The Functional Anatomy of Axial Muscles in Snakes

Number of Positions Available: 1-2
Preferred Academic Year: Freshman-Junior, but Seniors will be considered
Hours Per Week: 5-10 (Research Credit is available; e.g., BIO 495)
No prior research experience is required, but preference will be given to applicants who have taken anatomy classes and those with dissection experience.

Positions are available to assist with a project on the functional anatomy of axial muscles in snakes. We will be studying eight species: *Morelia viridis* (Green Tree Python), *Python regius* (Ball Python), *Corallus caninus* (Emerald Tree Boa), *Epicrates cenchria* (Rainbow Boa), *Bothriopsis taeniata* (Speckled Forest Pit Viper), *Crotalus atrox* (Western Diamondback Rattlesnake), *Dispholidus typus* (Boomslang), and *Nerodia rhombifer* (Diamondback Water Snake). Species were selected based on phylogeny, habitat (strictly arboreal vs. terrestrial), specialized prey capture methods (constriction vs. lack of constriction) and average length (to control for size). The major goal of this project is to investigate morphological adaptations to habitat and prey-capture methods. We will conduct an in-depth examination of axial morphology, collecting data on body length, vertebral count, muscle length, mass, and contractile-to-tendon tissue ratios via dissections of axial muscles and X-rays of the vertebrae.

To apply, please email Rebecca Fisher (rebecca.fisher@asu.edu) by January 4 with a copy of your CV and a brief description of 1) your research and career interests, 2) your prior research experience and relevant coursework (if any), and 3) why you are interested in working on this project. Please visit our website to learn more about the projects conducted in the Fisher lab: http://fisher.lab.asu.edu/.