46th Annual Conference of the Society of Ethnobiology

Table of Contents

University of Nevada, Reno
AT LAKE TAHOE

Society of Ethnobiology

Welcome to Incline Village!

Conference Theme: Traversing Ethnobiology Across Depths and Heights

The theme **Traversing Ethnobiology Across Depths and Heights** is reflective of the incredible landscapes of Lake Tahoe and the surrounding Sierra Nevada mountains. The University of Nevada at Lake Tahoe is located on the traditional lands and territories of the Washiw (Washoe) Tribe who have lived in and cared for this region for generations.

About the Conference Logo

The design for the 2025 Society of Ethnobiology Conference highlights the ***Wèš*** (Wehsh [chickadee]. ***Wèš*** is the forest guardian and ***Oŋ*** (Ong) is the bird spirit of **Da'aw'á:ga'a** (Lake Tahoe). Wèš rests upon the pinyon pine, which grows in the mountain ranges of the Great Basin, and native Lahonton cutthroat trout swim in the lake.

46th Annual Conference - Lake Tahoe, NV
May 21-24, 2025

Artist Biography

húŋa mehéší. I am Aspen Carrillo. I am an enrolled member of the Yerington Paiute Tribe and a Washoe Tribe descendant. I am currently pursuing a Bachelor of Fine Arts at the University of Nevada, Reno, and hope to continue to a Masters.

I have been an active tribal community member all of my life. I hold a position on the board of directors for a nonprofit organization called Washiw Zulshish Goom Tahnnu as their Youth Representative. I enjoy sharing my artistic talents and work in a variety of arts such as printmaking, graphic design, mural art, and oil painting. I am passionate about giving back to my community by revitalizing the Washoe language and culture.

University of Nevada, Reno at Lake Tahoe Campus

The University of Nevada, Reno at Lake Tahoe's Wayne L. Prim Campus, nestled among the pines of the Sierra Nevada, serves as the intellectual, cultural beacon of Lake Tahoe. The University of Nevada, Reno began operations on the campus on July 1, 2022, after entering into an agreement to acquire Sierra Nevada University. Sustainability and environmental stewardship remain at the core of all University teaching, and research, and outreach.

Unique to this campus are the cross-collaborations between scientists, visual artists, musicians, journalists, and creative writers to convey theories and practices in sustainability in new, impactful ways. The Wayne L. Prim Campus serves as an epicenter of cutting-edge collaborations and interdisciplinary activities aimed at inspiring the protection of the most precious natural environments.

We are excited to welcome the Society of Ethnobiology to our campus!

Map of Venue

Legend:

1: Conference Registration
Dorm room check in
Childcare check in
Parking passes

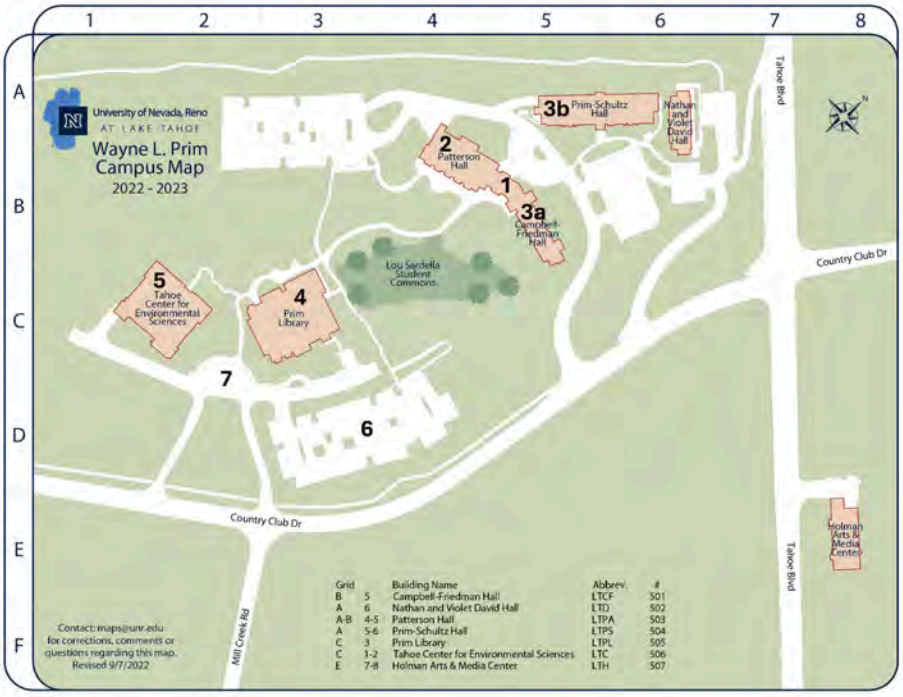
2: Dining Hall
Welcome Reception
Student Art Exhibit

3a/b: Dorm Rooms

4: Prim Library
1st floor
Quiet area/library
2nd floor
Mezzanine – Posters
Meeting Rooms (213, 214)

5: Tahoe Center for Environmental Sciences (TCES)
1st floor
Plenary, Board Meeting, Distinguished Lecture (139-141)
2nd floor
Meeting Room (206)

6: Visitor Parking



Hybrid Conference

The 2025 Annual conference will be completely hybrid, except for the poster session. All virtual attendees will be able to present and attend conference sessions via Zoom. Off-site events like the banquet and student social will not be telecast or recorded. All times are in Pacific Daylight Time Zone (UTC -7:00). To convert to your own time zone, see this **Time Zone Converter**.[1]

Statement on Inclusivity and Diversity

We strive to create ways to encourage a range of respectful voices at our conference. One way we have done this is by dramatically increasing our waivers and scholarships, especially to encourage international, World Majority as well as local, Indigenous participation. Another way has been to create a conference space that is welcoming to diverse communities and does not allow discrimination. To this end, we require all conference presenters to abide by the code of ethics[2] adopted by our organization.

Please also note:

- The conference venues are wheelchair accessible.
- There is a gender-inclusive (single-stall) bathroom on the first floor of Patterson Hall.
- We provide childcare and encourage attendance by caregivers; no registration fee is required.

[1] https://www.timeanddate.com/worldclock/converter-classic.html
[2] https://ethnobiology.org/about-society-ethnobiology/ethics (Code of Ethics)

Creating a Space for Elders and Youth

The UNR at Lake Tahoe campus is nestled in the forest, and weather-permitting, has ample open spaces and trails for play or quiet reflection. Elders and youth are also welcome to enjoy the quiet settings in the first floor of the Prim Library or lounge spaces in Patterson Hall. There are also wonderful, interactive exhibits about research in Lake Tahoe on the first floor of the Tahoe Center for Environmental Sciences (TCES).

Childcare Service: We are working with Tahoe Nanny[3] to provide child care services during the conference. If you have not done so already, please register for this service by contacting conference@ethnobiology.org. Our caregivers will be utilizing the various spaces on campus for activities including coloring, crafts, games, storytelling, and exploring to help your child(ren) have a great experience at the conference.

Recycling and Waste Reduction

We recognize that the very gathering of people from distant places is counter to reducing our carbon footprint; we struggle with balancing this fact against the huge value of meeting with our community face-to-face. We also understand the value of small actions, even if they just empower us as individuals to take bigger and bolder actions. We thank UNR at Lake Tahoe for its commitments to recycling and composting. We have tried in this conference to reduce excess by doing things like reducing packaging, sourcing local and/or organic foods, using non-disposable or responsibly disposable cutlery and plates and cups, and video-recording some talks for people to remotely access them. We encourage all participants to pay careful attention to our recycling stations. We welcome suggestions on how our Society's conferences, and indeed our Society more generally, can be better global stewards.

Social Media Ethics

To encourage this conference being a safe and inviting space for diverse voices and perspectives, we offer the following guidelines for respectful social media conversations:

- Only post content that represents your own thoughts.
- Act in a professional and constructive manner, especially regarding sensitive or meaningful topics.
- Show respect for others' opinions, and their rights to choose to participate or refrain from commenting in online discussions.
- Do not post presenters' ideas or data without the expressed permission of the presenter.

Our "Thumbs Up" Icon

If you see this icon on the title page or poster of a presentation, it means the author(s) have given permission to post images of their presentation online. If you do not see this icon, approach the author and ask permission about posting any information or images associated with the author before you share any information.

When sharing images of presentations, please be sure to include attribution (author's name, affiliation; date).

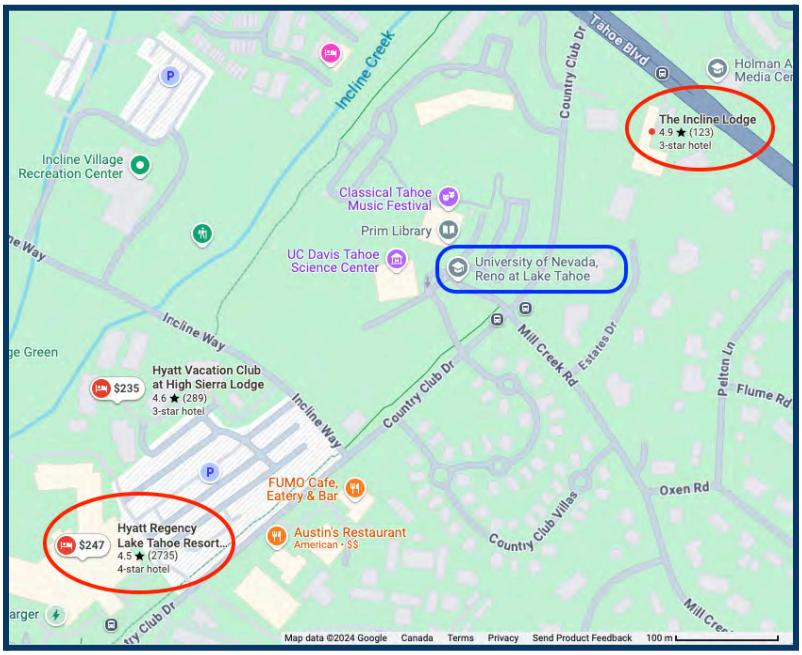
[3] http://tahoenanny.com/

Accommodations, Transportation, and Additional Resources

Accommodations

UNR, Reno at Lake Tahoe Student Dorms: Prior reservation only
Dorm Rooms are located in Campbell-Friedman and Prim-Schultz Halls (see Map of Venue). All check-ins/ check-outs for both buildings will take place at the front desk inside Campbell-Friedman Hall.

Check-in will begin at 3pm, Tues, May 20 and run until 10pm that night. On subsequent days the front desk will be staffed from 9am–10pm so guests can check in any time during those hours. We ask that guests **check out no later than 11am** on their designated check-out date.



Hotels

- Hyatt Regency Lake Tahoe Resort[4]
- Incline Lodge[5]

Transportation

Air Travel[6]

The closest airport to Incline Village is the Reno-Tahoe International Airport located in Reno, Nevada.

Reno-Tahoe Airport to Incline Village (and back)

Incline Village is about an hour drive from the airport. There are rental car options as well as a paid shuttle service called the North Lake Tahoe Express (NLTE).

The NLTE operates a regular schedule to and from the airport to various locations in Incline Village, several of which are hotel options we recommend. If you book one of the dorm rooms at the UNR campus, you can take the shuttle to the Hyatt, and it is a very short walk to the campus (see map).

Group Booking the North Lake Tahoe Express (NLTE)!

Booking 5–11 passengers at a time will reduce the price per person from $99 to $55, not to mention reduce our carbon-footprint. Coordinate with fellow ethnobiologists to save on the cost of travel to the

[4] https://www.hyatt.com/hyatt-regency/en-US/tvllt-hyatt-regency-lake-tahoe-resort-spa-and-casino
[5] https://theinclinelodge.com/
[6] *Looking for a ride or for other attendees to join a group booking for the NLTE? Can you accommodate additional passengers in your rental car? Connect with other attendees using the 2025 Conference Ride Share Message Board (login required).*

venue. We recommend providing at least a **45-minute buffer** from arrival time to departure (30-minutes might work if luggage is offloaded quickly). For the return trip, plan for a **1.5 hour travel time to the airport**. Link to NLTE website for bookings and inquires.[7]

Uber – averages about $138 (depending on the hour) one-way between the airport and Incline Village.

Local Transport

The UNR at Lake Tahoe campus is within walking distance of several hotel options (Hyatt, Incline Lodge), as well as shopping and eating areas (see map).

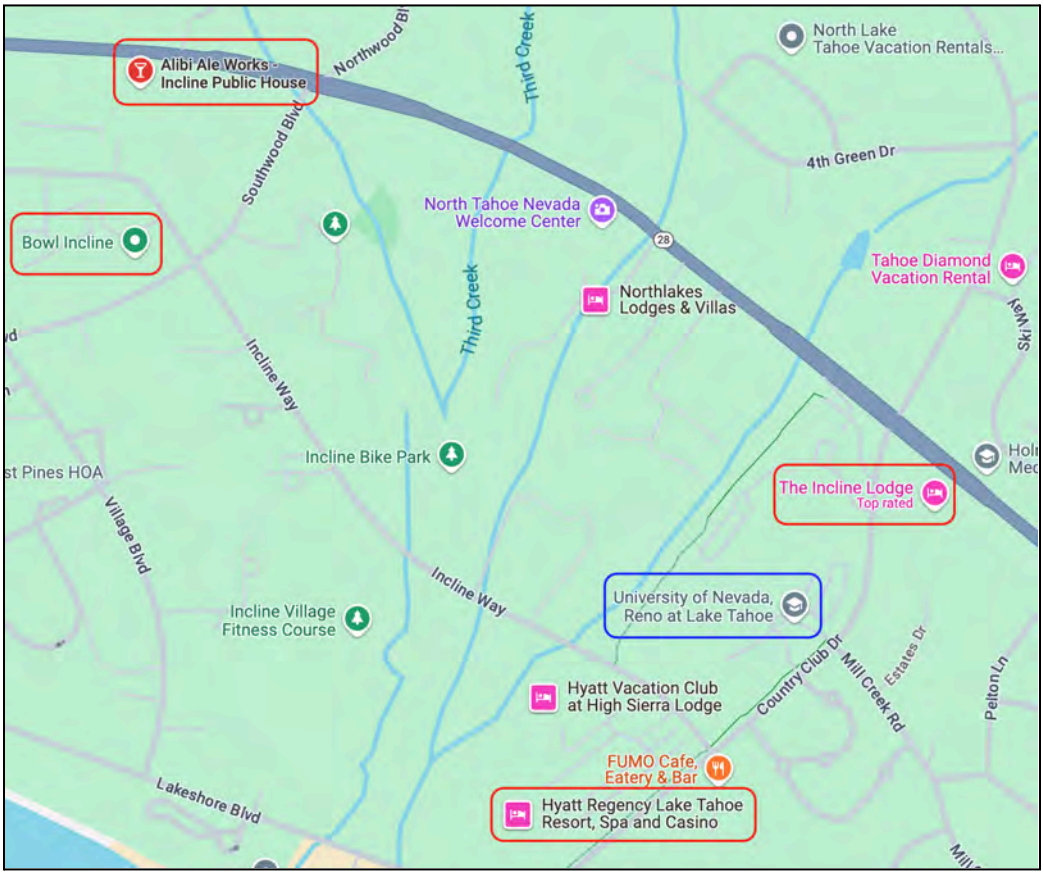
Uber and Lyft both serve the area, and we also highly recommend the free micro-transit option **TART Connect**[8]. Download their APP[9] to book door-to-door, on-demand rides.

Parking at UNR at Lake Tahoe

If you will be driving, you can obtain a daily parking pass for $5 on campus.

Dining and Attractions

Use the hyperlink (URL in footnote) for SoE community sourced recommendations[10] to notable places to eat and interesting places to visit around the UNR at Lake Tahoe Campus.



[7] https://northlaketahoeexpress.com/
[8] https://tahoetruckeetransit.com/tart-connect/
[9] https://apps.apple.com/us/app/tart-connect/id1566632029
[10] https://www.google.com/maps/d/u/0/edit?mid=1bffDm5sehNLUb2rTCI--TKfFNcTxbps&usp=sharing

Local Resources

*Remember to stay **Bear Aware**[11] and do not leave food or fragrant items in your car, or in rooms with open windows when you aren't present.*

Medical Needs

- Incline Village Urgent Care – 930 Tahoe Blvd, Unit 207 – (775) 833-2929
- Incline Village Community Hospital – 880 Alder Ave – (775) 833-4100
- Raley's Pharmacy – 930 Tahoe Blvd – (775) 831-3111

Grocery Stores

- Grocery Outlet – 770 Mays Blvd, Suite 2
- Natural Grocers – 873 Tahoe Blvd.
- Raley's – 930 Tahoe Blvd

Acknowledgments

Land Acknowledgment

The University of Nevada at Lake Tahoe and Society of Ethnobiology recognize and honor the Wá·šiw people (Washoe) who are the ancestors and original stewards of these unceded lands where our gathering is located. The Washoe or Wáší·šiw, which means "the people from here," inhabited the land around Lake Tahoe dating back thousands of years. They continue to gather here and advocate for the protection and preservation of the lake. We are deeply grateful for the opportunity to gather on their territory.

In recognizing Indigenous Peoples and their traditional homeland, we express gratitude for their enduring stewardship of the land and strive to create spaces for knowledge exchange, reflection, and action. We pay respect to and honor all Indigenous Peoples, past, present, and future, by building a more inclusive and equitable space for all. Their strength and resilience in protecting this land inspire us to uphold our responsibilities according to their example.

Thank You

Gatherings occur through the multitudes of cooperation, guidance, and creation of many community members. Conference organizers want to highlight the crucial support and work offered by the UNR at Lake Tahoe staff especially: Interim Vice President and Dean Dr. Doug Boyle, Coordinator of Events and Conferences Erin Simonton, Coordinator of Classroom and Events Technology, Forest Goodman, and Teaching Assistant Professor, Brennan Lagasse. We are also grateful for the sponsorship and support of the Department of Anthropology at the University of Nevada, Reno, especially the Department Chair, Dr. Erin Stiles. We also want to recognize the help and recommendations of Dr. David Rhode of the Desert Research Institute, Dr. Julia Hammett of Truckee Meadows Community College, and Dr. Sarah Cowie of UNR. Moreover, **student volunteers'** creativity and labor—both virtually and in-person—are invaluable for the creation and development conference. Their names are listed below:

Abdulrazak Adebayo	Aaron Gaswick	June Hee Kwon	Elizabeth Orhuamen	Catherine Scanlon
Chelsea Betts	Barbara Herrera	Annabelle Law	Kylie Papson	Chloe Twu
A.L. Blake	Molly Jenkins	Varpu Lotvonen	Melissa Ritchey	Kenneth Walker
Harriet Casserly	Liza Kachko	Patricia Mathu	Md Sadman Sakib	

[11] https://www.gotahoenorth.com/blog/be-bear-aware-in-north-lake-tahoe/

A Note From The President

Hi everyone!

I open this letter by expressing heartfelt gratitude to each of you for being a part of the Society of Ethnobiology (our "Society") and for the meaningful and important work that you do to highlight the inextricable connections between people's health and well-being, traditions, cultural wisdom, and the plants, animals, water, and soil that define and sustain us. We find ourselves at a time when the diversity of cultures, the sciences, and the humanities, are all being chastised instead of celebrated. In fact, many of you who hoped to join us in person have switched to joining us virtually because of justified fear of crossing US borders or to express opposition to our current political climate. I understand, and I sympathize. Most of all I want to express how thankful I am that, whether you are here in Lake Tahoe, or logging on virtually, you are joining us to share knowledge, to be inspired and inspire others, and to make connections with peers who have similar hopes for a more welcoming future.

I am honored to welcome you to the 46th Annual Society of Ethnobiology Conference. I acknowledge with humility that we are on the current, traditional, and ancestral territories and homelands of the Waší·šiw (Washoe people – the people from here), the aboriginal stewards of the land in and around the Lake Tahoe Basin. We are grateful to the Waší·šiw for their protection and preservation of this beautiful land since the beginning of time, and we look forward to learning about and witnessing some of their important ongoing efforts at this conference.

This year's conference organization was a true testament to the incredible and unique strength of our Society. As some of you may recall, two years ago we started collaborating in working groups that keep members of our Society closely connected throughout the year and the Planning Committee met biweekly throughout the year to create this remarkable conference. The committee was organized by our current Vice-President/incoming President, Steve Wolverton. Our local host, Maria Bruno (also the incoming Vice President/President-elect) did a phenomenal job of running the meetings and being our on-the-ground organizer – arranging the reservations, taking care of logistics, connecting us with the community members who would serve as our childcare providers, volunteers, and field trip leaders, and much more. The committee also included previous conference coordinators and organizers, Ashley Blazina, Denise Glover, and Kate Farley, whose experience in running conferences was instrumental in making sure every detail was thought of and addressed. Amazingly, Annalee Sekulic logged on for each meeting from Vienna, somehow balancing her work as a graduate student with a great deal of effort that was dedicated to creating the conference program, helping to organize the banquet from afar, and taking on many other tasks. We are also grateful to Jessica Dolan, [to] our Office Manager, Cheryl Takahashi, and our Treasurer, Mac Marston, for their incredible contributions to making this conference planning as smooth as it was.

Enormous thanks to our generous volunteers who are helping to keep things running throughout the week and to those adding to the ethnobiological learning opportunities of this conference through their contributions to the Wednesday workshops, tours, Saturday field trips, and the Friday night banquet. Please take a moment to show them your appreciation when you interact with them this week.

This year, one of our Engagement Committee Board Members, Andrew Flachs, had the insight to apply for a National Science Foundation grant to fund the travel of Indigenous and non-Indigenous scholars who understand and document ethnobiological and ecological changes occurring in mountain environments across the planet. We are grateful to the National Science Foundation for awarding a workshop grant (Award number (FAIN): 2520070) for *Understanding Change and Adaptation in Mountain Regions*, and to

Andrew for seeing this phenomenal workshop through even in times of uncertainty. Additionally, we thank all the people who are participating in this workshop for sharing their insight with us.

The Engagement Committee, led by Ricky Rietjens, was also busy this year developing strategies to connect with all of you, and our other members who are not able to join us for the conference. As part of this committee, Andrew Flachs helped launch and run the Distinguished Lecture Series this year (presented by Chelsea Geralda Armstrong and Jennifer Grenz). I also express thanks to Kali Wade, Cissy Fowler, Florencia Pech-Cardenas, Joshua Drew, Samantha Bosco, Liz Olson (Past President and European Ambassador), and Scott Herron (Past President and Indigenous Ambassador) for serving on the Engagement Committee.

For the past two years, student members of SoE looking to stay involved have organized a Student Board and they have done such a great job of engaging undergraduate and graduate students through meetings, newsletters, social media, and webinars. Enormous thanks to Saish Solankar, JT Michel and Florencia Pech-Cardenas for your involvement in creating and leading this student board. The student board is open to all undergraduate and graduate students who are looking for their professional home and offers a terrific opportunity to grow with SoE.

One of the most important elements of this professional family is that we collectively support grants, scholarships, and fellowships to enable people from all backgrounds to continue their important work and to join us as members and attend our conference. In addition to our scholarship and fellowship programs that support undergraduate and graduate students, we are happy to also offer poster awards, the Barbara Lawrence Award for best student research presentation, travel scholarships, and conference waivers. Sincere thanks go to Kate Farley, Samantha Bosco, and their teams of scholarship and fellowship review committees.

We are pleased to continue to offer our Rapid Assistance Fund for Indigenous Communities & Individuals in Need to offer financial assistance to individuals and communities who identify as Indigenous, Native, First Peoples, or as historically oppressed by colonization for urgent needs related to the field of ethnobiology. Thank you, Kali Wade, for your passion for this fund and organizing the review committee. In addition, we are pleased, for the second year, to offer a Communities and Ethnobiology Grant given to a community involved with an ethnobiology-related project local to that year's annual conference. It is a means through which the Society can give back to the community hosting us and support important work being done at the local level. This year, the award goes to the Washoe tribe to support ethnobiology education for children, including having them join us at this year's conference.

Sharing our ethnobiological research, perspectives, and information with the greater community is so important, and we are thrilled that our *Journal of Ethnobiology* is now published by Sage Journals and has a 2.9 Impact Factor (Q1 on Scimago). Thanks to Rick Stepp, Jeffrey Wall, and their entire editorial team for your hard work. We are also actively expanding the collection of ethnobiology literature through the gold, open-access *Ethnobiology Letters* periodical and the e-book *Contributions in Ethnobiology* monograph collection. We are indebted to the talent, energy, and time that the editorial team for all these publications share with us, and we invite you all to share your own research through our publications.

