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## PLANTING A SEED: UTE ETHNOBOTANY, A COLLABORATIVE APPROACH IN APPLIED ANTHROPOLOGY

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### ABSTRACT

This article provides a collaborative model for participatory research, here defined as seeking new ways to “explore methodologies that more accurately legitimize the expertise of the cultures being investigated. This effort to share-out authority and to acknowledge who the authorities and sources of our data really are, is part of the broader questioning of the motives and objectivity of the anthropological endeavor” (McBeth 1998: xi). We examine how anthropologists (including archaeologists) and tribal members can collaborate on issues regarding traditional ecological knowledge (TEK) and cultural property rights; participation by indigenous peoples in advancing the directions and goals of a variety of projects is critical to this inquiry. Centrally, this article explores tribal cultural self-determination through an exploration of the Ute Indian Tribe of the Uintah and Ouray (known as the Northern Ute) ethnobotanical experiences and research.

**KEY WORDS:** ethnobotany, traditional ecological knowledge, collaborative research, Northern Ute

### INTRODUCTION<sup>1</sup>

Stories and narrative play central roles in Native American and anthropological traditions; pursuing a collaborative discourse is therefore the goal of this article.

The story begins in 2002 on a clear cold November day in Greeley, Colorado. Chapoose (after consultation with long-time friend and associate Crum, who suggested an academic affiliation) approached McBeth and other anthropologists at the University of Northern Colorado about beginning discussions on a Ute Ethnobotany Project that she had been pondering for a number of years. The project, as conceived by Chapoose, would be based on inclusive and respectful collaboration between cultural anthropologists, archaeologists, and Native people of the Northern Ute tribe. In discussions among the four of us over many years, we have continually recognized that Native people and anthropologists were going to have to work together to protect cultural resources. This type of collaboration was already central to our combined philosophies.

In December of 2002 (and in consultation with Crum and LaForge) Chapoose and McBeth sat down in the Northern Ute tribal offices in Ft. Duchesne and crafted the following introduction.

The Ute Ethnobotany Project is designed to document and transmit plant identification skills between living Ute generations. The method by which this will be accomplished is through fieldtrips to eastern Utah and western Colorado (traditional Ute Territory) to record (on audio and videotape) Ute perspectives on cognitive ethnobotany (how humans view and classify plants) as well as economic ethno-

botany (how humans utilize plants). The tribal members of a variety of ages will participate; males and females will make separate trips to the same areas since it has been our experience that plant collecting and plant use are gender-specific activities. The lasting benefit to the tribe will be the creation of a bilingual herbarium and project report which will be used for educational purposes.

Chapoose articulated numerous objectives that she was interested in exploring in the context of what has become a ten-year endeavor. The main concern was the use of the ethnobotanical data as a management tool for the many requests that her office handles for input on managing archeological sites on federal lands. Chapoose takes issue with the compartmentalized approach utilized by federal agencies. Native Americans view the world holistically; but a comprehensive approach is not currently employed by federal agencies when administering the lands under their tenure. Their approach is to identify the archeology as Native American and consult with tribes who were believed to have inhabited the area; this results in limited and partial data pertaining to both the boundaries of the archeological site as well as the cultural landscape that the archeological site is part of.

Also included in her concerns, were using the ethnobotanical data as a management tool for natural and cultural resources, re-establishing connection with Ute ancestral homelands, and making initial steps toward revitalizing the Ute language. These emerging and evolving themes are elaborated later on.<sup>2</sup>

Our intention was to submit a grant to the National Park Service Tribal Preservation Programs which states:

Over the last 500 years, Indian cultures have experienced massive destruction, but the tide is changing. Indian tribes are using their resources to halt the loss of language, tradition, religion, objects, and sites. Fundamentally different in character from other components of American society, Indian tribes are living cultures that can continue and be strengthened only through the perpetuation of their traditions (National Park Service Tribal Preservation Grant <http://www.cr.nps.gov/hps/tribal/>)

While our dream of submitting a \$50,000 grant was never realized due to time constraints, tribal politics, and the like, the seed planted that December afternoon has led to the five projects described below. These projects are collaborative, with a number of federal agencies including the National Park Service, US Forest Service, and Bureau of Land Management providing much of the necessary funding. As anthropologists, McBeth, Crum, and LaForge were privileged to record and synthesize our experiences into written reports for the funding agencies as well as the tribe. In working with tribal members we witnessed emotional connections among the generations. The preservation of plant-use traditions has, according to tribal members, sparked a concrete interest in preserving not only plant lore, but also the intimate and profound connections among a people, ancestral landscape, and the voices of the elders. Most importantly, we learned that Native beliefs concerning stewardship of the land carry important lessons for the modern world.

