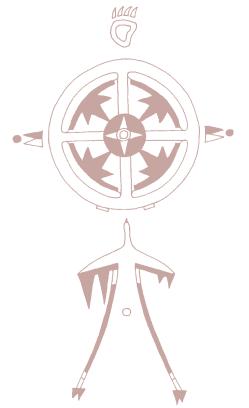
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Haskell hosts inter-tribal wetlands workshop

by Greg Wold, Prairie Band of Potawatomi

Prairie Band of Potawatomi Nation, in cooperation with Haskell Indian Nations University (HINU) and the Environmental Protection Agency (EPA), Region VII, sponsored a wetlands workshop at HINU from September 9-11, 1998.

Representatives from approximately 20 tribes in EPA Regions VI and VII attended the "Jage Nagonan-All Things Are Connected" wetlands workshop. Wednesday evening began with an ice cream social and welcome opening remarks by Rey Kitchkumme, Prairie Band of Potawatomi Tribal Councilman, who also served as the master of ceremonies. Dr. Bob Martin (Cherokee), HINU President, and Venida Chenault (Prairie Band of Potawatomi), Director of American Indian Studies at HINU, spoke of the importance of wetlands to all people and of the importance of the relationship between HINU and the Prairie Band of Potawatomi. Miss Haskell, Danita Holata (Seminole/Creek from Oklahoma), also sang "Alleleuia" in her tribal language.

The official opening of the workshop was held at the medicine wheel where veterans from the We-Ta-Se American Legion Post 410 presented the colors followed by a traditional flag song. Dr. George Godfrey (Citizen Band Potawatomi), HINU Natural and Social Sciences Depart-

Wetland Facts

- ♦ Wetlands are among the most biologically productive natural ecosystem in the world. They can be compared to tropical rain forests and coral reefs in the diversity of species they support.
- Produce great volumes of food as leaves and stems break down in the water; this enriched material is called detritus. Detritus is food for insects, shellfish, and forage fish, and it provides nutrients for wetland plants and algae.
- Support recreational fish such as bluefish, and striped bass, as well as mammals such as reptile, and amphibians; eat aquatic invertebrates and forage fish.
- The U.S. Fish and Wildlife Service estimates that up to 43% of the threatened and endangered species rely directly or indirectly on wetlands for their survival.

Source: U.S. Environmental Protection Agency

ment Chair, gave the blessing and invited all to share in the offering at the center of the wheel.

After the opening, the group traveled to the Baker Wetlands for a presentation on the history of the area. The group divided into three groups to explore different areas under the leadership of Bob Rinella, a consulting ecologist; Kelly Kindscher, Kansas Biological Survey; and Roger Boyd, Baker University biology professor.

Dan Wildcat (Yuchi), Haskell Environmental Research Studies Center (HERS) Co-Director, was the keynote speaker for the Thursday afternoon session, addressing the diversity and importance of wetlands. His view of the wetlands from an academic and tribal view helped bridge and bring together the

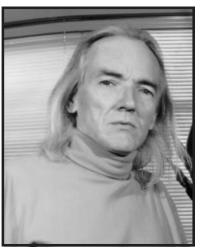
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Director's Corner:

New Dimensions for HERS

by George Godfrey, Haskell Indian Nations University

technical outreach program (EPA language) or extension program (USDA language) such as HERS should be able to take the experiences gained from working in Indian Country



Dr. George Godfrey

and channel some of them into the academic development of the host institution. The reverse also is true, i.e., gains in academic programs should cycle or flow back into outreach activities. It is hoped that successes in each area will be obtained. I do not know when the successes may be considered synergistic. However, after reviewing what has happened at Haskell during the past nine months, Haskell may be close to that level where the whole is greater than the sum of the parts.

The outreach activities of HERS have been reported in earlier issues of *Earth Medicine*, and recent ones may be read in this issue. The purpose of this column is to bring interested parties up to date on recent developments about Haskell's environmental science baccalaureate program. It is a pleasure to report that this program was approved for accreditation by the North Central Association of Colleges and Schools (NCA) on August 7, 1998.

