Use of the topographic ring model to identify candidate taxa for ring diversification around a focal barrier near the Baja California Peninsula (USA and Mexico) that is topographically similar to the reference barrier for the Drakensberg Massif (South Africa), which has promoted ring diversification in a tree species, *Acacia karroo* [1]. The focal barrier (left panel, map) is a low-lying topographic depression located at the land-sea interface in the northern Sea of Cortez. As a result of its particular topography, the barrier has promoted diversification in a number of terrestrial taxa, including *Hypsiglena* nightsnakes [2] and the rosy boa *Lichanura trivirgata* [3,4]. In *L. trivirgata*, mitochondrial data have been collected to reconstruct its phylogeographic history [4]. In agreement with our model prediction, these data suggest that the focal barrier has strongly influenced non-adaptive divergence among mostly contiguous subspecies of *L. trivirgata*, showing evidence of continuous levels of genetic differentiation along either side of the barrier (right panel, phylogenetic network; thick branches are supported by >0.95 posterior probability). Closure of the ring distribution may occur in the northwest, between two deeply divergent lineages within the subspecies *roseofusca* (symbolized by circles and hexagons). Genetic data and sampling locations adapted from Wood et al. [4]. Geographic range map obtained from IUCN [5], with subspecies distributions added based on Stebbins [3] and Wood et al. [4].

References

Known geographic range

Subspecies

gracia

roseofusca

saslowi

trivigata
Focal barrier

Known geographic range

Subspecies: gracia, roseofusca, saslowi, trivigata