

Mountain ranges are phylogeographic breaks for South African reptile and spider species.

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South Africa is a biodiverse region, although recently the number of described species has increased with the investigations of genetic structuring within species. For herpetofauna (reptiles and amphibians) in particular, many of the species descriptions were made using morphological characters, which may be convergent between species. Genetic analyses have aided the identification of species, in some cases identifying the presence of cryptic species, and have enabled greater evaluation of intraspecific evolutionary patterns. These types of studies have also highlighted regions that have facilitated genetic breaks within the ranges of species, termed phylogeographic breaks. One such break that has been found in multiple species is the Grootswartberg mountain range in the Western Cape Province. For the proposed project, we aim to investigate four species (vertebrates and invertebrates) that span the Grootswartberge, in order to elucidate whether this mountain range is a common phylogeographic break in species with differing life histories and dispersal capabilities. These investigations will include analyses of genetic structuring within the species and morphological analyses to identify whether there are phenotypic differences found between genetic groups.