This point marked the culmination of work that officially started in July 1996 with primary support from the Division of Undergraduate Education, National Science Foundation. However, in my estimation, the deepening interest in and level of confidence for expanding into environmental science from a highly successful two-year natural resources program had many of its beginnings with HERS.

Upon notice of accreditation by the NCA, Haskell faculty earnestly began focusing on the final degree structure. Following an earlier decision to have two academic emphases, environmental chemistry and environmental biology, in the new major, the faculty started to refine the program's curriculum requirements. Dr. Greg Cajete, science educator from the University of New Mexico, author of *Look to the Mountain* and one who has successfully integrated the sciences with culture and the arts, worked with the faculty during part of this phase to evaluate Haskell's environmental science program from two perspectives, the balance

between 'science' and cultural relevance. In addition, Dr. Cajete helped facilitate consensus building among the math and science faculty.

It was no surprise that faculty debated issues regarding degree of specialization versus generalization as well as academics versus extent of technology. A similar spectrum of opinions recently were expressed by some of the 80 plus participants of a Bureau of Indian Affairs-sponsored environmental science workshop and by members of the Natural Resources Advisory Board (NRAB). The workshop and NRAB independently had convened at Haskell on the same week so it was quite easy to solicit opinions. In summary, Haskell's new environmental science program received very favorable remarks and was viewed as an excellent start-up plan.

One NRAB member asked a significant question, "What drove the direction of your [environmental science] program?" The question was easily explained by referring to Haskell's current catalog in which the purpose of program is stated. It cannot be understated that a key element of the program is to prepare American Indian/Alaska Native students to become leaders and authors of environmental policies for their respective tribal nations for the purpose of restoring Mother Earth and assuring present and future environmental stewardship.

Students who complete their baccalaureates in environmental science at Haskell will have the skills and training to either 1) begin graduate work toward a more specialized degree or 2) work for tribal, federal or private natural resource or environmental programs. Students who begin work after their baccalaureates in environmental science will have a) a balance of technical skills, b) a broad conceptualization of math and science pertaining to related environmental issues, c) the ability to interface with tribal and federal programs within the framework of indigenous value systems, and d) a foundation for making contributions to environmental stewardship, including holistic economic development of American Indian and Alaska Native communities.

In looking back, some of my own views toward Haskell's environmental science program were refocused by the opportunity that I had to work for 14 weeks this past summer in Washington, DC, with Higher Education Programs of the Cooperative States Research Education and Extension Services,

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Delaware Tribe in Oklahoma creates environmental programs

he Delaware Tribe of western Oklahoma has created the Delaware Tribal Environmental Programs (DTEP) through a General Assistance Program (GAP) grant from the Environmental Protection Agency (EPA). To address public health and environmental protection of tribal land, grant provisions focus on the enhancement of tribal capability to participate in the effort to protect and manage environmental issues through the recently established DTEP.

Proposal requirements in building the DTEP framework include building a comprehensive tribal environmental infrastructure, creating a strong tribal and EPA partnership, and developing the tribe's capability to manage specific programs and projects.

Since the Delaware tribe jointly owns lands in Anadarko, Oklahoma, with the Wichita and Caddo Tribes (WDC Confederation), cooperative efforts are underway to provide site assessments of tribal lands. DTEP is working with federal, state, and local agencies, as well as Wichita and Caddo environmental programs to identify solid waste issues, illegal dump sites, land erosion, recycling, herbicides/pesticides, and other media issues. While the Wichita environmental tribal programs emphasize land issues and Caddo air issues, DTEP identifies water issues as its primary concern. Ultimately, the goal is to identify and harness environmental problems and to develop codes and ordinances to protect tribal air, land, and water quality through joint efforts on part of the WDC tribal programs.

Clean water takes the lead as the immediate priority for the DTEP. The Delaware Tribe is

pursuing the investigation of water quality, preservation of native plants, wetland preservation, and testing of surface water and individual water wells.

