

# DIVERSITY AND EVOLUTION AFRICAN AMPHIBIANS AND REPTILES

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**Our knowledge of the diversity of small animals in Africa is woefully incomplete.**

Over the past decade, my research group has conducted field research in multiple African countries, with a special focus around the Congo Basin. Funding from the US National Science Foundation supports much of our fieldwork and investigations of species diversity, evolution, and biogeography. To date, we have described more than a dozen new species of frogs from Cameroon and Nigeria based on our field research. We are especially interested in the evolutionary history of these animals and how their origins and distributions are related to Africa's long history of climatic and geological change.

In December 2015, we described six new species of African clawed frog from West and Central Africa. This work made use of scientific collections made over thirteen years. To differentiate these very similar looking frogs, we integrated information from their internal and external anatomy, genetics, mating calls, and even their parasites. Documenting these species and their respective distributions is important for understanding the complicated evolutionary history of hybridization in this group as well as thinking forward towards conservation management.

The new frontier for our field research is Angola, which covers an important transition zone between southern

and central Africa. While we have made great strides in understanding the diversity and evolution of species in both regions, the area in Angola where these faunas meet and interact remains largely unexplored. Our current funding from the JRS Biodiversity Foundation supports the digitization of scientific collections of amphibians and reptiles from both Angola and Namibia.

We are using these data, which will soon be freely available to the scientific community, to document the baseline of what is known for Angolan species. This knowledge in turn informs our work with the National Institute of Biodiversity and Conservation Areas (INBAC) within Angola's Ministry of Environment. We are working with INBAC to conduct collaborative field surveys during which we are sampling both new and historically important sites. We have conducted several field trips over the past three years, including

to Iona and Cangandala National Parks and the Chimalavera Nature Reserve. We expect to include UF undergraduate and graduate students in upcoming field research in Angola.

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