

Chapter 88

Expanding Toolkits for Heritage Perpetuation: The Western Apache Ethnography and Geographic Information Science Research Experience for Undergraduates

Karl A. Hoerig

*University of Arizona, USA & White Mountain
Apache Tribe, USA*

John R. Welch

Simon Fraser University, Canada

T. J. Ferguson

University of Arizona, USA

Gabriella Soto

University of Arizona, USA

ABSTRACT

From 2010 to 2013, the White Mountain Apache Tribe and the University of Arizona, with funding from the National Science Foundation, hosted the Western Apache Ethnography and Geographic Information Science Research Experience for Undergraduates. Designed to foster practical skills and scholarly capacities for future resource managers and anthropologists, this field school introduced Apache and non-native undergraduate students to ethnographic field research and GIS tools. Building upon the extensive arrays of geographical, cultural, and historical data that are available for Western Apache territory, field school students engaged in community-based participatory research with Western Apache elders and tribal natural and heritage resource personnel to contribute to the Western Apache tribes' efforts to document their cultural histories, traditional ecological knowledge, local understanding of geography, and issues of historic and contemporary resource management. This essay reviews the program and traces how student alumni have incorporated skills and perspectives gained into their subsequent academic and professional work.

DOI: 10.4018/978-1-4666-9845-1.ch088

1. INTRODUCTION

“Shi ni’. My mind. Shi ni’. My land. In the Apache language, there is one word for mind and for land, ni’. This is not an accident.” -- Ronnie Lupe, Chairman of the White Mountain Apache Tribe (personal communication, 2011).

For Ndee (Western Apache people) living in Ndee Dawa Dabini’ (the Western Apache Homeland) prior to federal subjugation in the last half of the nineteenth century, intimate knowledge of the natural environment was crucial (Buskirk, 1986). As horticulturalists, foragers, hunters, and later ranchers in a complex and variable region, Western Apache ancestors had to know the land to survive and thrive. As with other Indigenous populations engaged in mixed subsistence strategies in difficult environments, Ndee social, cultural, and spiritual identity was inextricably tied to landscapes and constituent places (Basso, 1996). To be Ndee was to be fully integrated into both the physical and cultural environment, including the foodscapes, storyscapes, songscapes and spiritscapes of the land. These traditional ways of being and knowing encompassed and surpassed western understandings of ecology, climate, geology, and geography. Traditional Ndee knowledge systems and epistemologies constituted a sophisticated Indigenous Geographic Information Science (see Kerski, 2006). As White Mountain Apache Tribal Chairman Lupe suggested, to have an Apache mind—to *be* Apache—was to know the Apache land.

Inspired by Ndee geographical knowledge of the land, the White Mountain Apache Tribe and University of Arizona with funding from the National Science Foundation (NSF Grant No. 1004556) collaborated on the Western Apache Ethnography and Geographic Information Science Research Experience for Undergraduates (REU). This ethnographic field school was designed to teach anthropological methods and geographical skills while documenting Apache history and land use. Here we discuss the community rationale for the REU program, review the curriculum of the ethnographic field school, describe several student projects, and assess the effectiveness of the program.¹

2. WESTERN APACHE LAND AND HISTORY

During the last century and a half, the Ndee were subjected to intense political and military intervention by the United States. By 1873, most Western Apaches had been forcibly constrained upon progressively reduced reservations (Goodwin, 1942). Successive iterations of Federal Indian Policy drove wedges between Ndee and Ndee Dawa Dabini’ (Welch & Riley, 2001). Ndee were denied the mobility necessary to maintain subsistence rounds. Many were forced to resettle away from their family farmsteads and customary hunting and gathering ranges, where they suffered near-starvation on inadequate and unhealthful food rations. They were “concentrated” in veritable prison camps with other Apache and non-Apache Native groups, sometimes far from their traditional homes, and some for nearly three decades at the end of the nineteenth century and beginning of the twentieth century (Watt & Basso, 2004). The Apaches lost, in some cases, essentially all of their land base. The local groups that today constitute the White Mountain and San Carlos Apache Tribes retained significant fractions of their homelands, but were obliged to witness more than a century of federal mismanagement of soil, water, and timber for the benefit of non-Apache commercial interests (Welch, 2009). Land segmentation and commoditization was accompanied by the separation of Ndee families and clans into four federally recognized tribes: Camp Verde Yavapai-Apache Nation, San Carlos Apache Tribe, Tonto Apache Tribe, and White Mountain Apache Tribe (Figure 1) (Goodwin, 1942; Welch & Ferguson, 2007).

16 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

www.igi-global.com/chapter/expanding-toolkits-for-heritage-perpetuation/149579

Related Content

GIS Implementation in Malaysian Statutory Development Plan System

Muhammad Faris Abdullah, Alias Abdullah and Rustam Khairi Zahari (2013). *Geographic Information Systems: Concepts, Methodologies, Tools, and Applications* (pp. 991-1010).

www.irma-international.org/chapter/gis-implementation-malaysian-statutory-development/70489

Application of AHP-GIS Technology to Assess Congestion Vulnerability, a Case Study of Ranchi City, India

Alok Bhushan Mukherjee, Akhouri Pramod Krishna and Nilanchal Patel (2017). *International Journal of Applied Geospatial Research* (pp. 19-42).

www.irma-international.org/article/application-of-ahp-gis-technology-to-assess-congestion-vulnerability-a-case-study-of-ranchi-city-india/169735

County Socioeconomic Deprivation and Preterm Birth Risk Between White and Black Mothers in Georgia, USA

Wei Tu (2018). *International Journal of Applied Geospatial Research* (pp. 18-30).

www.irma-international.org/article/county-socioeconomic-deprivation-and-preterm-birth-risk-between-white-and-black-mothers-in-georgia-usa/204551

Colorado 14ers, Pixel by Pixel

Brandon J. Vogt (2013). *Geographic Information Systems: Concepts, Methodologies, Tools, and Applications* (pp. 1200-1215).

www.irma-international.org/chapter/colorado-14ers-pixel-pixel/70500

Information Visualization Techniques for Big Data: Analytics Using Heterogeneous Data in Spatiotemporal Domains

William H. Hsu (2016). *Geospatial Research: Concepts, Methodologies, Tools, and Applications* (pp. 1677-1692).

www.irma-international.org/chapter/information-visualization-techniques-for-big-data/149570