

The Department of Ecology & Evolutionary Biology

Spring 2009 Seminar Series

Dr. Alison Bell

University of Illinois

Integrating causes and consequences of behavioral syndromes in threespined sticklebacks

There is growing evidence that individual animals behave in a consistent way through time and across situations. For example, individual sticklebacks that are particularly 'bold' in the presence of a predator are also relatively aggressive toward other sticklebacks. Personality is mysterious from an evolutionary point of view for at least two reasons. First, individuals that behave consistently might not be able to adjust their behavior according to the immediate circumstances and exhibit limited behavioral plasticity. Second, it is difficult to explain the maintenance of heritable behavioral variation that is related to fitness. Research in my lab integrates proximate and ultimate approaches to try to understand personality in sticklebacks. In this talk, I will illustrate how we are trying to explain variation in personality from the 'bottom up' by presenting data on the neuroendocrine correlates (cortisol and brain monoamines) of individual differences in behavior. At the same time, I'll argue that the radiation of sticklebacks offers an opportunity to trace the evolutionary history of personality variation, and population-level variation allows us to test adaptive hypotheses about the function of personality in this species. Finally, I'll show how we are using new genomic tools (expression microarrays and QTL approaches) to understand the genomic mechanisms underlying personality variation.



Friday, April 17, 2009

Room 307 SERF, 3:30-4:30 PM

Refreshments will be served in Dabney 568 at 3:15 PM.

Host: Dr. Ben Fitzpatrick, benfitz@utk.edu, 974-9734