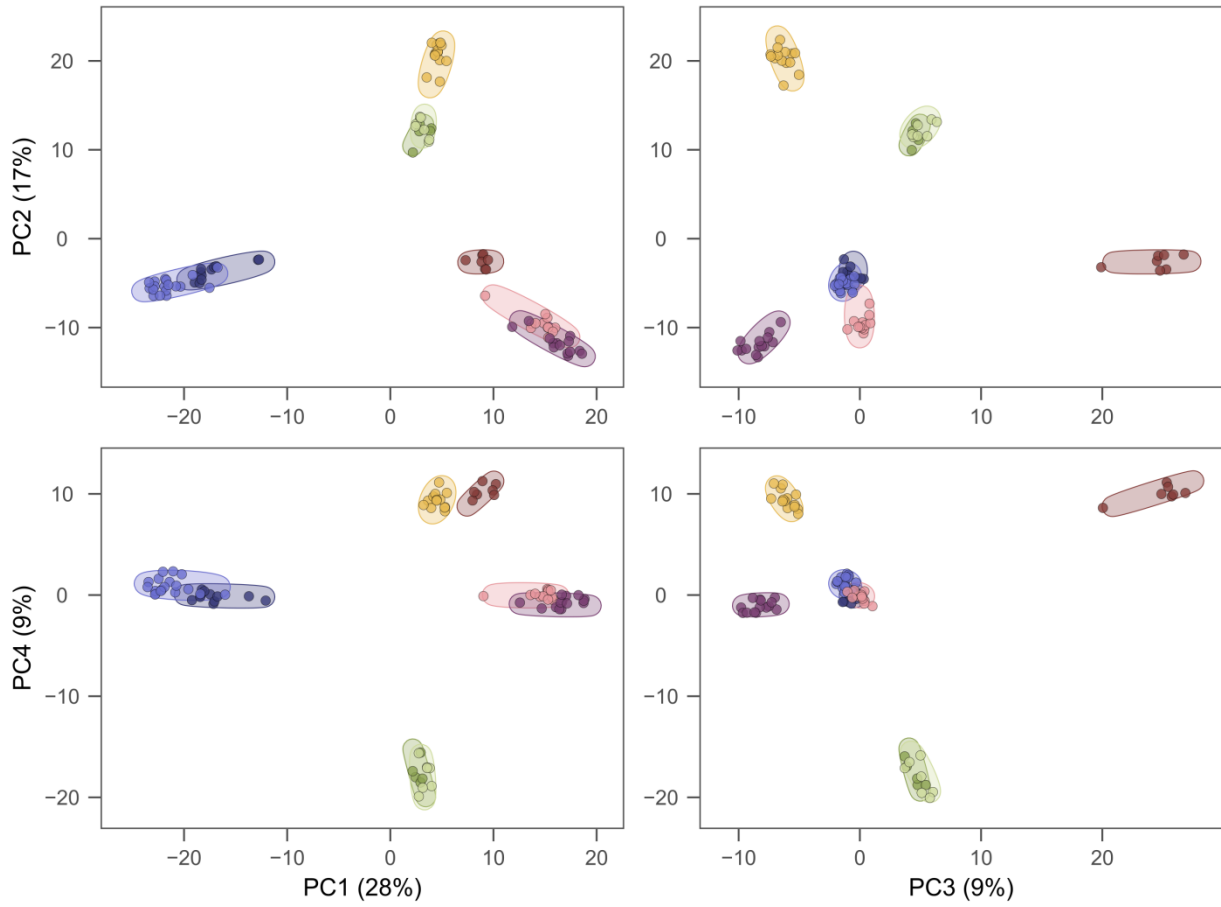


Figure S3 H. *Ctenotus taeniolatus* group

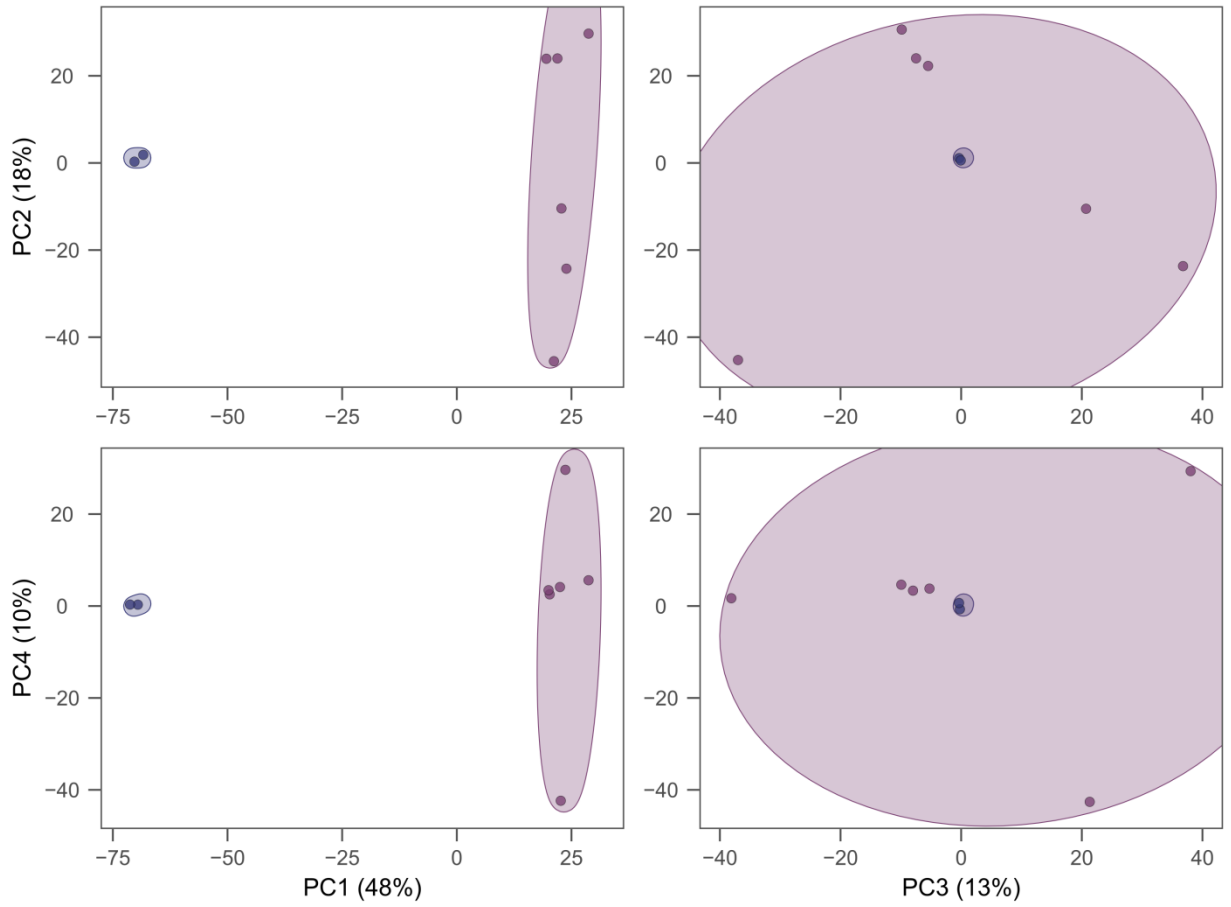


Figure S4. The relationship between the number of operational taxonomic units (OTUs) delimited within traditional (largely morphology-based) *Ctenotus* taxa and taxon range size.