Last, but certainly not least, thank you to our Office Manager who helps keep the Society running. SoE's power is generated in large part through Cheryl Takahashi's careful attention, patience, and support. This conference marks the closing of the term for Mac Marston's fantastic role as our Treasurer. We are indebted to his attention to detail, trustworthiness, and kindness. And, as I close out my term as President at this year's conference, I need to express my sincere gratitude to Steve Wolverton for being the best SoE partner, friend, and VP I could ever ask for. To all my dear friends that I have made over the past 25

years of being involved with SoE and who have helped support my time on the board, I will always be inspired by our friendship, laughter, and the pure joy that comes with working as part of a tight-knit and inspiring team.

Thank you, everyone, for being part of our professional family. I have often heard that it is the feeling of belonging that keeps people engaged with SoE and I hope that you all feel connected to this amazing community and that our time together over the next few days will leave you with beautiful memories, new friends, and inspiration to continue to do great work.

All the best,

Daniela Shebitz
President, Society of Ethnobiology

About The Society of Ethnobiology

The Society of Ethnobiology is a nonprofit professional organization dedicated to the interdisciplinary study of the relationships of plants and animals with human cultures worldwide, including past and present relationships between peoples and the environment. Our interests encompass ethnobotany, ethnozoology, linguistics, paleoethnobotany, zooarchaeology, ethnoecology, and other related areas in anthro-pology and biology. We are committed to scholarly research and to inclusive relationships with communities with whom we work and with colleagues around the world. The Society of Ethnobiology hosts an annual conference with field trips, and offers three peer-reviewed publications: the *Journal of Ethnobiology*, a professional journal with two issues per year, *Contributions in Ethnobiology*, a digital monograph series, and *Ethnobiology Letters*, a digital publication for short contributions. We award excellence in ethno-biological research through our Distinguished Ethnobiologist Award, and Best Poster Award, and also recognize student research excellence through the Barbara Lawrence Award and the Undergraduate Ethnobiologist Award.

Want to know more about the Society? Be sure to come to the **General Membership Meeting** on **Friday, May 23 from 3:30–5:00 pm** in the Tahoe Center for Environmental Sciences (TCES), Room 139–141.

Society Officers

President	Daniela Shebitz
President-Elect/VP	Steve Wolverton
Treasurer	John M. Marston
Secretary	Ashley Blazina

Conference Coordinators

Local Host	Maria Bruno
SoE Planning Committee	Ashley Blazina
	Jessica Dolan
	Kate Farley
	Denise Glover
	Annalee Sekulic
	Daniela Shebitz
	Cheryl Takahashi
	Steve Wolverton

Awards and Fellowships

Distinguished Ethnobiologist Award

Dr. Leslie Main Johnson

Dr. Leslie Main Johnson is a Professor Emerita of Anthropology at Athabsasca University. In addition to being the 2025 Distinguished Ethnobiologist, Leslie was the inaugural winner of the Mentor Award in 2016, is a long-time Society member, and conference attendee. Her record of accomplishment is rich and impactful. Nominators write in their letter that, *"Leslie has dedicated over 40 years to advancing our understanding of the intricate relationships between humans and their environments, championing Indigenous knowledge systems, and transforming the way we approach and engage in community-based research."* Leslie is also prized and admired as a staunch supporter of students. She has served as a graduate supervisor and committee member for many current SoE members. As her former students (Armstrong, Baker) can attest, Leslie is an ideal mentor and collaborator, taking time out of her own fieldwork to join her students' work, introducing students to Elders and Hereditary leadership, and always prying students to read more and never reinvent the wheel.

Undergraduate Ethnobiologist Award

Sabrina Mata (Medicinal Plant Chemistry and Spanish, Northern Michigan University)

Sabrina Mata is a third-year student at Northern Michigan University, majoring in Medicinal Plant Chemistry and minoring in Spanish. Her academic journey represents a deep passion for the intersection of ethnobotany, medicine, biochemistry, organic chemistry, and analytical chemistry, focusing on exploring plants' medicinal properties. One of her primary independent research projects investigates the secondary metabolite profile of *Datura ceratocaula,* a semi-aquatic plant species known for producing tropane alkaloids. Sabrina's research involves isolating compounds from *D. ceratocaula* extracts and testing their antimicrobial activity. This work contributes to understanding the biochemical pathways underlying the plant's medicinal potential and offers insights into novel therapeutic applications. Sabrina attributes her fascination with ethnobotany to the half of her family from Mexico. After reconnecting with them a few years ago and learning that knowledge of herbal medicine is cherished and passed down through generations, she developed a profound respect for traditional healing practices. This ancestral wisdom provided the inspiration and foundational knowledge for her research, allowing her to bridge traditional practices with modern scientific inquiry in a way that honors both perspectives.

Communities and Ethnobiology Grant

This is a monetary award given to a community involved with an ethnobiology-related project local to that year's annual conference. It is a means through which the Society of Ethnobiology can give back to the community hosting us and support important work being done at the local level. This year the funds are going to support the ongoing work of the Washoe Tribe of Nevada and California in connecting their youth with their traditional knowledge and stewardship of the environment across all of their homelands. This work is being done through the Department of the Environment and the Tribal Historic Preservation Office. Some of the funds helped to support the participation of Wá·šiw youth in our conference on Friday.

Herman Fillmore teaching Washoe youth the rhythm and song game, Hinoyowgi. Image used with permission of Laura Klivans/KQED.

We especially want to acknowledge the efforts of **Herman Fillmore**, Culture/Language Resource Director of the tribe, in organizing the youth participation in the conference and his offering of the Plenary Lecture.

Citation for Distinguished Service

The Citation for Distinguished Service award recognizes ethnobiologists who have served the Society and its members in indispensable ways over many years. The recognition highlights the contributions of service leaders whose work, often behind the scenes, has been vital to the Society. Members of the Executive Committee may select up to three recipients on an annual basis. Recipients of the Citation for Distinguished Service are recognized at the annual conference.

Liz Olson

The Society of Ethnobiology has been an integral part of my professional journey and personal growth. Since joining in 2013, I have proudly served the organization in various capacities, including as President (2020–2021), Vice President (2019–2020), Conference Coordinator (2014–2020), and Awards Coordinator (2013–2014). My work with SoE has allowed me to collaborate with incredible colleagues, foster diversity and inclusion through initiatives like NSF and Wenner-Gren funded conferences, and contribute to advancing the field through publications and editorial roles. I remain deeply inspired by the Society's mission to honor the interconnections between people, plants, animals, and cultures.

Beyond my leadership roles, SoE has provided a platform to share my research in ethnobotany, medical anthropology, and conservation, spanning studies from Mexico to the US. Personal highlights include presenting on topics such as indigenous knowledge and health sovereignty, contributing to Special Issues in Ethnobiology Letters, and mentoring students in their early forays into ethnobiological research. The

friendships and professional networks I've developed through this Society have enriched my life profoundly and continue to guide my work.

Today, I apply my ethnographic expertise as a Senior User Experience Researcher in industry, leveraging my background to create intuitive, human-centered design solutions. Though I've transitioned from academia, I remain actively involved in SoE, recognizing it as a vital space for interdisciplinary collaboration and mentorship. My enduring connection to the Society reflects not only my appreciation for its role in shaping my career but also my affection for its vibrant, supportive community.

James Welch

My first exposure to the Society of Ethnobiology was at the annual meeting in Oaxaca, Mexico, in 1999. Between shots of the Society of Ethnobiology labeled small batch mezcal flowing from pourers at the intersections of paths throughout the botanical garden, I knew I had found a scholarly community like no other. It took me another decade to become more involved, but my link to ethnobiologists through the Society became central to my academic worldview, even when I worked with disciplines like epidemiology and demography.

I am motivated by a passion for solution-oriented research in anthropology, ethnobiology, and community health. Through partnerships with Indigenous communities in Brazil, especially A'uwẽ (Xavante) Indigenous communities in Central Brazil, our work integrates diverse academic disciplines and cultural frameworks to understand and promote physical, social, environmental, and spiritual wellness. I have participated in studies and initiatives addressing territorial rights, environmental conservation, digital sovereignty, social identity, foodways, epidemiology, and demography. For over a decade, I served as a researcher in human ecology and public health with the Brazilian Ministry of Health (National School of Public Health, Oswaldo Cruz Foundation, Rio de Janeiro). I recently published a book with the University of Arizona Press, in the Global Change/Global Health series, entitled Persistence of Good Living: A'uwẽ Life Cycles and Well-being in the Central Brazilian Cerrados. I am now refreshing my career with a look towards international human rights.

Over the years I participated as editorial assistant for the *Journal of Ethnobiology* (2001–2002), co-editor of *Ethnobiology Letters* (2011–2018), author of the Contributions in Ethnobiology monograph series book Sprouting Valley: Historical Ethnobotany of the Northern Pomo from Potter Valley, California (2013), Promotion and Outreach member of the Board of Directors (2013–2016), and Associate Editor of the *Journal of Ethnobiology* (2019–present).

Indigenous Peoples' Conference Travel Award

Mimi Lucero

Mimi is a Kichwa seed keeper from San Cristóbal, Galápagos, Ecuador. She collaborates on seed house protocols, blending Western and Traditional training to refine ancestral strategies for improved conservation outcomes within cultural contexts. Mimi is finalizing a master's in biology at Miami University this December. At this time, her collaborative research centers on seed bank staff interactions with seed collections, cultural stewardship, and community-plant dynamics. She explores how these connections shape vegetation patterns, seed collection/conservation ethics, and responses to plant invasions—both in the Galápagos and across seed keeping communities in South and North America.

Student Conference Travel Award

Katherine V. Hernandez

Katherine V. Hernandez is a fourth year PhD candidate with the Institute of Environment & Sustainability at the University of California, Los Angeles. Her work looks at human-wildlife coexistence through an interdisciplinary lens, synthesizing scholarship from social-ecological systems (SES), narrative theory, and animal movement ecology to better understand how our human stories affect, and are affected by, animal lives.

Marina Luccioni

Marina Luccioni is from Corsica and Indonesia and grew up in London, England. She is pursuing a PhD in Biology at Stanford University and holds a BS degree with Honors in Human Biology and the Arts. Marina aspires to improve our understanding of mental health and to support community-based marine management, creating a research process that interfaces knowledge and methods from local, Indigenous, and conventional academic sources. Under the tutelage of Kelson "Uncle Mac" Poepoe since 2018, Marina is proud to be a member of the Nā Kai Ewalu research collective in Hawai'i.

Majority World Conference Travel Award

Darío Pérez

Darío Pérez is a biologist with a Master in Geography (Universidad Nacional de Colombia), and PhD in Biology (Université de Montpellier). He is a researcher with experience in topics related to Economic Botany and Agrobiodiversity, particularly in the Caribbean and Andean regions of Colombia. He has worked on research processes involving the active participation of local communities to highlight the sociocultural aspects associated with the use, management, and conservation of local biodiversity, as well as the impact of territorial conflicts on food systems.

Graduate Ethnobiology Research Fellowships

Justin Nolan Ecological Knowledge Research Fellow

Katharina Miller, "Calories and culture: socioeconomics of eider duck harvest to inform food security and well-being through Inuit knowledge in Kinngait, Nunavut"

Katharina (Kt) is a first-year PhD student in the Geography and Environmental Studies department at Carleton University in Ottawa, Canada, where she is part of the Social Ecology Conservation Collaborative. Her research interests include community-based research, coproduction of knowledge and mixing methods from Indigenous ways of knowing and environmental sciences. Kt has an MA in Interdisciplinary Studies from Royal Roads University, where her master's thesis, Indigenous Knowledge of Human-polar Bear Coexistence in Churchill, Manitoba, used storytelling as a method and built upon emerging audio-based qualitative analysis with arts-based podcast outputs. Kt worked for Polar Bears International for over 12 years, where she conducted field research and programs, oversaw climate and conservation communications, and built relationships with Northern communities. Kt grew up on the traditional lands of the Apsaalooké, Salish Kootenai, Blackfoot, Crow and Cheyenne in present-day Bozeman, Montana, where she spent her youth sleeping under the stars and exploring the rivers, peaks and trails of the Rocky Mountains.

Urban Ethnobiology Fellow

Jazlee Crowley, "How Japanese Hawaiians Define a Sacred Invasive Tree"

Jazlee Joon Crowley is a PhD student at Oregon State University. Jazlee was born and raised in Flagstaff, Arizona, where she was trained in ethnobotanical research through the Arizona Ethnobotanical Research Association (AERA). She studied Biology and Art History at Northern Arizona University and has since moved to Oregon to study sacred trees and their genetic and cultural histories. Jazlee will be using the Urban Ethnobiology fellowship for her work with the Japanese community in Hawai'i. Jazlee studies cultural histories and concerns surrounding the introduced Bodhi Tree, *Ficus religiosa,* as well as the tree's genetic story. With a primary focus in decolonizing science, Jazlee is utilizing a transdisciplinary research method in her dissertation by considering and prioritizing the perspectives of non-academic knowledge systems.

Jessica Mae Orozoco Indigenous Ethnobiologist Fellow

Aileen Grace Dumanhug Delima, "Ethnobotanical Knowledge on Sago Palm (*Metroxylon sagu* Rottb.) Utilization and Management in Three Provinces in Mindanao in the Philippines"

Madayaw! I am Aileen Grace Dumanhug Delima from Davao City, southern Philippines. I am in my 2nd year as a PhD Biodiversity student at the Taiwan International Graduate Program (TIGP) of the Biodiversity Research Center, Academia Sinica and Tunghai University in Taiwan. I am affiliated as a faculty member in the Department of Biological Sciences and Environmental Studies, University of the Philippines Mindanao. My Jessica Mae Orozco's proposal is on sago palm's (*Metroxylon sagu*) ethnobotany in Mindanao, an essential food source and materials for roof

thatching in marginal areas. While this plant has economic potential, personally, this plant has been dear to me. I am grateful because it paved the way for my research career and academic service. I started as a research assistant for UP Mindanao's sago palm micropropagation project. From there, I continued sago palm ex-situ conservation for my graduate thesis. When I started in the academe, my first batch of undergraduate advisees also worked on sago palm germination studies. Now that I'm pursuing my PhD, I want to continue the sago palm project in the Philippines focusing on poorly understood aspects, including the ethnobotany of its uses and management, conservation, and threats as underutilized starch palm.

Wednesday Workshops

R Programming for Ethnobiologists

Date and Time: Wednesday, 21 May, 2025 - 08:00 to 17:00
Organizer: Jonathan Dombrosky
Maximum # participants: 30; **Fee**: USD $0.00

Data scientists extract useful knowledge from a deluge of data, and they develop new tools to manage this task daily. These tools frequently rely on a programming language. Unfortunately, learning a programming language can be daunting for both new and experienced researchers. It relies on detailed knowledge of new software, grammatical and syntactical conventions, along with new data organization practices. It is easy to get lost in the sea of information on each of these topics. Fortunately, a popular new suite of tools has emerged within R called the tidyverse. Packages within the tidyverse share a similar design philosophy and data structure, which allows for the communication of complex statistical processes with only a handful of core functions. A common way to integrate data manipulation, visualization, and modeling with the tidyverse has led to an explosion of new R users. This workshop will introduce attendees to basic computer processes and file structures, useful core tidyverse packages called dplyr and ggplot2, and a new package for modeling called tidymodels. Integrating R and the tidyverse into research projects enhances reproducibility, supports long-term project management, and allows users to access up-to-the-minute statistical tools free of charge.

Edible and Medicinal Qualities of Blue Elderberry

Date and Time: Wednesday, 21 May, 2025 - 09:00 to 12:00
Organizers: Christopher Mackessy, Jung Mackessy
Maximum # participants: 20; **Fee**: USD $50.00

During this workshop, participants will be working with our native and local Blue Elderberry / *Sambucus cerulea* syn. *S. mexicana* to create a variety of edible and medicinal products including tinctures, syrups and more. In addition, we will learn about the ecological benefits this plant provides, its secondary chemical compounds which give it both medicinal and toxic properties, and the botany needed to correctly identify this plant in the wild! Elderberry is one of the world's most renowned medicines and foods. It is and has been used for thousands of years here in the Tahoe Basin and we are lucky enough to continue to have an incredibly healthy population of this amazing plant due to the stewardship of local individuals and groups.

Seng Song Sound Spa - An Intimate and Intentional Journey into Plant Music

Date and Time: Wednesday, 21 May, 2025 - 12:30 to 14:00
Location: Prim 213
Organizer: Loretta Mary Hord
Maximum # participants: 10; **Fee**: USD $40.00

This 90 minute deep dive will include a plant sensory spa experience focusing on American Ginseng and their friends; exploration into the "Mind of Coffee" through a cupping ceremony, and much more! Loretta Maps Bolt is an artist, plant researcher, and animist focused on interspecies collaboration with plants. After founding Biotunes in 2016, she has been making music with plants by taking the electrical responses within the leaf structure and translating it into musical notes; ultimately to share the multidimensional intelligence of plants. Biotunes collaborates with supporting artists, and local music producers to create new storytelling experiences, and guided learning opportunities within the environmental community.

Since her 2019 research internship with the Smithsonian Folklife Institute around untold narratives of American Ginseng, Maps Bolt has uncovered new pathways of intimate plant experiences through the plants we love. The engagement of technology to foster empathetic relationships with ecological and ancestral landscapes such as geofencing, and augmented reality, has allowed Maps Bolt to investigate new paradigms of thought within the field of critical plant theory. Through story and ritual, Maps Bolt interpolates those in the scientific and academic fields to reconsider how to engage with the more than human world.

Preparing for Professional Opportunities Beyond Academia

Date and Time: Wednesday, 21 May, 2025 - 14:30 to 16:30
Location: Prim 213 (Hybrid)
Organizer(s): Liz Olson, Kerri Brown, Angela Orlando, Scott Herron
Maximum # participants: 35; **Fee**: USD $0.00

Ethnobiologists, anthropologists, biologists, and others are increasingly seeking employment opportunities outside of academia. A key focus in this workshop is exploring common directions that ethnobiologists can take to apply their skills and make money doing it! Workshop organizers will provide examples from their own experiences, and share tips and strategies for ethnobiologists at varying stages of their careers. Participants will get the most from this workshop if they bring their current CV or resume with them on a laptop so that they can work on it during our session.

Silent Auction

Dates: Thursday, 22 May, 2025–Friday, 23 May, 2025
Location: Patterson Hall

This fundraiser has become a staple of our annual conference because funds raised through the silent auction support future scholarships for Indigenous scholars and students to attend our conferences.

Special Art Exhibit: “Soundings of Entanglements”

Dates: Wednesday, May 21–Friday, May 23
Location: Patterson Hall
Organizers: Society of Ethnobiology Student Board

"Soundings of Entanglements" is a captivating photography and art exhibit that explores the intricate web of connections within our world. Through a curated collection of evocative photographs and diverse artistic expressions, the exhibit delves into the subtle and profound relationships that bind us to our environments and each other. By visually capturing and interpreting these 'entanglements,' the exhibit invites viewers to contemplate the entanglements and relatedness that shape our collective experience. This exhibit will feature photographs and other art pieces that delve into any aspect of Ethnobiology as a broad discipline—this includes but is not limited to wildlife, landscapes, communities, individuals, and even scientists, scholars, and activists in action in the field. This exhibition seeks to showcase visual narratives that delve into the reciprocal relationships, traditional knowledge, and ecological wisdom embedded within diverse cultures and their interactions with the natural environment.

Thursday Non-Session Events

Plenary Lecture: Introduction to Place; How the Wá·šiw Language and Wá·šiw Legends Reflect Data and Observations Since the Beginning

Date and Time: Thursday, May 22, 2025 - 11:15–12:15
Location: TCES 139–141
Speaker: Herman Fillmore, Culture/Language Resources Director – Washoe Tribe of Nevada and California

Herman's lecture will touch on how the Wá·šiw language and stories represent knowledge itself, knowledge of place, and the role of Wá·šiw Peoples and others within Waší·šiw ʔitdéʔ (the homelands of the Wá·šiw People).

Herman's work has included learning and teaching the Wá·šiw language to adults and children through classes, story books, and activities, such as snowshoeing, that connect language to place.

Student-Mentor Lunch

Date and Time: Thursday, May 22, 2025 - 12:30–13:30
Location: Patterson Hall

Students are invited to have lunch with established ethnobiologists for networking and wisdom during our lunch break on Thu, May 22. No pre-registration required. Bring your lunch!

Public Session: Understanding Change and Adaptation in Mountain Regions - "Application of Indigenous knowledge and management in mountain systems"

Date and Time: Thursday, May 22, 2025 - 13:30–15:30
Location: TCES 139–141

This session reflects on the unique role of Indigenous knowledge and management in living through the intersecting changes of climate, politics, and society. This discussion is the culminating event for an NSF-sponsored workshop on mountain ethnobiology. Presenters will discuss threats to mountain livelihoods, as well as share the creative responses and thoughtful meditations that emerge from mountain communities of humans and other living beings.

Participants:

Dániel Babai	Carrie Cannon	Frank Lake	Rick Stepp
Janelle Baker	Andrew Flachs	Karine Narahara	Steve Wolverton
Purnima Devi Barman	Cissy Fowler	Nicole Sault	
Maria Bruno	Robbie Hart	Daniela Shebitz	
Patrick Burtt	Ripu Kunwar	Jeremy Spoon	

Student Social

Date and Time: Thursday, May 22, 2025 - 17:30–19:00
Location: Alibi Ale Works - Incline Public House, 931 Tahoe Blvd, Incline Village

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Friday Non-Session Events

Banquet

Date and Time: Friday, May 23, 2025 - 18:00–22:00
Location: Bowl Incline, 920 Southwood Blvd, Incline Village; https://www.bowlincline.com/
Tickets: $100

Join us for an unforgettable evening at Bowl Incline, a beloved, family-owned and operated business in Incline Village. Nestled among the pines of Lake Tahoe, Bowl Incline provides the perfect setting for conference guests to mix and mingle. Enjoy the unique ambience and, if so inspired, do some bowling after dinner!*

**Want to bowl after the banquet? We encourage groups to reserve lanes based on their availability. The Society will not be able to arrange this but highly encourages continued socializing after the banquet!*

Bowling Lanes and Food for children and other guests

Downstairs from the banquet room, you'll find the vibrant atmosphere of the bowling lanes and the Ohana Diner, offering a delightful range of kid-friendly food and drinks.

Please note: Parents will be responsible for ordering and paying for their child(ren)'s food, drinks, and bowling. Read more about the lanes: https://www.bowlincline.com/bowl

General Membership Meeting, Awards Ceremony, Distinguished Ethnobiologist Presentation

Date and Time: Friday, 23 May, 2025 - 15:30–17:00
Location: TCES 139–141

Saturday Field Trips

Plant Niche Stories/Edible & Medicinal Plants of the Timilick Valley (Northern Sierra Nevada)

Date and Time: Saturday, 24 May, 2025 - 08:30 to 13:00
Primary Organizers: Christopher Mackessy, Trash Panda Permaculture and Nikki Hill, Groundwork Ecology Center, Native Environment Solutions

Maximum # participants: 18; **Fee**: USD$35.00

*This is a collaboration between two proposed plant walks featuring the flora of the Northern Sierra Nevada. While having a strong focus on the ethnobotanical uses of these plants, we will also cover the general ecology of this floristically diverse location and exactly what makes the broader Northern Sierra Nevada such a wondrous location when it comes to our natural areas.

Participants are invited to adopt a biocultural landscapes lens on a plant niche ecology stroll around Martis Creek. This biocultural lens will be used to highlight the influences of natural landscape processes and human lifeway interactions that enhance the presence of culturally important plant (CIP) populations. Our saunter will be a hands-on event with opportunities to interact with our storytellers, the plants!

During this walk, participants will be exploring and learning about some of the amazing flora that the Sierra Nevada have to offer. The North Tahoe/Truckee area is home to some of the most extensive diversity in this range, including a number of notable edible and medicinal plants.

While having a strong focus on the ethnobotanical uses of these plants, we will also cover the general ecology of this floristically diverse location and exactly what makes the broader Northern Sierra Nevada such a wondrous location when it comes to our natural areas.

The Martis Creek watershed, known as Timilick Valley by the Wá·šiw people, is an elaborate mosaic of wet camas meadows amidst perched humps of dry short sagebrush zones shaped by the meandering tributary waters to the Truckee River. In spring, bouquets of delightfully edible and medicinal plants begin their seasonal invitation of endearment. Many of the first genus to flower are starchy root foods (or geophytes) that speak to a longstanding kinship of subsistence provision: *Lewisia, Lomatium, Allium, Fritiallaria, Camassia, Perideridia, Triteleia* and *Calochortus* (in rough phenological procession). Before logging and drainage of sections of the meadow, the area was an important year-round fishery and likely plant gathering grounds for thousands of years.