Marsey B. Harjo, director of DTEP, invited Brenda Brandon, Technical Outreach Services for Native American Communities (TOSNAC) Coordinator from the Haskell Environmental Research Studies (HERS) Center at Haskell Indian Nations University, to the Delaware Tribal Office in Anadarko, Oklahoma, to provide a needs assessment for technical assistance and community outreach. In September, Harjo and Brandon reviewed technical aspects of implementing the GAP grant with emphasis on water and wastewater sampling, and development of tribal environmental regulations and procedures. They discussed the possibility of providing community training on Federal regulations and guidelines, the importance of providing water quality monitoring on tribal land, and issues related to potential contamination of water due to impact from local industry.

The goal of the HERS Center is to integrate scientific knowledge and Native American traditional knowledge as they relate to the environment, while providing educational support to tribes. The TOSNAC program brings university educational and technical resourses to communities dealing with hazardous contamination issues. HERS and TOSNAC program staff look forward to providing the Delaware Tribe with numerous educational resources and outreach services to assist DTEP in accomplishing program objectives. ■

Martel stresses importance of tribal sovereignty

■ continued from page 1

scientific and spiritual perspectives, which attendees felt was necessary for a successful workshop. After Wildcat spoke to the group, he led one breakout group; Kelly Kindscher led a second; and Wes Martel, Friday's keynote speaker, took the third group. After the individual groups worked on their prospective topics, they re-gathered in the auditorium; and each leader discussed the work that their group had covered. Thursday sessions ended with a dinner hosted by Harrah's Prairie Band Casino. Matt Taylor, Harrah's Prairie Band Casino Public Relations Department, and Vestina Nonken, Prairie Band of Potawatomi Tribal Co-chair, greeted the visitors.

Wes Martel (Shoshone/Arapaho), vice president of Wind River Associates, was the keynote speaker

on Friday. He emphasized the importance of tribal recognition and sovereign authority over tribal lands regardless of checkerboard ownership and jurisdictional issues. He also emphasized the importance of knowing the hydrologic cycle on the reservation so that as water and other issues are addressed, informed decisions can be made. He stressed the importance of involvement of elders in the decision-making process, as well as those with technical capabilities.

The environmental professionals from the tribes in Region VII also discussed their environmental programs. The workshop ended with Godfrey offering the closing prayer. ■

Native professor illustrates connections between wetland ecology and Indian cultures

by Wendy Griswold, Kansas State University

The Inter-tribal Wetlands Workshop was held at Haskell Indian Nations University on September 9-11, 1998. Daniel Wildcat (Yuchi) gave a plenary address to tribal environmental professionals from several tribes in Nebraska, Kansas, and Oklahoma. The title of his address was "Wetland Ecology and Indian Culture." Wildcat is a professor of American Indian Studies and codirector of the Haskell Environmental Research Studies (HERS) Center at Haskell Indian Nations University.

In his address, Wildcat addressed the sociological connections that his tribe has to wetlands ecology. A significant component of Yuchi culture is a clan system tied to the natural world. Yuchi clans are identified by plants, animals, and even one of the natural elements, wind. A list of Yuchi clan names (e.g beaver, otter, fish) read like a list of wetlands ecology. Wildcat illustrated further connections between wetland ecology and Indian culture through examples of wetlands plants used by indigenous peoples, such as gourds and medicinal plants.

Wildcat stressed the concept of animals as relatives is a common thread in many Indian cultures. Personhood is not limited to humans, but includes animals. He quoted from a presentation made by Oren Lyons, Onandaga elder, at the 25th Earth Day celebration. According to Lyons, "There is a big difference between the way native people look at the natural world and the way that non-native

people do. The difference lies in the fact that when we look out at the world, we see our relatives. And when non-native people look out there, they see resources."

In discussing threats to wetlands and their impacts, Wildcat noted that 43% of animals on the endangered species list in the U.S. depend on wetlands for their survival. Each time a wetland is destroyed, species disappear. According to Wildcat, "We become poorer for that, because we haven't been very good community members." Wildcat encouraged those who work on wetlands issues to give acknowledgement, through their own traditions and cultures, to the special relationship that humans have with wetlands areas.

