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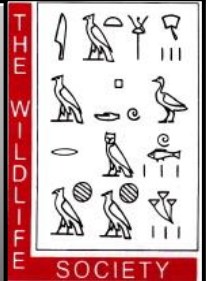
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Vol 10; Issue
ONE



"Gu-at-see"



Our Mission

The Native Peoples' Wildlife Management Working Group promotes improved relationships between state/provincial/federal wildlife managers and tribal wildlife managers through improved communications. The Working Group provides a forum for Tribal and agency wildlife professionals to discuss wildlife management on reservations and aboriginal lands and to share viewpoints on proposed policies affecting wildlife management in Indian Country. The Working Group works to enhance wildlife management on and off reservations through joint activities.

Winter Letter from the Chair

--Serra Hoagland

Gu-at-see (Hello!) NPWMWG members,

2018 is already off to a running start! I hope everyone had a safe holiday season filled with quality time with family and friends.

This is my first newsletter entry as the new Chair of the NPWMWG and I am thrilled to be serving in this capacity! I want to take this opportunity to say thank you to our past Executive Board members who provided great leadership and dedication to our Working Group. We have a great legacy of inspiring leaders! Also, welcome to the incoming Working Group members and Executive Board. I encourage you all to check out our webpage and WG charter and webpage for more info. Our Executive Board will be having the next quarterly meeting on



We are currently working on two events for the upcoming 2018 TWS Annual Conference in Cleveland, Ohio focused on food sovereignty and curriculum for preparing students to work in multicultural contexts. We are also working with Chuck Shively at TWS to secure funds for the 2018 Native Student Professional Development program. We continue to support the efforts of the Native American Fish & Wildlife Society and would like to encourage any 10-12th graders to attend the SW Youth practicum in June. During the last week in January I had the special opportunity to visit TWS headquarters in Bethesda where we discussed a preliminary assessment of the Native American Research Assistantship program provided by TWS and the US Forest Service. I also had the chance to meet Jamila Blake who is the new Professional Development coordinator at TWS. Jamila is coordinating efforts for the Diversity Joint Venture with the USFWS to improve the recruitment and retention of underrepresented groups in wildlife careers. Several of our WG members are serving on the ad-hoc committee for the Diversity Joint Venture.

Lastly, as I look outside and watch the snow fall I hope that everyone continues to stay healthy and safe during the winter season. We have so much to be thankful for in our lives and in our careers. Please be careful in your (very busy!) daily lives and keep up the great work for wildlife!



Summer Letter from the Chair

--Serra Hoagland

Guu-at-see (Greetings!) fellow NPWMWG members!

We hope you've been getting plenty of Vitamin D, you've roasted enough marshmallows and enjoyed the recent fireworks! Our working group has been busy proposing sessions for the upcoming TWS annual conference and we've sponsored an additional two symposia with letters of support.

We are engaged with the following accepted symposia at the upcoming TWS annual conference: Food for Thought: How Tribes Are Sustaining Wildlife Through Food Sovereignty (coordinators); WOW and the #MeToo Movement (speakers); Inclusive Pedagogy (speakers); and Developing Cross-Cultural Competence and Increasing Diversity in the Wildlife Management Profession (coordinators). The theme of the conference this year is Recognizing and Sustaining Conservation Successes. It will be held from Oct 7-11, 2018 in Cleveland, Ohio. You can find more details on the conference here: <http://twsconference.org/>

We also recently sent out the announcement for the 2018 Native Student Professional Development program. Applications are due August 17, 2018 to Ashley Archer (ashley.archer6@gmail.com). Please encourage indigenous students with an interest in wildlife conservation to apply for this opportunity!



Lastly, our working group continues to support the Native American Research Assistantship provided by TWS and the US Forest Service. We are currently accepting applications from Forest Service scientists to host a Native American Research Assistant for the 2019 field season. Once projects are selected then the announcement for student recruits will become available.

We hope this newsletter helps you stay connected to your network of Native and non-Native wildlife practitioners and allies throughout Indian Country. Please be safe in your field seasons and we look forward to seeing you in Cleveland in October!

Da-wa-eh (thanks!)

Serra J. Hoagland, PhD, CWB

NPWMWG Chair

NATIVE STUDENT PROFESSIONAL DEVELOPMENT PROGRAM



The Native Student Professional Development Program provides Native American students with the opportunity to attend The Wildlife Society's Annual Conference, the largest gathering of wildlife professionals in North America. Now in its 11th year, the program is organized by the Native Peoples' Wildlife Management Working Group of TWS.