We will track the layered stories of relationship to place by perusing macro and micro topography and discussing the autecology of various culturally important geophytes, to understand how they thrive with the continued reciprocity of horticultural tending. Curiosities will include: how rocks provide cool microclimates as lithic mulches; macrobiotic crusts and cracked soils are designed to catch certain seeds; the unique ways different soils retain moisture and the adaptive strategies of storage roots; playful penchants of propagules; and how the act of harvesting itself can be a beneficial disturbance that stimulates: by digging, scattering, grazing and trodding with care. We will also track the more recent layers of land relationships on our walk by investigating what types of plants show up where, and what they can tell us about underlying processes at play.

Together we will muse on the many ways that cultivating a deep understanding of niches is as much about how to move forward with our story of place as it is about the tales that came before.

Lake Tahoe Field Trip

Date and Time: Saturday, 24 May, 2025 - 09:00 to 17:00
Primary Organizer: Maria Bruno, University of Nevada, Reno
Additional Organizers: Lizzie Pintar (Gatekeeper's and Marion Steinbach Indian Basket Museum)
Maximum # participants: 36; **Fee**: USD$90.00

Participants will take a trip around Lake Tahoe with several stops to highlight the cultural and natural history of this stunning landscape. In particular, the tour will highlight the use and importance of Lake Tahoe to the Wá·šiw people who view the lake as a place of creation and where summer settlements were located Stops will include: the Gatekeeper's Museum to view the Indigenous basket collection, Meeks Bay Resort, which is managed by the Washoe Tribe of Nevada and California, the Lam Watah Nature trail, and the Tahoe East Shore Trail. A box lunch will be provided and enjoyed at a beach-side location along the journey (weather permitting!). There will be two locations for optional walks (again, weather permitting): a short (1 mile) portion on the Lam Watah trail (gravel and pavement) and a longer (2 miles), paved walk from the Memorial Point Scenic Overlook to the Tunnel Creek Café along the East Shore Trail. Both are easy, although we will be at about 6,000 ft above sea level, and the East Shore Trail is ADA accessible. Be sure to pack a 2L water bottle, sunscreen/hat, comfortable shoes, and layers for variable weather conditions.

List of Sessions

I. Land Stewardship

II. Challenging the Demonization of Wild Animals: Examining the Cultural Context for Conflict and Co-existence

III. Biocultural Heritage & Ecocultural Relationality

IV. Traversing Past Landscapes and Human-Environment Interactions

V. Plenary: Introduction to Place; How the Wá·šiw Language and Wá·šiw Legends Reflect Data and Observations Since the Beginning

VI. Roundtable: Ethnobiologists Sounding the Depths and Scaling the Heights of Global Health in a Changing World

VII. Indigenous Ecosystem Restoration Practices in the Himalayas

VIII. From Historical Ecology to Hysterical Ecology? Past Landscapes to Better Determine the Nature of Anthropogenic Landscapes

IX. Food Systems

X. Conserving Cultural Keystone Species

XI. Faith and Gender

XII. Supporting Biodiversity and Plant Justice through Varying Indigenous Concepts of Covenants of Reciprocity

XIII. Human-Animal Relations Across Diverse Environments and Places

XIV. Community, Climate and Food

XV. Chenopod Cuisines: Spatial and Temporal Explorations of Chenopodium Use Across the Western Hemisphere

XVI. Ethnomedicine

XVII. Ethnobiology Education Approaches

XVIII. Bats, Biodiversity and Ecological Knowledge

XIX. Collaborative and Community-Based Stewardship of Pinyon-Juniper Woodlands in the Great Basin

XX. Roundtable: Exploration, Organization, and Storytelling: Students at SoE

XXI. Roundtable: Launched! A Celebration of Recent Books in Ethnobiology and Beyond

XXII. Conservation of Culturally Important Sites

XXIII. Music, Language and Names

XXIV. Poster Session

Timetables

Prim = Prim Library
TCES = Tahoe Center for Environmental Sciences

DAY 1, WEDNESDAY, 21st MAY

Time (start)	Room: Prim 320	Room: Prim 214	Room: Prim 213	Patterson Hall	
7:30				Registration (7:30–14:30)	
8:00		R Programming for Ethnobiologists (8:00–17:00) includes 1 hr for lunch			
8:30					
9:00			Edible and Medicinal Qualities of Blue Elderberry (9:00–12:00)		
9:30					
10:00					
10:30					
11:00					
11:30					
12:00	Board Meeting (12:00-14:00)				
12:30			Seng SonSeng Song Sound Spa - An Intimate and Intentional Journey into Plant Music (12:30–14:00)		
13:00					
13:30					
14:00					
14:30			Preparing for Professional Opportunities Beyond Academia (Hybrid) (14:30–16:30)		
15:00					
15:30					
16:00					
16:30					
17:00 to 21:00				Opening Reception and Opening of Art Exhibit (18:00–21:00)	Registration (17:00–20:00)

DAY 2, THURSDAY, 22nd MAY

Time (start)	Room: Prim 213	Room: Prim 214	Room: TCES 206	Room: TCES 106	Room: TCES 139–141	Patterson Hall
7:30						Registration (7:30–17:00)
7:45						
8:00						
8:30	I. Land Stewardship (8:30–11:00)	II. Challenging the Demonization of Wild Animals (8:30–11:00)	III. Biocultural Heritage & Ecocultural Relationality (8:30–11:00)	IV. Traversing Past Landscapes and Human-Environment Interactions (8:45–11:00)		
8:45						
9:00						
9:15						
9:30						
9:45	Coffee Break (9:45–10:15)					
10:00						
10:15	Land Stewardship	Challenging the Demonization of Wild Animals	Biocultural Heritage & Ecocultural Relationality	Traversing Past Landscapes and Human-Environment Interactions		
10:30						
10:45						
11:00						
11:15					V. Plenary Lecture: Introduction to Place; How the Wá·šiw Language and Wá·šiw Legends Reflect Data and Observations Since the Beginning (11:15–12:15)	
11:30						
11:45						
12:00						
12:15		Lunch (12:15–13:45)				Student Mentor Lunch (12:30–13:30)
12:30	VI. Ethnobiologists Sounding the Depths and Scaling the Heights of Global Health in a Changing World (12:30–13:30)					
12:45						
13:00						
13:15						
13:30					Understanding Change and Adaptation in Mountain Regions: Public Session *"Application of Indigenous knowledge and management in mountain systems"* (13:30–15:30)	Registration (7:30–17:00)
13:45	VII. Indigenous Ecosystem Restoration Practices in the Himalayas (13:45–15:00)			X. Conserving Cultural Keystone Species (13:45–15:00)		
14:00		VIII. From Historical Ecology to Hysterical Ecology? Past Landscapes to Better Determine the Nature of Anthropogenic Landscapes (14:00–15:15)	IX. Food Systems (14:00–15:15)			
14:15						
14:30						
14:45						
15:00	Coffee Break			Coffee Break		
15:15		Coffee Break	Coffee Break			
15:30	XI. Faith and Gender (15:30–16:45)			XIV. Community, Climate and Food (15:30–17:00)		
15:45		XII. Supporting Biodiversity and Plant Justice (15:45–17:00)	XIII. Human-animal Relations Across Diverse Environments and Places (15:45–17:00)			
16:00						
16:15						
16:30						
16:45						
17:00						
17:30–19:00	Student Social (Location: Alibi Ale Works; 17:30–19:00)					

DAY 3, FRIDAY, 23rd MAY

Time	Room: Prim 213	Room: Prim 214	Room: TCES 206	Room: TCES 106	Room: TCES 139–141	Patterson Hall
7:30						
7:45						Registration (7:45–14:00)
8:00						
8:30				XVIII. Bats, Biodiversity and Ecological Knowledge (8:30–10:00)		
8:45	XV. Chenopod Cuisines (8:45–11:30)	XVI. Ethnomedicine (8:45–11:30)	XVII. Ethnobiology Education Approaches (9:00–11:30)			
9:00						
9:15						
9:30						
9:45	Coffee Break	Coffee Break				
10:00			Coffee Break	Coffee Break		
10:15	Chenopod cuisines	Ethnomedicine				
10:30			Ethnobiology Education Approaches	XIX. Collaborative and Community-Based Stewardship of Pinyon-Juniper Woodlands in the Great Basin (10:30–12:00)		
10:45						
11:00						
11:15						
11:30						
11:45						
12:00		Lunch (12:00pm – 1:30pm)		Lunch (12:00pm – 1:30pm)		
12:15	XX. Exploration, Organization, and Storytelling: Students at SoE (12:15–13:15)		XXI. Launched! A Celebration of Recent Books (12:15–13:15)			
12:30						
12:45						
13:00						
13:15						
13:30	XXII. Conservation of Culturally Important Sites (13:30–14:30)		XXIV. Poster Session (Mezzanine; 13:30–15:00)			
13:45						
14:00		XXIII. Music, Language and Names (14:00–15:00)				
14:15						
14:30						
14:45						
15:00	Coffee Break					
15:15						
15:30					General Membership Meeting, Awards Ceremony, Distinguished Ethnobiologist Presentation (15:30–17:00)	
15:45						
16:00						
16:15						
16:30						
16:45						
17:00						
18:00 to 22:00	Banquet (Bowl Incline; 18:00–22:00)					

DAY 4, SATURDAY, 24th MAY

Time (start)		
8:30		Plant Niche Stories/Edible & Medicinal Plants of the Timilick Valley (Northern Sierra Nevada) (8:30–13:00)
9:00	Lake Tahoe Field Trip (9:00–17:00)	
9:30		
10:00		
10:30		
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11:30		
12:00		
12:30		
13:00		
13:30		
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14:30		
15:00		
15:30		
16:00		
16:30		
17:00		

Presentation Schedule

*Presentations with an asterisk are being considered for the Barbara Lawrence Award.
Presenting authors in ***bold italics***.

DAY 2, Thursday, 22 May, 2025

I. Land Stewardship (08:30–11:00, Prim 213)

8:30 (Virtual)	***Dall'acqua Ayres, Ariadne****; Fernanda da Rocha Brando; Cristiana Simão Seixas* Sociobiodiversity Conservation and Socioeconomic Challenges: A Case Study from Southern Brazilian Indigenous Communities
8:45 (Virtual)	***Dickson-Hoyle, Sarah****; Lizzy Ignace; Shaun Freeman* "When You're on the Land, You Remember": Territorial Patrol as an Indigenous Model of Land-Based Engagement and Stewardship
9:00 (Virtual)	***Kepley, Evelyn****; Ryan Huish; Christine Small; James Chamberlain; Katie Commender; Matthew Sullivan* Experimental Harvest of an Appalachian Medicinal Plant, Goldenseal (*Hydrastis Canadensis*): Improving Sustainable Management through Ecological and Ethnobotanical Research
9:15	***Law, Justine*** Incorporating the Ecological Knowledge of Land Resilience Workers into the Wildfire Science Debate
9:30	***Mefford, Ethan*** Pious Landscapes: Arboriculture and Society in the 19th-Century Moroccan Jbāla
10:15	***Niesner, Chase*** Landscapes of Subjectification: New Directions for Linking Cultural Keystones and Self Understanding
10:30 (Virtual)	***Oeggerli, Virginia****, Jennifer Grenz* The Importance of Culturally Relevant Plant Classification when Evaluating Ecological Health: A St'at'imc Case Study on Post-Wildfire Landscape Recovery

10:45 (Virtual)	***Villar, Daniel**, Edwin Gutiérrez Tito, Anahi Paca-Condori, Paola Velásquez-Noriega, Edilio Mamani Mamani, Mario Arivilca Vilca, Edmundo Moreno Terrazas, Bastian Thomsen, Andrew Gosler* Totora as a Case Study of Declines of Traditional Resource Management in the Central Andes through Market Integration

II. Challenging the Demonization of Wild Animals: Examining the Cultural Context for Conflict and Co-existence (08:30–11:00, Prim 214)

8:30	***Anderson, Eugene*** Animals of Abuse Again: Demonization and Dehumanization
8:45	***Barone, Devon**, Ann Bryant* "A Fed Bear is a Dead Bear"
9:00	***Hernandez, Katherine*** Cougars, Charisma, and Celebrity: An Analysis of Changing Mountain Lion (*Puma concolor*) Media Coverage in Los Angeles, California since 1997
9:15 (Virtual)	***Mee, Allan*** Extinction and Reintroduction of Eagles in Ireland: The Historical Context to Demonisation of Native Predators
9:30 (Virtual)	***Miller, Katharina**, Georgina Berg, Indigenous Knowledge Keepers of Churchill, Michael Lickers, Nickia McIvor, Dominique Henri* "Bears are Like Family": Indigenous Knowledge of Human-Polar Bear Coexistence in Churchill, Manitoba
10:15 (Virtual)	***Nair, Sreekishen*** The Beautiful Birds at the Pillars of the Sky: Visual Phenology in Codex Laud 9-16
10:30	***Pierotti, Raymond*** Demonizing Natural Hybridization and False Conservation
10:45	***Sault, Nicole*** Bird Meanings For War and Peace: Weaponizing and Resistance

III. Biocultural Heritage & Ecocultural Relationality (08:30–11:00, TCES 206)

8:30	***Crowley, Jazlee*** One Tree, Three Perspectives: A Transdisciplinary Analysis of the Introduced Bodhi Tree, *Ficus religiosa,* in Hawai'i
8:45	***Bye, Robert**, Edelmira Linares* "Clinging to the Rocky Brows of the Barrancas…": Integrating Tropical and Temperature Biocultural Resources Across Altitudinal Gradients of the Sierra Madre, Chihuahua, Mexico
9:00	***Cannon, Carrie*** Threads of Life: The Yucca, The Moth, and Southwestern Tribe's Timeless Connection
9:15 (Virtual)	***Hart-Fredeluces, Georgia*** Reciprocal Caretaking And Affective Encounters Between Smallholder Farmers And Endemic Pili Trees (*Canarium ovatum*) in Sorsogon, Philippines
9:30	***Kwon, June Hee*** Nativeness as Copyright: Crafting the New Citrus Species in Jeju Korea
10:15	***Mathu, Patricia**, Madeline Augusta Turner, Taylor E. Hartson* Playing in the Dirt: Counteralmanac as Method
10:30 (Virtual)	***Miller, Andrew*** A Preliminary Report on Kâ-Ôtahtahkwanicik – "The Winged Ones": Plains Cree Birds
10:45	***Solankar, Saish*** A Hunter's Landscape in The Plantationocene: Multispecies Worldmaking in Rubber Plantations in Nagaland

IV. Traversing Past Landscapes and Human-Environment Interactions (8:45–11:00, TCES 106)

8:45	***Betts, Chelsea****, Jonathan Dombrosky, Steve Wolverton* Mulling Over Mule Deer: Body Size and Harvest Pressure in the Central Mesa Verde Region*
9:00	***Dombrosky, Jonathan****, R. J.Sinensky, Susan C. Ryan, Steve Copeland, R. David Satterwhite* Tracing Human-Bison Interactions Across the Landscape at the Haynie Site (5MT1905)
9:15	***Emslie, Steven*** Late Pleistocene Vertebrates in Caves with Human Artifacts in the Western U.S.: False and Real Associations Explained
9:30	***Hastorf, Christine****, Maria Bruno* Protective and Anticipatory Landscape Rituals on the Taraco Peninsula, Bolivia
10:15	***Jazwa, Christopher****, Amira Ainis, Ryan Anderson, Veronica Miranda, Maia Dedrick, Karim Bulhusen Muñoz, Alberto Calderón Vega* Community Engaged Archaeology in Cabo Pulmo National Park, Mexico: Implications for Conservation of an At-Risk Coastal Environment
10:30	***LaZar, Miranda,*** *Caroline Funk, Joshua Reuther, Scott Shirar, Liza Mack, Nicole Misarti* Integrating Ethno-Ornithology and Zooarchaeology: Comparisons of Unangax̂/Aleut and Seabird Relationships in the Eastern and Western Aleutian Islands, AK
10:45	***Welker, Martin,*** *David Byers, Jesse Alston* Historical Declines of Bighorn Sheep in the Southwest: Evidence for Shifting Baselines in Conservation?

V. Plenary Lecture (11:15–12:15, TCES 139-141)

11:15–12:15	***Herman Fillmore****, Culture/Language Resources Director—Washoe Tribe of Nevada and California* Introduction to Place; How the Wá·šiw Language and Wá·šiw Legends Reflect Data and Observations Since the Beginning

VI. Roundtable (12:30–13:30, Prim 213)

12:30–13:30	*Fowler, Cynthia; Elizabeth Olson; Janelle Baker* Ethnobiologists Sounding the Depths and Scaling the Heights of Global Health in a Changing World

VII. Indigenous Ecosystem Restoration Practices in the Himalayas (13:45–15:00, Prim 213)

13:45 (Virtual)	***Amritesh, AR****, V.S. Ramachandran, P.K. Viswanathan* The Role of Traditional Practices and Anthropogenic Interventions in the Ecorestoration of Sacred Groves in Kerala, India
14:00 (Virtual)	***Kopparambil, Sreelekha*** Indigenous Ecosystem Conservation Practices : An Insight into Indian Cultural Practices Aiding Conservation
14:15 (Virtual)	***Ormsby, Alison****, Subhani Rath* Management and Restoration of Cultural Ecosystem Services of the Sacred Groves of Kandhamal, Odisha, India
14:30 (Virtual)	***Sehgal, Anju Batta*** Traversing Ethnobiology of Higher Altitude Regions of Himalayas: Insightful Medicinal Uses of Weed Artemisia maritima”

VIII. From Historical Ecology to Hysterical Ecology? Past Landscapes to Better Determine the Nature of Anthropogenic Landscapes (14:00–15:15, Prim 214)

14:00	***Collier-Allen, Chloe****, Louis Forline* Departure from Traditional Stewardship and Its Effects on Herbivorous Arthropods within the Pinyon Pine-Juniper Communities of the Great Basin
14:15	***Forline, Louis*** Can We Untangle History to Better Understand Ecology?: A Retrospective View of Amazonian Landscapes
14:30	***Hammett, Julia*** Historical Ecology of the Future: Human Survival After the Great Collapse
14:45 (Virtual)	***Shay, C. Thomas Tom*** Historical Ecology of the Northern Plains: The Late 18th Century
15:00	***Tonenna, Dean*** Analyzing Plant Ecology, Archaeological Sites, and Traditional Needs to Restore Dormant Traditional Knowledges

IX. Food Systems (14:00–15:15, TCES 206)

14:00 (Virtual)	***Jones, Vanessa****, Jennifer Grenz* The Legacy of People-Soil Relationships: The Ethno-Soil Microbial Ecology of Indigenous Forest Gardens in the Pacific Northwest and Implications for Indigenous Food Systems Revitalization
14:15	***Revilla-Minaya, Caissa*** Variation and Food and Behavioral Taboos: An Exploration of Non-Human Beings in an Amazonian Society
14:30 (Virtual)	***Sachs, Nava,*** *Jennifer Grenz* A Methodological Approach to Enacting Food Systems Reconciliation at Hwkw'akw'la'hwum
14:45	***Herrera, Barbara*** Revitalizing Ecological Knowledge Through Food Forests in Miami, Florida
15:00 (Virtual)	***Rahayu, Yen Yen Sally****, Wawan Sujarwo* Unconventional Food Plants: A Path to Better Health and Wellbeing?

X. Conserving Cultural Keystone Species (13:45–15:00, TCES 106)

13:45 (Virtual)	***Arinyo-i-Prats, Andreu*** Red List of Cultural Threatened Practices, a Proposal for a Standardized Cultural Keystones Measurement
14:00 (Virtual)	***Flenley, Daniel*** The Cultural Significance of East Atlantic Migrant Birds
14:15 (Virtual)	***Ignace, Marianne*** Secwepemc Cultural Keystone Species, Wildfires and Indigenous Fire Stewardship
14:30	***Shebitz, Daniela*** Weaving Ssweetgrass through the Landscape and Over the Decades
14:45	***Spalding, Pamela*** Considering the Cultural Keystone Species Concept from Mole's Perspective

XI. Faith and Gender (15:30–16:45, Prim 213)

15:30	***Ezhevskaya, Anya*** Subdue and Multiply! Environmental Stewardship from the Depths of Faith
15:45	***Fahey, Fionna*** A Case for Feminist Science Studies in Ethnobiology

16:00	***Herron, Scott*** Gleaning Ethnobotanical Subsistence Lifeways from Historical Religious Documents
16:15	***Pech-Cardenas, Florencia****, Bianet Castellanos, Gabriela Spears-Rico* Maya Women Perceptions on Handicraft Production and Implications in Subsistence Autonomy
16:30	***Sharaibi, Olubunmi*** Exploring the Significance of Plants in Religious and Cultural Traditions Among the Yoruba Tribe of Southwest Nigeria

XII. Supporting Biodiversity and Plant Justice through Varying Indigenous Concepts of Covenants of Reciprocity (15:45–17:00, Prim 214)

15:45	***Baker, Janelle*** Northern Bush Cree Plant Kinship over Boreal Bitumen Deposits
16:00	***Maurice-Hammond, Isabelle*** Estuarine Root Gardens as Sites of Indigenous Caretaking and Resilience
16:15	***Spalding, Pamela*** Knowledge Bridging for Plant Justice through Covenants of Reciprocity
16:30 (Virtual)	***Turner, Nancy*** Our Generous Green Relatives
16:45	*Teixidor-Toneu, Irene, Àlvaro Fernández-Llamazares, Ricardo Alvarez Abel, Gantuya Batdelger, Elic Bell, Sophie Caillon, Mauricio Cantor, Joel Correia, Sandra Díaz, Jonathan Fisk, Alexander Greene, Spencer Greening, Simon Hoyte, Raivo Kalle, Gabriela Loayza,* ***Giulia Mattalia****, Rommel Montufa Jaime Ojeda, Suwichan Phatthanaphraiwan, Ismael Vaccaro, Natalie Ban* Human-nature Relationships through the Lens of Reciprocity: Insights from Indigenous and Local Knowledge systems

XIII. Human-animal Relations Across Diverse Environments and Places (15:45–17:00, TCES 206)

15:45 (Virtual)	***Andrascik, Nina****; Jennifer Grenz* Building Resilience through Tradition: St'át'imc Values and Knowledges for Hunting and Mule Dee
16:00	***Drew, Joshua****; L Jen Shaffer; Grace Grimes* Contested Shores: Oyster Ecosystem Services in Long Island
16:15	***Löki, Viktor*** The Knowledge and Perceptions of Recreational Anglers Related to Alien Plant Species in Freshwater Ecosystems: A Case Study from Hungary
16:30 (Virtual)	***Nagarkoti, Jyoti****; Dhanesh Ponnu; Ramesh Chinnasamy; Nehru Prabakaran; Sandeep Kumar Gupta* Fear and Fascination: Exploring Communities Knowledge, Perceptions and Practices Surrounding Snakes and Snake Bites in the Nicobar Archipelago, India
16:45	***Solankar, Saish*** An Insect Assemblage in a Lotha World - Multispecies Relatedness in Nagaland

XIV. Community, Climate and Food (15:30–17:00, TCES 106)

15:30	***Gagnon, Terese*** Recipes that Have Never Been Written: Karen Youth Enact Food Revivalism through a Community-Sourced Cookbook
15:45	***Glover, Mia*** Fijian Perspectives on Ecosystem Services: Mental Modeling for Climate Resilience and Food Sovereignty

16:00	***Kaminski, Alexandra****; Peter Hughes; Waisiki Sevakarua; Osea Dukuno; Joana Kamanalagi; Mia Glover; Joshua Drew* Investigating the Connections Between Food Choices and Climate Change Mitigation in Fijian Households
16:15	***Lotvonen, Varpu*** Foraged Foods in Dena'ina Cuisine
16:30	***Wooding, Stephen****; César Peña* A Tradition of Diversity: Biological and Cultural Variation in Yuca (Cassava, Manioc) in an Indigenous Bora Community.
16:45	***Nininger - Nenwero, Aaron - Abudu*** Ghanaian Agroecology - Resilience in the Face of Climate and Culture Change

DAY 3, Friday,23 May, 2025

XV. Chenopod Cuisines: Spatial and Temporal Explorations of Chenopodium Use Across the Western Hemisphere (8:45–11:30, Prim 213)

