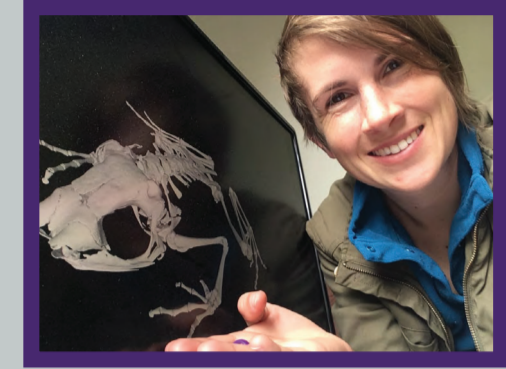


how diversity develops, how diversity evolves, and why it matters.

- We identify and describe traits that vary and are important to an animal's fitness
- We investigate how and why those traits have diversified across the tree of life
- We study how those traits emerge as animals develop from a single cell into an adult

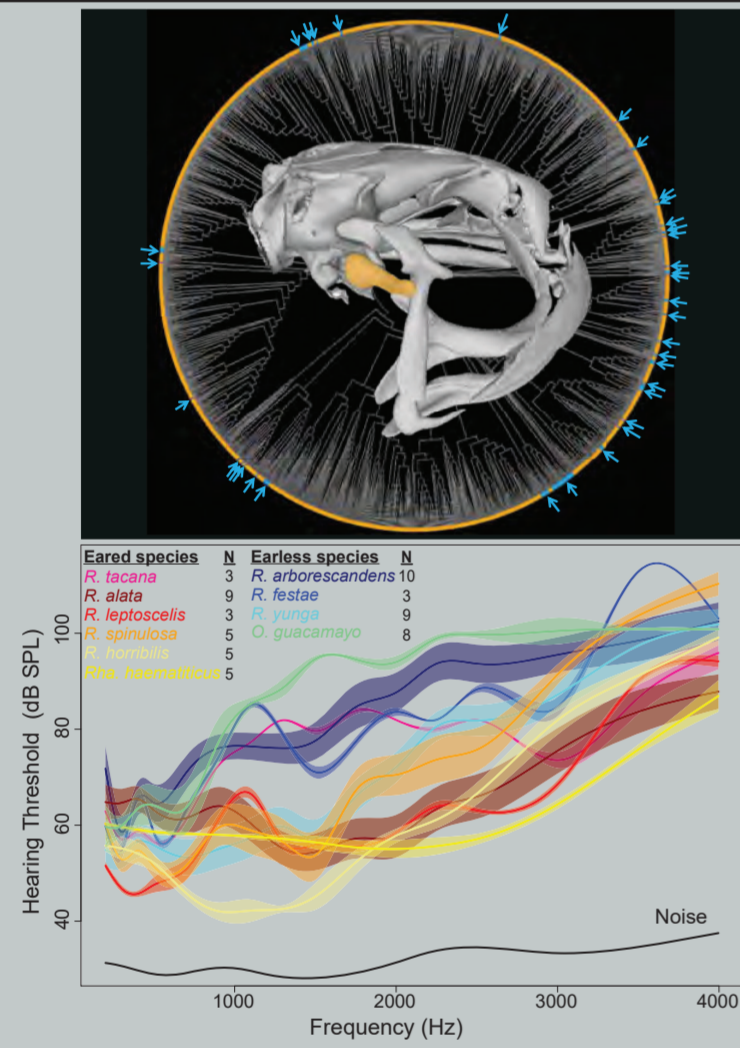
WHO ARE WE?

We are a collaborative team of **faculty**, **postdoctoral**, **graduate**, and **undergraduate** researchers interested in bettering our science and community



A FEW OF OUR PROJECTS

Why have so many frogs and toads lost their ears?