This year we had 14 applicants!

Participants in the 2018 program will receive a travel grant to attend TWS' Annual Conference in Cleveland, Ohio, from October 7-11, 2018. Candidates must be members of a Native American, First Nations or Indigenous Tribe, or identify as Native Alaskan or Native Hawaiian/Pacific Islander, and currently be enrolled in an undergraduate or graduate program in a relevant academic discipline.

The Native Student Professional Development Program is always looking for funding! If you have any suggestions or would consider funding, please contact Serra Hoagland at serrahoagland@gmail.com



The Wildlife Society Annual Conference 2018



25th TWS Annual Conference: Cleveland, Ohio October 7th-11th

Huntington Convention Center of Cleveland

Join us October 7-11, 2018, for a unique and memorable TWS experience that will include over 950 educational presentations, more than 40 networking events and plenty of engagement and learning opportunities in our TWS Members Activity Center.

*"Recognizing and Sustaining Conservation
Successes"*



Native People's Wildlife Management Working Group, 2017

Save the Date!

Native People's Wildlife Management Working Group MEETING

ROOM: HCCC, Room 12
Monday, October 8th
8:10am-9:50am

If you are interested
in joining through
Skype please

email serrahoagland@gmail.com



"Food for thought: How Tribes Are Sustaining Wildlife Through Food"

DATE: October 8, 2018 TIME: 12:50 pm - 5:00 pm

ROOM: HCCC, Room 22, SESSION NUMBER: 25

In the modern era of Tribal sovereignty, Native Americans are working hard to reclaim their traditions and relationships with the natural world. This symposium is meant to help educate wildlife professionals on the intersectionality of food sovereignty and the role of wildlife. By recognizing these efforts for conservation and adaptive management, community members, scholars, and professionals can help overcome conflicts and facilitate diverse collaborations aimed at inclusion and positive growth in rebuilding Native Nations.

Organizers: Celina Gray (Little Shell Chippewa & Blackfeet), Salish Kootenai College, Pablo, MT; Serra Hoagland (Laguna Pueblo), U.S.F.S./ Salish Kootenai College, Pablo, MT; Chase Voirin (Navajo), University of Arizona, Rio Rancho, NM; Daniel Bird (Santo Domingo Pueblo), Purdue University Lafayette, IN; Laura Lagunez (Navajo), Cornell University, Ithica, NY

Supported by: TWS Native People's Wildlife Management Working Group





The Wildlife Society Annual Conference 2019

Sessions of the Week

“Moving Forward Together from #MeToo”

DATE: October 9, 2018 TIME: 12:50 pm - 5:00 pm
ROOM: HCCC, Room 22, SESSION NUMBER: 44

While many of the sessions at the TWS Annual Conference tackle wildlife-specific topics, others hope to address issues that span across all professions.

One such symposium at this year's conference is “Moving Forward Together from #MeToo,” which will explore the implications of the recent social movement on the wildlife profession.

“The wildlife profession is not immune to occurrences such as those revealed by #MeToo, and all professionals have a responsibility to be aware of and improve conditions in their respective working environments,” reads the symposium abstract.

The symposium will consider a variety of perspectives, with opportunities for panel and audience discussion, and will emphasize mechanisms for improving the atmosphere in the workplace in moving forward from the #MeToo movement. The issues in this session, organizers say, apply to students and professionals of all genders and backgrounds, and thus have broad applicability across conference attendees.

Starting with an overview of the movement, the 10-talk session attempts to teach attendees how to identify inappropriate behavior and evidence of harassment in the workplace, and present actions that can be taken by both men and women to end these behaviors. It will also consider perspectives of possible victims of the movement itself, specifically those who may have been wrongly accused. Organizers are prepared for a potentially emotional session, and will have an experienced moderator.

It is supported by the Women of Wildlife Organizational Committee, TWS Ethnic & Gender Diversity Working Group, Southwest Section of TWS, and TWS Native Peoples' Wildlife Management Working Group.

View Session Organizers, List of Speakers and Presentation Topics here: <http://twsconference.org/sessions/moving-forward-together-from-metoo/>

“Cross-cultural Competence and Increasing Diversity”

DATE: October 10, 2018 TIME: 8:10 am - 5:00 pm
ROOM: HCCC, Room 22, SESSION NUMBER: 52

How can wildlife professionals increase the probability of successful outcomes for wildlife management and conservation programs?

According to the organizers of one symposium at this year's TWS Annual Conference, one possible answer is by training students and professionals in cross-cultural competence and increasing diversity in wildlife settings.