Additionally, we hope that undergraduate and graduate students and professional anthropologists reading this article will understand that they can develop the problem-solving skills to address real-world problems and needs, and that "anthropology often works best when it works with others—when its tools and insights are integrated into broader interdisciplinary projects" (Borofsky 2011: 78-79). Indeed, we hope that the reader will discover the cross-cultural values of the authors reflected herein.

## UTE SUBSISTENCE PRACTICES

The five projects described below emerged and blossomed as the seed began to germinate. The following description of Ute subsistence practices is relevant to all of the five projects. The Utes practiced a flexible subsistence system sometimes called the seasonal round. Extended family groups (from 20-100 people) moved through known hunting and gathering grounds (several hundred square miles) on a seasonal basis, taking advantage of the plant and animal species available. The image of a group of Indians randomly and endlessly searching for foodstuffs in a semi-desert clime is far from the truth. Rather, the seasonal round is a regular circuit in

which the group moves from eco-zone to eco-zone, harvesting and hunting the periodic abundance of flora and fauna (cf. Buckles 1971; Callaway et al. 1986:337; Fowler and Fowler 1971:38-49 [Powell 1868-1880]; Goss 1972, 2000; Greubel 2002; Jorgensen 1964:186-187; Lewis 1994, n.d.; Opler 1940:124-125; Steward 1974; Stewart 1942).

This elegant adaptation required a profound and systematic knowledge of the territory, the plant and animal life, seasonal and annual fluctuations, as well as preservation and storage techniques. It was a "vertical buffet, limited only by the seasons" (Simmons 2000:3). Cooperation and communication among and between bands was also indispensable. The speakers of the Ute language did not necessarily think of themselves as a tribe. Folks from different bands intermarried, recognized each other, and traded, but did not otherwise maintain a larger tribal organization. Bands seasonally congregated for communal rabbit or antelope hunts or pine nut harvests, and the annual spring Bear Dance.

The Utes (and other Great Basin tribes) were, essentially, sophisticated naturalists and dieticians, exploiting their environment through intelligent planning. Moving across the landscape kept the Ute in touch with their land base both materially and spiritually (Fowler 2000:91). Today this awareness is called Traditional Ecological Knowledge (or TEK). "The term *traditional ecological knowledge* came into widespread use only in the 1980s, but the practice of traditional ecological knowledge is as old as ancient hunter-gatherer cultures" (Berkes 1999:2; cf. e.g. Ford and Martinez 2000; Inglis 1993; Kawagley 2006; Nazarea 1999). Traditional ecological knowledge will be discussed later on.<sup>3</sup>

## FIVE ETHNOBOTANICAL PROJECTS

The first project is the Rocky Mountain National Park (RMNP) Oral History and Cultural Interpretation Project. Begun in 2000 and completed in 2007, the project's original (flawed) purpose was revised. Originally intended to be a collection of oral histories from the Ute and Arapaho about the area in and around RMNP (an impossibility since all Native people had been forced out of their mountain hunting grounds over 125 years ago), the project was amended so that knowledgeable members of the Ute and Arapaho tribes could be invited into the park to visit archaeological sites, reflect on possible meanings, and revisit ancestral homelands (cf. McBeth 2007).

The portion of the fieldwork relevant to this publication was the invitation of Northern Ute (mostly women) into the park, accompanied by the park botanist Leanne Benton, to visit archaeological sites at various altitudes of the park's landscape. The purpose of bringing a group of Northern Ute women into RMNP was to try to learn a little more about the Utes' use of plants in high altitude landscapes. Not surprisingly (given that their ancestors were displaced more than 125

# The Applied Anthropologist

CHAPOOSE ET AL.

Planting a Seed...

years ago), Benton was more familiar with the uses of plants in the Park than the Ute women were. However, the emotions evoked by these visits were palpable as the women reflected on memory, place, and loss.

