Maternity Testing in Ants: Are You My Mother?

The Fewell Lab is seeking highly motivated and independent sophomore and junior undergraduate students to assist in studies involving genetic analysis and/or summer field research. The genetics research involves performing DNA extraction, PCR, and microsatellite analysis on ants. These techniques are common in genetic work, often used in paternity testing and DNA fingerprinting. We utilize these methods to reconstruct the matrilines of ant colonies that contain multiple, unrelated queens, allowing us to determine the number of queens present in field colonies as well as each queen’s reproductive output and workforce contribution. Applicants should be patient, organized, and meticulous. Previous experience in a genetics lab is appreciated but not required.

The summer field research takes place in Southern California, in an area just outside of San Diego, where we study the reproductive flight of the California Harvester Ant. Selected students are responsible for performing basic ecological surveys of the study sites, setting up and taking down ant traps every day, as well as counting and weighing ants caught during the mating flight. The field season takes place over June and July, ideal candidates would be able to stay in the field for the duration of the study. Applicants should have camping experience and be comfortable spending long hours outdoors. There is opportunity for independent studies to be performed while in the field.

If you are interested in one or both of these projects please send your CV along with a statement describing which project you are interested in and why you are a good candidate to Brian Haney at brhaney@asu.edu.