



A big burst of blindsnakes: Phylogenomics and historical biogeography of Australia's most species-rich snake genus.

Sarin Tiatragul (Australian National University); Elizabeth S. Broady (Australian National University); Ian G. Brennan (Australian National University); J. Scott Keogh (Australian National University).

Blindsnakes are cylindrical-bodied snakes with reduced vision and have scales that completely cover their eyes. Out of over 450 described species of blindsnakes globally, the Australo-Papuan blindsnake radiation is among the most species rich comprising ~50 described in the genus *Anilius*. We extend the phylogenetic understanding of *Anilius* using a phylogenomic approach with over 4500 Squamate Conserved Loci markers. Using phylogenomic data from 130 specimens, including previously unsampled species and divergent lineages, we reconstructed a near-complete phylogeny of the Australo-Papuan blindsnake genus *Anilius* and closely related kin. We then used this phylogeny along with information about their distribution and estimates of paleo temperature and aridity during the Neogene to explore how changes in the environment influenced diversification of Australian blindsnakes.

Sarin (Putter) Tiatragul: sarin.tiatragul@anu.edu.au