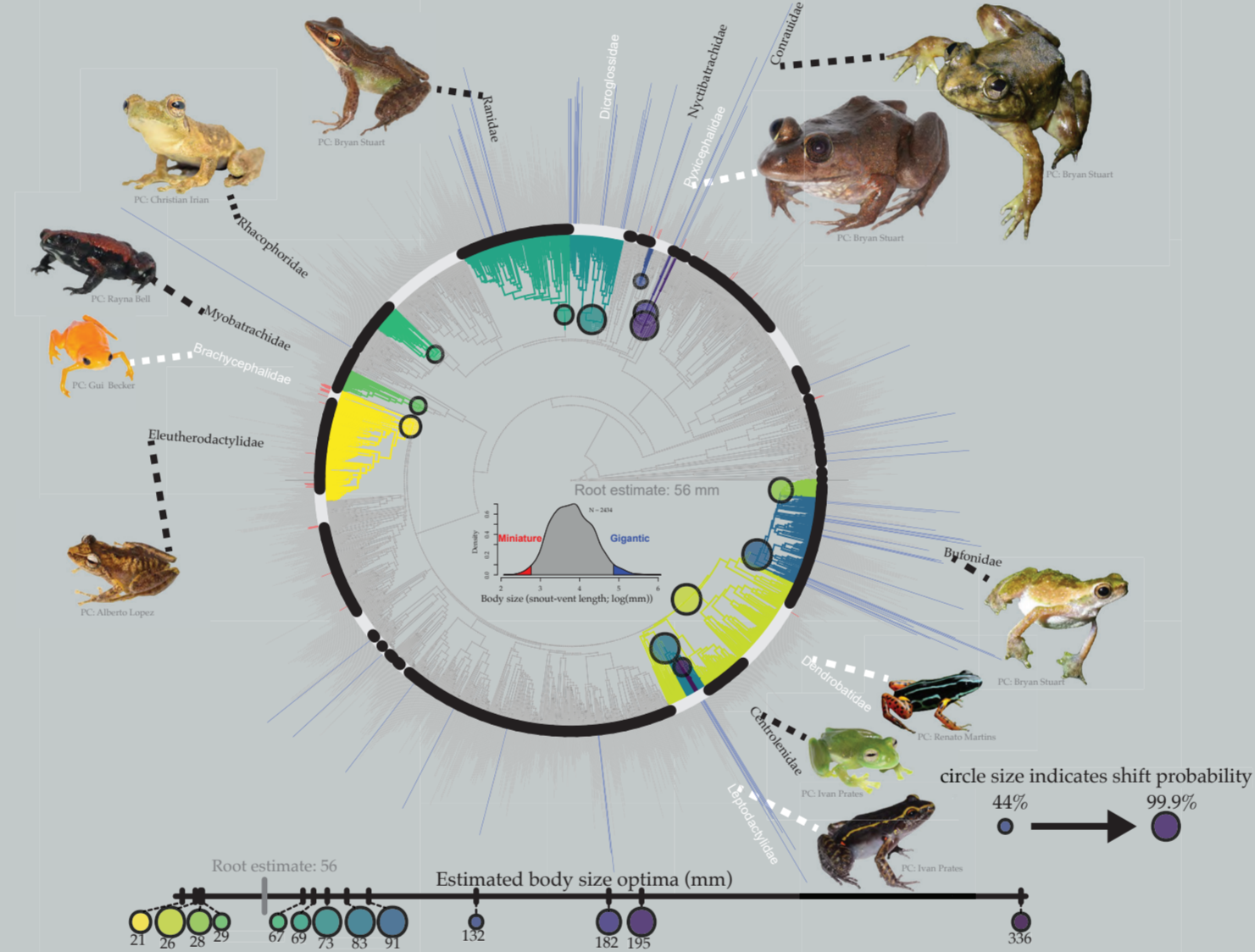


Within frogs and toads, there have been more than 38 losses of the middle ear that almost all other tetrapods (like you!) use to hear airborne sound.

Frogs without ears can't hear high frequencies very well but manage to live all over the world in many different habitats.

Late development of the middle ear, during metamorphosis, may leave the middle ear vulnerable to loss when changes in development occur.