A statement made by Mariah Cuch, Northern Ute tribal member, during an August 2004 visit to RMNP, is significant to this line of inquiry. She said,

I have this thing that place has memory. Sometimes people think that things are lost, you know, they're gone. But it is just there, waiting. It's just waiting to be remembered. I don't myself believe in past lives, but I believe that this all belongs to all of us. Like a moment—just a tiny moment—and the land recognizes our presence here (Cuch as quoted in McBeth 2007: 3)

Geneva Accawanna, Uncompahgre Ute, said,

I feel so humbled that I'm here. And I can feel them; I can feel the spirits; it makes me cry to feel that I'm home—being on the Ute Trail, and being on the mountains—seeing the medicine wheel and praying there, I knew that my ancestors heard me (Accawanna as quoted in McBeth 2007:177).

After walking a portion of the Ute Trail in RMNP, Northern Ute Loya Arrum was in tears when she said,

But it's just the thought that you're walking on the same footsteps as your ancestors walked. Your feet [are] touching the same ground where they walked. I wanted to just lay on the ground. I just wanted to think about them. In one way it breaks my heart [loss of homelands], in another way I'm so glad. My heart is just overfilled with joy that I could make the connection, to be able to touch the stones that they touched. I'm seeing the same mountains that they saw (Arrum as quoted in McBeth 2007: 176).

Cuch, although younger than most of the Ute women who visited RMNP during the ethnobotany project, exhibited a detailed knowledge of traditional plant use. While inspecting a mountain mahogany plant in the Park, she related how she knew so much about mountain vegetation. She shared with Crum that when she was a child, the circus often came to Vernal, Utah, just east of the Uintah-Ouray Reservation. But Mariah's parents could not afford to take her and her siblings to the circus. Instead, so the children would not feel left out, Mariah's mother took them camping in the nearby Uintah Mountains. They camped with several women elders who were gathering plants for food and medicine. These childhood trips provided Mariah with treasured memories as well as a background in traditional gathering methods and uses of mountain plants (Crum 2004, personal communication).

The above are just a sample of emotive affirmations made by Northern Ute women expressing reflections on ancestral landscape.



Fig. 1: Northern Ute in Rocky Mountain National Park (back: TJ Ridley; middle: Mariah Cuch, Loya Arrum, Leanne Benton (botanist), Demoi Chimburaf, Venita Taveapont, Sally McBeth, Helen Wash; seated: Kathleen Chegup, Allain Myore, Betsy Chapoose, Geneva Accawanna (2004)

Elusive as they were, the more elders we worked with, the more we appreciated their stories about emotional connections to the landscape. It seemed that when we were in a location, surrounded by the cultural and natural landscape, including but not limited to plants, that stories and remembered traditions emerged. Elders Duncan, Taveapont, Wash, Arrum, and others reminded us that nature has an inherent ability to renew itself as long as we humans not only allow, but encourage, that revitalization to occur.

On plant gathering walks, we learned about the principle of reciprocity, of thanking the earth with prayer and tobacco offerings as we harvested a medicinal root, osha (a.k.a. bear root, also known as osha' or Porter's lovage [*Ligusticum porteri*]), berries, rose hips, and other plants. For the Ute, the world is sacramental and it is a world thoroughly impregnated with energy, purpose, and sense of creative natural forces; the Ute give gifts or offerings in and to locations where they believe their ancestors prayed or where plants were collected. We learned about respect for nature by the judicious use and harvesting of plants. The Ute seem to have tended the plant (including prescribed burning) and animal populations



on which they relied. Ute knowledge of what may have been sophisticated and complex harvesting and management practices has been all but lost. Nonetheless, there is much to be recorded and perhaps relearned (cf. e.g. Anderson 2005: 1-10). Significantly, like many others, we began to comprehend that as custodians of the land, we all are responsible for educating 21<sup>st</sup> century global citizens and that there is much that can be learned from indigenous peoples.



