

Biology

Contract	Term	Course	Contract Title	Contract Description
319014	Spring 2016	BIOL-3217K	Investigation of plant and animal material collected by seed harvester ants	We will be collecting and analyzing food material brought back by seed harvester ants that reside in the sand hills of Georgia. Fieldwork will include collecting items brought back to the ant colonies by worker ants, primarily seeds and the bodies of dead insects. Material will be sorted back in the lab to determine the ratio of plant vs. animal material. Not much is known about the diets of these ants so the study could shed some light on this. There will be three different colonies investigated.
319028	Spring 2016	BIOL-3216K	Identification of tree species for Trees Columbus	This project entails using DNA barcoding in identifying unknown species. This method began only 13 years ago; yet, it's accurate and has directly cut out any error in identification that could previously have been made from studying morphological features. DNA barcoding involves taking a short segment from the standard portion of a genome and scanning it within the database for an analysis. In my project, I will be sampling different leaves from around the Columbus area for tree analysis. I will do this using a FastDNA Spin Kit that will isolate DNA. The sequence will be then amplified using PCR and genome sequencing and editing will be done for final identity confirmation. Once analyzed and identified, the information will be sent to Trees Columbus in association with the Columbus Botanical Garden for public educational displays along one of the many walking trails in the area. Upon completion, this project will be reported to the Office of Provost and present at an upcoming professional conference or exhibition.
319043	Spring 2016	BIOL-4795	Examining Evolution of Hominids	This project will explore the evolution of hominids in depth in order to better understand their development including social, cognitive, and environmental factors. Specifically, this project aims to better understand how modern human behavior came to be without an increase in cognitive capacity.