“Most issues associated with wildlife management are inherently multi-cultural, and therefore the ability to work across cultural boundaries is vital to the success of wildlife management programs,” reads the abstract for the session, titled “Developing Cross-Cultural Competence and Increasing Diversity in the Wildlife Management Profession.”

This is a full-day symposium, featuring speakers from diverse settings including tribal agencies, U.S. federal agencies, and universities. Presenters will discuss topics associated with the development of cross-cultural competence and diversity both within their organizations as well as through collaborations with other organizations, with a specific emphasis on indigenous people.

The session is organized by Casey Day and Patrick Zollner (Purdue University), Jonathan Gilbert (Great Lakes Indian Fish and Wildlife Commission), and Serra Hoagland (USFS), and supported by the TWS Native Peoples' Wildlife Management and Gender and Ethnic Diversity Working Groups.

View List of Speakers and Presentation Topics here: <http://twsconference.org/session-of-the-week-cross-cultural-competence-and-increasing-diversity/>





TWS NEWS

Apply Now!! USFS Native American Research Assistantship

--TWS, August 31st, 2018



Zintkala Eiring, a research assistant in the 2018 Native American Research Assistantship program, conducts a black-backed woodpecker survey in the Black Hills. ©Brian Dickerson



Research projects potentially available for 2019 assistantships include:

1. Assessment of camera trap surveys to estimate wild pig and white-tailed deer density
2. Bat surveys and Greater sage-grouse vegetation studies in the Buffalo Gap National Grassland of South Dakota
3. Bioacoustic surveys for owls in the coast range of Oregon
4. Evaluating restoration treatments to promote flora and fauna important to the Washoe Tribe

The deadline for applications is November 5, 2018.

The Wildlife Society, alongside the U.S. Forest Service, a Premier Partner of TWS, has announced new Native American Research Assistantships for 2019.

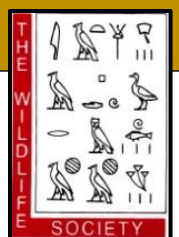
This is the fifth year for the professional development program, which facilitates opportunities for Native American students to be mentored by USFS Research & Development (R&D) scientists and promotes student advancement and training for careers in natural resource and conservation-related fields. Assistantship participants aid and learn about the USFS' ecological science-based approach to decision-making and balancing multiple-use management of national forests and grasslands.

Assistantships are available for Native American students interested in wildlife and forest resource research and management. Students will learn and work with an interdisciplinary team of researchers with the USFS during 2019. Applicants must be a member of an American Indian or Alaska Native tribe, First Nations or a Native Hawaiian or Pacific Islander, or have some other indigenous identification, and be currently enrolled in an undergraduate or graduate program from an accredited academic institution. Pursuit of a bachelor's or master's degree in wildlife biology, ecology, forestry or other closely related natural resource discipline is preferred. Students with related associate's degrees from tribal colleges and universities or other community colleges will be also be considered.

The appointments vary from 3 to 5 months within the 2019 calendar year, depending on the project. Only a limited number of projects may be funded and assistantship placement is dependent on a suitable student/mentor match. Starting dates are generally negotiable within the context of the seasonality of the research topics.

For more information, including project objectives, locations, duration, and instructions on how to apply please download an application form HERE: <http://wildlife.org/apply-now-usfs-native-american-research-assistantship/>

The deadline for applications is November 5, 2018.





TWS NEWS, Old News but Good News



“Wildlifer recognized for promoting native diversity”

--By Julia John, TWS, December 13th, 2017

When Serra Hoagland joined The Wildlife Society in 2010, she wanted to find her own niche in the society — a place, she said, where she “could make an impact and benefit other members.”

She found it in the Native People’s Wildlife Management Working Group. Soon, she started coordinating its Native Student Professional Development program, which enables Native American, First Nations, Native Hawaiian and Alaskan Native students to attend the annual conference through travel grants and to network with wildlife professionals.

At the last annual conference in Albuquerque, New Mexico, the 2017 Diversity Award went to Hoagland, a biologist at the U.S. Forest Service in Montana, for her work forging a path for other Native Americans to engage in the wildlife profession. “We have to promote Native Americans in natural resource management at the junior high, high school, college and post-graduate levels and foster leadership development for that community,” said Hoagland, chair of TWS’ Native People’s Wildlife Management Working Group. “Tribes hold and manage unique landscapes and important resources, and ideally we’d like to have Indian people making the decisions as land managers.”