Fig. 2  
Helen Wash and Loya  
Arrum collecting osha,  
offering tobacco (2004)

The second project, an outgrowth of the first, is the Ute Ethnobotany Project (2005-2008). A Centennial Service Challenge Grant based on the initial NPS grant proposal was awarded to the Grand Mesa, Uncompahgre, and Gunnison National Forest for the Ute Ethnobotany Project in 2005. The "project was designed to document and transmit plant identification skills between living Ute generations" (LaForge 2006: i) and was designed to accomplish four goals: first, to bring Ute youth and elders together in a field setting at recorded archaeological sites to identify and discuss plant use and associated practices; second, to create an herbarium catalogue with the assistance of the Mesa State College (now Colorado Mesa University) Biology Department to be housed at the Northern Ute tribal offices; third, to begin to identify plant communities that are associated with specific kinds of archaeological sites; and lastly, to compile a final report (not elaborated herein) of the accomplishments of this project, including an ethnographic overview of Ute plant use. Two field trips were conducted annually with the Northern Ute from 2006 to 2009 which brought youth and elders together in a field setting. Archaeologists and botanists or ethnobotanists were present at all site visitations to assist in the identification of cultural resources and species in specific plant communities;

elder Utes discussed Ute names and plant use and associated practices among themselves and with the younger tribal members who were present. Also, Crum and LaForge, as archaeologists, believed that it was important to connect the "dead past" with the "living culture of the Utes," and that plants were a good way to make that connection.

The second goal was to create an herbarium catalogue with the assistance of Walter Kelley of the Mesa State College Biology Department that would be housed at the Northern Ute Cultural Rights and Protection Office. An herbarium is not just a collection of dried and pressed plants; the first step in creating an herbarium is to identify and photograph plants in their natural setting. For example, Cletis Mart (Northern Ute) and Lynn Albers (ethnobotanist) identified the scientific and common names for manzanita (*Arctostaphylos patula* ssp. *platyphylla*). In Colorado, this species is only found on the Uncompahgre and the Blue Mountain Plateaus.

The students were taught the methods of science: they took field notes, learned how to use GPS units, took photographs of the plants, learned to read maps to document the collection location (including elevation), learned about plant zones to describe habitat, and documented the date of the collection (since seasonality is critical), and each plant then was assigned a collection number. The plants then were carefully removed from the ground so that the roots, leaves, flower and/or fruit were intact. For example, Helen Wash (Cultural Rights and Protection, Northern Ute, retired) collected a sage specimen on the Uncompahgre Plateau while Kerry Cesspooch (Ute Bulletin, Northern Ute, staff) photographed the process.

From removal, to pressing, to drying, to long-term mounting and preservation – with appropriate labels – the process unfolded systematically. (Airtight cabinets were used.) Specimen labels including the collection number, the scientific name, common name, Ute name (if known), date collected, person who identified the plant, person who collected the plant, detailed location (including elevation), soil description, habitat, harvest period, and Ute usage were added. The back of the herbarium sheet was designed so that references to Ute traditions of the harvest, ceremonial uses, and the like could be added as new information is forthcoming.

It is the intention of this Ute Ethnobotany Project that the herbarium collection will be an on-going endeavor of the Ute Cultural Rights and Protection Office and that additional information on Ute uses and other cultural information will be added as they surface. The herbarium will provide a platform for elders and youth to continue to explore Ute traditions and language about plant use into the twenty-first century (cf. McBeth 2008).

The third goal, to identify plant communities that are associated with specific kinds of archaeological sites, is a bit more complex, but was also partially accomplished. The ma-



majority of field site visits were to plant communities that are associated with archaeological sites managed by the US Forest Service (USFS) Grand Mesa and Uncompahgre Ranger Districts, and Bureau of Land Management (BLM) Grand Junction Field Office and BLM McInnis Canyons and Dominguez-Escalante National Conservation Areas. The field visits on the USFS and BLM lands focused on known Ute sites in Mesa County, Colorado. These locations provided an opportunity to look for plants in lower elevation desert scrub and river riparian plant communities, through mid-elevation oak-brush, piñon-juniper woodland, and mountain shrub plant communities with associated seeps, springs, and creek riparian, to higher elevation ponderosa pine, aspen forest, and sub-alpine plant communities.

Without additional research it is difficult to offer conclusions here about the association of specific archaeological site types with specific plant communities. The environment surrounding the Grand Valley in western Colorado provides a diversity of species and seasonality, both of which were undoubtedly factors in site location, especially if the site was associated with plant exploitation. To date, archaeological evidence of plant manipulation in the study area, either for horticultural or potential domestication purposes, is limited. Although seed manipulation may be inferred by the presence of larger pollen (Conner and Langdon 1987), much work is yet to be done to make definitive conclusions about these associations that could then be extrapolated to similar sites.

