

Dr. Çağlar Akçay - Virginia Tech

“Bluffers and Strong, Silent Types:
The Role of Personality in the Evolution of Honest Signaling in Song Sparrows”



Evolution of honest signaling has been a persistent puzzle in the study of animal social behavior. In many situations, (e.g., during aggressive interactions), signalers have evolutionary incentives to exaggerate their intent or quality so as to manipulate receiver behavior. The classic solution to this puzzle has been that for honesty to evolve and persist, it should be costly to cheat in signaling. Here, I present a series of studies on aggressive signaling in song sparrows (*Melospiza melodia*) that challenges this standard account of honest signaling. First, I show that male song sparrows show individually consistent differences in aggressive signaling strategies such that some males are consistently over-signaling (“bluffing”), whereas others are consistently under-signaling, with the latter surprisingly being the more prevalent form of signaling strategy. Second, using a long-term dataset I show that these personality differences have significant fitness consequences. That is, under-signaling males survive longer on territories compared to reliable signalers and over-signaling males. In a subsequent playback experiment, I found that song sparrows tend to stop signaling during playback of predator calls which suggests that the survival advantage of the under-signalers may stem from decreased risk of predation. These results set up important future research directions on the evolution of honest signaling as well as the mechanisms of variation in social behavior.

RESEARCH TALK – Thursday March 3; Room 27 – Alumni Memorial Bldg – 3:20 – 4:20 pm