The Wildlife Society’s Diversity Award commends wildlife professionals or entities for exceptional contributions to the task of boosting ethnic and gender diversity in the wildlife field through the workforce, education or organizational membership. The Diversity Award “symbolizes we’re on the right path,” Hoagland said, “justifying all the initiatives we’ve been trying as a working group and as an individual helping coordinate the professional development program. Getting the recognition makes you feel like we all agree this is a good thing.”

The 2017 Annual Conference was “powerful,” Hoagland said, and “monumental because this was the first year we had the Native American Fish and Wildlife Society in participation at the event.” It left her “with so much revived energy, encouragement and excitement for all the good things we do for wildlife,” she said. Realizing she could study the animals she loved in their natural environment by becoming a wildlife biologist, Hoagland — who’s Laguna Pueblo — majored in ecology and systematic biology at California Polytechnic State University in San Luis Obispo and graduated in 2008. Three years later, she obtained a master’s degree in environmental science and management from the University of California, Santa Barbara, and in 2016, she earned a PhD in forestry at Northern Arizona University.

For the past year, Hoagland has been a liaison officer with the USFS. In this position, she conducts research with the Mescalero Apache tribe, provides professional mentorship to indigenous students at Salish Kootenai College and collaborates with the Intertribal Timber Council and American Indian Science and Engineering Society. Hoagland recently served as co-guest editor for a special issue of the Journal of Forestry about tribal natural resource management, a publication she sees as one of the greatest achievements in her career so far.

She plans to keep supporting the Native People’s Wildlife Management Working Group while TWS continues to cultivate the wildlife profession’s cultural and gender diversity as represented by the Diversity Award.

“I have admired people who received that award in the past,” Hoagland said. “It makes a good statement for TWS to say diversity is one thing they care about and recognize people for it.”

Read the Article Here: <http://wildlife.org/wildlifer-recognized-for-promoting-native-diversity/>



TWS NEWS, Old News but Good News



“At play, Native American kids show deeper ecological knowledge”

--By Julia John, TWS, January 18, 2018

Can playtime tell us how young children see wildlife and the environment?

A study of Midwestern preschoolers found Native American children were more likely than others to roleplay as animals and showed a deep understanding of other species.

“How kids learn and think about the natural world varies across cultures, said Sandra Waxman, a Northwestern University psychology professor and a co-author of the paper published in the *Journal of Cognition and Development*. “Children’s knowledge about the natural world is shaped importantly by community-held belief systems and exposure to the natural world,” she said.

As part of a larger cross-cultural study on how children acquire ecological knowledge, lead author Karen Washinawatok, the former director of the Menominee Indian tribe of Wisconsin; Waxman and colleagues at Northwestern, the Menominee tribe and the American Indian Center of Chicago created a novel hands-on activity. The researchers presented 4-year-olds with a realistic forest diorama featuring toy plants and animals to play with. The children came from three different communities — the rural Menominee Indian Tribe of Wisconsin, Chicago’s Native American community and nonindigenous families from Chicago and Evanston. As the preschoolers interacted with the diorama, the researchers observed their speech and actions to gain insight about how they portrayed ecological relationships among living things.

All the children engaged with the diorama and possessed an awareness of ecological relations, the researchers found. But the Native American kids — particularly those from rural Menominee tribal lands — were very talkative and more than twice as likely to take on the role of animals. They were more likely to use their imagination to speak or act like an animal — for example, saying “I’m thirsty” while flying an eagle figurine to the pond or flapping their arms like an eagle would its wings.

Such play demonstrates they have developed the ability to “see living things in relation” and that they appreciate other beings’ perspectives, the researchers said.

“Young Native American kids reasoned in a sophisticated way about ecological systems and relations,” Waxman said. This kind of reasoning, evident in young Native American children, is not introduced in most schools until later elementary school, she said. **Read More Here:** <http://wildlife.org/at-play-native-american-kids-show-deeper-ecological-knowledge/>

“Native American students selected for USFS research program”

--TWS, May 24, 2018



The Native American Research Assistantship Program begins its fourth year, a program made possible by the Premier Partner relationship between the U.S. Forest Service and The Wildlife Society. The Research Assistantship program provides valuable knowledge to Native American students and recent graduates who are interested in becoming wildlife biologists. The program allows these individuals to learn and gain beneficial hands-on experience while working with a wildlife professional on the approved project.

The USFS has worked closely with TWS to develop mentoring opportunities for Native Americans to work as research assistants with USFS Research & Development scientists. R&D funding will be used to provide living stipends for upper-level undergraduates, graduate students, and recent graduates during their mentorship, while TWS will provide administrative support and coordination.



