Wild rice (*Zizania aquatica*) is an aquatic annual and only native North American cereal (Vennen 1988). Modern Anishinaabe, which includes the Ottawa, of the Great Lakes region harvest, consume, use, and sell wild rice. Yet the Anishinaabe were not the first or only people to utilize wild rice; ethnographic and archaeological data reveal it has been harvested in North America for the past 2000 years (Lee 2004). Although ethnobotanical research exists on the historical and contemporary uses of wild rice by Great Lakes tribes, archaeological research on wild rice subsistence is lacking (Lee 2004). Thus, many questions remain unanswered about wild rice subsistence practices of the past. For my dissertation research, I will add to the paleobotanical and archaeological body of knowledge of wild rice. Specifically, the Grand Traverse Band of Ottawa and Chippewa Indians has requested that wild rice be introduced to Sleeping Bears Sand Dunes National Lakeshore; however, in order to plant wild rice in a national park, past presence of wild rice in the park must first be established. Therefore, I will investigate whether wild rice grew in the park and if evidence of wild rice can be found in the paleoenvironmental and archaeological record.

The first focus of this research project is reconstruction of paleolimnological environments within Sleeping Bear Dunes. By examining areas with potential wild rice stands of the past, the following questions can be addressed: did wild rice grow in Sleeping Bear Dunes? If so, when was it introduced to the area? What fluctuations in wild rice prevalence have occurred since it was introduced? Does prevalence of wild rice correlate to environmental factors or anthropogenic factors or both? The second area of interest is wild rice presence or absence within cultural contexts. Is there evidence for the presence of wild rice in the park’s archaeological record? If so, how deep in time did wild rice subsistence occur? In addition, what technologies were developed to harvest, store, and cook wild rice?

To investigate wild rice presence or absence in the park, the first step is reconstruction of the paleoenvironment using lake sediment cores from sampling numerous bodies of water within the park. One way to identify wild rice in lake cores is through phytolith analysis. Macrofossil remains of wild rice are scarce because charred wild rice remains are brittle and short-lived (Lee 2004). Thus, phytolith analysis is an alternative that supports interpretations from other methods such as pollen or macrobotanical analyses, as well as fills in gaps where such methods are impossible (Pearsall 2008). Wild rice phytoliths, made of silica mineral, do not decay easily, and phytoliths produce more taxonomic accuracy and often better represent the flora environment than pollen or macrobotanical studies (Yost et al. 2013).

The next phase of research will be examining wild rice presence or absence within cultural contexts. Pedestrian survey and shovel test pits will be used to relocate known sites and identify new ones for excavation. After sites are identified, excavation will be implemented and methodologies will be oriented around phytolith, pollen, and starch grain analyses. Precautions will be taken to gather the most effective samples in accordance with Pearsall’s recommendations for phytolith recovery (2008). Samples will be taken from several areas of the excavation, including vertical profiles and horizontal features, such as house floors, middens, fire pits, and rice jiggling pits. In addition, residues from artifacts such as vessels, ground stones, and rim sherds will also be sampled.

This research requires interdisciplinary and collaborative work. For example, in order to take lake core samples, collaboration with the Grand Traverse Natural Resources and Conservation Department and National Park Service resource managers will be needed to take lake cores. After lake sediment cores are taken, LacCore at the University of Minnesota will be
process them and with guidance from University of Arizona Geosciences PhD candidate Chad Yost, I will identify wild rice phytoliths from these samples. Also, I will use the services of PaleoResearch for phytolith, pollen, and starch grain analyses of cultural features and artifacts.

An important component of this project is the Indigenous archaeological framework that will be incorporated into the research. The wild rice project will be for, with, and by Indigenous peoples, a central tenet of Indigenous archaeology, but it will also incorporate other important concepts of Indigenous archaeology (Atalay 2006). For example, I will hire Ottawa field technicians for the survey, shovel test pits, and excavation and will use Indigenous perspectives in archaeological interpretations. Thus, this research will also contribute to the small yet growing body of Indigenous archaeological research. Besides contributing to this literature, this project has even wider implications for the Ottawa. If wild rice is found to have grown in the park, the Ottawa can reintroduce it and thus continue their cultural traditions in Michigan where wild rice once grew in the past but now has greatly diminished. Wild rice is vital to Ottawa and wider Anishinaabe identity because they consider it not only a type of food, source of income, and key player in ecological diversity, but a sacred plant as well (Vennum 1988). For example, wild rice is used as an offering to the spirits and is included in oral traditions.

Additionally, there are potential health benefits of this research. The results of this project will be disseminated to the tribe and can be used to help with traditional practices and public health outreach. Rates of health conditions such as obesity, heart disease, and type 2 diabetes are high among Native Americans. Certain movements in Indian Country such as the Well for Culture movement encourage Indigenous peoples to lead healthier lives by re-incorporating traditional foods into their diets. Incorporation of foods that have nutritional and cultural value, such as wild rice, can promote healthier lifeways for the Anishinaabe (DeGonzague 1999). This project thus seeks to better understand past subsistence practices and employ Ottawa people in the research design, process, and interpretations, and has the potential to contribute to the overall wellbeing of the Anishinaabe, a goal many Indigenous people are calling for.

The potential impacts of this collaborative and interdisciplinary project are manifold. Not only will wild rice research supplement an area that is lacking in the archaeological literature, it will also contribute to Indigenous archaeology by providing a project which is relevant and potentially beneficial to a tribe. By examining past lifeways and using Ottawa people as research collaborators, the wild rice project could help Anishinaabe people continue their traditional lifeways, lead healthier lives, and protect an important resource of the Anishinaabe.

Atalay, Sonya
DeGonzague, Bernadette et al.
Lee, Gyoung-Ah, et al.
Pearsall, Deborah M.
Vennum, Thomas
Yost, C. L., M. S. Blinnikov, M. L. Julius