Mapping Mitchelville: 1860-1910

During the summer of 2014 I worked with Professor Dana Byrd, Art History, to incorporate Geographic Information Systems (GIS) into her research using ArcGIS and associated programs. Professor Byrd specializes in studying the history of Mitchelville, South Carolina through material culture. Mitchelville, which was located on Hilton Head Island, is a unique setting as it was the first place in the south taken over by Union soldiers during the Civil War. As Union soldiers began to set up camp on Hilton Head Island newly freed slaves, Union soldiers, sailors and northern missionaries were all left living together on the land of southern plantation owners who had fled. This unique, groundbreaking collection of people led to the development of Mitchelville, and surrounding military encampments including, initially, the department of the South. Today, Mitchelville has disappeared, all except a few earthen fort foundations, and the land on which Mitchelville stood is covered with golf courses, residential construction and an airport. Looking at satellite imagery it not evident that Mitchelville ever existed.

To better understand the material culture of Mitchelville and what it was like to live in this unique town, Professor Byrd is interested in incorporating mapping into her study. At the beginning of the summer we started with a blank slate and it was exciting and a little nerve-wracking to start with empty GIS files. To get a sense of Mitchelville I began by georeferencing multiple historical maps that Professor Byrd has that date to the mid-1860’s. This gave a good sense of the lay of the land, and the detail of the historical maps allowed me to develop GIS features for buildings, land cover, streams, roads and other aspects of Mitchelville and Hilton Head Island. The georeferencing and digitization process was very time consuming however it was important to get a final product that was as accurate as possible.

After these base files were developed it was much easy to get a sense of where we were headed and what was plausible for this project. To add a layer of depth to the project I learned how to use the ArcPhoto extension. There are many black and white photographs from the region that were taken while Mitchelville existed and the ArcPhoto extension allowed me to incorporate the photos into GIS, giving them spatial reference, direction, height and a whole host of other attributes. In addition to ArcPhoto I also began to learn how to use ArcGIS in three dimensions. This allowed me to develop 3-D models of Mitchelville from two dimensional layers. In the future I hope to integrate ArcPhoto and the 3-D modeling to best visualize what it was like to stand in certain locations in Mitchelville during the 1860’s. Together, all of these different forms of visualization in ArcGIS attempt to combine different historic views of the town, such as maps, photographs and artifacts into a single platform. This is important as it helps one to understand patterns of occupation of Mitchelville, the growth of the town, as well as the social history and the movement of many from slavery to freedom.

This project is ongoing. I have developed ArcGIS files for the digitization of all aspects of the historical maps and surveys that we have access to, have written the meta-data that is associated with this files and have organized the files for easy use by others. As a final product, Professor Byrd is hoping for an online map installment. This online visual would depict Mitchelville as a series of GIS layers. Each layer would visually inform a user about the material culture and visual history of the area. This online map will be interactive and would allow a user to click on different sections of the map to read about different areas, look at a photograph pinned to a certain area, overlay layers to get a sense of change over time or see a 3-D model of a specific spot in Mitchelville. In the coming year I hope to continue my work with Professor Byrd to further clean up the data I have created, finalize my work in
ArcPhoto and 3-D visualization and get the ArcGIS data to a place where it can be displayed on a website as an interactive, easy to use visual companion to Professor Byrd’s research on Mitchelville.