Collective personality in tropical ant colonies: video analysis

Preferred Majors: Biology, interest in animal behavior, video editing, and field work
Desired Academic Year: freshman - junior, but seniors considered
Location/Campus: ISTB1, Room 303, Tempe Campus
Hours Per Week: 10 - 15

Project Description:
Over the last decade, there has been a surge of interest in non-human personalities. Animals that span a wide range of taxa have been shown to have behavioral tendencies that are consistent across time and contexts. Some individuals are consistently aggressive, bold, and take risks, while others are calm, calculated, and cautious. Most of these studies have been focused on individual personalities, leaving collective personalities of highly social groups, like ant colonies, largely unexplored. Thinking of the ant colony as a singular functioning superorganism, this project asks: do ant colonies maintain collective personalities? To answer this question, I studied tropical Azteca ants that live inside Cecropia trees in the rainforests of Panama over the last 8 months. This system involves a tightly-bound mutualism where trees provide food and shelter in return for protection from herbivores and encroaching vines. Five behavioral traits (including aggression, exploration, etc.) were repeatedly tested for each colony and recorded on HD video. The applicant's role as a researcher would be to analyze these videos by scoring the behavior of the ants for each trait using video scoring software. This work is fun and interesting, but may be very tedious. Prolonged vigilance and attention to detail are required. The student will be invited to lab meetings to discuss stimulating new research, and may ultimately have an opportunity to participate in my next field season in the Panamanian rainforest as a field assistant in the Spring/Summer of 2016.

Application Instructions and Contact Information:
Send an email to Peter Marting at pmarting@asu.edu with
1) why you are interested
2) a very brief summary of your research experience
3) what are your career goals
4) any questions you may have
5) your CV attached