Six individuals have been selected for research assistantships, which will last for approximately 12 to 14 weeks, most beginning in spring of 2018 and running through summer of 2018.

Story Continues on Next Page...



TWS NEWS, Old News but Good News

Story Continued....

Zintkala Eiring, a recent graduate of George Washington University, will be mentored by Brian Dickerson, a wildlife biologist at the Rocky Mountain Research Station. Their project topic will be woodpecker surveys in the Black Hills of South Dakota and Wyoming.

Xavier Lovato, a current student at New Mexico State University, will be mentored by Serra Hoagland, a liaison officer and biologist at the Rocky Mountain Research Station. Their project topic will be assessment of wildfire risk in treated and untreated Mexican spotted owl (*Strix occidentalis lucida*) territories on tribal lands.

Jamie McBryde, a recent graduate of Colorado State University, and Sattie Whitefoot, a current student at Salish Kootenai College, will be mentored by Deahn Donner, a project leader and research landscape ecologist at the Northern Research Station. Their project topic will be evaluating regional and landscape-scale movement patterns of wood turtles.

Jessica Rich, a current student at Michigan Tech University, will be mentored by Christel Kern, a Research Forester at the Northern Research Station. Their project topic will be integrating wildlife habitat into nonconventional forest management.

Thomas Thompson, a recent graduate of Humboldt State University, will be mentored by John Kilgo, a Research Wildlife Biologist at the Southern Research Station. Their project topic will be assessment of camera trap surveys to estimate wild pig and white-tailed deer density.

"Wildlife hold an important place in our world and we depend upon them, just as they depend upon us. These are critical linkages that Native peoples understand and hold dear. These connections make us stronger. Educational opportunities such as those offered by the Forest Service's Native American Research Assistantship program provide opportunities to connect native knowledge with science to the benefit of all beings," said Colleen Pelles Madrid, Deputy Director of the U.S. Forest Service WFW Washington D.C. office.

The Native People's Wildlife Management Working Group of The Wildlife Society also provides educational and networking opportunities for Native Americans. They are very thankful for the support of Native American students interested in wildlife biology and management. For more information on the working group Go Here: <http://wildlife.org/npwmwg/>

As a Premier Partner of TWS, the USFS also provides funding for travel grants to Native American students to attend the TWS Annual Conference. The USFS and TWS would like to extend thanks to the scientists who submitted project proposals and to the individuals who will be mentoring the six Native Americans in this year's program.

Read the Article Here: <http://wildlife.org/native-american-students-selected-for-usfs-research-program/>

"Native Americans used fire to hunt bison"

--By Dana Kobilisky, TWS, August 16th, 2018



Looking back 1,000 years, researchers have found that Native Americans used fire to help them hunt bison (*Bison bison*), a fact they say can provide insight into fire management today.

"In the northern plains, we have historic descriptions of tribes using fire for a variety of purposes," said Christopher Roos, associate professor of anthropology at Southern Methodist University and lead author of the recent study published in Proceedings of the National Academy of Sciences. This includes descriptions of using fire to manipulate bison in order to hunt them more easily, he said.

"Knowing the complex history of people and fire and the relationship to climate helps us to contextualize where we are today," Roos said.



The team also determined that climate played an important role in bison hunting and fire use. High fire activity matched up with wet climate episodes, which would have resulted in enough grass to fuel prairie fires.

"Knowing the complex history of people and fire and the relationship to climate helps us to contextualize where we are today," Roos said.

Story Continues Next Page...



TWS NEWS

Story Continues...

"We live in a time now when there will be no fire problems independent of climate and independent of people. In my view, there's a lot to learn from past experiences from human societies with climate to make better decisions today."

In the study, Roos and his colleagues studied drivelines — linear arrangements of stone piles that acted as giant funnels to push bison herds off ledges — in northern Montana. Roos suspected fire may have been somehow involved. He and his colleagues looked for places that might still show remnants of prairie fire, including flood deposits that can accumulate after fires scorch the landscape.

In areas associated with drivelines, they found charcoal and were able to radiocarbon date it. Working with the Blackfoot tribe, they compared time periods of peak driveline use with prairie fire activity.

"There couldn't have been a clearer outcome," he said. All of the charcoal layers that were dated perfectly aligned with the time that natives used drivelines. This suggests fire played an important role in their hunting strategy, he said, not only in corralling the bison toward ledges but likely also creating fresh grass for them to graze.