A third project that integrates Ute ethnobotany was the Ethnographic Overview of Colorado National Monument. Located in western Colorado near the town of Grand Junction, the research for this project was carried on between 2006 and 2010 (McBeth 2010). Since there is such a sparse historical record of Native American presence in this area, Utes were invited into the monument to visit archaeological sites and examine plant communities. The reason for the dearth of information is that the Ute were pushed out of this part of Colorado in 1881, and only a few ethnographic observations were recorded prior to this time. No ethnographic research was done in the area before the Northern Ute were removed and relocated to what eventually became known as the Uintah-Ouray Reservation in Utah.

What this means is that there was a tremendous loss of Ute cultural knowledge that would likely have been associated with this area. Twenty-first century analysts must concede that the memories of any traditions related to the Grand Valley and Uncompahgre Plateau are elusive and fragmentary. Tattered memories and mostly-erased histories were at the center of this investigation. The Ute Ethnobotany Project was expanded to include the area around Colorado National Monument; this also meant that the funding provided by the National Park Service for original research was used to in-

clude paid consultants and collaborators. These included author Betsy Chapoose and Venita Taveapont (Coordinator, Ute Language Program, Northern Ute Tribe).

The fourth project is the Ute Learning Garden. This project started in 2007 when Laurie Reiser, an archaeologist and local Colorado State University (CSU) Master Gardener, became acquainted with Crum and LaForge's work on the Ute Ethnobotany Project. Reiser's long-time interest in native plant use prompted the three archaeologists to take the Ute Ethnobotany Project in a new direction—to create a garden for interpreting plants utilized by the indigenous people of Western Colorado.

In 2008 Curtis Swift, Director of the CSU Tri-River Extension Agency, received permission from Mesa County to use roughly three acres of bare land adjacent to the CSU facility's cactus garden and office. The partnership grew. With the critical help of Chapoose and Northern Ute Traditional leader Clifford Duncan, the partners planned a garden that would represent riparian, desert shrub, piñon-juniper, transitional, and alpine eco-zones. In 2009 Chelsea Nursery generously donated many of the native plants and the Ute students with Master Gardener guidance planted most of the plants. The BLM through an Assistance Agreement partnership with Tri-River Extension Agency paid for irrigation pipes, interpretive signs, landscaping, and ramada posts, while both partners donated hours of employee and volunteer time. A small garden of corn, beans and squash is grown to show how indigenous farmers, neighbors to the Utes, planted, harvested, and prepared their food. (The Utes occasionally grew small plots of corn, but were mainly hunters and gatherers). Manos and metates lie near the garden and are used by students as they learn how to grind their own corn flour and wild seeds.

In 2009 and 2010 Chapoose and Duncan brought students from the Uintah-Ouray Reservation in Utah to participate in "mini-pow-wows" (they even persuaded the local public to dance). Duncan gave the Ute students their first experiences in how to erect a tipi, and in how to build a wickiup, sweat lodge, and associated cobble hearth. Archaeologists from Dominquez Archaeological Research Group gathered poles for the wickiup project and discussed Ute archaeology at the public events, with a focus on wickiups and Ute sites that are found in Western Colorado. Master Gardeners served as garden docents. They were instructed by Northern Utes, archaeologists, and a local native corn farmer and gave tours to Mesa County school groups. At public events, the gardeners interpreted Ute culture and plant use.

Master Gardeners continue to maintain the garden but funding to bring Utes to participate in activities will be a future challenge. The garden may become primarily a learning opportunity for local school groups as they study Colorado history.





The Ute Learning Garden was the result of cooperation among many agencies and organizations. Ute students learned from their own elders more about their culture and it provided them with the opportunity to share specifics about it, imparting a sense of stewardship to the people now living in the heart of what was once their homeland.

