

Previous Research Experience

NSF Graduate Research Fellowship

The Ambos Nogales Revegetation Project:

Institution: University of Arizona (UofA)

Start: August 2001

End: January 2002

In September of 2001, I joined the Ambos Nogales Revegetation Project, headed by Dr. Diane Austin, as a paid intern through the Bureau of Applied Research in Anthropology (BARA). The Ambos Nogales Revegetation Project is a bi-national collaborative project exploring ways to increase the planting and maintenance of native vegetation on hillsides and in local gardens in order to decrease erosion and preserve water resources in the twin cities of Nogales, Sonora, México and Nogales, Arizona, USA. The project gave me a chance to combine many of my interests and goals as an undergraduate anthropology major. I had the opportunity to meet new people, increase my proficiency in Spanish, and to participate in community-based research. As a major of anthropology, I gained valuable experience in the field of applied anthropology and learned to design and conduct an independent research project.

I participated in one of three subprojects that comprised the entire effort. This subproject involved collaboration with a local elementary school in order to design gardens of native vegetation within the school area and to implement a water harvesting system for the school. Throughout my involvement in the project, I participated in group meetings with elementary school teachers, parents, and other UofA researchers to collaborate on the design and sustainability of the “native gardens”. I participated in community trip for environmental education with students, teachers, and other researchers, which included visitation of the Arizona Sonora Desert Museum and the Terra Cycle (soil recycling) farm in Rio Rico, Arizona. I collaborated with UofA professors from the Department of Hydrology and Water Resources to design the water harvesting system for the school. I sought out native plant species by visiting nurseries throughout northern Sonora. I helped organize and participated in a “planting day” with the school. In addition, I designed and conducted original research on the dynamics of a bi-national collaboration dealing with environmental issues in an arid land (under the supervision of Dr. Diane Austin). I produced a project report at the end of my involvement and I presented the results of this research at the annual Undergraduate Biology Research Program Conference (2002) at the University of Arizona.

As a result of this internship, I learned first-hand about the basic necessary components for a community-based research project: participation, communication, coordination, and social skills. I learned the iterative process of designing and conducting independent research, and I gained experience in different forms of data collection, including participant observation, questionnaires, and formal interviews. I also came to appreciate my new environment (as a newcomer to the Tucson area) through the environmental education programs of the project. Finally, I learned the basics of research dissemination by producing a project report and presenting my findings at a university conference.

Ethnohistory of the Ozark National Scenic Riverways:

Institution: University of Arizona

Start: January 2002

End: June 2002

In January of 2002, I worked as a paid research assistant to Dr. Maria Nieves Zedeno (BARA) on her latest ethnohistory project for the National Park Service. The purpose of the project was to document Native American occupation of the Ozark National Scenic Riverways (ONSR) area for future use with consultation concerning tribal cultural artifacts and resources.

I initiated the library research for the project, focusing on historic Native American occupation of the geographical area of the Current River in Missouri. Frequent conversations with Dr. Zedeno about my work provided some background of the area and aided Dr. Zedeno with preliminary ethnohistorical analysis. In June of 2002, I accompanied Dr. Zedeno to ONSR headquarters and to St. Louis, Missouri to conduct on-site archival research and local interviews. Other responsibilities included starting and maintaining the project filing system, starting an electronic reference database, and composing monthly project progress reports.

I gained library research skills, organizational skills, and ethnohistorical methods from this experience as well as some background knowledge on one of the country’s most beautiful and historically complex geographical areas. Fieldwork with Dr. Zedeno gave me valuable experience in archival research methods and provided me with insight

to National Park Service protocol and regulations. Interviews with the park service archaeologist, museum curators, and local experts added to my knowledge of ethnohistorical methods and also added rich history to the area.

Coupled Natural and Human Dynamics in Coral Reef Ecosystems:

Institution: University of Arizona

Start: January 2002

End: August 2003

Also in January of 2002, I began work with Dr. Richard W. Stoffle (BARA) on an NSF-funded biocomplexity project in the Commonwealth of the Bahamas. Recently, the Bahamian government has proposed a network of marine protected areas (MPAs) to cover over twenty percent of the archipelago's ocean habitats. The NSF research project is a large-scale interdisciplinary effort to aid in the installation of MPAs in the Bahamas. As applied anthropologists, the UofA research team is working to include local people in the process of designing MPAs with the goal of encouraging Bahamian policy-makers to involve local people in the management of these sites. The research is guided by the notion that local people who have resided in a place for many generations intimately know their environment, and therefore have the ability and local knowledge to sustainably manage its resources.

During my one-and-a-half years of involvement with this project, I conducted numerous interviews during three fieldwork trips in the Exuma Cays, Bahamas. I assisted with data management and analysis, including indexing and transcribing interview tapes. As a side project, I transcribed, compiled, and designed an individual life history of one of our respondents (as told to Dr. Stoffle). Furthermore, I designed and conducted original research on the capacity of language to convey intimate ecological perceptions (ecolinguistics), which resulted in my undergraduate senior thesis project. As a result of my individual research, I produced my senior thesis, entitled *Language and Folk Environmental Knowledge in the Exuma Cays, Bahamas*, and presented my findings in the following venues: 2003 conference of the Society for Applied Anthropology (chair of session), 2003 National McNair Symposium, and 2004 conference of the Society for Applied Anthropology (as a group session with other UofA researchers).

My research discusses the theoretical and applicable sides of how language, knowledge, and the environment intertwine in the Exuma Cays, and the ways this information can benefit community-based management programs. I show how language can encode local knowledge in words and expressions, and that this phenomenon is a result of a high level of human adaptation to the environment. For example, during an interview with two local fishermen, they commented on the well-known spawning site located near their settlement in their traditional fishing grounds. They referred to the spawning of the fish as the "wash". Specifically, this term refers to the white sperm passing over ("washing") the yellow eggs. As a part of their traditional fishing practices, the fishermen of the settlement let the fish "wash" (or spawn) for a few days without fishing them so that they can reproduce. In this sense, they restrain themselves from an easy catch for a designated amount of time in order to benefit from the long-term effects (successful reproduction and the beginning of a new generation of fish).

As a contribution to the University of Arizona team research, this project adds to the diversity of data concerning Exumian local ecological knowledge of the marine environment. It also demonstrates how such a study can play a role in local (Bahamian) and global contexts when dealing with issues of biodiversity and conservation. This research was mentored and advised by Dr. Stoffle as well as by colleagues, friends, and advisors in the UofA McNair Scholars Program. The summer research component of the McNair program provided funding and academic support for the research process as well as presentation skills and time structure.

Tsalagi-yi Digakohidi ("Cherokee Plants") Ethnobotanical Study*:

Institution: Cherokee Nation Office of Environmental Services

Start: June 2004

End: July 2004

I spent one-and-a-half months (June 14 – July 30, 2004) initiating the TDEP, during which I performed a comprehensive background research on Cherokee ethnobotany; I designed a database in Microsoft Access to hold cultural and botanical information about individual plants; I corresponded with officials nationwide about other tribal efforts taking place within the field of ethnobotany; I conducted informal interviews with knowledgeable and reputable community members; I attended local tribal environmental meetings; and, I coordinated a river trip (involving two highly knowledgeable community members) in order to collect qualitative data on plants that grow along the riverbanks of the Illinois River. As a result of the initial research phase, the plant database now holds extensive information about 36 culturally significant plants, and the foundations for the project have been laid.

* Please see my proposed plan of research for a thorough discussion of this research.