8:45	***Armstrong-Ingram, Angela*** Morphological and Stable Isotope Insights into Ancient Cultivation of Goosefoot in Owens Valley, California
9:00	***Belcher, Megan*** Using Carbonization Experiments to Explore the Effects of Charring on Goosefoot (*Chenopodium berlandieri*) Seed Morphology
9:15	***Carney, Molly*** From Incidental to Integral: The Significance of Chenopodium in Pacific Northwest Archaeology
9:30	***Fritz, Gayle*** Chenopod Cultivation in Eastern North America After the Intensification of Maize
10:15 (Virtual)	***Harris, Megan*** If It Walks Like a Goosefoot and It Talks Like a Goosefoot…: Chenopodium at the Chuchuwayha Rock Shelter
10:30	***Horton, Elizabeth****; Gayle Fritz; Natalie Mueller* The Edens Bluff Chenopodium Bag
10:45	***Mueller, Natalie****; Elizabeth Horton; Logan Kistler* Genomic Methods for Understanding Crop Histories in Eastern North America: New Insights into Chenopodium Domestication
11:00 (Virtual)	***Reamer, Justin*** Exploring Indigenous Management of Chenopodium in Northeastern North America
11:15	***Wohlgemuth, Eric*** Chenopodium Use in Precolonial California

XVI. Ethnomedicine (8:45–11:30, Prim 214)

8:45 (Virtual)	***Adebayo, Abdulrazak****; Abdulazeez Ogbe; Oyedamola Oke* Endophytic Fungi from the Medicinal Plant *Peperomia pellucida* (L.) Kunth Exhibit Antagonistic Potential Against Phytopathogenic Fungi.
9:00	***Chen, Caleb*** An Economic Strain (:) On the Bottleneck of Cannabis Genetics
9:15 (Virtual)	***Gamit, Sandip****; Rasik Sojitra; Snehal Gamit* A Comprehensive Review on Ethnomedicinal Plants Used in Management of Skin Diseases by Various Communities in Gujarat, India
9:30 (Virtual)	***Iddrisu, Rashid Abubakar*** How Plants Heal: Gonja Concepts of Healing

10:15 (Virtual)	***Brogden, Mette*** Why Phonetic Drift Endangers Indigenous Healing Efficacy
10:30	***Watson, Tyler*** From Tradition to Treatment: How Plants Become Drugs
10:45 (Virtual)	***Huish, Ammon****; Owen Johnson; Zuhayr Khan; Ryan Huish* Ethical and Professional Frameworks for the Integration of Traditional Medicine into Public Health Care Systems in the Global South
11:00 (Virtual)	***McGuire, Gina*** Climate & Lā'au Lapa'au (Hawaiian Medicinal Community)
11:15 (Virtual)	***Sullivan, Matthew****; Ryan Huish; Allison Scherer* Investigating Medicinal Plants in Actaea and Developing New Embryo Viability Techniques

XVII. Ethnobiology Education Approaches (9:00–11:30, TCES 206)

9:00	***Blazina, Ashley*** Every Voice At the Table: Work in Washington State to Reduce Systemic Inequities around Knowledge Sharing
9:15	***Bobsin, Courtney*** Ecosystem Wellbeing, Learning-Based Collaboration, and Ethnoforestry: A New Approach to Fores Management on the Olympic Peninsula, WA
9:30 (Virtual)	***Breesman, Amy June*** Cultural Stewardship and Waymaking with Local Contexts Labels and Notices
9:45	***Flachs, Andrew*** Ethnobiology, Social Reproduction, and the Work of Ecological Skill
10:30 (Virtual)	***Jemphrey, Michael*** Giriama Ethnoecology Project: Rapid Word and Story Collection
10:45	***Reid, Hannah*** Revitalising TEK to Increase Plant Awareness and Sustainable Behaviours
11:00	***Spadola, Loup****; Ludovic Granjon; Guilaume Odonne* Designing an Open Access Database Structure to Register and Protect Already Published Ethnobotanical Data. An Example from French Guiana
11:15 (Virtual)	***Walshaw, Sarah*** Study of Teaching and Learning (SOTL) in Ethnobiology: Sharing Food, Connecting People

XVIII. Bats, Biodiversity and Ecological Knowledge (8:30–10:00, TCES 106)

8:30	***Laugrand, Frederic*** Bats, Palm Civets and the Covid-19 Outbreak An Ethnobiological Conversation with the Iraya of Calomintao, Mindoro (Philippines)
8:45 (Virtual)	***Baran, Nicolas*** The Chronicles of Power: Cosmic Polity with Bats in Soppeng City, Sulawesi
9:00	***Coetsier, Margot*** Between Cave Depths and Canopy Heights: An Ethnography of Interspecies Relationships Among Bats and Itaukei People in the Fiji Islands
9:15	***De Meyer, David*** How the Ni-Vanuatu Manage to Preserve the Flying Foxes in an Area of Dangers?
9:30	***Vanhaelen, Justine*** Governmental Management of Bats, Insects, and Pesticides: Interspecies Relationships (Taiwan)
9:45 (Virtual)	***Vinogradova, Daria*** Bats, Lemurs and Birds in Madagascar. Local Meanings and Perspectives in Wild Nature Conservation Initiatives

XIX. Collaborative and Community-Based Stewardship of Pinyon-Juniper Woodlands in the Great Basin (10:30–12:00, TCES 106)

10:30	***Burow, Paul*** Building Effective Indigenous/non-Indigenous Alliances for Shared Forest Stewardship
10:45	***Cowie, Sarah*** Ecological Heritage of Care
11:00	***Lysgaard, Cole****; Peter Weisberg; Tom Dilts; Miranda Redmond; Alexandra Urza* Differentiating Pinyon-Juniper Woodland Types to Inform Ecological Resilience Management
11:15	***Reid, Hayley*** Collaborative Approaches and Novel Strategies for Post-Fire Restoration of Single-Leaf Pinyon Pine
11:30	***Syskine, Yarrow****; Diana Macias; Rosemary Frederick; Anna Magruder; Miranda Redmond* Impacts of Stand and Neighborhood Density on Pinyon Pine Cone Production
11:45	***Urza, Alexandra*** Masonic Mountain Pinyon-Juniper Shared Stewardship Project

XX. Roundtable (12:15–13:13; Prim 213)

12:15–13:15	*Solankar, Saish; J.T Mitchell; Tyler Watson; Cameron Dasher; Ricky Rietjens* Exploration, Organization, and Storytelling: Students at SoE

XXI. Roundtable: Launched! A Celebration of Recent Books in Ethnobiology and Beyond (12:15–13:15, TCES 206)

12:15	***Bruno, Maria*** "Growing the Taraco Peninsula: Indigenous Agricultural Landscapes": Perspectives on Integrating Voices from the Past and Present
12:30	***Fritz, Gayle*** Feeding Cahokia: Early Agriculture in the North American Heartland
12:45	***Kelly, Kindscher*** Sahnish (Arikara) Ethnobotany

XXII. Conservation of Culturally Important Sites (14:00–5:00, Prim 213)

14:00 (Virtual)	***Latosky, Shauna*** The Rhetorical Importance of Marula in Mursi, Southern Ethiopia
14:15	***McCune, Letitia*** The Protection of Medicinal Plant Gathering Sites
14:30	***McFarland, Jeremy*** Red Abalone Gardens: Cultural Keystone Species and Implications for Marine Conservation and Restoration*
14:45	***Soewu, Durojaye*** Sacrifices and Rituals in Ethno-biological Practices amongst the Yorubas, West Africa: Dynamics a Implications for Biodiversity Conservation

XXIII. Music, Language and Names (13:30–14:30, Prim 214)

13:30	***Blake, A.L.*** Generating Reproducible Research in Ethnobotany from the Perspective of Endangered Language Documentation
13:45	***Growingthunder, Raymond****; Kelly Kindscher* Tribal Nation Names and Ethnobotany for the USDA Plants Database
14:00	***Huish, Ryan****; Lise Dobrin* Documenting and Preserving Ethnobotanical Relationships and Language in Papua New Guinea through Collaborative Efforts with an Indigenous Community, Linguist, and Ethnobotanist
14:15	***Medinaceli, Armando****; Natalie Hansen* Ethnobotany of music: A Case Study from Northern Arizona

XXIV. Poster Session (13:30–5:00, Prim Mezzanine)

Jenkins, Molly*; Molly Carney* 12,000 Years of Climate Change and Fire in the Willamette Valley: A Multi-Proxy Paleoclimatic Reconstructio
McGuire, Gina; ***Kelsey Fitzgerald*** Climate & Lā'au Lapa'au (Hawaiian Medicinal Community)
Scanlon, Catherina*; Michael Gan; Ryan Zhu* Combining Ethnobotany and Linguistics: A Multimethod Ethnobiological Survey with the Ende Tribe in Western Province, Papua New Guinea
Law, Annabelle Cultivating Culture with Fire
Papson, Kylie Decolonizing Water Policy: Collaborative Ethnographic Methods for Equality in Policy Design at Lake Tahoe*
Twu, Chloe*; Paul Goldstein; Arianna Garvin* Exploring Viru (ca. 200 B.C.E– 600 C.E.) Foodways at Puerto Malabrigo in the Chicama Valley, Peru: Household Economy, Cuisine, and Gender Roles
Philbin, Casey*; Tod Swanson; Eric Tepe; Katherine Chacon-Godoy; Lee Dyer; Christopher Jefferey; Lora Richards* Maticu (Kichwa, Piper spp.), a Traditional Decongestant used in the Ecuadorian Amazon during the COVID Pandemic: Chemical and Biological Insights
Johnson, Emily Quantifying Change: Correction Factors for Carbonized and Desiccated Avocado Pits
Orhuamen, Elizabeth Roots of Time: An Integrated Spatio-temporal Assessment of Anthropogenic Impacts on Indigenous Forest Garden Species in British Columbia
VanDerwarker, Amber Tree Fruit Domestication in the Americas: 8,000 Years of *Spondias purpurea* Domestication at El Gigante, Honduras

Presentation Abstracts

Adebayo, Abdulrazak, Abdulazeez Ogbe, Oyedamola Oke. **Endophytic Fungi from the Medicinal Plant *Peperomia Pellucida* (L.) Kunth Exhibit Antagonistic Potential against Phytopathogenic Fungi** (XVI. Ethnomedicine)

Peperomia pellucida (L.) Kunth is a medicinal plant with ethnobotanical significance, yet the endophytic microorganisms associated with it and their antagonistic activities remain unexplored. This study isolated five fungal and two bacterial endophytes from the leaf tissues of *P. pellucida* and evaluated their antagonistic activity against *Aspergillus aculeatus* (OQ550967) and *Penicillium oxalicum* (OQ550966) using dual culture assays. Two fungal isolates, identified as *Aspergillus niger* (LSUPP-PF4-2) and *Aspergillus flavus* (LSUPP-PF5-1) based on ITS region sequencing, exhibited significant inhibitory activity against the phytopathogens. Both isolates demonstrated plant growth-promoting traits, including ammonia and hydrogen cyanide production and phosphate solubilization. GC-MS analysis of *A. niger* revealed bioactive compounds with antimicrobial properties. This study reports, for the first time in Nigeria, the antagonistic potential of endophytic fungi from *P. pellucida,* highlighting their role in plant health and the need to further explore this plant's medicinal and culinary applications.

Anderson, Eugene. **Animals of Abuse Again: Demonization and Dehumanization** (II. Challenging the Demonization of Wild Animals: Examining the Cultural Context for Conflict and Co-existence)

Edmund Leach observed that dogs, pigs, foxes, and other animals are used to insult people, as in: "You dog! You swine!" (1964). He concluded that many of these animals are structurally anomalous because they can be domestic and yet wild (like swine) or flourish in both wild and settled habitats (like foxes), thus crossing and messing up culturally important boundaries. Smith (2021) and Kteily (2015) have written on dehumanization, including the practice of calling people rats, cockroaches, and other animals associated with dirt and darkness. This paper extends their work to examine further characteristics of animal images as terms of abuse. Many animals are mistreated or exterminated, after demonizing them to excuse or justify such actions. In the process, people project their worst feelings about people onto the animals in question. Examining such projection and displacement provides insight into dehumanization and the ensuing mass murder.

Andrascik, Nina and Jennifer Grenz. **Building Resilience through Tradition: St'át'imc Values and Knowledges for Hunting and Mule Deer** (XIII. Human-animal Relations Across Diverse Environments and Places)

Mule deer (*Odocoileus hemionus*), a species of cultural significance and vital protein source for Interior Salish communities in British Columbia, have experienced population declines. Colonial land management and regulations slow-to-adapt to the impacts of mega-wildfires have led to widespread habitat destruction and intensified pressures on ecosystems. This study engaged Elders, hunters, land guardians, and knowledge keepers from seven St'át'imc communities through 33 semi-structured interviews, community workshops, and hunters' dinners to identify challenges, values, and priorities for mule deer stewardship. Participants emphasized the importance of honouring St'át'imc sovereignty and enabling traditional land stewardship to restore mule deer populations and develop new management frameworks. Beyond ecological benefits, the study reveals how revitalizing hunting practices fosters cultural resurgence, health, and well-being in St'át'imc communities, contributing to reconciliation and accountability. Addressing these challenges requires a fundamental shift in governance to enact Indigenous-led conservation so benefits for the land and all people can be realized.

AR, Amritesh, Ramachandran V.S., and Viswanathan P.K. **The Role of Traditional Practices and Anthropogenic Interventions in the Ecorestoration of Sacred Groves in Kerala, India** (VII. Indigenous Ecosystem Restoration Practices in the Himalayas)

Sacred groves, traditional ecosystems conserved through socio-cultural practices, are an integral part of biodiversity and cultural heritage. However, they are rapidly declining in number and area due to various socio-cultural and ecological challenges. The migration of younger generations to urban areas for education and employment disrupts intergenerational knowledge transfer, weakening efforts to restore and manage these groves. This shift has led to the erosion of socio-cultural practices, the foundation of grove conservation. Additionally, native plant-dominated groves face threats from alien and invasive species, further reducing their ecological value. To address these issues, it is essential to prioritize the prevention of grove degradation alongside conservation. Regular monitoring, removal of invasive species, and the reintroduction of native trees through planting or seed broadcasting are critical steps. Strengthening community involvement and fostering awareness among younger generations are equally vital for preserving the ecological and cultural significance of sacred groves.

Arinyo-i-Prats, Andreu. **Red List of Cultural Threatened Practices, a Proposal for a Standardized Cultural Keystones Measurement** (X. Conserving Cultural Keystone Species)

In our rapidly changing World, we need standardized datasets to assess the endangerment of cultural keystones essential for populations' well-being. Worldwide, curated, homogeneous datasets facilitate the communication between agencies, institutions and decision-makers to plan and design actions to safeguard communities. Such datasets need accessible, low-uncertainty, systematic measurement strategies. Drawing inspiration from ICUN's Red List of Threatened Species, on top of our work on cultural keystones and modelling of the basic cultural loss mechanisms, we make an initial proposal for standardised measurement of key cultural items (be it species, practices or places) affecting communities wellbeing. We propose a basic methodology to measure four elements defining a cultural keystone usage: frequency, variability, category of knowledge needed, and number of experts. Longitudinal data on these, as well as information on last use and the training of new experts, form the basis of our proposed threatened index for Endangered Cultural Keystones.

Armstrong-Ingram, Angela. **Morphological and Stable Isotope Insights into Ancient Cultivation of Goosefoot in Owens Valley, California** (XV. Chenopod Cuisines: Spatial and Temporal Explorations of Chenopodium Use Across the Western Hemisphere)

Stable isotope and morphological properties of Chenopodium seeds have implications for ancient water management practices by Owens Valley Paiute in eastern California. Isotopic $\delta^{13}C$ values from charred acorn and pine nuts differ from *Chenopodium spp.* recovered from the same contexts in archaeological sites in different regions of Owens Valley, and reflect differential water availability. Morphological features of Chenopodium spp. associated with domestication in other regions, in combination with increased density of small seed remains, suggest that irrigation practices developed between 1350–650 cal BP in Northern Owens Valley, with *Chenopodium spp.* an important irrigated plant.

Baker, Janelle. **Northern Bush Cree Plant Kinship over Boreal Bitumen Deposits** (XII. Supporting Biodiversity and Plant Justice through Varying Indigenous Concepts of Covenants of Reciprocity)

In what is now known as northern Alberta, Northern Bush Crees, who tend to the landscape with ancient and adaptive reciprocal traditions, are asked to quantify and justify their traditional land use through the consultation process with government and corporations who actively extract natural resources from Treaty No. 8 territory. One of many problems that arise from consultation is that many of the cultural keystone plants for Northern Bush Crees are not charismatic, or rare species for Settlers. So, when

communities try to protect such plants, they are unsuccessful because the plants are commonly found throughout the Boreal Forest. Many of the same plants, which are used for food and medicine, are now being sprayed with glyphosate by logging companies during the reforestation process. This paper will bring attention to some of these cultural keystone plants that are abundant in Boreal Forests, and the processes that protect and threaten them.

Baran, Nicolas. **The Chronicles of Power: Cosmic Polity with Bats in Soppeng City, Sulawesi** (XVIII. Bats, Biodiversity and Ecological knowledge)

In Soppeng City, South Sulawesi (Indonesia), thousands of bats inhabit the tamarind trees surrounding the central square. According to Bugis oral tradition, a 14th-century pact with the first divine kingship binds the bats to refrain from consuming cultivated fruits and to alert humans of any impending disasters. Related to meta-beings, bats are embedded in a hierarchical cosmic order that grants them influence over human destiny. This study explores the active role of these animal figures in shaping Soppeng's social, economic, and political transformations, and their enduring agency in contemporary politics becomes.

Barone, Devon and Ann Bryant. **"A Fed Bear is a Dead Bear"** (II. Challenging the Demonization of Wild Animals: Examining the Cultural Context for Conflict and Co-existence)

American black bears' characterization as intelligent opportunistic omnivores who live to eat anything and everything, especially high calorie foods that are easy to access, translates directly into a preference for human foods that makes them prone to conflict. The Lake Tahoe Basin has some of the clearest examples of this, due to its high urban density adjacent to native forest, among many other complicating factors. The BEAR League exists to help residents and visitors of Lake Tahoe coexist with its bear population, under the recognition that "a fed bear is a dead bear" and that helping bears unlearn their dependence on human food requires a group effort. When a bear is deemed to be "habituated to human food" by California or Nevada's Departments of Wildlife or if a citizen is issued a depredation permit, the bear is trapped and killed. Unfounded fears and hunting-oriented politics compound this human-induced problem.

Belcher, Megan. **Using Carbonization Experiments to Explore the Effects of Charring on Goosefoot (*Chenopodium berlandieri*) Seed Morphology** (XV. Chenopod Cuisines: Spatial and Temporal Explorations of Chenopodium Use Across the Western Hemisphere)

Seed size is an important variable in characterizing paleoethnobotanical assemblages, and the effects of charring is well studied for some species but not for others. It is important to understand these effects since during carbonization, seeds may or may not maintain enough of their qualitative morphology to be diagnostic. The morphological changes associated with carbonization may present in a variety of ways: seeds may or may not pop, swell, or distort, leading to an increase or reduction in diameter or testa thickness. To assess domestication status, seeds must be well preserved enough to observe seed diameter, the shape of the seed margin, and/or the texture and thickness of the testa. This paper focuses on one formerly domesticated crop from eastern North America, goosefoot (*Chenopodium berlandieri*). I want to understand the quantifiable effects of carbonization on goosefoot seed morphology and to help correct measurements of ancient specimens for these effects.

Betts, Chelsea R., Jonathan Dombrosky, and Steve Wolverton. **Mulling Over Mule Deer: Body Size and Harvest Pressure in the Central Mesa Verde Region*** (IV. Traversing Past Landscapes and Human-Environment Interactions)

Zooarchaeology provides valuable insights into human impacts on past landscapes, especially when untangling questions of overhunting and resource depression. These processes require multiple targeted

analyses to understand the individual influences of human and environmental factors on animals. Mule deer in the late pre-Hispanic central Mesa Verde region offer an excellent case study for understanding the importance of using zooarchaeological methods to isolate signatures of (un)sustainable resource use. Mule deer are culturally and dietarily significant, making their scarcity in the archaeological record from Pueblo I–III (750–1350 CE) a potential indicator of overhunting. While overhunting has been hypothesized as a cause of mule deer decline, supported by multiple strong case studies and relative abundance data (and indices), this interpretation warrants careful evaluation. Multiple analytical tools should be used to evaluate claims of unsustainable resource use. This study reevaluates the overhunting hypothesis using body size and mortality profile analyses, aiming to clarify hunting practices and their ecological impacts through time.

Blake, A.L.. **Generating Reproducible Research in Ethnobotany from the Perspective of Endangered Language Documentation** (XXIII. Music, Language and Names)

Ethnobotany uses data obtained from plants and from people. While ethnobotanical methods manuals (Albuquerque et al. 2019; Alexiades 1996; Martin 1995) guide researchers in preparation of plant data for future preservation and scientific accountability, they do not offer similar instruction for primary data obtained from people – even though such data may include audio- and video- recordings of little studied, endangered languages. We know that translations are not enough; ethnobiological knowledge is linked to the language that encodes it (Chiblow and Meighan 2021; McClatchey and Winter 2005; Stringer 2024). Recordings are valuable to members of the community and other researchers. This presentation explains basic methods for increasing the reproducibility of ethnobotanical field data (Berez-Kroeker et al. 2018). With examples from my own and others' collections in endangered language archives, I demonstrate how data collected in local languages is processed and preserved, while noting current limitations to archival design for interdisciplinary projects.

Blazina, Ashley. **Every Voice At the Table: Work in Washington State to Reduce Systemic Inequities around Knowledge Sharing** (XVII. Ethnobiology Education Approaches)

The importance of local and Indigenous Knowledge are recognized more widely and frequently in fields like ecology, anthropology, and archaeology than they have been in decades past. Despite this, there are a number of often-overlooked, systemically discriminatory practices that continue to prevent Indigenous and local knowledge (and knowledge holders) from fully being included, recognized, and honored in the discussions and decisions that shape these canons of knowledge. This paper looks at some of the new laws and policy changes in Washington state that were developed to work to reduce some of these barriers. This paper will review these laws and policies, share recent examples of work putting these new laws and policies into action, as well as share critiques of the continued challenges that remain.

Bobsin, Courtney. **Ecosystem Wellbeing, Learning-Based Collaboration, and Ethnoforestry: A New Approach to Forest Management on the Olympic Peninsula, WA.** (XVII. Ethnobiology Education Approaches)

Forest management has changed significantly over the last several decades as researchers and forest managers and practitioners deal with changing social, economic, and climatic needs. To address this, we propose using a new ecosystem wellbeing approach that centers both community and environmental wellbeing, understanding that both need to be addressed simultaneously and with equal seriousness. Achieving this starts with a formal process to engage people which is done through a learning-based collaboration approach where stakeholders, tribes, forest managers, and researchers engage with one another to address management questions and options through the scientific process. Input derived from the diverse array of participants is fed into ethnoforestry prescriptions, a people-focused forest management, that has a key goal of achieving ecosystem wellbeing. We present how this work is being

applied on two large, operational-scale forest management experiments on state and federal lands on the Olympic Peninsula, WA.

Breesman, Amy June. **Cultural Stewardship and Waymaking with Local Contexts Labels and Notices** (XVII. Ethnobiology Education Approaches)

In this introductory session, attendees will learn about the global work of Local Contexts, an Indigenous-led nonprofit. Responsive to years of iteration and learning with researchers and local communities, Local Contexts delivers much-needed digital tools which affirm Indigenous Peoples' access, attribution, and provenance over their own data in the natural and social sciences fields. The Biocultural and Traditional Knowledge Labels are assigned by Indigenous communities to reflect protocols, while Notices are used by researchers and institutions to disclose Indigenous data and interests. Ethnographers and those in related fields will learn how to use Local Contexts as a path finding tool for valuable collaboration in research and its utility to apply permanent identifiers in metadata to uphold the FAIR and CARE principles in support of Indigenous Data Sovereignty.

Brogden, Mette. **Why Phonetic Drift Endangers Indigenous Healing Efficacy** (XVI. Ethnomedicine)

The Gonjas' native language in rural northern Ghana, encodes traditional eco- and medicinal-knowledge through relational syllabic markers. We documented phonetic drift among native speakers of Gonja in 2021, becoming more noticeable as one moves west across Savannah Region, the traditional home of Gonja people. Since phonetic drift invariably leads to semantic drift, medicinal knowledge of traditional healers is becoming compromised.

This presentation covers how Gonjas are counteracting phonetic drift through language documentation methods with elders who still recall how their grandparents pronounced the names of flora and fauna species, thereby helping to preserve indigenous healing efficacy in the region.