The fifth project is the 2011-initiated consultation by the Northern Ute on the Denver Botanic Garden exhibit entitled "Native Roots, Modern Form: Plants, Peoples, and the Art of Allan Houser." The art of Houser (1914-1994), a Chiricahua Apache modernist sculptor, was the centerpiece of this exhibit. Advertised as a "multidisciplinary appreciation of American Indian cultural and botanical heritage" (Denver Botanic Garden web site 2012), it is described by Carol Berry, correspondent for *Indian Country*, in this way:

The core of the Native Exhibition will be "elders who can talk to us about the ethnobotanical uses of plants and their knowledge of cultural preservation" [citing an expert], stressing that although the presentation is of arts and horticulture, "driving them is cultural preservation" to retain Native knowledge that is being lost, particularly in urban areas (Berry 2010).

Native American media (especially *Indian Country*) has covered numerous examples of Indian focus on plants, health, and related legal issues (cf. Allen 2011; Valencia, et al. 2011).

In early April, 2011, Chapoose and Clifford Duncan, tribal elder, toured the gardens that were going to be utilized for the exhibit, "Native Roots/Modern Form: Plants, People and Art of Allen Houser," which opened on April 29<sup>th</sup>. Chapoose and Duncan discussed which sacred plants were appropriate to exhibit and interpret as well as those plants which would be inappropriate to reveal in a public setting such as the Denver Botanic Garden. Chapoose and Duncan discussed with the staff how the traditional use of the plants should be incorporated into the displays; the idea of possible trips to the garden with tribal elders, who might be willing to assist in identification and Ute interpretation of specific plants, was also broached.

## THEMES IN CULTURAL RESOURCE PROTECTION AND APPLIED ANTHROPOLOGY

Four themes have emerged from the above projects that are relevant to the concerns of both tribal cultural resource protection and applied anthropology.

The first theme is cultural resource management (CRM) which is intended to protect and enhance Native cultural and natural resources. Not surprisingly, there seems to be little agreement about what cultural resources include. A broad definition states that cultural resources include "all elements of the physical and social environment that are thought by any-

body—a community, a tribe, an interest group—to have cultural value" (King 2003: 11).<sup>4</sup>

Chapoose believes that the responsibility of cultural resource managers lies in not only documenting and recording the historic and prehistoric "meanings" of the landscape for her tribe, but also protecting and conserving the resources through stewardship. Through a Ute lens, the continuum between the natural and the cultural worlds is seamless. Chapoose asserts that anthropologists must employ increased transparency (to the public) as we address key (to the tribal worlds) social concerns and that our accountability (to the tribes which have entrusted us with their traditional ecological knowledge) should be framed according to their concerns, not those of the academy.

Landscapes are a complex of interrelated and essential places of religious and cultural significance to the Ute. All the lands and elements of the environment within the landscape are related. Chapoose believes that the tribe has tried to communicate this to the federal agencies and is concerned that the issues are neither understood nor taken into account in decision-making processes. It is clear that the governmental analysis employed in this context focused merely on specific locations, which are but a fraction of the landscape. Chapoose asserts that this analysis is flawed. Current procedures and policies do not consider that these landscapes are alive and interconnected; the current problematical approach fractures the landscape into segmented pieces and therefore will endanger its continued use by future generations of practitioners of Native American religions.

Additionally, Chapoose believes that cultural resources create the foundation for Ute cultural landscapes; she is a strong advocate of re-establishing connections with ancestral homelands. Ute still collect plants and roots for weaving, construction, food, and medicine<sup>5</sup> (e.g., willow for baskets, spring beauty a.k.a. wild potatoes and pine nuts to eat, and osha for medicine). The challenges of protecting the plant communities and advocating for a Ute reconnection are very real.

A second theme is that of re-establishing connections with ancestral homelands which originally comprised a vast territory of over one-third of what is now the state of Colorado. Whenever a tribal community is dispossessed of their territory and removed to a distant location, much traditional knowledge is lost. In 1881 the Northern Ute bands were removed from their western Colorado homelands to a reservation in Utah. Subsequently assimilationist institutions such as boarding schools and missions, and simply accommodation to the demands of the twentieth and now twenty-first century, generated tremendous cultural erasure.

The authors have long believed that we are capable of initiating, creating, and funding successful projects to work with the Native peoples to reclaim not only knowledge about our/their heritage land base, but also to establish reconnect-







tions to these ancestral homelands. Whenever a people are disenfranchised of their heritage, their sacred landscape, all of their reflections must be interpreted in light of this removal.<sup>6</sup> While we strongly believe that we must maintain ethnographic integrity, we also believe that it is essential to work with tribes to develop culturally sensitive and honest ways to recoup lost traditions.