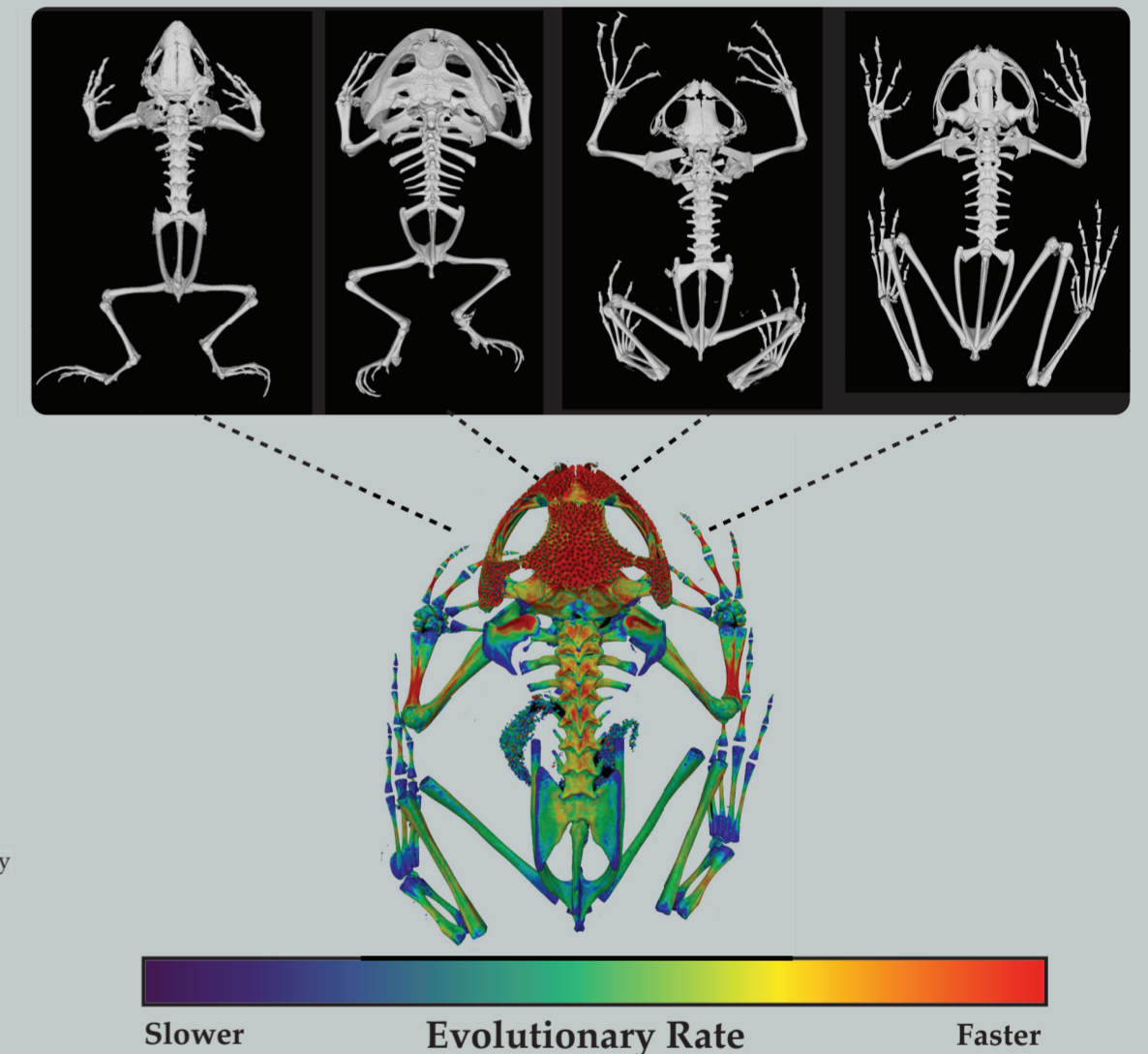
How has frog body size evolved?



Fossils reveal frog and toad body size has not changed very much over deep time, however, body sizes of living species range from 10 to 320 mm.

Frogs have evolved to miniature (<16 mm) and gigantic (>127 mm) frog body sizes many times and clade-specific shifts in body size have also occurred.

How has skeleton evolution aided frog and toad ecologically diversify?