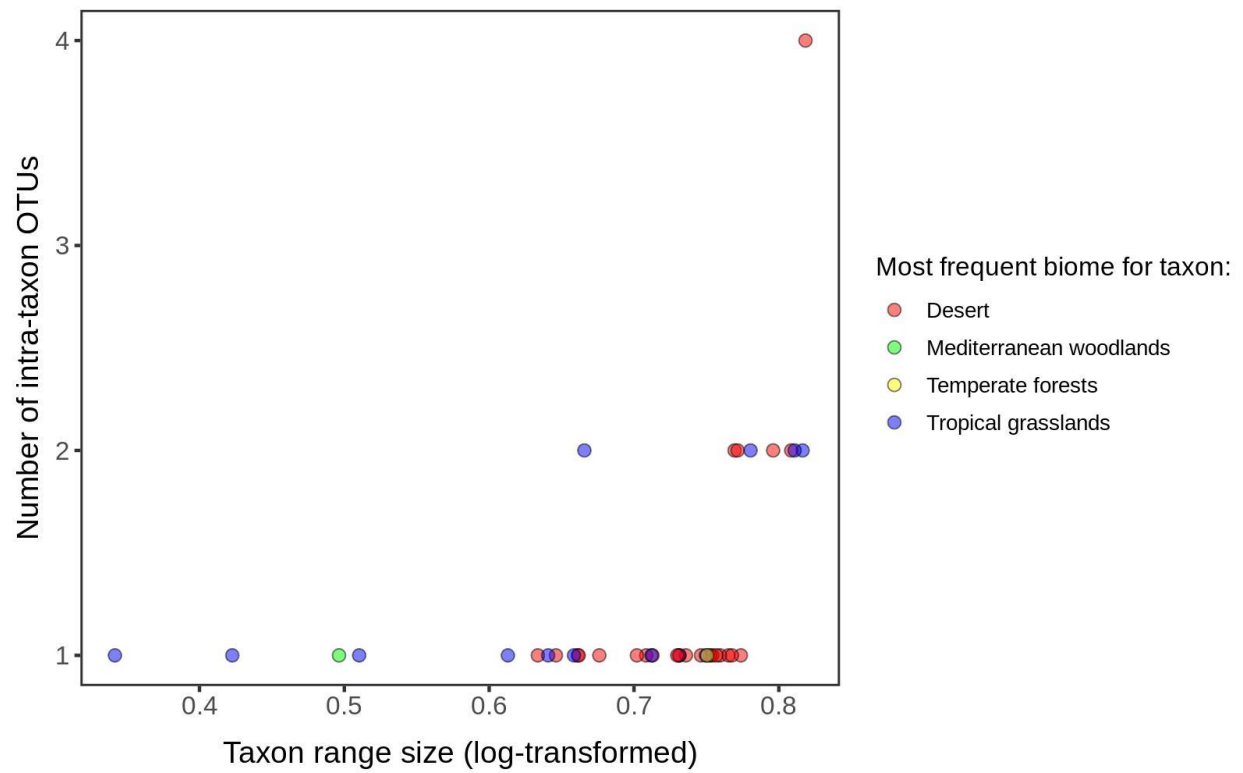


Figure S5. IBD (isolation-by-distance) slopes for the delimited operational taxonomic units (OTUs) in *Ctenotus*.

Figure S5 A. *Ctenotus atlas* group

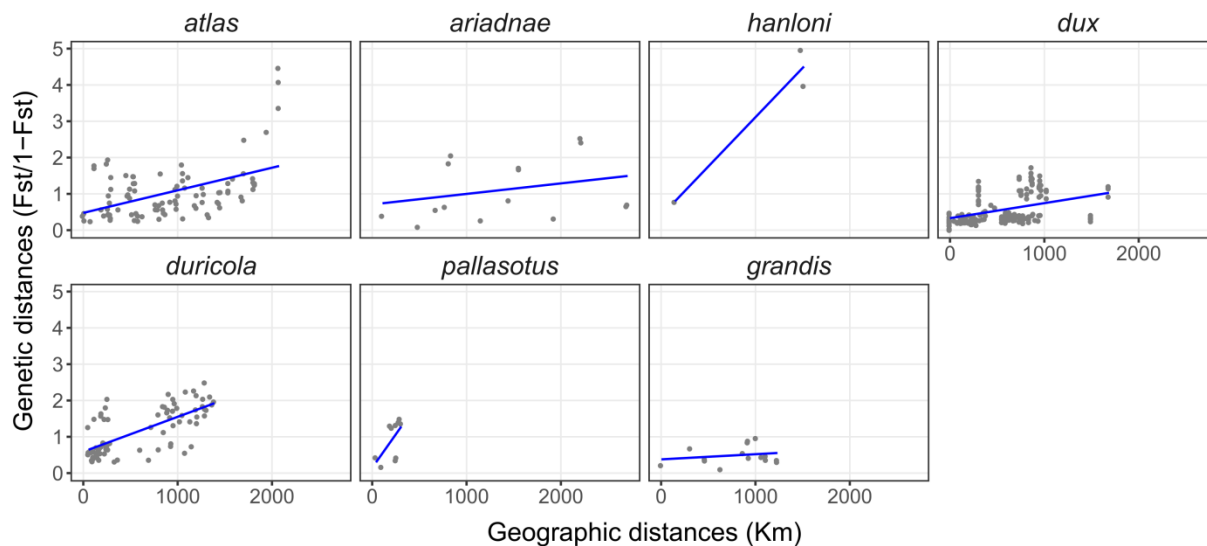
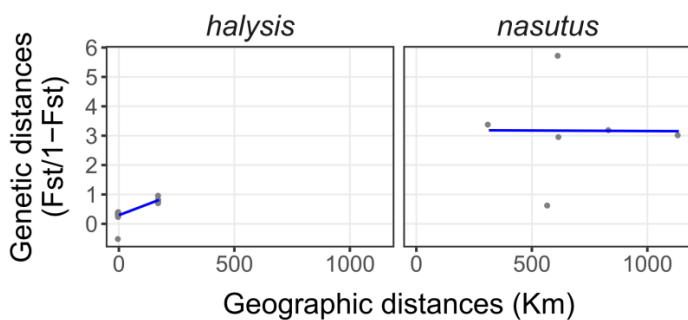


