

# A Comparative Look at the Genus *Sceloporus*: The evolution of Communication and Biogeography. Drs. Cristina Romero Díaz and Julio Rivera, ASU, Tempe



Cristina Romero Díaz and Julio Rivera joined the Emilia Martins Lab at ASU in September 2017 after finishing their Ph.Ds. at the Autonomous University of Madrid (Spain) and the University of Hawaii, respectively. After completing her Masters in Conservation Biology, Cristina studied how changes in the abiotic environment affect life history traits of individuals and population dynamics of the Eurasian common lizard (*Zootoca*

*vivipara*). Her primary interests are on the mechanisms and processes behind animal behavior and adaptation that can help us understand how species may eventually undergo speciation or extinction, affecting biodiversity. In her postdoc, she is working on behavioral ecology and the evolution of intra- and interspecific communication of *Sceloporus* lizards. In Hawaii, Julio worked on understanding how diversity arises in microhylid frogs from Papua New Guinea. He did this by combining phylogenetics, morphology, ecology, and performance data to understand how these interact with each other to create the complex species assemblages seen today. He came to ASU to work on biogeographic questions in hopes of understanding the phenotypic evolution of *Sceloporus* lizards through paleoclimate and tectonic data.

Cristina and Julio will be presenting some of their current projects in the Emília Martins Lab. The Lab works on understanding behavioral and morphological evolution of *Sceloporus* lizards using both experimental and theoretical approaches. For example, one of their projects focuses on chemical communication and behavioral responses to odor signals. In a different study, they've looked at the evolution of sexual signal traits, like the blue belly patches of many *Sceloporus* species. Their work has shown that not all bellies are blue in the same way and that lineages that have lost the blue patches evolve new ways to communicate with members of their species. Recently, the lab has also become interested in adding biogeography to understand the evolution of the genus *Sceloporus* and will be discussing new findings and future work that will allow for a better understanding of how this large and widely-distributed clade evolved.

21 Feb 2018, 7:15, Ward 3 Conference Room, 1510 E Grant.  
Pre-meeting dinner at Rubios, 2906 N Campbell, 5:30.