A third theme is language revitalization. While perhaps the most elusive, it is decidedly a worthwhile endeavor. We have created a physical connection to the sacred landscape by working with elders, whose recollections, reminiscences, and stories of plant use might be used to promote a linguistic resurgence. The Ute Ethnobotany Projects described herein have connected youth to ancestral Ute homelands with knowledgeable Ute tribal members. This has renewed an interest in recording these traditions, and learning plant names, vocabulary, and traditional practices in their Native language. Additionally, the preservation of plant-use traditions has, according to tribal members, sparked a concrete interest in preserving not only plant lore, but also the intimate and profound connections between a people, the ancestral landscape, and the voices of the elders.

At this point we can synthesize the above three themes as a rediscovery of traditional ecological knowledge (TEK). Chapoose expresses the belief that the environment is more than a collection of resources—and as such is a comprehensive landscape that includes natural, cultural, and spiritual components. She is interested in exploring the relationships between the culturally created environments (archaeological sites such as game drives, wickiup and camp sites, vision quest sites) and physical environments (water sources, plants, available game). Additionally, she is curious about the possible existence of unique Ute cultural perspectives of the landscape that would include the botanical resources and their connection to distinctive cultural and/or historical experiences.

Related to this is the complex and sometimes elusive process of the social construction of sense of place, a topic which has generated a lot of discussion and publications as of late. Anthropologists Stewart and Strathern (2003: 1) note that “Ethnographers have realised from their field experiences how perceptions and values attached to landscape encode values and fix memories to places that become sites of historical identity.” The authors learned that the stories of the elders were not only expressions of ethnic identification and tribal sovereignty, but also of personal connectedness to the land. While their memories are fragmentary and elusive, stories emerge that serve to remind all of us that plants have the capacity to reveal secrets of the landscape.

Clifford Duncan, Northern Ute elder, discusses the importance of showing the proper respect for plants.

When we are looking for this spring beauty, Indian potato, my mother would tell us that when we get there that maybe they [spring beauty] won't be

there. We ask, ‘Why not?’ And she replied, ‘They move away.’ And the reason why they moved away was because we abused it. Maybe we didn't do right, and they moved out of the area, and then we have to go look for it again. But those that abused it—they're not going to find it because it moved away to another area.

We have to treat a flower or a plant, even a tree, in that they have same spirit that we have. All things are connected with the spiritual. Offerings differ with tribes. When you take the northern tribes, they use tobacco; most of them use tobacco. In between there's sometimes a mix too; or you could use any plant really which you consider to be sacred like fruit, like dried buffaloberries. ‘Here's a sweets for the spirit.’ Or eagle feathers can be used as spiritual gifts. Give something that you cherish and put that there. So offerings remain that way, even to a plant. Those are earlier ways of doing things (Duncan as quoted in McBeth 2008: 2010).

The spiritual life of plants is also discussed by Helen Wash, Northern Ute tribal member. Wash reflects on her experience on Grand Mesa in an area near a Ute trail:

I was thinking about that [Ute] trail up to the mountains. And just then, I saw this big aspen—I mean it was wide; I don't know if my arms could have gone around it completely, but it was huge, it was just wide, and I could see it from where I was sitting. So, I went up the hill to go see it, and when I was standing there, I just happened to look south.

Ohh, that hill side was just full of bear root. I thought, ‘Wow, this is so beautiful!’ Before I came back down, I prayed, and I thanked the Creator for letting me see that, and to let me know that our ancestors came through here long ago and to show me that sight of bear root—it was so beautiful.

It reminded me of when I was little. My mother knew a lot about plants. She knew it from her relatives, her cousins, her mom, and her sisters. They all shared their knowledge of what plants do this and that for you. One day, she said, “Let's go up to the mountains, and let's get some plants for the winter, in case someone comes and asks for some medicine.” So, we're up in the mountains, and I'm looking around like, “Gosh mom, there's nothing growing around here.” She said, “You see that plant over there?” And I thought, “Well, there's just that one, so why don't we just go?” She says, “No, no, just wait here.”