Figure S5 B. *Ctenotus colletti* group



Controls on Species Cohesion – Supplementary Material

Figure S5 C. *Ctenotus essingtonii* group

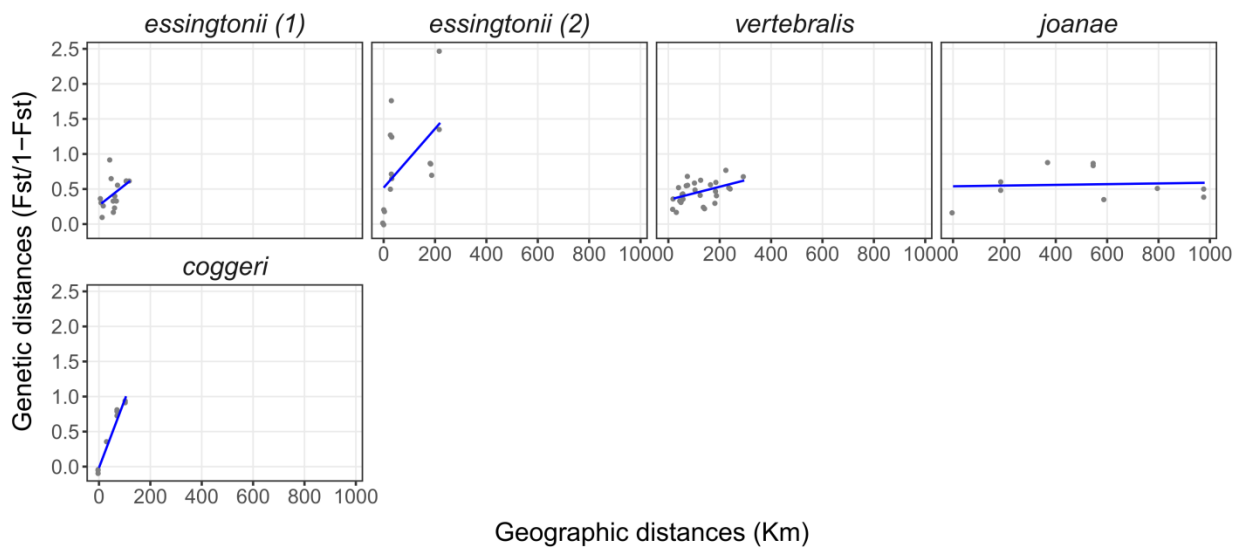


Figure S5 D. *Ctenotus inornatus* group

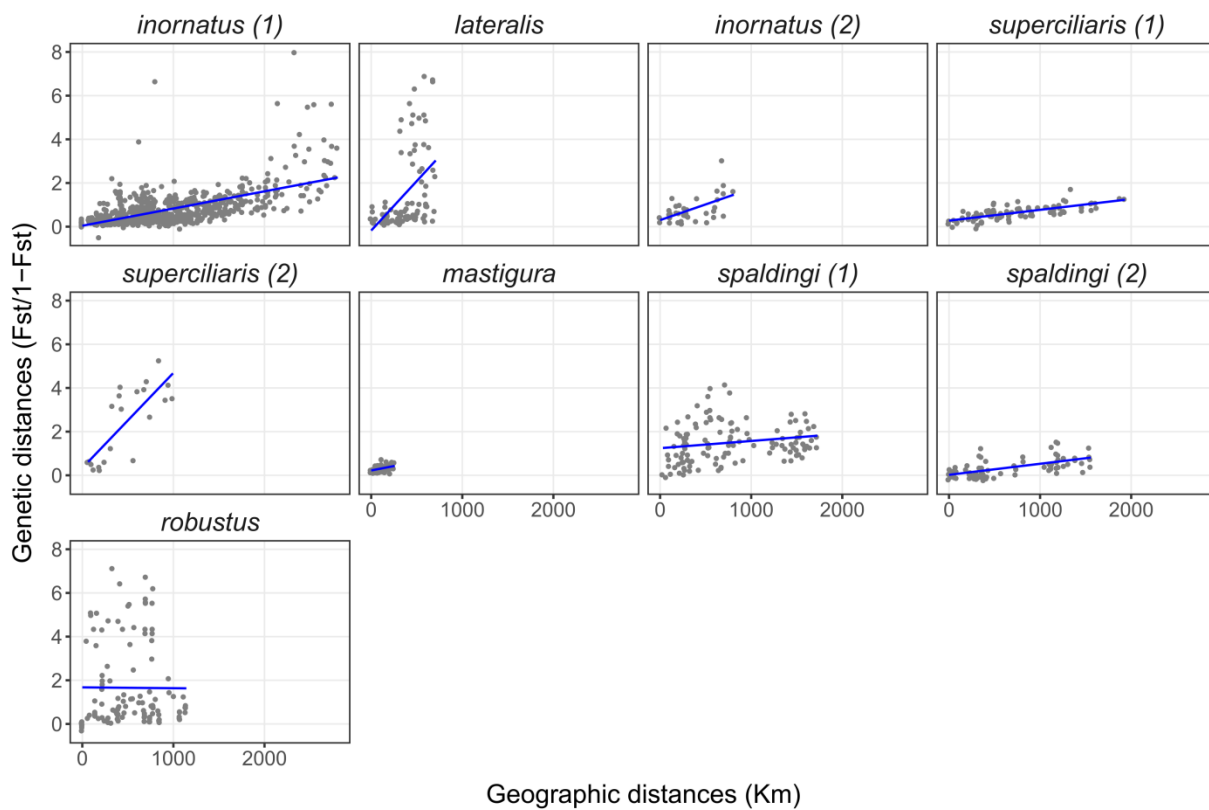


Figure S5 E. *Ctenotus leonhardii* group

