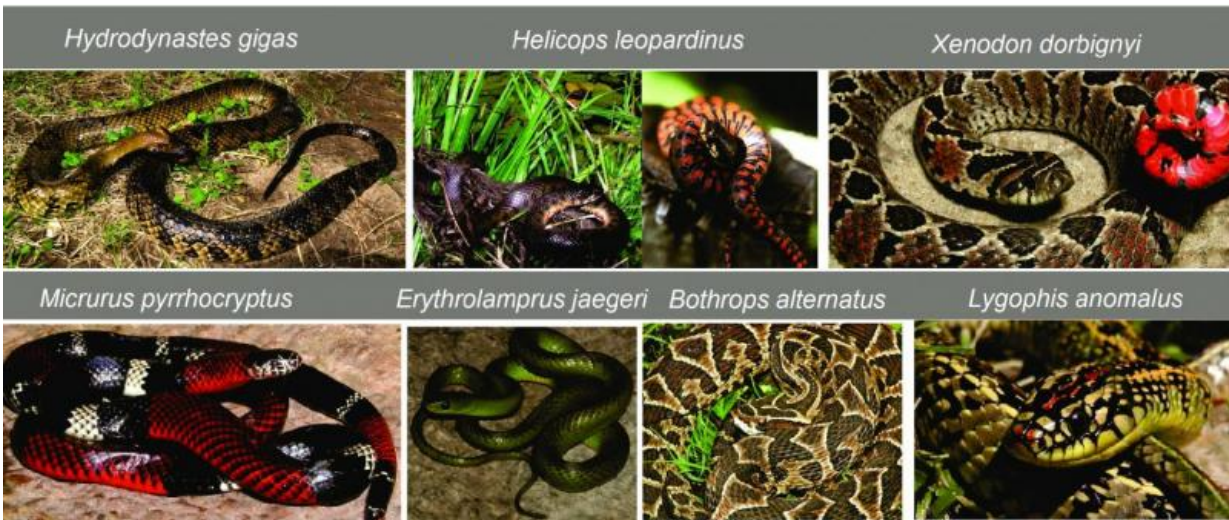


Snakes' dining habits shaped by ancestry, relationships moreso than ecology

May 6 2015



Snake species included in the study. Credit: Alejandro R. Giraudo and Vanesa Arzamendia

Diets of snakes from a temperate region in South America may depend more on phylogeny (ancestry) than ecology, according to a study published May 6, 2015 in the open-access journal *PLOS ONE* by Gisela Bellini from Instituto Nacional de Limnología, Argentina and colleagues.

Some scientists believe that the deep history hypothesis based on phylogeny—the history of evolution, or [ancestry](#) and relationships between snakes—and ecological interactions from the competition-

predation hypothesis may act together to determine the structure of snake communities. The authors of this study used diet, which may differ between snakes to varying degrees, to understand the impact of ecological and phylogenetic factors on the diet of Neotropical snakes from the subtropical-temperate region of South America. In addition to evaluating the snakes' ecology and natural history, dietary data were obtained by analyzing nearly 2000 specimens belonging to 25 species of snakes over 20 years.

According to the authors, the results showed that ancestry or phylogeny explained most of the variation in diet, whereas ecological characters explained little of this variation. The clade with the greatest variability was the subfamily Dipsadinae, whose members had a different type of diet, based on soft-bodied invertebrates. The author's results suggest that [phylogeny](#) plays a large role in [diet](#), consistent with the deep history hypothesis.

More information: Bellini GP, Giraudo AR, Arzamendia V, Etchepare EG (2015) Temperate Snake Community in South America: Is Diet Determined by Phylogeny or Ecology? *PLoS ONE* 10(5): e0123237. [DOI: 10.1371/journal.pone.0123237](https://doi.org/10.1371/journal.pone.0123237)

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