Bruno, Maria. **"Growing the Taraco Peninsula: Indigenous Agricultural Landscapes": Perspectives on Integrating Voices from the Past and Present** (XXI. Launched! A Celebration of Recent Books in Ethnobiology and Beyond)

This book project began with a dissertation project that incorporated both ethnobotanical and archaeolobotanical datasets on Indigenous farming in the Lake Titicaca basin of Bolivia. The work of transforming dissertation chapters that separated ethnographic and archaeological data of farming into more coherent units of agricultural taskscapes over varied temporal scales was challenging but fun. I am happy to share the process of writing, rewriting, and thinking outside of the box of typical archaeological narrative styles, as well as any other questions future book-writers hope to discuss.

Burow, Paul. **Building Effective Indigeous/Non-Indigenous Alliances for Shared Forest Stewardship** (XIX. Collaborative and Community-Based Stewardship of Pinyon-Juniper Woodlands in the Great Basin)

The Masonic Mountain Pinyon Juniper Shared Stewardship Project is a collaborative planning initiative aimed at developing a comprehensive management framework for the stewardship of woodlands in the Bodie Hills region of the western Great Basin. This presentation provides an overview of the project’s approach to collaboration and alliance-building with Indigenous partners from the Washoe Tribe of Nevada and California, as well as the Bridgeport Indian Colony. It delves into the history of this collaborative endeavor and outlines some of the formalized processes that underpin our approach to collaborative conservation. These processes encompass consent-based decision-making and Indigenous data sovereignty protections, which inform our commitment to advancing healthy forest ecosystems, preserving cultural values, and upholding Indigenous sovereignty.

Bye, Robert and Edelmira Linares. **"Clinging to the Rocky Brows of the Barrancas...": Integrating Tropical and Temperature Biocultural Resources across Altitudinal Gradients of the Sierra Madre, Chihuahua, Mexico.** (III. Biocultural Heritage & Ecocultural Relationality)

The Sierra Madre Occidental has served as a North-South conduit for people and plants for millennia. Its dissected altitudinal gradient of more than 2800 m is cloaked with tropical and temperate floras with more than 2200 vascular plant species of which more than a quarter contribute to the Rarámuri (Tarahumara) people's corporal and spiritual well-being. The interactions and relationships between the Rarámuri and their vegetal world are manifested through interregional trade between communities in the "sierra" (mountains) and those in the "barranca" (deep canyons) as well as contrasting agrobiodiversity. Analysis of ethnobotanical documentations by "Relaciones Topográficas" (1700s), Edward Plalmer (1885), Carl Lumholtz (1890s), W. Bennett and R. Zingg (1930s), Campbell Pennington (1950s) and our team (since 1970s) reveals distinctive patterns of continuity and discontinuity of biocultural resources resulting from climate change, deforestation, immigration, and tourism.

Cannon, Carrie. **Threads of Life: The Yucca, The Moth, and Southwestern Tribe's Timeless Connection** (III. Biocultural Heritage & Ecocultural Relationality)

The Hualapai Indian Reservation of northwestern Arizona has four species of yucca characteristic of the Mojave Desert. The majority of the fifty yucca species thrive in the American Southwest, while others extend into Mexico and Guatemala. Yucca species have an extraordinary relationship with nature--a story of survival and collaboration. With little exception, each species depends on a specific moth for pollination, creating an exclusive bond. This mutual dependence, known as obliage mutualism, represents one of nature's most delicate and enduring partnerships. For millennia, the Hualapai and other Southwest Tribes have cultivated a deep connection with yucca for food, fiber, basketry, fuel, and sandals. These sandals, among Puebloan groups, were often woven with intricate geometric designs mirroring patterns found in pottery, textiles, and baskets, showcasing an extraordinary cultural artistry. This presentation explores the enduring connection between Tribes and yucca species of the region, tracing its significance through history to present-day.

Carney, Molly. **From Incidental to Integral: The Significance of Chenopodium in Pacific Northwest Archaeology** (XV. Chenopod Cuisines: Spatial and Temporal Explorations of Chenopodium Use Across the Western Hemisphere)

Once considered incidental inclusions, archaeologists within the last 10 years have finally begun to consider the role of charred Chenopodium seeds in past Pacific Northwest subsistence practices. In this presentation I synthesize data published in both academic and cultural resource management projects to determine the approximate extent, abundance, and timing of Chenopodium use across the US Columbia Plateau. I take a closer look at the goosefoot assemblage at a Middle Archaic food processing site, tentatively identified as *Chenopodium berlanderii* var. zschackei (pitseed goosefoot), and consider the depositional pathways and culinary choices that may have produced the curiously flattened seeds. By reflecting on the potential role of goosefoot within the broader precontact Plateau food system, I aim to shed light on its significance and integration into the dietary and cultural practices of the region's past populations.

Chen, Caleb. **An Economic Strain (:) On the Bottleneck of Cannabis Genetics** (XVI. Ethnomedicine)

This research in progress examines changes in cannabis genetics with a focus on cannabis genetic bottlenecking. Significant knowledge gaps exist in the study of how and why cannabis genetics have changed over time. To fill these gaps, a series of semi-structured qualitative interviews were conducted

with self-identified cannabis breeders around the world. Previous qualitative cannabis research has centered around users, growers, and dealers with few studies looking exclusively at cannabis breeders. Anticipated results include insights into changing cannabis breeding strategies and techniques as well as a historical shift to target high THC percentage, high yield in indoor cultivation settings, and low flowering times due to the economic pressures generated by various stages of The Prohibition. These results may be meaningful in highlighting the role of legalization on declining genetic diversity in the worldwide cannabis market—and its impacts on the medicinal potential and therapeutic index of legal cannabis products.

Coetsier, Margot. **Between Cave Depths and Canopy Heights: An Ethnography of Interspecies Relationships among Bats and iTaukei People in the Fiji Islands** (XVIII. Bats, Biodiversity and Ecological Knowledge)

As umbrella species and pollinators, bats are essential in preserving ecosystems and biodiversity. Despite their importance, five of the six species recorded in Fiji are considered endangered or vulnerable. Causes are manyfold. Invasive cats, mongoose and plants are one of the targeted problems. Furthermore, human's interventions such as the hunting and consumption of bats, timber industries, guano mining or tourist incursions are other established reasons. This paper captures the challenges at play concerning relationships between bats and (non)-humans in Fiji. By conducting a multi-site ethnography, this research questions how interspecies relationships are intertwined with contemporary and global issues. It focuses on empirical work conducted among iTaukei populations in Lau, Viti Levu and Vanua Levu islands and examines how the knowledge and involvement of local and indigenous communities are paramount to understand how diversities of cosmologies, transmission of practices and interspecies challenges play a key role against the current ecological crises.

Collier-Allen, Chloe and Louis Forline. **Departure from Traditional Stewardship and Its Effects on Herbivorous Arthropods within the Pinyon Pine-Juniper Communities of the Great Basin** (VIII. From Historical Ecology to Hysterical Ecology? Past Landscapes to Better Determine the Nature of Anthropogenic Landscapes)

Historically, indigenous groups such as the Wa She Shu (Washoe), Numu (Northern Paiute), and Newe (Shoshone) have been stewards to regions of the Great Basin they inhabited and have cultivated a strong connection to the land. One such culturally important species is the single leafed pinyon pine (*Pinus monophyla*) as it provided much needed sustenance during harsh winters. However, due to factors such as cultural assimilation, loss of land, declining resource availability, and anthropogenic climate change leading to lower masting events, several indigenous groups have been stunted or have completely lost their connection to this culturally important resource. This loss of stewardship has led to decline of biodiversity within the pinyon pine-juniper community. Such losses include herbivorous arthropods that utilize pinyon-juniper communities as a food resource. I plan to quantify the interactions between anthropogenic climate change factors, loss of indigenous stewardship, and herbivorous arthropod populations.

Cowie, Sarah. **Ecological Heritage of Care** (XIX. Collaborative and Community-Based Stewardship of Pinyon-Juniper Woodlands in the Great Basin)

Caring for pinyon-juniper woodlands also means caring for past, present, and future peoples. Here, I consider collaborative ecological research as a compassionate heritage activity, because it nurtures relationships and values knowledge that people have actively remembered for millennia. Ecological heritage includes intangible cultural heritage such as TEK and Indigenous Peoples' wisdom, as recognized by UNESCO. It also brings together both tangible and intangible elements of heritage ecologies to promote well-being for the ecosystem's entire human- and non-human community, from past to future.

As a non-Native archaeologist, I address heritage considerations as they emerge through collaborative activities. I also integrate work from Indigenous scholars who developed a framework variably described as "archaeologies of the heart" and "landscapes of care," which braids together threads from diverse fields such as women's studies, resource management, nursing, Indigenous studies, and social psychology. This approach rejects the western mind/body dualism and recognizes the validity of emotion, listening, and heartfelt care in scientific research.

Crowley, Jazlee. **One Tree, Three Perspectives: A Transdisciplinary Analysis of the Introduced Bodhi Tree, Ficus religiosa, in Hawai'i** (III. Biocultural Heritage & Ecocultural Relationality)

When species of plants and animals move across the world, it is often called migration, introduction, or invasion. However, when a people with a shared homeland and culture migrate across the globe, it is called diaspora. Our team conducts research on the diasporic spread and culture, thus diaspora, of the Bodhi tree (*Ficus religiosa*), the tree of enlightenment in Buddhism, on the Hawaiian island of Kaua'i. This research includes three facets unified under a transdisciplinary approach: a genetic analysis of Bodhi tree DNA lineages, the invasive trajectories and implications of the Bodhi tree on Kaua'i, as well as an overview of the contemporary Japanese culture in Kaua'i that considers these trees to be sacred. This presentation will share our ongoing analysis and illustrate a holistic view of the plant's impacts in a non-native region, and introduce our future goals to extend research to two more Hawaiian islands, O'ahu and Maui.

Dall'acqua Ayres, Ariadne, Fernanda da Rocha Brando, and Cristiana Simão Seixas. **Sociobiodiversity Conservation and Socioeconomic Challenges: A Case Study from Southern Brazilian Indigenous Communities** (I. Land Stewardship)

This work presents collective scenarios co-created with Indigenous peoples considering traditional practices as a way to overcome current deforestation and socioeconomic challenges. Using participatory methods, we interviewed 53 individuals from Kaingang and Guarani Peoples in six communities (Paraná, Brazil) to co-create future scenarios. They have been facing a vulnerable socioeconomic situation, relying on government assistance, and are susceptible to external pressure, which is increasing land leasing and illegal wood sales in the indigenous land. Guided by the Ethnographic Futures Research protocol, our findings revealed a local interest in revitalizing traditional practices to manage their crops, especially concerning the maintenance of yerba-mate (*Illex paraguaiensis*) and pinhão (*Araucaria augustifolia* seed). Additionally, locals are interested in identifying alternative sustainable community-based activities that could be implemented there. The current conservation initiatives do not generate significant economic returns for communities, whereas land leasing for the agribusiness market is advancing, exacerbating forest degradation.

De Meyer, David. **How the Ni-Vanuatu Manage to Preserve the Flying Foxes in an Area of Dangers?** (XVIII. Bats, Biodiversity and Ecological Knowledge)

Coming from the depths of the sea to reach the heights of the trees where the flying foxes live, cyclones are part of the landscape in Vanuatu. Cyclones cause serious casualties amongst the flying foxes communities and their environments. While waiting for food supplies coming by boat, the fragilized flying foxes of the islands become easy food for the locals whose gardens have been destroyed. Flying fox's meat is considered locally the best meat available. As a result, the equation in which the Ni-Vanuatu are involved is a complex mix of their own survival, those of the flying foxes and the government scheduled periods of hunting. The Ni-Vanuatu know well the importance of the flying foxes and they are credited for planting fruit trees that the locals are not planting themselves. This article aims to show the complexity of this situation and how the Ni-Vanuatu people understand and practice ecology.

Dickson-Hoyle, Sarah, Lizzy Ignace, and Shaun Freeman. **"When You're on the Land, You Remember": Territorial Patrol as an Indigenous Model of Land-Based Engagement and Stewardship** (I. Land Stewardship)

The ever-growing interest from scientists and land managers in Indigenous knowledge and stewardship practices has, for many communities, resulted in increasing engagement fatigue and demands for more community-led and culturally responsive approaches. In this presentation we draw on collaborative research with Skeetchestn, a Secwépemc Nation community located in interior British Columbia, Canada, to highlight the role of Indigenous 'territorial patrol' programs in leading innovative approaches to community engagement and land stewardship. We describe Skeetchestn's model of 'community ride alongs', in which Elders and resource users are invited to join territorial patrol staff as they drive and monitor the territory, and how this facilitates community documentation of cultural knowledge, sites and observations of landscape change; identification of community priorities for restoration; and "restorying" the territory, through inter-generational sharing of stories, memories and oral tradition. These findings demonstrate the value of community- and land-based engagement approaches, and the potential to scale up collaborative stewardship through Indigenous territorial patrols.

Dombrosky, Jonathan, R. J. Sinensky, Susan C. Ryan, Steve Copeland, and R. David Satterwhite. **Tracing Human-Bison Interactions Across the Landscape at the Haynie Site (5MT1905).** (IV. Traversing Past Landscapes and Human-Environment Interactions)

The Haynie site (5MT1905), an Ancestral Pueblo village in southwest Colorado, was intermittently occupied from approximately 700 to 1280 CE. Since 2017, the Crow Canyon Archaeological Center has investigated its role within local and regional networks, its function as a community center, and its interactions with the surrounding landscape. Excavations in 10th- and 11th-century CE contexts uncovered five bison (*Bison bison*) specimens, a notable find for the Mesa Verde region during this time. These remains, found across different stratigraphic levels, represent a Minimum Number of Individuals (MNI) of one, raising questions about how many individuals are represented. Were these remains locally procured or acquired through long-distance networks? This research uses AMS radiocarbon dating of bison and plant specimens and stable isotopic ($\delta^{13}C$) modeling to assess depositional rates and provenance. These analyses reveal patterns of resource acquisition, depositional practices, and the site's integration into broader environmental and cultural landscapes.

Drew, Joshua, L Jen Shaffer, and Grace Grimes. **Contested Shores: Oyster Ecosystem Services in Long Island** (XIII. Human-animal Relations Across Diverse Environments and Places)

Oysters provide a variety of ecosystem services, ranging from shoreline protection, to pollution alleviation, to supporting culturally important fisheries. However, not all of these ecosystem services can be maximized - one does not want to eat an oyster that was planted to sequester toxins from coastal waters! In this project we explore the various stakeholders in Long Island, New York and the various ways they interact with oysters on their shores. We bring together voices from Indigenous communities, yacht owners, shellfish farmers, town governments and many others whose lives intersect with oysters in meaningful ways. Despite this diversity of viewpoints we find that there are similarities in perceived threats and shared values. We view these data through a feminist conservation lens where we seek to build collaboration around shared values to protect the variety of lifeways that are dependent on being in relationship with oysters.

Emslie, Steven. **Late Pleistocene Vertebrates in Caves with Human Artifacts in the Western U.S.: False and Real Associations Explained** (IV. Traversing Past Landscapes and Human-Environment Interactions)

Many cave deposits in the western U.S. are rich in late Pleistocene vertebrate fossils. These caves are usually deep, dry, and located in arid environments where preservation of organic remains is highest. Many of these same caves were used by prehistoric peoples for hunting camps, shelters, or ceremonial purposes as evinced by cultural features, artifact assemblages and/or pictographs. Radiocarbon dating can reveal chronological differences between human artifacts and Pleistocene fossils, both of which are often found in the same layers and appear contemporaneous. Here I describe several cases of caves with apparent associations of human artifacts with Pleistocene fossils that resulted from taphonomic processes during a climatic transition from late Pleistocene to Holocene environments. Real associations also occur in some caves and may relate to recognition by prehistoric peoples of 'ancestral animals' in bones and fecal remains of species no longer present in the region by the early Holocene.

Ezhevskaya, Anya. **Subdue and Multiply! Environmental Stewardship from the Depths of Faith** (XI. Faith and Gender)

Protestants in evangelical and mainline traditions embrace the notion of a Creator God who entrusted the stewardship of the natural world and its resources to humans. This belief nestled in the depths of Christianity, coupled with an ever-increasing concern for environmental degradation, has compelled the global Lausanne movement and the Presbyterian (USA) and Disciples of God denominations to develop robust creation care programs. Although the programs differ in specifics, principles of advocacy, social justice, sustainable practice, and education underpin them all. In my paper I describe a Christian theological foundation for environmental stewardship and outline two denominational programs. Then I present a case study of one Presbyterian church implementing the PC(USA) Earth Care Congregation program. I analyze the components that have made this program successful and hypothesize on the far-reaching positive implications of faith-based environmental programs. I end with potential points of collaboration between religious and secular stewardship initiatives.

Fahey, Fionna. **A Case for Feminist Science Studies in Ethnobiology** (XI. Faith and Gender)

Seeds are adapted and situated in everyday life and practice. People care for seeds through alternative models of preservation and forms of kinship for next generations that resist settler registrars of property. My paper first reviews the rich ethnobiological scholarship and activism around local and embodied knowledges, seed practices, and critiques of intellectual property. I then advance feminist science studies scholarship on situated knowledge(s) and pilot ethnographic data collected through participant observation of seed yield trials in the Pacific Northwest. As a part of my larger dissertation project, I interrogate plant breeding science's tendency to suspend and naturalize seeds' dynamic relations. I argue that feminist attunements to sciences, including ethnobiology, will help scholars trouble the inherent power dynamics in knowledge production and seed relations. In short, it matters how we think about seeds and toward what futures (Haraway 2013).

Flachs, Andrew. **Ethnobiology, Social Reproduction, and the Work of Ecological Skill** (XVII. Ethnobiology Education Approaches)

Ethnobiology is a field that describes long-term, reciprocal relationships between humans and other living beings. The knowledge and ways of being with others that underlies these relationships is always contextual, a function of ecology, political economy, and culture. As a theoretical framework, social reproduction theory scholarship tends to ask how class is continually formed and labor differentiated. In ecological spaces, this social work also continually creates a physical environment: the stages on which

ecological skill is performed. While capitalist or colonial models of production often fail to describe value in ethnobiological terms, social reproduction provides a useful vocabulary for exploring the work, value, and learning of ethnobiology. This presentation explores ecological knowledge, traditional or not, through the lens of social reproduction theory to explore the work of learning and living in a dynamic landscape.

Flenley, Daniel. **The Cultural Significance of East Atlantic Migrant Birds** (X. Conserving Cultural Keystone Species)

Birds have deep significance in cultures across the world. What happens, though, when a bird migrates between landscapes where it holds very different cultural meanings? This talk presents a case study from the East Atlantic Flyway, with examples from work in the United Kingdom, Portugal, Morocco, Ghana and Nigeria. We will explore cultural and artistic representations of various long-distance migrants including cuckoos, swallows, turtle doves and nightjars. These will be compared with resident bird species, and with stylised and idealised birds. The idea of 'ethnobiomigratory space,' with its own depths and heights, will be presented to conceptualise the journeys of migrant species. The talk will end by considering the implications of this concept for bird conservation, especially in the context of global change. In the spirit of arts and culture, this talk will be delivered entirely as a performance poem.

Forline, Louis. **Can We Untangle History to Better Understand Ecology?: A Retrospective View of Amazonian Landscapes** (VIII. From Historical Ecology to Hysterical Ecology? Past Landscapes to Better Determine the Nature of Anthropogenic Landscapes)

Since the day and age of colonization in Brazil's Amazon region, indigenous peoples and their habitats have undergone significant changes. Occupation by European settlers and later by Brazil's moving frontier have impacted indigenous communities and their livelihoods, invariably altering landscapes and imposing new land use regimes. An expanding area of research in the area of historical ecology has unearthed past management regimes by indigenous peoples but can often dismiss the impacts of modernization and the current forces of globalization. In this paper I discuss some often ignored factors that come to play in understanding the footprint of anthropogenic landscapes in Amazonia, looking at the interplay between different actors engaging in this region. As such, I attempt to better fine tune conscious management activities and the net effect of different human settlement patterns in the Amazon region drawing on work among the Awá-Guajá and other indigenous communities.

Fritz, Gayle. **Chenopod Cultivation in Eastern North America After the Intensification of Maize** (XV. Chenopod Cuisines: Spatial and Temporal Explorations of Chenopodium Use Across the Western Hemisphere)

Cultigen goosefoot or chenopod (*Chenopodium berlandieri* ssp. *jonesianum*) is well represented in pre-maize archaeobotanical assemblages across much of eastern North America, often in concentrations accentuating its economic importance. Maize (*Zea mays* ssp. *mays*) eventually overshadowed all small-seeded members of the Eastern Agricultural Complex (EAC), but the dramatic rise of corn after CE 900 did not quickly impact chenopod production negatively, at least not in the central Mississippi Valley. Understanding the decline of EAC crops is complicated by lack of appreciation for their long-term persistence. I focus on the cultivation of chenopod throughout the Mississippian period and into colonial and modern times, and discuss implications for resilience of Indigenous foodways and potential contributions to local and global food security.

Fritz, Gayle. **Feeding Cahokia: Early Agriculture in the North American Heartland** (XXI. Launched! A Celebration of Recent Books in Ethnobiology and Beyond)

Feeding Cahokia (University of Alabama Press, 2019) was inspired years ago by Gary Paul Nabhan. Gary told me he searched through every book in the gift shop at Cahokia Mounds State Historic Site and found

nothing pertaining to the Eastern Agricultural Complex that was accessible to the general public. It hit me that I could write that book, and finally I did. Ancient Cahokia and the surrounding Mississippi River valley region serve as ideal settings for demonstrating that Indigenous farming in eastern North America was diverse and sophisticated and that women were the primary farmers. Publishing a book is usually slower than placing articles in academic journals, but a book can reach unexpected readers and bring rewards beyond institutional advancement.

Gagnon, Terese. **Recipes that Have Never Been Written: Karen Youth Enact Food Revivalism through a Community-Sourced Cookbook** (XIV. Community, Climate and Food)

At Transplanting Traditions Community Farm in Chapel Hill, NC a group of Karen high schoolers are undertaking a project to record foodways that have previously only ever been oral and embodied. By interviewing community elders and documenting their recipes and stories the youth seek to breathe new life into a cuisine that has traveled from Myanmar with members of the global Karen diaspora. Through the cookbook project, the youth attend to the embodied labour of Karen farmers and cooks in re-creating home and more-than-human connections in diaspora. Since there is much regional variation in Karen dishes, I track how such variation is accounted for in the cookbook or moments when it is elided through the demands of fixity. The cookbook is poised to be a powerful example of the re-spatialization of food sovereignty amidst diasporic food landscapes. Here I explore the embodied labor and subjectivities produced by these processes.

Gamit, Sandip, Rasik Sojitra, and Snehal Gamit. **A Comprehensive Review on Ethnomedicinal Plants Used in Management of Skin Diseases by Various Communities in Gujarat, India** (XVI. Ethnomedicine)

This review article includes using ethnomedicinal plants to cure different skin diseases documented in Gujarat state. A total of 56 papers were reviewed and listed about 193 plants that are used for Skin problems. Eighteen skin diseases classified under five categories based on their origin are Bacterial, Fungal, Viral, Parasitic, and Autoimmune. These plants are used to cure various skin diseases like Abscess, Boils, Mastitis, Leprosy, Ringworm, Tinea versicolor (Krodiya), Itching, Chicken pox, Measles, Warts, Rabies, Scabies, Psoriasis, Eczema, Leucoderma and specifically cosmetic practices. Among listed plants *A. indica, C. fistula, A. vera, M. peguensis, S. tora, J. sambac, S. urens,* and *B. ceiba* are mostly used to cure skin disease and in cosmetics. The significance of pharmacology is that proves it is used to cure that particular skin disease. It is important to understand that traditional practices are cost-efficient as well as beneficial to society in developing countries.

Glover, Mia. **Fijian Perspectives on Ecosystem Services: Mental Modeling for Climate Resilience and Food Sovereignty** (XIV. Community, Climate and Food)

In traditional Fijian communities, ecosystem services have allowed the iTaukei to remain resilient despite ongoing climate stressors. This relationship is often underexplored from local perspectives. Our research uses mental modeling to identify critical ecosystem services most valued in communities to learn about their ability to remain climate resilient in a changing environment. By co-creating mental models with local stakeholders, we document traditional and contemporary ecological knowledge, helping to facilitate a relationship between researchers and communities while centering on locals' most pressing climate concerns. We identify several shared ecosystem services, including fisheries supplementation, medicine, and the provisioning of culturally important forest products, that are most important to communities and can be used to gain a more in-depth understanding of resilient food systems under climate stress. This strategy allows us to better inform local ecosystem management, strategies for climate resilience, food sovereignty, and environmental sustainability.