He also noted that indigenous peoples working on environmental issues have a specific task. "We have a challenge to make people understand the disputes we're raising about water rights, about standards of water quality, about issues of how what someone calls our resources ought to be used, or controlled, or regulated. Those people must understand, I would argue, our own indigenous traditions demand that we have to be good relatives. If we do that, I think that the future looks very good for native people."

Wildcat's presentation was filmed as part of the Campus Lecture Series of the Haskell Environmental Seminar Series. To obtain a videotaped copy of this presentation, please contact HERS at the address listed on page 7 of this publication. ■

Success of Haskell's four-year environmental science program in sight

■ continued from page 2

USDA. The experiences that I had in being part of a USDA-sponsored workshop for principal investigators from Tribal College Land Grant programs and reviewing several Tribal College programs were especially helpful. But, in actuality, the program's philosophy is a composite of several years of experiences that the faculty and I gained through collective experiences with tribal elders, our students, advisory boards, and governmental agencies. Many of these experience had connections directly or indirectly with HERS, for it is through this conduit that Haskell has maintained the broadest and most in depth connections with

Tribal Nations throughout Indian Country.

Projecting the success and promise of the environmental science program at Haskell needs to be tempered with the continuing struggle to find resources for major renovations or new construction for a building to carry out our dreams. One NCA reviewer told my colleague and co-director of HERS, Dan Wildcat, that Haskell will have a model program with a new science facility, otherwise just another environmental science program.

Either before or shortly after the new four-year program is implemented in August 1999, it is hoped that we will have an answer to this basic need.

Martel views environmental education as an intergal part of tribal capacity building

by Barbara Cornelius, Haskell Indian Nations University

n Omaha Nation treaty states, "The American Indian people are entitled to the arts of civilization." The important aspects of treaties ascertain the quantity and quality of water for many American Indian people. Treaties are incorporated into planning processes and development of tribal water laws. Nationwide, tribal people and their lands are experiencing negative environmental impacts. Additionally, the need for and lack of American Indian/Alaska Native professionals, who can understand and interpret the environmental complexities and obstacles, affects many of today's tribal people and their councils.

Wes Martel (Shoshone-Arapaho), vice-president of Wind River Associates, recently presented a tribal perspective on building water resource protection programs. According to Martel, tribes need to develop policies, laws, and technical administrative capabilities to become primary leaders of their water resources on reservations. The presentation was part of the Intertribal Wetlands Workshop, "Jage Nagonan-All Things Are Connected" at Haskell Indian Nations University (HINU). Martel believes, "If you are a tribal resource manager, you are a key component to tribal sovereignty."

HINU offers an integral contribution to tribal sovereignty and the arts of civilization. In August 1998, HINU's biggest accomplishment was approval by the North Central Association (NCA) for American Indian students to earn a bachelor's of science degree in environmental science. The multicultural curriculum will provide graduates of the program with ecosystem dimensional knowledge and the necessary discipline for a balance of technical skills. Within the framework of indigenous value systems, American Indian students will be empowered with the capability to interface with tribal and federal programs to respond to environmental relationships that affect their people and lands. "The ability to integrate technical knowledge into culturally appropriate solutions is essential," according to Martel.

The American Indian people need to understand their own water resources and should highlight these questions, "What do we get out of the sky? What do we have on the surface of our land? What is the hydrologic cycle of our reservations?" It is important for American Indian people to understand the hydrologic cycle and integrate that knowledge into their own tribe's planning process. The environmental science program at Haskell hopes to

increase the presence of capable American Indian minds to become involved with their tribe's environmental programs. The program expects to blend tradition and culture with technical knowledge and create further opportunities for students to experience a full array of environmental issues that face tribal people and their lands. Martel states, "Now-a-days, it is not enough for American Indian people to wave our treaty and assume that we are sovereign." We need to rely on our cultures and traditions and merge the two with scientific and technical aspects. Traditional elder involvement in

The Arts of Civilization

We want to protect our treaty rights.
We are always looking out for our cultural and traditional beliefs.

We want to create a climate conducive to economic development.

We will always protect the health and well being of our people.

