

Jessica Harrison  
Honors Anthropology student  
UROP (Undergraduate Research Opportunities Program) Completion Report  
(H. McKillop, advisor)

**Title:** Evaluating sediment development and sea-level rise in a wetland landscape at the K'ak' Naab' site of the ancient Maya of southern Belize

**Abstract:**

My Undergraduate Research Opportunities Program grant was used for analysis of a marine sediment core collected on a National Science Foundation funded Louisiana State University field project, "Mapping Ancient Maya Wooden Architecture on the Seafloor, Belize," directed by my advisor, Dr. Heather McKillop. The UROP grant funded two 14C dates, lab time, and supplies, and was fundamental for my honors thesis in Anthropology. A 1cm<sup>3</sup> sample of sediment from each of the six 10cm levels was sorted under magnification to identify the sediment as *R. mangle* peat. Loss-on-ignition (LOI) was conducted to measure vertical variability in organic content of the sediment column. Munsell soil color was identified both before and after LOI was conducted to document and compare color change in ashed sediment. Two samples of *R. mangle* roots, taken at 35cm and 60 cm below the seafloor, were sent to Beta Analytic, Inc. for accelerator mass spectrometry (AMS) radiocarbon dating. A sediment history documenting environmental and anthropogenic landscape changes, including sea-level rise and human interaction with the ancient landscape during the Classic period, was reconstructed from these analyses. The results of this study have been developed into an honors thesis project.