Growingthunder, Raymond and Kelly Kindscher. **Tribal Nation Names and Ethnobotany for the USDA Plants Database** (XXIII. Music, Language and Names)

We are beginning a project working with tribal nation language programs to add tribal nation names and ethnobotany to the USDA Plants Database. Our project is now recruiting tribal language programs to work with us in adding linguistic diversity and ethnobotany to the USDA Plants database. With funding to help tribal language programs with the work, we will match scientific names of plants already in the database with Native names, plant uses, audio clips of the plant names being said, and possible images of plants being used. We will empower language programs to decide whether names or uses are appropriate to share. Our goal is to work with 5 language programs this year and another 7 next year. We believe that this effort will support Native languages programs, highlight traditional ecological knowledge and encourage Indigenous language use. Your ideas and suggestions are welcomed.

Hammett, Julia. **Historical Ecology of the Future: Human Survival After the Great Collapse** (VIII. From Historical Ecology to Hysterical Ecology? Past Landscapes to Better Determine the Nature of Anthropogenic Landscapes)

As current weather patterns become more extreme, climate watchers are confident our plight will only get worse. Some now speculate about our extinction. Half a century ago, anthropologist Elizabeth Colsen argued that while food scarcity has occurred many times in history, severe climate change could lead to dramatic increases in plagues, famines, civil unrest, revolts, reprisals, invasions, and "a loss of confidence in both the social and natural order." Through her ethnographic research and literature review, she identified "hard times" stories and coping strategies which were shared generationally. Based on my careful study of the current climate science, I hypothesize that some of our species will survive the coming collapse. I dig into our archaeological past for evidence of persistent adaptations that have withstood the test of time. I conclude with speculations about what our future might look like, based on a historical ecology of the past.

Harris, Megan. **If It Walks Like a Goosefoot and It Talks Like a Goosefoot…: Chenopodium at the Chuchuwayha Rock Shelter** (XV. Chenopod Cuisines: Spatial and Temporal Explorations of Chenopodium Use Across the Western Hemisphere)

Chenopodium is a genus of perennial and annual herbaceous plants recovered from paleoethnobotanical assemblages in the Fraser and Columbia Plateaus of North America. While prevalent in the paleobotanical record, they are often discounted as incidental environmental inclusions. A growing literature is having trouble reconciling the presence of Chenopodium species. This genus appears in great abundance across both Plateaus. It likely has some role in the lifeways of those Plateau peoples.

This paper presents the initial results of the paleoethnobotanical analysis at the Chuchuwayha Rock Shelter in southern British Columbia within the traditional unceded territory of the Upper Similkameen Indian Band (USIB). It explores the relationship between the archaeological remains of Chenopodium from Chuchuwayha and present-day Chenopodium species within the USIB territory. Given their prevalence at a culturally significant site to the USIB, it is likely the Chenopodium species here represents something beyond an incidental environmental inclusion.

Hart-Fredeluces, Georgia. **Reciprocal Caretaking and Affective Encounters between Smallholder Farmers and Endemic Pili Trees (*Canarium ovatum*) in Sorsogon, Philippines** (III. Biocultural Heritage & Ecocultural Relationality)

Reciprocal caretaking relationships between people and the environment support equity and sustainability by reinforcing social norms like sharing, not taking more than you need, and showing gratitude. While reciprocal caretaking includes emotional bonds, little research has explored the role of emotion in

shaping such relationships. Here, we draw from interviews with smallholder farmers in the Philippines to understand if and how reciprocal caretaking occurs between farmers and the endemic pili tree (*Canarium ovatum*), and to explore the role of emotion in shaping such caretaking. We find that farmers love and cherish pili as kin, due, in part, to its faithful persistence as a source of livelihood and thriving across generations. This kincentric love then reinforces and strengthens material and symbolic caretaking practices such as weeding, smudging, and singing to pili. This study helps illuminate the importance of emotion in creating and sustaining people-environment relationships that support sustainability.

Hastorf, Christine, and Maria Bruno. **Protective and Anticipatory Landscape Rituals on the Taraco Peninsula, Bolivia** (IV. Traversing Past Landscapes and Human-Environment Interactions)

Generations of ethnographers have documented many rituals that contribute to Andean food production, from subtle coca offerings to community-scale canal cleaning festivals. Here, we discuss rituals conducted annually in the community of Chiripa on the Taraco Peninsula, Bolivia to predict and to temper crop production. From two seasons of ethnographic work, we have learned about signals that exist across the landscape predicting moisture levels, how to protect springs, along with rituals to protect the agricultural lands and yields. We present the evidence of these actions, how they link to agricultural practice and the well-being of the landscape. These actions reveal the local understanding of where risk comes from and how to mitigate it. We will consider some of the ways this ethnographic case study can inform our understandings of past ritual ecologies in this landscape.

Hernandez, Katherine. **Cougars, Charisma, and Celebrity: An Analysis of Changing Mountain Lion (*Puma concolor*) Media Coverage in Los Angeles, California since 1997** (II. Challenging the Demonization of Wild Animals: Examining the Cultural Context for Conflict and Co-existence)

In 2012 a puma in Los Angeles County known as P-22 entered the public eye when he was spotted by camera traps set in Griffith park, and remained in the area until he was humanely euthanized in 2022. In both life and death, P-22 was treated as an unofficial mascot for the city of Los Angeles, highlighted in news media, artistic expression, and in campaigns for the world's largest wildlife crossing now being built over a major LA freeway. In this study, we ask how has the quantity and content of Los Angeles Times newspaper coverage on mountain lions changed since before, during, and after P-22? And what could this tell us about "charisma" and celebrity as conservation tactics? We've used Atlas.ti to code and analyze thousands of Los Angeles Times newspaper articles related to mountain lions from 1997 to 2023, and other Southern California newspapers for comparison.

Herrera, Barbara. **Revitalizing Ecological Knowledge Through Food Forests in Miami, Florida** (IX. Food Systems)

Local ecological knowledge is being buried by the same communities that actively depended on it for their survival. Often due to urbanization and the limited dissemination of knowledge between generations, urban youth are less likely to come into contact with natural environments and are therefore unequipped to find relevance in ecological knowledge. Given this disconnect, various organizations are developing programs and tangible products to facilitate the learning of ecological knowledge. The Education Fund, an organization based in Miami, Florida, develops programs to mitigate this issue through their installations of food forests within local public schools and with the production of food forest guides. Programs such as these provide students a green space that aids in the ecological knowledge continuum, facilitates active learning through outdoor science-based lessons, and contributes to development of self-sustaining students through the participation of caring for and growing food.

Herron, Scott. **Gleaning Ethnobotanical Subsistence Lifeways from Historical Religious Documents** (XI. Faith and Gender)

Reviewing the history of post-contact period settlements of Indian communities/tribal settlements in the current State of Michigan and its earlier territories (1600–2020) led to very detailed early historical period details on food subsistence and Anishinaabek cultural knowledge of plants. During a novel project to understand the distribution of Michigan's current federally recognized communities, the writings and manuscripts of the Catholic Church, primarily from the Venerable Frederic Baraga, Bishop of Marquette, 1853–1868. His diary, and official letters written to and from Baraga revealed key details about maple sap harvest and sugar production, wild rice harvesting, farming, fishing, and other subsistence activities among the tribal communities Bishop Baraga was a missionary among, and later ministered to as a bishop. Other documents from the Notre Dame Archives, especially the Frederic Baraga Papers (1809–1908) provided valuable missing first-person details of life among early Michigan's tribal communities.

Horton, Elizabeth, Gayle Fritz, Natalie Mueller. **The Edens Bluff Chenopodium Bag, 1932–1933** (XV. Chenopod Cuisines: Spatial and Temporal Explorations of Chenopodium Use Across the Western Hemisphere)

An exquisite, twined drawstring bag filled with goosefoot and Asteraceae seeds was excavated from the Edens Bluff site in the Arkansas Ozarks by a crew from the University of Arkansas in 1932. A direct AMS radiocarbon assay in the early 1980s dated the bag and its contents to the Middle Woodland period (approximately 2000 years BP), and close examination of the goosefoot seeds revealed them to be thin-coated *Chenopodium berlandieri* ssp. *jonesianum*. Until recently, the Asteraceae seeds remained unidentified, but we now recognize them as a member of the genus Rudbeckia. The mixture of these two seed types, carefully cleaned and stored for future cultivation or consumption, has implications for understanding plant domestication, cropping strategies, and Indigenous food systems in eastern North America.

Huish, Ammon, Owen Johnson, Zuhayr Khan, and Ryan Huish. **Ethical and Professional Frameworks for the Integration of Traditional Medicine into Public Health Care Systems in the Global South** (XVI. Ethnomedicine)

Traditional medicine plays a vital role in global public health but is often overlooked as an efficient and legitimate resource in treatment protocols. Understanding various approaches to the integration of traditional medicine and "Western" health clinics in the rural Global South can help us consider potentials to expand this hidden synergy in safe, inexpensive, and ethical ways. In an effort to understand this integration more fully, a literature review and analysis of WHO reports, country health policy data, and case studies were performed to qualitatively and quantitatively document the past and current integration of health policies within individual countries. Through these analyses, past integration methods can be categorized into three general trends: cultural studies, scientific medical analyses, and broad national policy initiatives. Through promoting these methods of integration, the two systems of traditional and western medicine can harmonize together in mutually beneficial ways towards better health for all.

Huish, Ryan and Lise Dobrin. **Documenting and Preserving Ethnobotanical Relationships and Language in Papua New Guinea through Collaborative Efforts with an Indigenous Community, Linguist, and Ethnobotanist** (XXIII. Music, Language and Names)

Papua New Guinea is the most floristically rich island in the world, and the most linguistically diverse, with over 850 languages spoken, each finely attuned to, and interwoven with the environment in which it

is spoken. Collaborative efforts between a linguist, an ethnobotanist, and an Indigenous community are documenting the Arapesh vernacular plant names and ethnobotanical terms and concepts to create a rich digital repository of co-created multilingual audio-visual recordings, texts, and stories, within appropriate ethical frameworks. One field method was to initiate Indigenous-created videos using high quality smartphones, emphasizing local concepts of distinguishing characteristics to identify plants, and details such as pronunciations, and how to harvest, prepare, and use the plants. Digital storytelling is one way they are preserving portions of their language associated with biocultural heritage vital to their enduring relationships with the environment and each other.

Iddrisu, Rashid. **How Plants Heal: Gonja Concepts of Healing** (XVI. Ethnomedicine)

Animist traditional healing among Gonja people of rural northern Ghana views sickness as a kind of being living in the ill person. The presentation contrasts the use of antibiotics to treat infection by Western biomedical practices with how indigenous Gonja healers use plant antibiotics to prevent illness, and explains the action of plant medicines used by healers to treat illness living in a suffering individual.

Ignace, Marianne. **Secwepemc Cultural Keystone Species, Wildfires and Indigenous Fire Stewardship** (X. Conserving Cultural Keystone Species)

The availability of Secwépemc cultural keystone species like sxúsem (Shepherdia canadensis) and other berries, as well as various historically and nutritionally important root plants, and cambium (e.g. Pinus contorta) has greatly diminished in past decades. This has been due to a combination of cumulative impacts that have affected key harvesting areas, including logging, mining, diminished access to harvesting areas, as well as pine beetle kill and subsequently wildfires. Recorded ethnobotanical knowledge about Indigenous fire stewardship has clearly shown the positive impacts of cultural burning practices on species and ecosystems, with burning practices depending on landscape, ecology and weather conditions in specific areas. We show here how by "walking on two legs" of Indigenous knowledge and western scientific documentation, we can revive and continue of age-old cultural burning practices and the detailed knowledge underlying it, to create better food security, wellbeing and ecological resilience on Secwepemcúlecw (Secwepemc land).

Jazwa, Christopher, Amira Ainis, Ryan Anderson, Veronica Miranda, Maia Dedrick, Karim Bulhusen Muñoz, and Alberto Calderón Vega. **Community Engaged Archaeology in Cabo Pulmo National Park, Mexico: Implications for Conservation of an At-Risk Coastal Environment** (IV. Traversing Past Landscapes and Human-Environment Interactions)

Archaeological data from coastal shell midden sites can have important implications for understanding long-term variations in ecosystem health and resource abundance. Our work in Cabo Pulmo National Park, Baja California Sur, Mexico, has allowed us to trace long-term patterns of change, with human occupation of the region beginning as early as 7,000 years ago and increasing over the most recent 2,500 years. Like many regions of the southern end of the Baja California Peninsula, Cabo Pulmo and the surrounding East Cape are at imminent risk of development and loss of natural and cultural resources. Our international research team has focused on public outreach and involving the local community to maximize the potential for conservation. In this talk, we will present the results of our archaeological research, including ethnobiological implications, and our community outreach activities, including our outlook for the future of this internationally recognized coastal ecosystem.

Jemphrey, Michael. **Giriama Ethnoecology Project: Rapid Word and Story Collection** (XVII. Ethnobiology Education Approaches)

"The Giriama people live along the coast of Kenya in an area of rich forest and ocean biodiversity.

This paper will describe how in 2024 members of the Giriama community, in partnership with SIL Global and A Rocha Kenya, held a two-week rapid word collection workshop during which small groups crowdsourced Giriama names of local fauna and flora. They also recorded indigenous ecological knowledge and traditional stories about the environment in the Giriama language.

The paper will then present plans on how the data collected will be used. Books will be produced in Giriama to share knowledge across the community and help inspire and educate the younger generation to care for their forest home. Data will be shared on the Global Biodiversity International Facility with the global scientific community to allow them to interact with the Giriama population to promote healthy ecosystems.".

Jenkins, Molly and Molly Carney. **12,000 Years of Climate Change and Fire in the Willamette Valley: a Multi-Proxy Paleoclimatic Reconstruction** (XXIV. Poster Session)

A complete and updated paleoclimate history of the Willamette Valley is critical in order to further archaeological and environmental research in the area. This study explores the broad climatic trends of vegetation and fire through charcoal influx rates, palynological records, and historical documents in respect to the archaeological record. By synthesizing data and recalibrating radiocarbon dates from existing paleoclimatic research, this study provides a complete and up-to-date history of the Willamette Valley's climate over the past 12,000 years. This overview aims to deepen our understanding of climate change through time and provides insight into our current climate crisis.

Johnson, Emily. **Quantifying Change: Correction Factors for Carbonized and Desiccated Avocado Pits** (XXIV. Poster Session)

Avocados provided a significant source of dietary fat for individuals throughout ancient Meso- and South America. This study quantifies the effects of carbonization and desiccation on the size and weight of fresh avocado pits to establish correction factors that accurately reconstruct the altered dimensions of archaeological samples. Haas avocado pits (n=128) underwent experimental carbonization and desiccation, with each pit's length, width, and weight recorded pre- and post-treatment. Linear regression models of these measurements confirm significant relationships between raw and altered measurements, enabling the creation of measurement correction factors with high R2 values. Results indicate that desiccation has a greater effect on pit morphology than carbonization, with individual correction factors necessary for each treatment type and measurement. This information provides insights for researchers analyzing avocado pits subjected to similar taphonomic processes, ensuring the reliable reconstruction of archaeological data and interpretation of avocado tree management through time.

Jones, Vanessa and Jennifer Grenz. **The Legacy of People-Soil Relationships: The Ethno-Soil Microbial Ecology of Indigenous Forest Gardens in the Pacific Northwest and Implications for Indigenous Food Systems Revitalization** (IX. Food Systems)

The ancient forest gardens of the Ts'mysen, Gitanyow, Nuu-chah-nulth, and Coast Salish reflect the legacy of Indigenous plant and soil stewardship, and are home to diverse, food-producing systems distinct from peripheral coniferous forests. Historical and ecological research demonstrates evidence of the higher biological and functional plant diversity of forest gardens, as well as distinct soil properties shaped by centuries of Indigenous management. To understand the legacy of Indigenous stewardship practices on soil microbial communities, we characterized and compared the soil microbiomes of culturally significant native plants in forest gardens to periphery conifer forests. Our results show greater microbial richness and diversity in garden soils, as well as overlapping microbial communities between certain native species. These results suggest that reclaiming people-forest-soil relationships are important to long-term forest health and resiliency, especially amidst a changing climate. They may also inform

practical management practices to improve Indigenous food systems revitalization and ecological restoration outcomes today.

Kaminski, Alexandra, Peter Hughes, Waisiki Sevakarua, Osea Dukuno, Joana Kamanalagi, Mia Glover, and Joshua Drew. **Investigating the Connections between Food Choices and Climate Change Mitigation in Fijian Households** (XIV. Community, Climate and Food)

Climate change impacts food sovereignty. Choices communities make to manifest that sovereignty fluctuate based on environmental conditions and resource access. To investigate how iTaukei communities balance risk of food production and access we conducted 71 surveys in three localities across Fiji. We questioned which foods were purchased from town, which foods were grown locally, and how different factors affected choices. Geography and extreme events influence food production while remoteness influences food access; this affects risk mitigation in communities. Our ordination analysis comparing food items clustered in town and village groups showed little overlap between community grown and purchased food, however, there was a higher degree of variation within the community grown foods. Purchased food and frequency of travel were consistent regardless of distance or cost of travel suggesting that items from towns were relatively inelastic to costs. We see iTaukei communities are splitting risks by maintaining two complementary food systems.

Kepley, Evelyn, Ryan Huish, Christine Small, James Chamberlain , Katie Commender, Matthew Sullivan. **Experimental Harvest of an Appalachian Medicinal Plant, Goldenseal (*Hydrastis canadensis*): Improving Sustainable Management through Ecological and Ethnobotanical Research** (I. Land Stewardship)

Goldenseal (*Hydrastis canadensis*) is a vulnerable eastern North American deciduous forest herb that is often used for its medicinal properties. Increasing demand and unsustainable harvesting practices have contributed to the plant's decline. The objectives of our 5-year study are to examine: 1) effects of experimental harvests on naturally occurring populations; 2) success of rhizome propagation for root production and forest farming practices; and 3) phenology to investigate developmental stages of goldenseal and how that relates to harvester interviews. Study plots (1 m^2) were established in naturally occurring populations in Kentucky and Ohio. In each plot, density, height, leaf size, and reproductive status were recorded, and experimental harvests conducted. Harvested rhizomes were transplanted into cultivation plots to monitor regrowth across the study period. Results recorded from this project are used to better understand population recovery and sustainable harvest levels, with our data suggesting higher harvest intensities do significantly impact Goldenseal populations.

Kindscher, Kelly. **Sahnish (Arikara) Ethnobotany** (XXI. Launched! A Celebration of Recent Books in Ethnobiology and Beyond)

This book describes the traditional use of wild plants among the Arikara (Sahnish) for food, medicine, craft, and other uses. The Arikara grew corn, hunted and foraged, and traded with other tribes in the northern Great Plains. Their villages were located along the Missouri River in northern South Dakota and North Dakota. Today, many of them live at Fort Berthold Reservation, North Dakota, as part of the MHA (Mandan, Hidatsa, Arikara) Nation. We document the use of 106 species from 31 plant families, based primarily on the work of Melvin Gilmore, who recorded Arikara ethnobotany from 1916 to 1935. The work serves as an important regional ethnobotany of the Arikara Tribe, one of the most influential on the Northern Plains, and should be of great interest to ethnobotanists, ethnomedical practitioners, historians, and other Indigenous Peoples. More importantly, this book is for the Arikara people of all ages as documentation of, and reconnection to, their cultural heritage.

Kopparambil, Sreelekha. **Indigenous Ecosystem Conservation Practices : An Insight into Indian cultural practices aiding conservation** (VII. Indigenous Ecosystem Restoration Practices in the Himalayas)

Sacred ecology is a living breathing cultural aspect in most Asian countries and especially so in India. Indigenous ecosystem conservation practices in India include a wide range of activities in its rural and urban landscape often intertwined with cultural and religious practices the benefits of which are unknown to the youth. Most of these ecosystem conservation practices are viewed through the religious & spiritual lens and often, their value in providing ecological services is overlooked. This paper intends to initiate a dialogue to promote a holistic outlook towards multifarious indigenous ecosystem conservation practices in India like the sacred groves, sacred trees, step wells, star forests, the consumption of 10 herbal leaves during the monsoon, worship of certain animals and plants, along with the many taboos associated with these practices. Attached to these practices are the many taboos which have in many cases contributed to the ecosystem conservation.

Kwon, June Hee. **Nativeness as Copyright: Crafting the New Citrus Species in Jeju Korea** (III. Biocultural Heritage & Ecocultural Relationality)

Citrus farming has been a defining industry on Jeju Island, shaping its ecology, economy, and daily life for several decades. However, the commercialization of citrus as a widely accessible fruit only began in the 1960s. This transformation was sparked by Koreans in Japan—displaced from Jeju during and after the colonial era—who sent Japanese citrus trees as gifts to aid the economic revival of their impoverished homeland. Since then, Jeju's citrus farming industry has flourished, supported by Japanese training programs, the introduction of new citrus species, and technological advancements. This paper addresses the growing need to integrate native citrus species into Jeju's farming landscape. Drawing on a year of archival and field research conducted in Jeju and Japan, it examines the ecological and economic implications of "nativeness," considering intellectual property rights and cultural connections to local territory and the natural environment in Jeju, South Korea.

Latosky, Shauna. **The Rhetorical Importance of Marula in Mursi, Southern Ethiopia.** (XXII. Conservation of Culturally Important Sites)

Among the Mursi of southern Ethiopia, wild plant foods are discussed as having a lower profile than agro-pastoral foods. While sorghum (or maize) porridge (tila), makes the most significant contribution to the daily diet of the Mursi (Turton 1973), in the absence of milk, wild edible plants, especially boiled leaves (kinnoi), are eaten together with porridge. Wild edible fruits (kênô bhurra) and roots (kirimoga) also provide vital nutrients throughout the year, especially during periods of cyclical scarcity. One of the most culturally salient "famine foods" (bhaaga rôbhôgay) in northern Mursi is that of marula (chobui), also referred to as "children's food" (tilaa eruin) (LaTosky 2022). Understanding the importance of marula for the Mursi has been largely understudied and will be discussed in relation to Mursi rhetoric, knowledge, production, and the use of 'children's famine foods' using visual anthropological methods.

Laugrand, Frederic. **Bats, Palm Civets and the Covid-19 Outbreak An Ethnobiological Conversation with the Iraya of Calomintao, Mindoro (Philippines).** (XVIII. Bats, Biodiversity and Ecological Knowledge)

The Iraya live on the island of Mindoro, Philippines. After the Covid-19 outbreak, when bats and palm civets were accused to be at the origin of the pandemic, they reacted with doubt, like many Indigenous people in Asia. The Iraya coexist with bats (adas) and palm civets (musang) for a long time. This paper explains how their cosmology connects predation to compensation, maintaining symbiotic/mutualistic relationships with all the beings living around them. Despite Christianization, master spirits continue to

play a structuring role and a series of prohibitions are perpetuated with them. Iraya argue that bats and palm civets do not represent a threat as long as they are respected as a prey, as well as their biota. They are valued for the various services they provide to humans, and their meat and substances are used for medicinal purposes.

Law, Annabelle. **Cultivating Culture with Fire.** (XXIV. Poster Session)

How do we learn to live with fire? It is a complex, yet fundamentally simple question we need to ask ourselves and others. For many, memories of fire in California are shrouded with fear. Although wildfire has become a common topic on the news and emerged as a higher priority for state and federal governments, the western narrative and public understanding of fire are severely lacking in the ecological and cultural components of fire. Indigenous communities have been actively engaged in fire stewardship in what is now known as California long before colonization. Today, Indigenous communities continue to resist and survive generations of land dispossession and physical/cultural genocide through eco-cultural revitalization. Through centering the stories of how the North Fork Mono Tribe is revitalizing their cultural fire practices, we are able to learn about the past, present, and future possibilities for Indigenous sovereignty and fire stewardship.

Law, Justine. **Incorporating the Ecological Knowledge of Land Resilience Workers into the Wildfire Science Debate** (I. Land Stewardship)

How should we manage forests for fire? Most fire scientists and forest managers advocate more active management through thinnings, prescribed burns, etc. These fuel management practices are intended to prevent catastrophic fire and, often, resuscitate indigenous land management regimes. But another body of scholarship argues that fuel management only makes wildfires more damaging. This "dissident" scholarship has made its way into popular media and the messaging of various environmental organizations, and it has ignited a fierce debate. This debate, however, leaves out important perspectives: the perspectives of people who do land resilience work. Here I draw on new ethnographic fieldwork in the American West to share what the people who physically manage landscapes for fire (e.g. forestry technicians, US Forest Service certified sawyers, and certified indigenous land workers) think of this debate. In doing so, I foreground their ecological knowledge, forest stewardship practices, and views on fire science.