In Other News...

"Tribal Members Trained and Hired to Hunt for Resources of Cultural Value"

--Estelle J Bowman, Office of Tribal Relations, USFS Blog, April 13, 2018

White Mountain Apache tribal member Gregg Henry hiked along the southwest landscape of the Tonto National Forest in Arizona with the specific intention to identify and record sacred places.

"I'm Apache. I'm from here," Henry said. "I know these places and the traditional stories associated with them."

For decades, Native American tribal members have approached state and federal agencies to offer insight on their ancestral lands. Finally, land managers, surveyors, and others are tapping into this expertise – and employing tribal members to work alongside scientists.

In January 2018, Henry and 30 others representing nine tribes took part in a first-of-its-kind intensive nine-day Tribal Monitor Training.

In Other News...

"Landscapes have names, hold stories, house spiritual deities, invoke prayer, provide food and medicine, mark ancestral boundaries, and are venues for the exchange of traditional knowledge," said Nanebah Nez, an archaeologist and tribal liaison on the Tonto who organized the training.

"While an archaeologist can see and record many things, he or she can't see through the eyes of an Apache or a Hopi."

Daniel Cain, Heritage Program Manager on the Mark Twain National Forest, helped train the aspiring Tribal Monitors.

"The long-term goal is for participants to use the training to pursue employment opportunities while helping the Forest Service meet its goals to maintain a healthy landscape," he said. "It's truly a win for all."

Eleven trained tribal members have already found high-paying jobs alongside archaeological survey crews with Westland Resources Inc (link is external), a cultural resources management and environmental consulting firm based in Tucson, Arizona. They will spend almost four months performing pedestrian survey work in 10,200 acres of the remote, rugged Sonoran Desert.



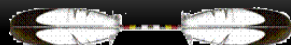
Avi Buckles, WestLand's Project Manager and Senior Archaeologist, is enthusiastic about this collaborative effort to understand the landscape.

"This is the first time Tribal Monitors have been used in the Southwest on such a large scale in such a collaborative way," he said. "We're excited to be part of the process. In truth, tribal communities need to be part of the archaeological review process from the beginning."

The information gathered by the Tribal Monitors and WestLand archaeologists will help to inform the Resolution Copper Project Environmental Analysis and help federal agencies to avoid or mitigate impacts to the areas identified.

After this fieldwork ends in July, Avi hopes to have additional projects for the Tribal Monitors to work on.

"The future of cultural studies involves having this kind of collaboration between tribal communities and archaeologists," he said. "Tribes are, after all, the original stewards of these lands."



In Other News...

"Indian Time": Characterizing Tribal Understandings of Time and Seasonality in the Context of Climate Change

--August 6th, 2018, Northwest CASC



Western climate science and Traditional Ecological Knowledge (TEK) represent complementary and overlapping views of the causes and consequences of change. In particular, observations of changes in the natural world, such as in the abundance and distribution of plants and wildlife, can provide valuable information that otherwise might not be readily available through western science observations. TEK can serve as data that are useful for scientific research, for describing the impacts of climate change, or for adaptation insights that could potentially support community-level planning efforts.

In a new paper published in the journal *Ecological Processes*, Northwest CASC-funded researchers explore how Western climate science and TEK relate to time and seasonality in the context of climate change, to identify how these forms of knowledge are complementary and how they differ.

Researchers interviewed tribal elders and cultural experts from five tribes in the Pacific Northwest and Great Basin regions: the Confederated Salish Kootenai Tribes, the Confederated Tribes of Siletz Indians, the Paiute Shiwits Band, the Duckwater Shoshone, and the Quinault Indian Nation. They asked questions about cultural impacts of climate change, as well as responses and adaptation measures, then compared those findings with Western climate science findings. The focus of the interviews was on identifying how changes in the abundance and distribution of plants, animals, and other environmental factors have resulted in modifications or adaptations of tribal cultural traditions or other aspects of culture.

The results of this research demonstrate that assumptions about the nature, perception, and utilization of time and timing can differ across knowledge systems in regard to climate change. For example, tribal understandings of time are defined by cues and patterns observed in nature, differentiating it from the westernized linear time system. Cues such as the first appearance of snow on a certain mountain, or the emergence of particular berries or species of ant, are used to indicate when certain traditional human behaviors should begin, such as hunting, fishing, and gathering.



These results demonstrate that scientists seeking to work with Native peoples should pay close attention to the relational and seasonal frameworks with which TEK and Indigenous scientists interpret the natural world. This awareness can help contribute to a better understanding of the Northwest tribal culture and its vulnerability and capacity to adapt to a changing climate.