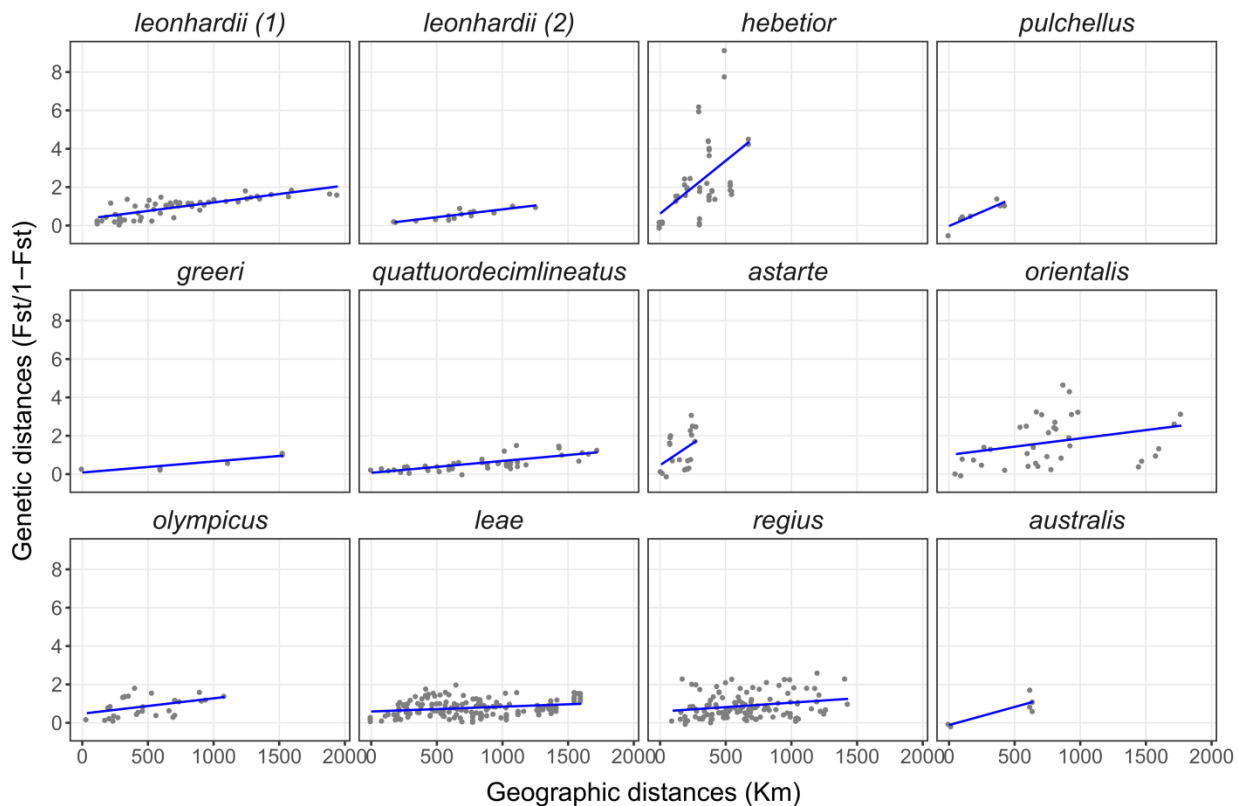


Figure S5 F. *Ctenotus pantherinus* group

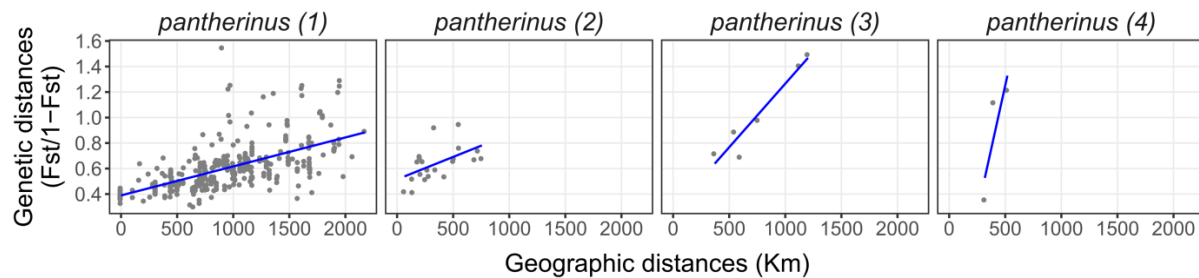


Figure S5 G. *Ctenotus schomburgkii* group

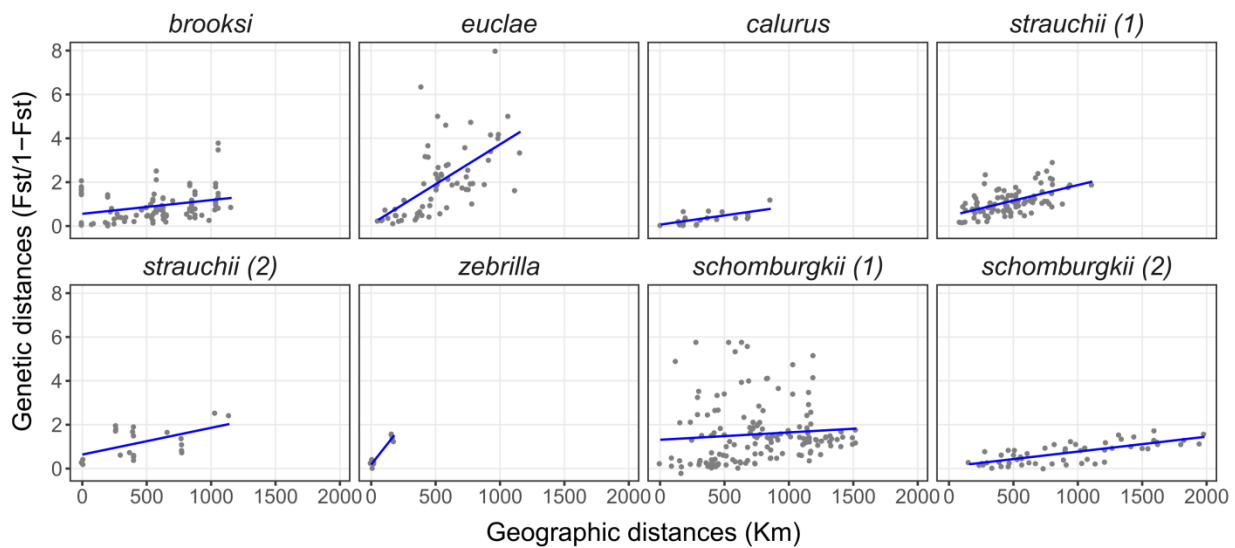


Figure S5 H. *Ctenotus taeniolatus* group

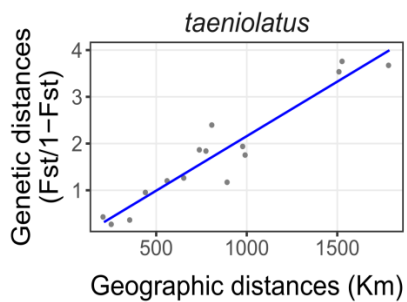