Wes Martel (Shoshone-Arapaho), August 1998

all phases, along with technical experts, is necessary to back up the cultures and traditions of the American Indian people. Tribal laws have to be patterned to the priorities and what is good for the tribal people. Federal and state laws cannot dictate what is good for our Indian people; only Indian people can do that, which sets Indian people apart from the rest of the country.

HINU's new environmental science program is a key component to tribal sovereignty. It has a responsibility to provide current information for students to relate to the tribal decision-makers and tie the environmental obstacles together with total solutions to even the most complex and large-scale problems.

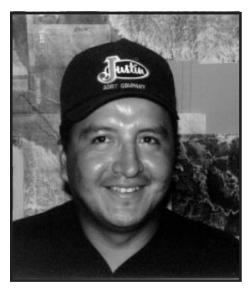
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HERS Profile:

Explosive ordnance disposal trainee prepares for an exciting future

by Brenda Brandon, Haskell Indian Nations University

It was a warm sunny day on the side of a plateau in the Badlands in 1982, when Thomas Blacksmith and his schoolmates led by their teacher Ed Tubbles were searching for fossils. As Mr. Tubbles spoke about the uniqueness of the



Thomas Blacksmith

geology and diversity of plant and animal life surrounding the children, small whirlwinds stirred dust into the air, overpowering their senses. Curiously digging for ancient remains of millenniums gone by, one student sang out in question for his uncovered treasure more closely resembled a metal shell than one created by nature. Indeed, it was a 50 caliber round; live or dead, no one knew. The students stood in silent meditation, remembering

their elders' words of how Lakota families had lost their homelands in the 1940's, and of planes which flew over Pine Ridge Reservation riddling the ground with bombs and bullets. It was a story the children would never forget, a story now their own.

Today, Thomas still searches this same terrain, though not for fossils. Thomas and his companions search for the potentially dangerous remains of rounds and bombs known as ordnance and explosives (OE) — not stumbling into them, but carefully surveying the ground step by step for the metal objects, ranging in size from finger-sized 20mm bullets to huge 250 pound bombs.

The Oglala Lakota Nation maintains a crew of 23 explosive ordnance disposal (EOD) trainees at the former Badlands Bombing Range (BBR) project office in Pine Ridge, South Dakota. The field trainees were hired in April 1998 to assist in cleaning up and mitigating impacts from defense activities on 341,375 acres of land that is part of the former BBR. Of the 23 employees, two are women and eleven are

men who are Army, Air Force, or Marine Corps service veteran. All the EOD trainees are members of the Oglala Lakota Nation.

To date the EOD trainees have completed a number of safety and technical training courses in preparation for their work on the former BBR as field technicians. In addition to basic first aid and CPR, they have completed 80 hours of HAZWOPER and HAZMAT training, which focused on identification and safe handling of hazardous substances. The U.S. Army Corps of Engineers sponsored workshops on identification of specific types of OE. BBR project crews have also undergone mapping skills and global positioning system (GPS) training to assist them in marking and locating OE once it has been sited on the range. Because steep escarpments, gulches, and ravines are contained within the Badlands terrain, the EOD trainees were subjected to four days of rappelling training to ensure safe search and rescue techniques and mountaineering fundamentals while on the job.

Thomas Blacksmith and his coworkers look forward to upcoming training events. In February 1999, the EOD crew will be attending a rigorous six week course at Texas A & M University at College Station, Texas, titled Level I UXO (Unexploded Ordnance) training. The EOD trainees will learn to safely identify unexploded ordnance and "flag and tag" it for later removal by Army explosive experts. Maps and GPS equipment will be used to pinpoint the location of identified UXO by the BBR project field crew before removal action is taken. This will be the first civilian crew ever trained to perform such courageous duties.

Thomas Blacksmith was raised on Pine Ridge Reservation. After serving six years in the Army, which included combat duty in Desert Storm, he returned home to find the perfect job waiting for him. In respect to his cultural background, Thomas lists two important reasons for taking the job at the BBR: "A lot of things have historical significance at the BBR. Environmental cleanup will render the lands taken in 1942 safe for the people to occupy them and enjoy them." ■

Available Videotapes

hese tapes are available through interlibrary loan from Kansas State University's Hale Library, formerly Farrell Library. You may also request copies by contacting HERS by phone at 785-749-8498; by e-mail at hers@hsrv.nass.haskell.edu; or by mail at HINU, 155 Indian Avenue, Box 5001, Lawrence, Kansas, 66046.