This paper is a product of the Northwest CASC project Assessing the Cultural Effects of Climate Change on Northwest Tribes.

"Voice of the Sea" Highlights PI CASC in Newest Episodes

--August 2nd, 2018, Pacific Islands CASC



The Pacific Islands CASC was recently the focus of two half-hour episodes of the Hawai'i Sea Grant-produced science program, *Voice of the Sea*. The first episode, "Climate from the Mountains to the Past," highlights two important projects of the center: the role that high elevation forests play in the islands' freshwater resources, and using local observations recorded in 19th century Hawaiian language newspapers to uncover evidence of past El Niño events. The second episode, "Adapting Culture to Climate Change," investigates the relationship between a changing environment and water quality in local fishponds as well as the relationship between changing ocean conditions and people's personal connection to place.

Climate from the Mountains to the Past: This episode begins by discussing with Tom Giambelluca, from the University of Hawai'i at Mānoa, and Abby Frazier, from the US Forestry Service, their work on Maui investigating how climate change may affect the role that high elevation forests play in the freshwater resources for island communities.

Story Continues Next Page...

In Other News...

Story Continued....

Adapting Culture to Climate Change: The episode begins by discussing with PI CASC-funded graduate students Kamala Anthony and Cherie Kauahi, from the University of Hawai'i at Hilo, their two projects aiding the restoration of Hawai'i Island fishponds. Their research examines the impacts of climate change on the fishpond conditions by examining salinity effects on algae growth and nutrient variability through groundwater influx. Side by side with this is the effort to enhance their community by promoting the fishpond restoration, to strengthen their connection to place and thus community adaptive capacity. The third PI CASC project presented is one conducted by Noelani Puniwai, who explores people's perception of the effects of climate change on an important social place, namely a favored surf spot. She discusses an unexpected correlation she found between a positive outlook on climate changes and an individual's connectedness to their beloved community location.



Voice of the Sea is a weekly television series, produced by the University of Hawai'i Sea Grant Center for Marine Science Education, which focuses on telling stories of scientific and cultural work in the Pacific to engage the community in environmental and societal issues in exciting and inspiring ways. The show airs across the Pacific Basin, in Hawai'i, US territories, and the affiliated Pacific regions, reaching tens of thousands of viewers each week. Since first airing in 2014, the show has won 14 Telly Awards for its excellence.

View the original PI CASC announcements:
[Telly Award-winning Voice of the Sea highlights PI-CASC in newest episode](#)
[PI CASC place-based projects highlighted in Voice of the Sea episode](#)



"Puwalu 'Umi, Ola Honua I ke Kupa'a Kanaka"

--Pacific Islands Fishery News, Fall 2017, submitted to NPWG by Sylvia Spalding

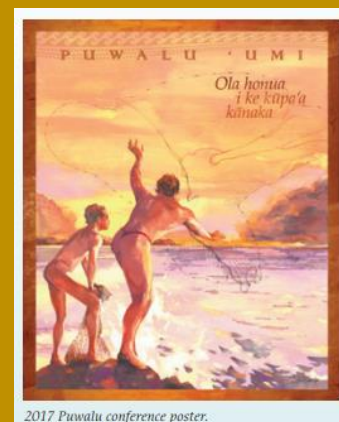
Sixty Native Hawaiian practitioners gathered in Honolulu on Nov. 17 and 18, 2017, for Puwalu 'Umi: Ola honua I ke kupa'a kanaka (Puwalu 10: The earth flourishes with bounty when k-anaka stand together in support). The participants from O'ahu, Kaua'i, Moloka'i, Maui, Hawai'i and Kaho'olawe gathered to assess what was happening with the 'Aha Moku system and how to move it forward.

The 'Aha Moku system was recognized by the State of Hawai'i in 2012 through Act 288 as the traditional natural resource management system in Hawai'i. Act 288 also created the 'Aha Moku Advisory Committee (AMAC) to advise the Board of Land and Natural Resources on traditional management. Members of the AMAC are to be selected by the Governor from nominees provided by island councils.

The Puwalu participants discussed how to organize in order to access funding opportunities at the island level. There was also strong support for improved recruitment, especially among the younger people, to strengthen island councils.

Lisa Maruyama of the Hawai'i Association of Nonprofit Organizations gave a presentation on how nonprofit organizations operate and the value they bring to the Hawai'i community. She offered assistance to any council that needs it to organize. She promoted the theme of legal organization so that island councils could participate in funding opportunities and receive increased benefit from fundraising activities. There was general agreement of the need for legal organization of the island councils by the participants.