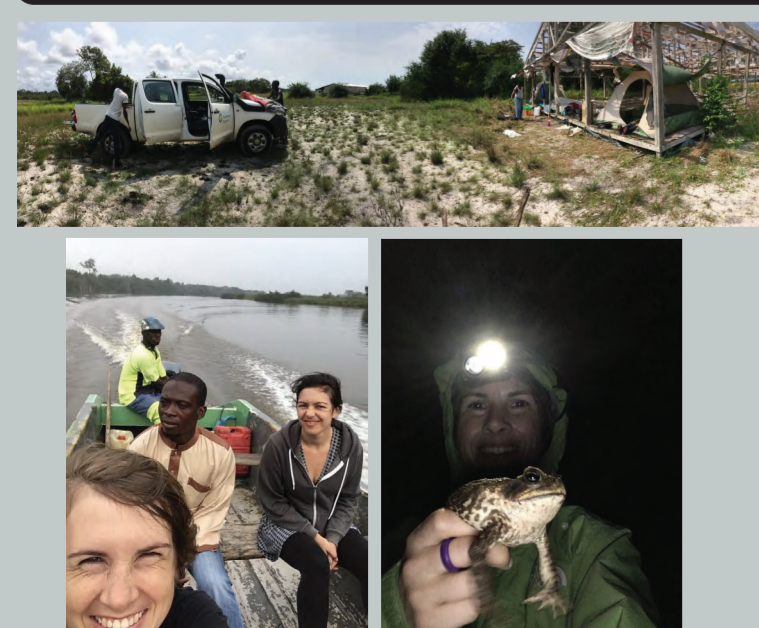


The frog and toad body plan has been conserved for over 200 million years, however, there are important skeletal differences among species with some features evolving faster than others.

Frog hips and limbs have changed in response to differing locomotor demands of various frog lifestyles. While other features, such as frog vertebrae, change more stochastically over evolutionary time.

SOME OF OUR METHODS

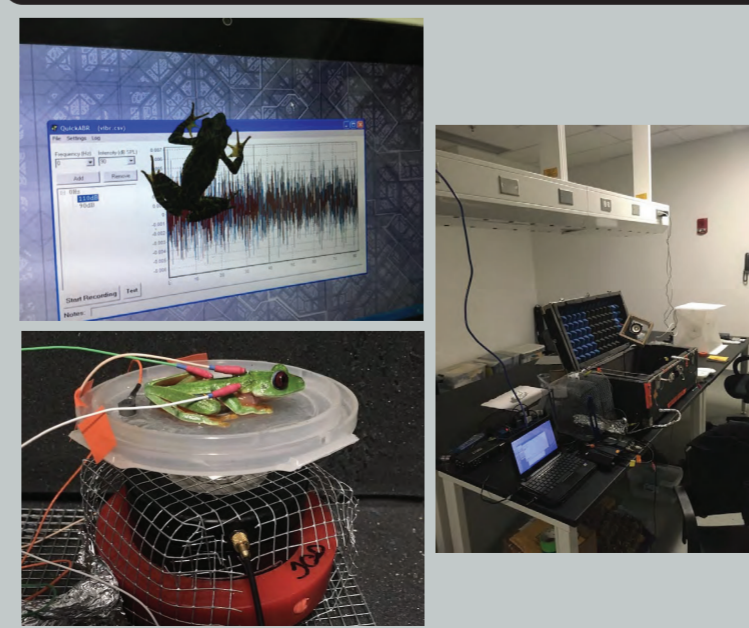
Fieldwork



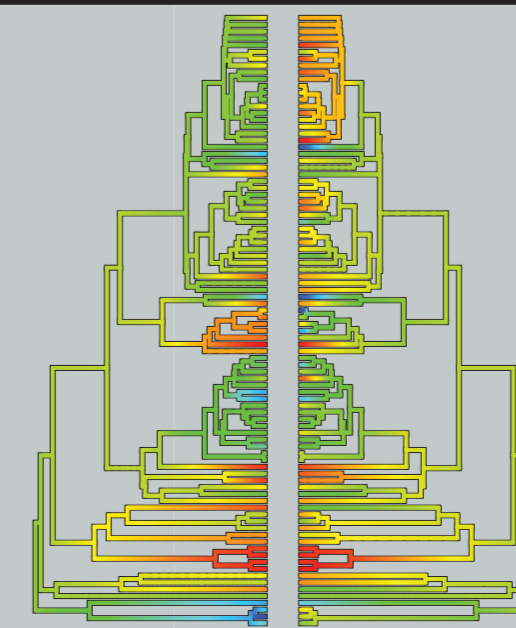
Micro & Macro Anatomy



Neurophysiology



Phylogenetic Comparative Methods



Molecular Work