Figure S6. Effect of biome on the geographic, climatic, and genetic structure of species distributions. Left, differences across major Australian biomes in the relationship between IBD (isolation-by-distance) slope and geographic range size across operational taxonomic units (OTUs). Right, differences across biomes in the relationship between IBD slope and climatic niche breadth.

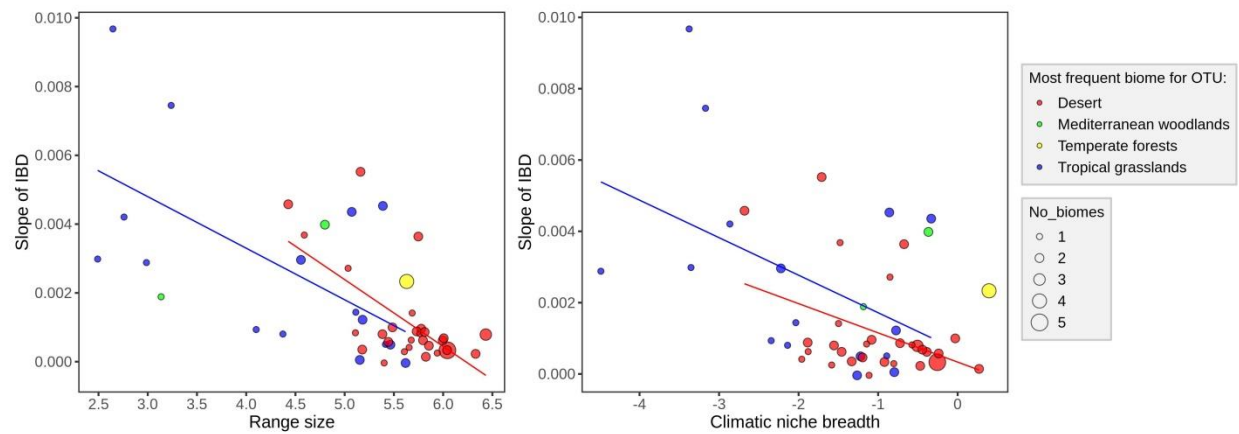


Figure S7. Correlates of genetic diversity. (A) The relationship between expected heterozygosity and range size across delimited operational taxonomic units (OTUs). (B) The relationship between IBD slope and heterozygosity across OTUs.