She stood facing east and prayed. I didn't know all of what she was saying, but when she got through

she said, "Okay, this plant right here. See it? We'll go over there and pick some." And, when I went over there, I just saw so many, I couldn't believe it. She said, "Don't take a lot of it," she reminded me, "just take as much as we'll need, and some to share with people we'll want to give it to."

She made me a believer of what plants can do for you, and that it adds beauty to the mountains, to the deserts—everything adds beauty. It's God's creation for us to enjoy, for us to take and share and to use as medicine or as food. For that I'm thankful, for my mother sharing that with me, and I'll probably always share that with people. We thank the Creator for all of that and we thank our ancestors for showing us the way. Even though they are no longer with us, their knowledge is passed down from generation to generation, to this generation—the now generation, the young people who came with us on this trip" (Wash as quoted in McBeth 2008: 14-15).

What the above stories demonstrate are Ute narrative traditions which include the land itself. Anthropologist Basso, Lakota activist Deloria, Kiowa poet and philosopher Momaday and others offer clues as to why and how the landscape can be read as a sacred text. Perhaps more of us in and out of the academy should seriously take up the recording of these stories instead of bemoaning the loss of tradition (cf. Basso 1996; Deloria 1994; Momaday 1969).

## SOPHISTICATED NATURALISTS

While we can posit that cultural resource managers should be indebted to Ute traditional ecological knowledge, as far as our research has gone, we have learned that many plant collecting and plant management traditions of the Ute are lost. We are, however, optimistic that pharmaceuticals, utilitarian, and food collection techniques may still be retrieved, revived, and re-taught. Ecological restoration and wildland management, including those of historic and prehistoric landscapes, the control and eradication of invasive species, and the reintroduction of plant and animal species known to have inhabited a particular locale are part of the rich, largely untold, indigenous histories, which in turn are at the root of traditional ecological knowledge.

We have learned anew as Native Americans and applied anthropologists that lasting bonds are created through sharing stories. Storytelling is an essential part of being human, as it ignites the imaginative possibilities and awakens our cross-cultural understandings.

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## NOTES

1 Portions of this manuscript have been vetted previously by federal agencies in reports written by McBeth (McBeth 2007; 2008; 2010).

2 *Ethnobotany: Evolution of a Discipline* (1995), edited by Richard Evans Schultes and Siri von Reis, provides an important introduction to the discipline.

3 A "Google scholar" search on traditional ecological knowledge (TEK) yielded 1,040,000 citations. We are aware that Krech (1999; 2005; 2007) does not necessarily eschew the concept of the "environmental" Indian, but he does take it to task, citing Pleistocene extinction, bison and beaver overkill, and some burning practices as case studies to make his point (1999). Krech carefully selects examples that indicate negative impacts on the natural environment. Not surprisingly he "proves" that Native people were responsible for overharvest, deforestation, and extinction of particular species. We do not necessarily assume that a respect for living things "translates automatically into conservation" (2007: 346), but we do argue that it does reflect a philosophy of respect, irrespective of some wasteful resource users.

4 As CRM archaeologists Stapp and Burney admit, "Cultural resources are many things to many people" (Stapp and Burney 2002: 5; cf. e.g. Harkin and Lewis 2007: 275-342). One significant component of cultural resource management is traditional cultural properties (TCP). The term TCP was originally defined as a property "that is eligible for inclusion in the National Register because of its association with cultural practices or beliefs of a living community that (a) are rooted in that community's history, and (b) are important in maintaining the continuing cultural identity of the community" (Parker and King 1990: 381). The anthropological and related disciplinary literature includes numerous books and articles on CRM and TCP. We include the definition here in order to assist the reader in understanding the ways that our other definitions and concepts are negotiated across cultural, religious, and social boundaries. A note to the reader: a "Google scholar" search of cultural resource management (CRM) yielded about 2,120,000 books and articles. Traditional cultural property (TCP) yielded 1,230,000 and when pluralized to "properties" the yield was 1,460,000.

5 "Eighty percent of the world's population relies on traditional medicine to maintain its health" (Alcorn 1995: 27).

6 The reader interested in learning more about the ignominious removal of the Ute should consult Becker 2004 and McBeth 2010.

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# The Applied Anthropologist



CHAPOOSE ET AL.



Planting a Seed...

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