Building Water Resource Programs: A Tribal Perspective (available spring 1999)

Wetland Ecology and Indian Culture (available spring 1999)

Microscale Chemistry in Your Classroom (available spring 1999)

Environmental Justice in Indian Country

The Effects of the Nuclear Policy Act of 1997 on Native Americans

Native American Environmentalism at the Cusp of the Millennium

All Things Are Connected: The Sacred Circle of Life Series

Air—Ensuring Quality for the Future

Biology of the Earth—Our Connection to the Land

Biology of the Earth—All Things Are Connected

Water—Going Beneath the Surface of an Issue

Geoscience Education in Native American Communities

Live Teleconference: An Environmental Legacy for Our Grandchildren

Comparison of Native American and European Worldviews Series

A Native American Viewpoint

A European Viewpoint

A Roundtable Discussion

A Roundtable Discussion, Part II

The Badlands Bombing Range Project

Basin Creek Mine Closure Reclamation Techniques

Topics in Pollution Prevention—Vehicle Maintenance

PCBs in Our Environment—The Legacy Continues

Environmental Impacts of Gold Mining Operations Near the Fort Belknap Reservation

The NAOMI Program and HERS: New Opportunities in Environmental Research

Bold print indicates current videos available at no cost to participants in the Haskell Environmental Seminar Series. All other tapes are available for \$5.00 each (includes shipping and handling).



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Earth Medicine is published quarterly by the Haskell Environmental Research Studies Center to serve as a means of communication for members of the center's consortium and the public. The Office of Research and Development, U.S. EPA, under agreement #R-819653, through the Great Plains-Rocky Mountain Hazardous Substance Research Center, provides \$1,101,757, or 70 percent, of the funding for this program and publication. The content of this publication does not necessarily represent the views of that agency. No official endorsement should be inferred.



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Haskell Indian Nations Universit

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Announcements and upcoming events

Environmental education through distance learning

LAWRENCE, KS - The Haskell Environmental Research Studies Center (HERS) in cooperation with the Natural Resources program and the Teacher Education program at Haskell Indian Nations University (HINU) is developing an environmental education curriculum that is culturally relavant to Native American and Alaskan Native philosphies in environmental education. The program will be facilitated by students in the teacher education program.

The program will be uplinked through the AIHEC satellite system on Earth Day, April 22, 1999. It will consist of hands-on demonstration and new teaching methods. The target audience for this prgram are students in grades 6 to 8. The program will be downlinked at participating tribal community colleges.

If you are interested in participating in this program, please contact Patterson Yazzie at 785-749-8498 or at pyazzie@ross1.cc.haskell.edu.

DOI internship opportunities

LAWRENCE, KS - The Natural Resources Program at Haskell Indian Nations University is seeking applicants from American Indian and Native Alaskan students for

its 1999 Department of Interior Minority Intern program. All federal agencies offer a variety of possible job placements. All disciplines are encouraged to apply. Some internship areas include accounting, civil engineering, environmental science, history, public adminstration, Native American studies, natural sciences, sociology, and wildlife biology.

For more information on qualifications and application procedures, contact the Natural Resources program at HINU, 155 Indian Avenue, Lawrence, KS 66046 or at 785-749-8409 or http://www.NASS.haskell.edu/NASS/evrn_sci/html/ntrnship.htm.

NASF searches for new logo

ALBUQUERQUE, NM - The Native American Scholarship Fund (NASF) will award \$500 for a winning logo design for its new name. The NASF will change its name to the National Indian Education and Scholarship Center (NIESC) in the first half of 1999. The winning design will be used on all of NIESC's correspondence. All entries will become property of NASF/NIESC.

For more information, contact NASF at 505-262-2351 or 8200 Mountain Road N.E., Suite 203, Albuquerque, NM 87110.

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