

## Science, Cultural Awareness and Jobs Flow from San Juan

According to Hopi legend, a boy named Tiyo took a primitive boat on a journey from the San Juan River onto the Colorado through the Grand Canyon and eventually ended up in Mexico. The Hopi believe Tiyo was the first human to successfully travel on the Colorado long before John Wesley Powell. On the journey, he learned more about life and himself, and how to face the challenges of the unknown. The knowledge he acquired from the river was passed along to his people.

Today, Native American culture continues to flow from the river. And like Tiyo, Northern Arizona University students are sharing that knowledge with others through the San Juan Native American Guide Training and Cultural Interpretation Program.

"There is a connection there between the river and native people," said Native Guide Training Program Project Coordinator Nikki Cooley. "The river rafting industry is a multi-million-dollar industry that employs thousands of guides; but, it lacks Native representation and the cultural perspective of the river and the river corridor."

Developed through the Ecological Monitoring and Assessment Program and Foundation, the San Juan Guide Training Program strives to broaden cultural awareness, share ancient knowledge and encourage respect for archaeological sites.

EMA, located on the NAU campus, was created six years ago through a vision and land gift from Babbitt Ranches. It facilitates research projects and cultivates relationships among land managers, governmental agencies, scientists, researchers, private landowners, professors and students.

### Article V A Land Ethic

#### Section 2.

A land ethic changes the role of Homo sapiens from conqueror of the land-community to plain member and citizen of it. It implies respect for his fellow members, and also respect for the community as such.

On the river, students also study hydrology, geology and astronomy.

"The San Juan is a great living classroom. We do a lot of hiking and exploring, while learning about ethnobotany and studying the flow of the river, how it changes and how it affects beaches and plant life," said Cooley. "All along the San Juan you can see kiva archaeological sites. We teach how to approach them with offerings of

corn pollen, prayer, harmony and respect for the spirits that still live there."

Cooley, an NAU graduate with a master's degree in forestry, also teaches students natural history along with the medicinal uses of plants, the significance of rock art and what pottery sherds reveal about



the past. As a member of the Navajo Tribe raised on the reservation, Cooley says her participation in the program is a way of giving back to her culture.

In addition, the program helps students qualify for jobs and find employment as the National Park Service now requires its Colorado River guides to have cultural interpretation training.

Tribes associated with the river include Navajo, Hopi, Paiute and Ute Indians.

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## Thousands of Acres Restored to Grasslands

Researchers have long noted that Arizona is losing its grasslands to the spread of pinyon and juniper forests. With the loss of grasslands comes the loss of critical habitat for such animals as pronghorn, black-footed ferrets and ferruginous hawks.

Also, as grasslands are restored through brush management, the healthier and thicker grass cover will slow runoff, allowing more moisture to soak into the soil. And, soil erosion by water and wind will be reduced.

Shai Schendel grew up in Humboldt and has a deep appreciation for the wide open spaces and the ranchers who manage those lands.

As Rangeland Management Specialist for the Natural Resource Conservation Service, Schendel assists landowners with conservation planning and identifying resource concerns on their operations through cost-share projects such as the Wildlife Habitat Incentive Program.

"I love being on the ground working with local ranchers and landowners and helping them implement conservation plans to create a sustainable operation. Working outdoors, you get to learn

something new every day. I find my job very exciting and rewarding."

The NRCS has been working with Babbitt Ranches for more than five years and Schendel says she is amazed at the amount of land being treated on the CO Bar.

"When they have completed their current practices, they'll have treated more than 20,000 acres of grassland. That's a huge chunk of land. Babbitt Ranches has been very active, consistent and successful with their brush management to make the land more productive and opening corridors for wildlife. They are doing a great job out there restoring the land to its historic state."

The job of removing invading pinyon and juniper trees requires the use of an agra ax, grinders and hand crews with chainsaws. Through proper management and planning, Schendel says the range can improve greatly.

The NRCS also is assisting Babbitt

Ranches with the installation of watering facilities for wildlife along with escape ramps for small mammals that fall into the tanks and troughs.

"It's a collaborative process between the NRCS, Babbitt Ranches, Arizona State Land Department, Arizona Department of Agriculture and the Arizona Game and Fish Department. It allows all parties involved to meet their goals. Once the plan is in place, we get the clearances so the project can move forward. We also check to make sure the practices are meeting the identified objectives and specifications."

Schendel adds that Babbitt Ranches is involved with the Conservation Security Program

that offers rewards to landowners who have been good stewards of the soil and water resources. The incentive program offers more funding to ensure that agricultural lands remain viable working enterprises.

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### Article VI Sustainable Community Principles

Babbitt Ranches is a community that:

#### Section 5.

Respects other forms of life and supports biodiversity;

## Researchers Study Need for Land to Rest

Northern Arizona is a mecca for outdoor recreation and its popularity continues to grow. But land and wildlife managers are concerned about the number of people and the length of time they are on the land.

"Until recently, there were periods of the year when visitation was rare. Today though, Americans are very mobile and there is scarcely a time when hunters, campers, off-highway vehicle enthusiasts and others are not out there," said retired Arizona Game and Fish Department Research Chief and Southwest Wildlife Advisory Group President Jim DeVos.

Babbitt Ranches supports all of these uses, but also recognizes the importance of quiet time for both the land and wildlife. Therefore, the ranches are in the early phases of a project to plan for future recreation use that sustains the natural environment.

"This is such a unique approach from a private land steward," said DeVos.

One of the key tenets of the Babbitt Ranches Constitu-

### Article V A Land Ethic

#### Section 3.

The land ethic then reflects the existence of an ecological conscience, and this in turn reflects a conviction of individual responsibility for the health of the land. Health is the capacity of the land for self-renewal. Conservation is our effort to understand and preserve this capacity.

tion is a recognition that growth will occur, but that growth must occur within the carrying capacity of the land.

"It is important to develop a better understanding of the potential impacts of increased recreational use," said Babbitt Ranches President Bill Cordasco.

To accomplish this, Babbitt Ranches is engaging researchers from the Arizona Game and Fish Department, Northern Arizona University and Texas Tech University.

Key study areas include the impact of off-highway vehicle use on pronghorn; how increased hunting pressure is affecting wildlife cycles such as breeding periods and the successful rearing of young; and, the potential impact of dispersed recreation on wildlife and habitat in general.

Babbitt Ranches expects to use the findings as a tool to ensure that recreational use of the land is consistent with its constitution and sustaining a healthy environment.

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