LaZar, Miranda, Caroline Funk, Joshua Reuther, Scott Shirar, Liza Mack, Nicole Misarti. **Integrating Ethno-Ornithology and Zooarchaeology: Comparisons of Unangax̂/Aleut and Seabird Relationships in the Eastern and Western Aleutian Islands, AK.** (IV. Traversing Past Landscapes and Human-Environment Interactions)

Seabirds are important sentient beings in Unangax̂/Aleut ontologies. Seabird skins were used for everyday parkas as well as magical guises that facilitated transformations of people into birds in ancestral times. The relationships among Unangax̂/Aleuts and seabirds were not uniform across the archipelago; and little is known about relational variation across distinct cultural island groups. Additionally, we expect local ecosystems and oceanographic conditions to influence the histories of people and seabirds on the landscape. We use oral history and ethnohistory accounts of seabirds to complement zooarchaeology and bulk stable isotope analyses in a holistic study of the cultural and ecological relationships that bound the Unangax̂/Aleut and seabirds between Sanak Island and Agattu Island. This study highlights how human interactions with seabirds may have been differently shaped by cultural preferences, influence from neighboring cultural groups, and local environmental conditions on either end of the Aleutian Archipelago.

Löki, Viktor. **The Knowledge and Perceptions of Recreational Anglers Related to Alien Plant Species in Freshwater Ecosystems: A Case Study from Hungary** (XIII. Human-animal Relations Across Diverse Environments and Places)

Recreational anglers' ecological knowledge and perceptions might include those of alien organisms and might be particularly important in monitoring and revealing the causes of aquatic invasions. To learn more about anglers' knowledge and perceptions of alien plant species, 72 field interviews were conducted between 2021 and 2023 at four regularly fished freshwater bodies in Hungary. During interviews, photographs of 12 alien plant species were shown. Those regularly fishing at thermal water habitats were able to correctly identify more of the invasive plants. Two of the anglers confessed that a plant species and a fish species previously held in aquaria had been intentionally released into the wild by them. We suggest that anglers are an untapped resource in defining and implementing conservation strategies that could counter the spread and establishment of aquatic plant invasives.

Lotvonen, Varpu. **Foraged Foods in Dena'ina Cuisine.** (XIV. Community, Climate and Food)

In Alaska, traditional diets center on meat and fish; yet, plants were widely used to supplement nutrition. Today, traditional foods—including plants—enjoy renewed attention because of their physical, social, and cultural health benefits and waning importance in people's food practices. This research, conducted within the National Park Service and in partnership with Dena'ina stakeholders, will explore past and present uses of culinary plants. The projected impact of this research stems from knowledge sharing. Both rural and urban Dena'ina have access to plants, and foraging may offer culturally salient, rewarding outdoor activities, and a nutritious addition to contemporary diets. This presentation reviews the existing literature, and highlights the potential of foraging practices to sustain cultural connections while addressing contemporary food insecurity and nutritional challenges.

Lysgaard, ColePeter **Weisberg**, Tom Dilts, Miranda Redmond, Alexandra Urza. **Differentiating Pinyon-Juniper Woodland Types to Inform Ecological Resilience Management** (XIX. Collaborative and Community-Based Stewardship of Pinyon-Juniper Woodlands in the Great Basin)

There is a need for management strategies that address the various threats to pinyon-juniper woodlands. To be effective, management strategies must consider the variable nature of woodlands, which differ greatly in stand structure, understory, past disturbance, and land use history. This variability requires treatments tailored to individual woodlands, yet is poorly documented in western science. This study seeks to understand and communicate woodland variability by describing distinct woodland types at a study site in the Eastern Sierra Nevada. Hierarchical cluster analysis was used to group 181 sampling plots into seven woodland types based on their stand structure. In addition to stand structure characteristics, we described the tree species composition, environment, health, and understory of these woodland types. We then used spatial models to predict their occurrences across the study area. With these woodland types identified and mapped, management actions can selectively target the values and threats unique to each type.

Mathu, **Patricia**, Turner, Madeline Augusta, Harston, Taylor E. Hartson. **Playing in the Dirt: Counteralmanac as Method.** (III. Biocultural Heritage & Ecocultural Relationality)

Almanacs are prophetic: they speculate on agrarian futures through close attention to the present. Almanacs have rich agricultural histories and new "counteralmanacs" (Blanchette and LaFlamme 2019:59) play on their form to creatively respond to contemporary uncertainties like social inequity and environmental degradation. Playing in the Dirt is a collaborative art book featuring work from over two dozen queer midwestern farmers. Not unlike the zines of punk and queer communities, this

alternatively-published book and participatory research project explores the worlds and ecologies of queer growers through a counteralmanac form. LGBTQIA+ landworkers have much to share about joy, relationships, futurity, and biology - and counteralmanacs became a powerful tool for exploring, co-creating, and disseminating their knowledge(s). From hand-dyed paper to a sliding scale contribution for sale, we bring forward how "playing in the dirt" transgresses metaphors, mediums, and methods.

Maurice-Hammond, Isabelle. **Estuarine Root Gardens as Sites of Indigenous Caretaking and Resilience** (XII. Supporting Biodiversity and Plant Justice through Varying Indigenous Concepts of Covenants of Reciprocity)

Estuarine root gardens are Indigenous plant stewardship landscapes on the Pacific Northwest Coast of North America. As "living archaeological sites," these places often still contain large quantities of traditionally managed plant foods (namely, Pacific silverweed (Argentina egedii) and springbank clover (Trifolium wormskioldii), with features of past caretaking still present even a century after the cessation of active caretaking practices. As such, they represent import nexus points of connection with descent communities, with high potential for eco-cultural restoration. Using a "Walking on Two Legs approach" (as originally articulated by the Stk'emlúpsemc te Secwépemc Nation), this paper suggests a methodology for identifying estuarine root gardens that may no longer be known by descent communities, thus re-inserting them within broader cultural landscapes and supporting Indigenous sovereignty.

McCune, Letitia. **The Protection of Medicinal Plant Gathering Sites.** (XXII. Conservation of Culturally Important Sites)

Given this year's conference theme of ethnobiology across depths and heights, this presentation will focus on environmental factors that influence the potency of medicinal plants with a focus on traditional gathering sites. A review of the research will illustrate the effects of altitude, soil conditions, temperature, light, and stage of development on secondary metabolites of select herbs. Growing conditions have been found to affect volatile chemical production, essential oils, flower production, antioxidants, etc. Compiling the known compounds of gathered medicinal plant species, in combination with the above research, could help the feasibility of highlighting a particular plant species population as critical to an Indigenous community's health. With methods in place to maintain the privacy of sites, the collecting practices and site conditions could be documented along with known information on the plant species to clarify the medical importance and need for protection of traditional gathering sites.

McFarland, Jeremy. **Red Abalone Gardens: Cultural Keystone Species and Implications for Marine Conservation and Restoration*** (XXII. Conservation of Culturally Important Sites)

Red abalone (*Haliotis rufescens*) is a cultural keystone species vital to the cultural identity and lifeways of local and neighboring California Indigenous communities for millennia. Now critically endangered, red abalone populations face threats from climate change, habitat loss, and other impacts. Indigenous abalone gardens in southern Humboldt County, CA give insights into long-term socio-ecological relationships between the Ancestral Nek'anní (Bear River) and their marine environments. Archaeological and ecological research suggests that these gardens have increased the abundance and biodiversity of intertidal organisms and have enhanced microhabitats crucial for successful red abalone reproduction. This research has the potential to inform red abalone restoration efforts, providing a blueprint for community-based conservation strategies and innovative solutions for protecting important marine ecosystems for future generations. This work is in support of and supported by the Bear River Band of Rohnerville Rancheria who aim to revitalize their cultural heritage and traditional practices within their homelands.

McGuire, Gina. **Climate & Lāʻau Lapaʻau (Hawaiian Medicinal Community).** (XVI. Ethnomedicine)

The Climate & Lāʻau Lapaʻau project seeks to understand the impact of climate change on Hawaiian medicine and care practices. In Hawaiʻi, sea level rise and other climate and anthropogenic factors threaten native species and ecosystems. Species at risk include plants, animals, and minerals that are integral to the practice of lāʻau lapaʻau, Hawaiian medicine. To understand how environmental change is impacting the availability, distribution, and need for species identified by lāʻau lapaʻau practitioners as important to the persistence of their practice, documentation, and communication of current conditions are needed. This project documents species, ecosystems, growing and gathering practices important to healing communities through interviews and co-productive research modalities, reciprocal practices of stewardship and cultivation by healing communities, common ailments being treated today, other concerns, challenges, and resiliencies discussed by practitioners, and communicates research approaches and findings to Hawaiian and other Indigenous communities with best practices in Indigenous data sovereignty.

Medinaceli, ArmandoNatalie Hansen. **Ethnobotany of Music: A Case Study from Northern Arizona.** (XXIII. Music, Language and Names)

Indigenous music represents one example of the relationship between Indigenous cultures and their environment. Using natural materials for the fabrication of musical instruments is arguably a practice as old as culture itself. As part of the cultural connections between Indigenous cultures and their local environments, we aim to document the natural materials (plants and animals) traditionally used for the fabrication of Native American musical instruments, the types of instruments fabricated, and the kinds of music/sounds produced by each one of them. This documentation also analyzes the effects of external factors, such as climate change, access to land, and others, on the production of the natural materials required for fabricating musical instruments. This presentation reflects our ongoing collaboration with the Hopi tribe in northern Arizona. The preliminary results presented are one part of a bigger project comparing the ethnobotany of music between Native American and Andean music production.

Mee, Allan. **Extinction and Reintroduction of Eagles in Ireland: The Historical Context to Demonisation of Native Predators.** (II. Challenging the Demonization of Wild Animals: Examining the Cultural Context for Conflict and Co-existence)

Predatory mammals and birds were widespread when humans first arrived in Ireland around 11,000 BP. While humans were responsible for at least one extinction (Eurasian Lynx), there is evidence that humans and large predatory wildlife coexisted up to and after the Anglo-Norman invasion. Persecution of large predators was enshrined in law by the 16th century, coinciding with the repression of indigenous Gaelic culture. By the 19th century, eagle populations were much reduced and confined to the more remote coast and islands. Accounts confirm the destruction of eagle populations culminating in extinction by the early 20th century. Reintroduction is an increasingly important tool in species conservation. However, restoring ‘lost’ species where human-wildlife knowledge has been extirpated is often difficult. Shifting baselines, loss of cultural knowledge and the prevalence of colonial mindsets are barriers to successful reintroduction and species recovery. Historical perspectives are important in understanding, addressing and, hopefully, resolving human-wildlife conflicts.

Mefford, Ethan. **Pious Landscapes: Arboriculture and Society in the 19th Century Moroccan Jbāla.** (I. Land Stewardship)

In the Jbāla hill country of northern Morocco, ḥubus (pious endowments) from the 19th century record the historical, socio-religious landscapes of the region's limestone heights. Craggy outcroppings above nucleated villages appear to be thickets of wild olive, cultivated olive, and mastic. However, ḥubus

endowments – bequest or purchase deeds by which the village mosque acquired and oversaw trees – reveal the contours of a socially constituted landscape. Nested communal relations were perennially inscribed in the landscape, marked out by environmental features: a tree's shadow, a notorious wild olive, or a salient rock.

Diana Davis traced the development and impact of French colonial environmental imaginaries of North Africa, yet local environmental imaginaries are overlooked. These never-before-used archives of pious bequests, gleaned from local ministry offices, provide an entry into these imaginaries through the religio-legal genre, illustrating how life and hope for the afterlife were reified in the dense groves of the limestone heights."

Miller, Andrew. **A Preliminary Report on Kâ-Ôtahtahkwanicik – "The Winged Ones": Plains Cree Birds.** (III. Biocultural Heritage & Ecocultural Relationality)

This presentation provides highlights of a 7-year collaborative effort with Touchwood Agency Tribal Council Elders of central Saskatchewan, Canada to document Plains Cree (nêhiyaw) bird stories and cultural meanings. Birds are relatives, sources of food, messengers, allies, and possessors of power. Elders recognize that all birds are related to the thunderbird, the allies of the Creator and possess mysterious powers of flight, speed, vision, and speech. Waterfowl, including ducks, geese, and swans contribute tremendously to community economies through their contributions of eggs, meat, and bones and are hunted from their spring arrival, breeding, molting, and fall migration periods. Numerous birds including turkey vulture, grebe, owl, American crow, and sharp-tailed grouse acquired their appearance from humorous interactions with the Older Brother (Nânapohš). Others including black-capped chickadee, common loon, western meadowlark, and great-horned owl have calls that sound like Cree words that amuse, frighten, and remind listeners of cultural meanings.

Miller, Katharina, Berg, Georgina. **Indigenous Knowledge Keepers of Churchill, Michael Lickers, Nickia McIvor, Dominique Henri. "Bears are Like Family": Indigenous Knowledge of Human-Polar Bear Coexistence in Churchill, Manitoba.** (II. Challenging the Demonization of Wild Animals: Examining the Cultural Context for Conflict and Co-existence)

Polar bears are coming into northern communities more frequently, and human-polar bear conflict is increasing. However, in the community of Churchill, Manitoba, Canada, people live alongside polar bears with high tolerance and reciprocal respect. Through this case study, we explored human-polar bear coexistence in the community through Indigenous voices, documented social-ecological change, and mobilized recommendations as future visions to inform inclusive management and research strategies: elevate Indigenous knowledge, support proactive management and less invasive research, cultivate a culture of coexistence, improve education and safety awareness, and protect polar bears to support tourism. We used community-based participatory research, coproduction of knowledge, hands back, hands forward, and storytelling, mixing methods from the social sciences and Indigenous ways of knowing. Our study revealed coexistence can be a tool to bridge social and ecological knowledge, examine and facilitate wildlife conservation, and promote well-being through applied research on global issues at the local level.

Mueller, Natalie, Horton, Elizabeth, and Kistler, Logan. **Genomic Methods for Understanding Crop Histories in Eastern North America: New Insights into Chenopodium Domestication.** (XV. Chenopod Cuisines: Spatial and Temporal Explorations of Chenopodium Use Across the Western Hemisphere)

In eastern North America, ancient Indigenous people domesticated several native annual plants, including the quinoa relative *Chenopodium berlandieri.* In this presentation, we describe genomic

research to resolve remaining uncertainties about the evolution, taxonomy, and biogeography of this crop. We present the first ancient nuclear DNA evidence from an extinct domesticated plant, a pale-seeded variety of *Chenopodium berlandieri* recovered from rockshelters in Arkansas and Kentucky, USA, which confirms the local origin of this crop. We built DNA from four ancient seeds into a phylogeny reconstruction of Chenopodium species thought to be native to eastern North America, using tissue samples from herbarium specimens. This study allows us to formulate new hypotheses about the dynamics of Chenopodium evolution under human management and inform crop wild relative conservation.

Nagarkoti, Jyoti, Dhanesh Ponnu, Ramesh Chinnasamy, Nehru Prabakaran, Sandeep Kumar Gupta. **Fear and Fascination: Exploring Communities Knowledge, Perceptions and Practices Surrounding Snakes and Snake Bites in the Nicobar Archipelago, India.** (XIII. Human-animal Relations Across Diverse Environments and Places)

Snakes are typically linked to fear and aversion within human communities. However, few traditional communities perceive snakes as bio-resources. We studied Human-snake interactions through questionnaire surveys with 347 participants in the Nicobar Archipelago between February 2023 and July 2023. Our findings revealed the dual nature of human-snake interactions; Indigenous communities value snakes such as Reticulated Python and pit vipers for medicine and meat, yet the persistence of Negative Attitudes towards the snakes remains. These sentiments towards snakes and their conservation, accompanied by fear due to personal snake bite encounters, drove the inclination towards retaliatory killings of snakes. To bridge this gap, we suggest an urgent requirement for the integration of indigenous knowledge systems in conservation planning and awareness programs to foster harmonious human-snake coexistence. Traditional medicines for snake bites retained popularity among the communities hence incorporating traditional medicine into modern treatment could enhance community acceptance.

Nair, Sreekishen. The **Beautiful Birds at the Pillars of the Sky: Visual Phenology in Codex Laud 9-16.** (II. Challenging the Demonization of Wild Animals: Examining the Cultural Context for Conflict and Co-existence)

This study discusses the ecological imagery on pages 9-16 of the Codex Laud, a sacred manuscript from central Mexico composed by indigenous scribes around the 14th-15th centuries CE. The glyphs and illustrations on these pages, whose exact meanings remain unsettled in current research, delineate an almanac that associates distinct cycles of time with different divinities, four of whom preside over the sun, rain, and plant cultivation. They are accompanied by specific birds that migrate seasonally through central Mexico, suggesting that the almanac might be better understood in terms of regional phenology. This paper argues that the almanac's imagery cites seasonal bird activity to mark annual solar stations (e.g., solstices and equinoctial quarter-days), which it graphically aligns with weather patterns, planting cycles, and the 260-day ritual calendar once widely observed in Mexico. Its authors applied their keen understanding of avian behavior to visually correlate sacred timekeeping with agricultural practices.

Niesner, Chase. **Landscapes of Subjectification: New Directions for Linking Cultural Keystones and Self** Understanding**.** (I. Land Stewardship)

Since the concept of "cultural keystone species" has entered the conservation biology lexicon, much has been made about what qualifies a given species as such, and much work has been done as well to expand the concept to consider not only specific species, but also places and cultural practices more generally. In the following presentation, I will use the philosopher Félix Guatarri's notion of "ecosophy" to consider another such possible dimension of the cultural keystone landscape: human subjectivity. If the environment and social relations give rise to one's sense of self, then what potentially is the role of other

species in this process of self-fashioning, whether through identification, human-wildlife conflict, or admiration of beauty? By considering a few ways multispecies relations contribute to the critical components of human subjectification, my aim is to bring more awareness to some of the sensibilities, intelligences, and desires that might allow us to do the work of conservation biology better.

Nininger, Nenwero and Aaron Abudu. **Ghanaian Agroecology - Resilience in the Face of Climate and Culture Change.** (XIV. Community, Climate and Food)

My research is focused on Ghanaians agroecological traditions, their relationship to plants as food, medicine, fibre and building material. Last year I had the opportunity to visit my fathers family in the North of Ghana for the first time. On the way I stayed with Abena at Tongo Oasis and learned about indigenous seeds, traditional foods and culture. After this I visited and documented Fra Fra, Agroecological Organic Farmers. Learning about their successes, new and continued challenges, values and wisdom. In times of great division, I believe storytelling and cultural exchanges based in earth tending can bring healing and unity. I have helped to start a Mutual aid organization to support Agroecological farmers in my family's village Nabala and in Karimenga Village. I'm interested in documenting the resilience of indigenous wisdom and culture in the face of climate change and continued colonization. My next trip is planned for winter 2025.

Oeggerli, Virginia and Jennifer Grenz. **The Importance of Culturally Relevant Plant Classification When Evaluating Ecological Health: A St'at'imc Case Study on Post-Wildfire Landscape Recovery.** (I. Land Stewardship)

Post-wildfire restoration has been criticized by affected Interior Salish Indigenous communities in British Columbia, Canada, as lacking data-driven responses and ignoring Indigenous values such as impacts to traditional food systems. We assessed wildfire impacts on vegetation trajectories using both western scientific and Indigenous research methods. Examining percent cover of plants within 80 plots throughout the 2021 McKay Creek wildfire, we hypothesized that analyses using colonial plant classifications would not provide results which are culturally relevant. We found that colonial plant categories, such as "native", masked impacts to culturally significant plants important to the St'át'imc Nation. Utilizing St'at'imc-determined plant classifications provided deeper insights into the recovery of mule deer forages and St'át'imc food and medicinal plants. Integration of Indigenous knowledges and values are critical for data-driven restoration planning and will provide an accurate post-wildfire recovery story needed to guide restoration planning and resource allocation.

Orhuamen, Elizabeth. **Roots of Time: An Integrated Spatio-temporal Assessment of Anthropogenic Impacts on Indigenous Forest Garden Species in British Columbia.** (XXIV. Poster Session)

This research employs a historical-socioecological framework to examine the impacts of anthropogenic land use on Indigenous forest garden species in British Columbia. Forest gardens, cultivated by Indigenous communities, are ecosystems of fruit- and nut-bearing trees, shrubs, and edible plants within coniferous forests. These landscapes supported Indigenous food systems for millennia, reflecting deep cultural stewardship. This study analyses the impacts of land-use changes from historical to contemporary times, emphasizing integrated approaches to biodiversity conservation. Preliminary findings reveal that over 70% of ice-free land globally has been modified by human activity. In British Columbia, logging and oil and gas exploration have drastically reduced plant diversity and degraded habitats. Using historical records, ecological data, and tools like MaxEnt and the InVEST Habitat Quality model, this study identifies areas most affected by anthropogenic pressures and highlights key regions for conservation and restoration. The findings offer insights into protecting culturally significant plants and landscapes under evolving climate and land-use scenarios in BC.

Ormsby, Alison and Subhani Rath. **Management and Restoration of Cultural Ecosystem Services of the Sacred Groves of Kandhamal, Odisha, India.** (VII. Indigenous Ecosystem Restoration Practices in the Himalayas)

Understanding the cultural beliefs and practices of indigenous people associated with management of natural resources not only helps in preserving cultural beliefs but also in formulating management policies. The objective of this study was to document the cultural ecosystem services of belief systems associated with ten sacred groves in the Kandhamal district in Odisha, India. Odisha has 37% of its land under forest cover, is home to 62 ethnic tribes, and has about two thousand small sacred groves distributed mostly in tribal districts of the state. The Kandhamal district is the homeland of the Kandha peoples. Field research documented the sizes, cultural traditions, management, and challenges facing the ten study site sacred groves. Understanding the cultural ecosystem services associated with such groves is crucial in formulating strategies to preserve them in the long run.

Papson, Kylie. **Decolonizing Water Policy: Collaborative Ethnographic Methods for Equality in** Policy **Design at Lake Tahoe.** (XXIV. Poster Session)

In ever-growing and globalized communities, also effected by increasing climate change-related events, public policy must be crafted with the goal of balancing short- and long-term health and needs of the environment and people. A potential key to adaptation in the shifting tides of public policy is the use of applied anthropological methods that connect ethnographic research to the praxis. Through research done in the Lake Tahoe Basin and surrounding watersheds, this project aims to bridge the gap between anthropological studies, public policy, and environmental protection by suggesting new methods, based in ethnography and collaborative research, to be used in policy development that aims to decolonize unbalanced processes of water policy design. As the demand for the fresh waters of Lake Tahoe increases, it is imperative to do this research to ensure that chosen policies promote equal access to the fundamental human right to clean water and a healthy environment.

Pech-Cardenas, Florencia, Bianet Castellanos, Gabriela Spears-Rico. **Maya Women Perceptions on Handicraft Production and Implications in Subsistence Autonomy.** (XI. Faith and Gender)

This study explores Maya women's experiences with handicraft production within a Maya community near Chichén Itzá using gender and autonomy of subsistence as frameworks. Drawing on ethnographic data, this article examines the lives of artisan women to answer the following questions: 1) What are the opportunities and challenges that indigenous artisan women face in handicraft production? 2) What is the role that handicraft production plays in indigenous women's autonomy? By answering these questions, this study attempts to contribute to the knowledge gap around indigenous women's handicraft production in academic literature, and to bring to light gender inequalities within the heritage tourism industry among indigenous communities.

Philbin, Casey, Tod Swanson, Eric Tepe, Katherine Chacon-Godoy, Lee Dyer, Christopher Jeffrey, Lora Richards**. Maticu (Kichwa, Piper spp.), a Traditional Decongestant Used in the Ecuadorian Amazon during the COVID Pandemic: Chemical and Biological Insights.** (XXIV. Poster Session)

The 2020 COVID outbreak in Ecuador rapidly spread into Amazonian Kichwa, Shuar and Waorani communities through migrants working as first responders in cities. Many COVID survivors in these communities attributed their recovery to the preventative and curative properties of medicines derived from the maticu (Kichwa, Piper spp.) plant. Traditionally used as a decongestant to treat pneumonia, leaves steeped in hot water were ingested as tea or inhaled as vapor to treat COVID symptoms. Multiple Piper spp. may have been identified as maticu within these communities. Leaves from one such plant

were extracted and analyzed using LC-MS/MS, revealing the major constituent, a C-glycosylated flavonoid that had previously been studied as an anti-hypertensive treatment. Hypertension can be elicited by COVID, suggesting maticu may have beneifts beyond its decongestant properties. Here we describe the confirmation of this maticu chemical structure by NMR, and potential COVID symptom-relieving properties of maticu chemical constituents.