Associate Justice Michael Wilson provided a presentation that tied environmental activism and climate change to global indigenous initiatives.





In Other News...

Story Continues...



The Puwalu 'Umi participants discussed organizing into an Association of 'Aha Moku Island Councils. Some questioned the need for the AMAC. However, the discussion could not be resolved, and the island councils were encouraged to send their nominations for the AMAC to the Governor.

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As a result of Puwalu 'Umi, the island council on O'ahu has a new chair and the island council on the Big Island is reorganizing. Maui, already organized, is planning outreach activities to each of its 12 moku. Kaho'olawe will have a new 'Aha Moku representative. Kaua'i 'Aha Moku practitioners have renewed their commitment to the 'Aha Moku and, new members will be joining in.

The 'Aha Moku steering committee is reviewing the notes and actions from the Puwalu and will send a report to the participants. The Western Pacific Regional Fishery Management Council has supported the Puwalu series of conferences since its beginning in 2006. The Council views the 'Aha Moku system as an opportunity to increase involvement of the Native Hawaiian community and the incorporation of traditional knowledge into the federal fishery management process.

500 Women Scientists

Request a Woman Scientist!



500 Women Scientists is a cool new resource for students, journalists, policymakers and scientists in need of scientific expertise. The website allows you to find a female scientist to answer your questions, speak on panels, or be a reference for accurate reporting. There is also a spot on the homepage where you can sign up to be a resource, all women are encouraged to do so!

Learn more Here: <https://500womenscientists.org/request-a-scientist>

Environmental Stewardship of Indigenous Lands (ESIL) certificate



We do not inherit the Earth from our ancestors, but borrow it from our children.
-Native American Proverb

The Environmental Stewardship of Indigenous Lands (ESIL) certificate is an exciting new educational opportunity at the University of Colorado Denver (CU Denver), where the term Indigenous includes Native American, American Indian, Alaskan Native, and Hawaiian Native. This first-of-its-kind program provides training, internships, and job placement opportunities for students interested in environmental issues involving tribal and non-tribal entities.

The ESIL certificate provides a unique training opportunity for students to combine a passion for protecting natural resources with a desire to communicate across diverse cultures and schools of thought. We hope you will join us in this exciting educational opportunity!

Learn More Here: <https://clas.ucdenver.edu/esil/>



THE NATIONAL CONSERVATION
LEADERSHIP INSTITUTE

Developing Extraordinary Conservation Leadership

--Submitted by Whisper Camel-Means, NPWG Member

Have you heard of the National Conservation Leadership Institute? I am currently working through a professional development fellowship with them. They have reduced fees for tribes and are actively trying to recruit a more diverse participant list. If you are interested or able to attend please check it out! <https://www.conservationleadership.org/explore-experience/program-overview>



finalthoughts...

Interested in Joining our Working Group?

If anyone is interested in joining the NPWM Working Group, please visit your TWS login website (through **wildlife.org**) and select the "Add Subunits/Publications to Active Membership" button. To be eligible for a membership in a working group, interested individuals must be a current member of The Wildlife Society. It is not required to be affiliated with a Tribe to participate. Student dues are waived by the working group. If you have any questions concerning working group dues or how to join, contact the membership coordinator at (301) 897-9770 or by E-mail at membership@wildlife.org.

For more information on our Working Group, Check out our TWS webpage!
<http://wildlife.org/npwmwg/>



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Submission Requests for Newsletters

Calling all Working Group members!!

We want to know what is going on where you are! As a national (and now international!) working group, it is difficult to always keep up on what members in other parts of the country and other reaches of the world. Keep members of our group informed on issues and announcements pertinent to wildlife management and conservation in Indian Country.

Please feel free to submit any of the following for inclusion in the newsletter:

- Job and internship openings
- Scholarship opportunities
- Research and management on indigenous lands
- Policy regarding wildlife management as it pertains to Tribes
- TWS Conference photos or stories
- Any Other Conference Details
- Current News Pertaining to indigenous rights/resources

OR Any other announcement or information you'd like to get out to your colleagues in Tribal wildlife management.

Please submit to Molly O'Grady, NPWM Newsletter Editor, at: mtogrady1158@gmail.com. **Submissions are accepted on a rolling basis.**



Connect With Us on Facebook

<https://www.facebook.com/Native-Peoples-Wildlife-Management-Working-Group-191566967530978/>

