

This summer, I am working with Professor Donald Barber both in the field and through laboratory research. We are investigating how sea-level has varied over the past 5,000 years with a particular interest in the period of around 3,000 years ago. The work builds off of the work of previous summer research to some degree while including further investigation into new questions.

Fieldwork will involve collecting sediment cores from salt marsh peat deposits and beach ridges around Cedar Island and the southern Pamlico Sound area of North Carolina. Previous fieldwork in the area has revealed plant root fragments buried upright in some areas; these may be indicative of a variation in the rate of sea-level rise. When not in the field, collected cores will be analysed in the laboratory. This analysis will include identification of plant material and examination of the organic carbon content alongside other methods for investigating previous sea-level. We will also conduct a close examination of the existing data collected on sea-level rise in order to situate the work within the current scientific understanding. Existing data may also be used to create a series of data visualizations to demonstrate the processes which impact our understanding of sea-level rise and how they relate to each other.

The results of my summer research will provide further insight into past sea-level and its variations as well as potentially making the topic more understandable through the visualisation of real data to demonstrate the relevant processes. Sea-level rise is an important issue for many communities and this research will help inform our future decisions as well as potentially increasing the acumen of the public in regards to these issues.