Pierotti, **Raymond**. **Demonizing Natural Hybridization and False Conservation.** (II. Challenging the Demonization of Wild Animals: Examining the Cultural Context for Conflict and Co-existence)

Western Science regards naturally occurring hybridization as representing error in mate choice, thus demonizing natural hybridization, which is now recognized as an important evolutionary process, challenging this line of thinking. For example, analysis of phylogenetic relationships among white-headed gulls revealed that ecological and sexual selection are not strong enough to complete reproductive isolation among several species in this complex. In the 1970's, many Black ducks were found carrying Mallard DNA, raising concerns about long-term viability. Research revealed that hybrid offspring rarely breed back with pure Black Ducks, limiting gene flow back into black duck populations. More recently, Barred Owls have been considered invasive to the range of spotted owls, being larger, more aggressive, and more numerous. USFWS is considering a strategy to remove Barred owls, which proposes killing up to 450,000 Barred Owls over 30 years. This represents demonization, revealing Eugenics-based, ineffective Conservation approaches which must be resisted.

Rahayu, Yen Yen Sally and Wawan Sujarwo. **Unconventional Food Plants: A Path to Better Health and Wellbeing?** (IX. Food Systems)

Worldwide, modern food systems prioritize a limited range of low-nutrient plant species, often neglecting the rich diversity of nutrient-dense plants traditionally consumed by indigenous and rural communities, including those in Indonesia. Encouragingly, global interest in promoting biodiversity to enhance food, nutrition, and health by utilizing underexploited resources is increasing. In this context, Unconventional Food Plants (UFPs) have emerged as promising solutions to address public health challenges and nutritional disparities. However, evidence supporting their broader adoption remains limited, and their relationship with people's health has not been thoroughly investigated. This study aimed to explore the correlation between UFP intake and individuals' health through case studies conducted among local communities in rural areas across three regions of Indonesia. Correlation and multiple regression analyses were performed, incorporating various indicators. Mixed methods were employed, including an ethnobotanical survey, a food frequency questionnaire, and a standard subjective health assessment (SF-12).

Reamer, Justin. **Exploring Indigenous Management of Chenopodium in Northeastern North America.** (XV. Chenopod Cuisines: Spatial and Temporal Explorations of Chenopodium Use Across the Western Hemisphere)

In northeastern North America, chenopodium (*Chenopodium* sp.) appears in the paleoethnobotanical record with the first arrival of the Indigenous Algonquian and Iroquoian people. Despite the plant's long history of and nearly ubiquitous use by Indigenous people, only two sites, one in Ontario and one in Pennsylvania, have clear evidence for domesticated chenopodium populations. In this paper, I will explore how Indigenous people used and managed chenopodium through time. Based on recent experimental work by Belcher and colleagues (2023), I explore the possibility that Indigenous people cultivated and possibly domesticated chenopodium in Northeastern North America. I draw data from my own paleoethnobotanical analyses and those conducted by Nancy Asch Sidell for contract archaeology projects to better understand how Indigenous people in the region used and managed chenopodium populations.

Reid, Hannah. **Revitalising TEK to Increase Plant Awareness and Sustainable Behaviours.** (XVII. Ethnobiology Education Approaches)

Around the world, the growing distance between people and plants has coincided with a global increase in 'plant awareness disparity' or 'plant blindness' - the inability to notice, understand and appreciate the plants in one's own environment. Plants make up the majority of life on Earth and foundational to life-giving and sustaining processes upon which humanity depends. It is not possible to facilitate sustainable development or build resiliency to climate change without increasing awareness, understanding and appreciation of plants. Ongoing research in the Cayman Islands is exploring the relationship between traditional environmental knowledge (TEK) and plant (non)awareness, the interlinkages between plant awareness, nature-connectedness and sustainable behaviours, and the potential role of TEK in efforts to increase plant awareness.

Reid, Hayley. **Collaborative Approaches and Novel Strategies for Post-Fire Restoration of Single-Leaf Pinyon Pine.** (XIX. Collaborative and Community-Based Stewardship of Pinyon-Juniper Woodlands in the Great Basin)

Single-leaf pinyon pine is a cornerstone species of cultural and ecological significance in the Great Basin, yet increasing wildfire frequency threatens its resilience. This research explores novel approaches to post-fire restoration of single-leaf pinyon pine through collaborative experiments between the Washoe Tribe and ecological researchers. Field trials on Washoe Tribal land assessed microsite influences and abiotic conditions, while a complementary experiment evaluated the effects of shade and soil amendments on seedling survival. Overall, we observed about 35% seedling survival in the first year after planting, and the results highlight the critical importance of shade and microsite selection in enhancing seedling survival rates. This study highlights the value of community-based restoration and multi-agency partnerships, offering practical insights for land managers and a hopeful path forward in addressing mounting ecological challenges while preserving cultural heritage.

Revilla-Minaya, Caissa. **Variation and Food and Behavioral Taboos: An Exploration of Non-Human Beings in an Amazonian Society.** (IX. Food Systems)

Understanding the emergence and practice of dietary and behavioral restrictions is essential for exploring the influence of environmental conceptions on people's engagements with their world. Some evolutionary studies suggest that these practices are adaptive responses, for instance, to potentially harmful food. Ethnographic explanations account for cultural understandings of food taboos, but some are equally functionalist in that they conceive of such restrictions as general rules that contribute to the cohesion of the social group, ignoring individual variation in notions of non-humans. This presentation takes a novel ontological approach to understanding local conceptions associated with the food and behavioral restrictions practiced in an Indigenous Matsigenka community in Amazonian Peru. Combining qualitative and quantitative methods, this study explores how certain non-human beings are differently conceived, and why they are considered taboos. Based on these results, I propose a new theory to explain the emergence of ontological configurations underlying food and behavioral restrictions.

Sachs, Nava and Jennifer Grenz. **A Methodological Approach to Enacting Food Systems Reconciliation at Hwkw'akw'la'hwum.** (IX. Food Systems)

As the integration of Indigenous and Western scientific knowledge systems within restoration ecology gains momentum, there is a pressing need for culturally appropriate, land-based methodologies that move beyond descriptive metaphors such as “braiding” and “two-eyed seeing.” This presentation introduces an Indigenized methodology that leverages the strengths of both knowledge systems to advance food systems reconciliation at Hwkw’akw’la’hwum, the Cowichan Bay Estuary on Vancouver

Island, British Columbia, Canada. Key approaches include reconstructing pre-colonial baselines to guide restoration planning through plant inventories and elevation modeling of legacy-state portions of Hwkw'akw'la'hwum; identifying and sourcing seeds and plants to honor place-based plant genetics; and developing a five-acre native plant nursery to expand seed and plant availability. We highlight the creation of art-based, community-driven knowledge translation tools, which serve as culturally resonant planning resources to mobilize and communicate the healing and restoration of Hwkw'akw'la'hwum.

Sault, Nicole. **Bird Meanings For War and Peace: Weaponizing and Resistance.** (II. Challenging the Demonization of Wild Animals: Examining the Cultural Context for Conflict and Co-existence)

People recognize birds as important for not only their anatomy and behavior but their symbolic meaning, which is culturally variable. For example, hummingbirds are associated with war in some cultures and hospitality in others. Birds have been seen as guardians and teachers who speak to individuals, kin groups, and nations. However, in the globalized technocratic society of today, birds are redefined as objects to be used for manipulation and coercion. The corporate media promote a utilitarian view of birds that emphasizes superficial aspects for consumer culture. Relational meaning and spiritual essence have been replaced by commodified images for video games; governments utilize caricatures of birds to manipulate the governed; and military authorities weaponize bird images for bombers, helicopters, and drones. Nevertheless, contrasting worldviews continue to survive. What alternative meanings are emerging that engage people and encourage them in redefining their relationship to birds, people, and their surroundings?

Scanlon, Catherine, Michael Gan, Ryan Zhu. **Combining Ethnobotany and Linguistics: A Multimethod Ethnobiological Survey with the Ende Tribe in Western Province, Papua New Guinea.** (XXIV. Poster Session)

This poster reports on an ethnobotanical survey with the Ende tribe in Western Province, Papua New Guinea, an under-researched hotspot of biocultural diversity. Building on a foundation of collaborative linguistic research, we worked with local Ende people as well as botanists from the New Guinea Binatang Research Centre to collect voucher specimens, match Ende plant names to their Latin species names, document their uses, and video-record the process of making items such as grass skirts, baskets, and animal traps. We identified about seventy plant species with uses including food, medicine, fish poison, snake repellent, and materials for traditional crafts. We corroborate the documented uses of some plant species and also note a few novel uses. Finally, we conducted an inductive thematic analysis of the Ende food system using narratives and conversations originally recorded for linguistic research, situating the ethnobotanical work in a broader cultural context.

Sehgal, Anju Batta. **Traversing Ethnobiology of Higher Altitude Regions of Himalayas: Insightful Medicinal Uses of Weed *Artemisia maritima*** (VII. Indigenous Ecosystem Restoration Practices in the Himalayas)

Medicinal plants, found in high-altitude regions, have played a crucial role in traditional medicine systems. Their use ranges from enhancing vitality and cognitive function for treating respiratory and digestive conditions. Knowledge of these plants, passed down through generations, underscores the deep connection between Indigenous peoples and their natural environment. Gurez, is a valley located in the higher altitude of the Himalayas. At about 13,185 ft above sea level, the valley is surrounded by snow-capped mountains. Has diverse fauna and wildlife. *Artemisia maritima* is a European species of Wormwood as sea wormwood, is bitter tonic and aromatic. Made use of by country people for intermittent fever, as insect repellent instead of the true Wormwood. Plant is the source of the Sesquiterpenoid Santonin. Plant is used for treatment of digestive issues, respiratory ailments, and mild

sedative to ease anxiety or promote relaxation. Leaves employed in smudging rituals, its scent was believed to purify spaces and protect against negative energies.

Sharaibi, Olubunmi. **Exploring the Significance of Plants in Religious and Cultural Traditions Among the Yoruba Tribe of Southwest Nigeria.** (XI. Faith and Gender)

This research explored the pivotal roles that plants play in the cultural, spiritual, religious beliefs and practices of the people in Southwest, Nigeria. Ethno-botanical surveys were carried out to identify plants used in religious and cultural practices in six southwest Nigerian States. Information was obtained from 100 respondents through oral interviews. Seventy plant species representing 33 families were identified during ethnobotanical surveys. Fabaceae had the highest plant species while Tiliaceae had the least. *Garcinia cola, Cola nitida, Milicia excelsa,* and *Dioscorea alata* are frequently offered to appease deities or ancestors, acting as conduit for spiritual communion and guidance. These plants are used in rituals to promote physical, emotional, and spiritual well-being. Leaves and roots are interpreted as part of divination rituals, helping individuals navigate life's uncertainties. Plants are deeply embedded in the cultural identity and belief systems of the Yoruba people, contributing to the continuity and richness of their spiritual heritage.

Shay, C. Thomas Tom. **Historical Ecology of the Northern Plains: The Late 18th Century.** (VIII. From Historical Ecology to Hysterical Ecology?)

Past Landscapes to Better Determine the Nature of Anthropogenic Landscapes. Imagine life in the northern grasslands centuries ago. Was it, as some say, an American Serengeti, teeming with bison and other wildlife? Or, was it a land of occasional searing droughts and deep snows that sometimes left the countryside strewn with dead animals? We explore these questions by perusing the late 18th Century climate together with wildlife responses to droughts and snow. We transcribed daily journals (activities plus weather: wind direction and strength, cloud cover, rain or snow and, rarely, how warm or cold it was. We compiled weather data for five posts totalling 234 months and daily temperatures from one posts. We used these data to help estimate conditions for local wildlife by how numbers of bison, elk, and deer fluctuate with drought and snow in today’s Yellowstone Park. Indigenous people as well as some fur traders, suffered from food scarcity and the deadly smallpox epidemic of 1780–1781.

Shebitz, Daniela. **Weaving Sweetgrass through the Landscape and Over the Decades.** (X. Conserving Cultural Keystone Species)

Sweetgrass (*Hierochloe odorata*) is an essential basketry material to many Indigenous communities of the Northeastern United States, but basketmakers have reported its decline in traditional gathering sites. This presentation will highlight some of the work that I’ve conducted over the past three decades in collaboration with the Haudenosaunee (New York State) and Lenni-Lenape (New Jersey) to understand changes in the population dynamics and restoration potential of sweetgrass. My work began in the early 2000s with a focus on documenting population trends throughout the Northeast and reestablishing sweetgrass to the Mohawk Community of Kanatsiohareke. Over the past decade, I’ve focused more on working with communities in New Jersey to weave this plant into Lenapehoking as part of recovery from heavy contamination, through incorporating it into microforests, and as part of a land-back program with the Native American Advancement Corporation. These ongoing projects will be briefly introduced.

Soewu, Durojaye. **Sacrifices and Rituals in Ethno-Biological Practices amongst the Yorubas, West Africa: Dynamics and Implications for Biodiversity Conservation.** (XXII. Conservation of Culturally Important Sites)

Appeasing gods, witches and ancestral spirits constitute an integral part of the traditional healing practices of Yorubas. Ten classes of sacrifice were identified, some with proven efficacy. Response from

astral realm could signify acceptance, when presentation is "consumed" within a stipulated time, or it could be "ignored" to indicate rejection. Most sacrifices have time and presentation-spot specificity. A wide variety of wild animals were utilized in preparing these sacrifices without consideration for conservation interests. Preparations involved animals under varying degrees of threats and age grades. In addition to depleting populations, such requirements eat deep into the procreation base of populations, denying members the opportunity to participate in reproductive activities. There is an urgent need to improve the yield of these animals, in-situ, and ex-situ. There is also a need to reduce demand for, and utilization of, these resources through massive conservation education, extension services and capacity building for indigenous people.

Solankar, Saish. **A Hunter's Landscape in The Plantationocene: Multispecies Worldmaking in Rubber Plantations in Nagaland.** (III. Biocultural Heritage & Ecocultural Relationality)

Subsistence farming and hunting are an integral part of the Lotha way of life. Foraging for banana shoot and wild herbs, collecting longhorn beetle from bamboos, and hunting wild birds are all elements that contribute to the broader food culture and practices of the community. Centuries of engaging in these practices in their ancestral homelands have created a Lotha manifestation of Ogden's "Hunters' Landscape" an arena for the entanglements of a multispecies of the human, non-human, and beyond-the-human, creating multispecies becomings and possibilities. Today, these landscapes across the state of Nagaland are subject to an influx of monocrop plantations such as rubber, and more recently, oil palm. Within these shifting physicalities lies the political ecology of hunting and farming set in the context of a contemporary state and economy. How has this multispecies landscape changed - and how do the Lotha negotiate their nature-dependent identities - within the context of the plantationocene and a broader changing environment?

Solankar, Saish. **An Insect Assemblage in a Lotha World - Multispecies Relatedness in Nagaland.** (XIII. Human-animal Relations Across Diverse Environments and Places)

Insects are an important part of the multispecies assemblage that makes up the indigenous cosmology of the Lotha peoples of Nagaland, India. The dead that turned into grasshoppers, katydids, bees that roam the rice fields, and silkworm that demand care, all constitute a rich multispecies landscape that has been a part of the Lotha way-of-being for millennia. This multispecies ethnography traces the plethora of stories of multispecies reciprocity and relatedness between the Lotha and their insect companions in the hills of Nagaland, giving insight into the political, cultural, and environmental ecosystems of the Lotha.

Spadola, Loup, Ludovic Granjon, Guillaume Odonne. **Designing an Open Access Database Structure to Register and Protect Already Published Ethnobotanical Data. An Example from French Guiana.** (XVII. Ethnobiology Education Approaches)

Databases have been proposed as tools to protect local knowledge of biodiversity and to foster its repatriation to the original knowledge holders, however, the technical challenges are many. We designed the BDEthno as a way for storing ethnobotanical data available from literature, covering all plant uses and vernacular names in French Guiana. The use report is the central entity of the database, linking, for a given bibliographic reference, a Linnaean species, its use(s) and its local name(s) in a considered cultural group, completed, if available, by the plant part(s) used and herbarium vouchers. The project uses open source software PostgreSQL and LibreOffice Base to manage data, and the data model has been debated with experts to fit to ethnobotanical requirements. It is thought to be replicable and reusable by those wishing to protect local knowledge, and It might be the first step towards a larger-scale database network project.

Spalding, Pamela. **Considering the Cultural Keystone Species Concept from Mole's Perspective.** (X. Conserving Cultural Keystone Species)

The concept of Cultural Keystone Species (CKS) was introduced into ethnobiology twenty years ago and has been adopted by academics, Indigenous cultural specialists, Indigenous governments and land rights legal professionals as a powerful metaphor and methodology for expressing culturally salient species that shape in a major way the cultural identity of a people. In my own research I find the CKS concept to be both useful and problematic. On the one hand, the method is a transparent way for Indigenous peoples to foreground significant and special relationships with certain plant, animal, and fungi species. On the other hand, I struggle with the quantification of cultural significance and, while clearly not the intent of the original researchers, I believe the method can be misappropriated to promote a positivistic and narrowing form of cultural significance. While celebrating the obvious strengths of this concept, I propose ways that practitioners should be mindful of the potential for its misapplication and misinterpretation.

Spalding, Pamela. **Knowledge Bridging for Plant Justice through Covenants of Reciprocity.** (XII. Supporting Biodiversity and Plant Justice through Varying Indigenous Concepts of Covenants of Reciprocity)

In the current precarious environment of remnant forests and intense industrial development, changing world climate patterns, and uncertain political and economic institutions, how can we better examine plant justice and human responsibilities to the more than human world through western and Indigenous frameworks of law and justice? My research explores why Indigenous long-term relationships with plants receive little attention in Canadian law and governance. Even though the use and management of native plants is a foundation of Indigenous cultural and legal practice, these important relationships are generally overlooked in legislation, case law, environmental assessments, and modern treaty negotiations. Using examples from Canadian law and Native American tribal court law, I will explore the potential and challenges of defining legal dignity for plants from the perspective of covenants of reciprocity with the humans whom they stand in relation.

Sullivan, Matthew, Ryan Huish, Allison Scherer. **Investigating Medicinal Plants in Actaea and Developing New Embryo Viability Techniques.** (XVI. Ethnomedicine)

Actaea (Rannunculaceae) is an important genus containing black cohosh (*Actaea racemosa*), an Appalachian medicinal plant. Two poorly understood areas within this genus are proper vegetative identification (thus preventing unintentional adulteration with co-occurring toxic species in the genus), and knowledge about embryo development and germination to aid in the conservation and propagation of these increasingly rare plants. Our investigation into Actaea has led to a better understanding of morphological characteristics, resulting in the development of improved vegetative dichotomous keys, and a new method that determines embryo viability and refines germination techniques. The improved methods increase understanding of metabolic trends during seed dormancy and will serve to refine germination techniques using quantitative data from fluorescing reactions. These minimally invasive methods are more useful compared to other existing embryo viability determinations, and will allow for increased efficiency and accuracy in agriculture and conservation including applications for other important ethnobotanical plants.

Syskine, Yarrow, Diana Macias, Rosemary Frederick, Anna Magruder, Miranda Redmond. **Impacts of Stand and Neighborhood Density on Pinyon Pine Cone Production.** (XIX. Collaborative and Community-Based Stewardship of Pinyon-Juniper Woodlands in the Great Basin)

In an era of climate change and rapid forest die-offs, it is crucial to understand the drivers of forest regeneration to forecast future changes and identify potential management solutions. In this study, we

assessed how stand density impacts cone production in single-leaf pinyon pine (*P. monophylla*). In summer 2024, we sampled 36 pinyon pine populations across their range from the Eastern Sierra to Utah (1287 to 2653 meters, 34.0307º to 41.0418º lat.), recording neighborhood density, stand density, and current year production, and using the cone-scar method to obtain estimates of historic cone production. Our efforts recovered approximately 15 years of cone production data for 309 trees. Preliminary results suggest that in single-needle pinyon pines, higher neighborhood density is correlated with increased cone production. Consequently, higher density pinyon pine stands may indicate that micro-environmental or micro-topographic conditions are particularly favorable to tree growth, where density is not a limiting factor for cone production.

Teixidor-Toneu, Irene, Àlvaro Fernández-Llamazares, Ricardo Alvarez Abel, Gantuya Batdelger, Elicia Bell, Sophie Caillon, Mauricio Cantor, Joel Correia, Sandra Díaz, Jonathan Fisk, Alexander Greene, Spencer Greening, Simon Hoyte, Raivo Kalle, Gabriela Loayza, Giulia Mattalia, Rommel Montufar, Jaime Ojeda, Suwichan Phatthanaphraiwan, Ismael Vaccaro, Natalie Ban. **Human-nature Relationships through the Lens of Reciprocity: Insights from Indigenous and Local Knowledge Systems.** (XII. Supporting Biodiversity and Plant Justice through Varying Indigenous Concepts of Covenants of Reciprocity)

In the context of climate change, biodiversity decline, and social injustice, reciprocity emerges as a way of living and being in this world that holds transformative potential. Concepts of reciprocity vary and are enacted in specific cultural practices grounded in Indigenous and local knowledge systems. This editorial synthesises first-hand evidence of how practising reciprocity can result in positive reciprocal contributions between people and nature. It also offers a theoretical justification of why considering reciprocity can lead to more equitable, inclusive, and effective conservation and sustainability policy and practices, contributing to curving the colonial baggage of academic inquiry and development action. Nurturing relations between people, especially academics, and Indigenous Peoples and local communities, is a necessary first step to identifying pathways whereby living in harmony with nature can be achieved.

Tonenna, Dean. **Analyzing Plant Ecology, Archaeological Sites, and Traditional Needs to Restore Dormant Traditional Knowledges.** (VIII. From Historical Ecology to Hysterical Ecology?)

Past Landscapes to Better Determine the Nature of Anthropogenic Landscapes. With the removal of Native American traditional stewardship of land and plant communities, once managed areas have reverted to unmanaged landscapes hiding and over time erasing evidence of traditional use areas and practices. Unmanaged landscapes are also more vulnerable to disturbances that can significantly alter plant communities in ways that are detrimental to human and wildlife habitat. As Tribes seek to resume traditional ethnobotanical uses of plants and stewardship of vegetation communities, a corresponding effort is needed to understand landscape vegetation dynamics as influenced by traditional stewardship and frequency of stewardship practices to promote vegetation that is healthy and optimal for ethnobotanical uses. A careful analysis of plant ecology, archaeological sites, and traditional needs is crucial to bringing back dormant traditional knowledge. This presentation will share some insights on this process from Mono Lake, CA.

Turner, Nancy. **Our Generous Green Relatives.** (XII. Supporting Biodiversity and Plant Justice through Varying Indigenous Concepts of Covenants of Reciprocity)

Humans cannot survive without plants. As well as providing the oxygen we breathe, plants have contributed to people's cultural and linguistic diversity and richness. Plants can readily survive without humans; yet, many humans consider ourselves to be greatly superior to plants, fungi, and all other lifeforms. We have become separated from other species and have moved away from our ancestral

teachings of humility and appreciation for our non-human relations. We need to reconsider our human-centricity and recognize our total dependence on the earth's other lifeforms. We have neglected their needs at our peril. Here I provide some examples of our dependence on our non-human relations, through "Five F's": Foliage, Flowers, Fruit, Forests, and Fungi, with examples of recognition of this dependence from Indigenous Peoples' cultural practices and lifeways in Northwestern North America.

Twu, Chloe, Paul Goldstein, Arianna Garvin. **Exploring Viru (ca. 200 B.C.E - 600 C.E.) Foodways at Puerto Malabrigo in the Chicama Valley, Peru: Household Economy, Cuisine, and Gender Roles.** (XXIV. Poster Session)

We investigate the domestic economy, cuisine, and gender roles of the Viru people (ca. 200 BCE-600 CE) through household archaeology and archaeobotany at Puerto Malabrigo, Chicama Valley of northern Peru. In households, people prepare, cook, eat, store, and throw away food, reinforcing identities or making new dietary choices with social meaning (Hastorf 2017). In an area where occupations fluctuated, households provide records of larger social transformations as residents actively adapt to changes (Billman 2021). In 2023, Proyecto de Investigación Arqueológica de Puerto Malabrigo excavated Viru household units in Puerto Malabrigo. We combine archaeobotanical analysis of household contexts with research on contemporary cultures like the Moche, to examine Viru foodways, discerning social relationships and gender roles within the household. Finally, we compare Malabrigo foodways to domestic food practices at the Viru capital, Huaca Gallinazo, Viru Valley, examining how changes in women's domestic roles reflect shifts in societal power dynamics.

Urza, Alexandra. **Masonic Mountain Pinyon-Juniper Shared Stewardship Project.** (XIX. Collaborative and Community-Based Stewardship of Pinyon-Juniper Woodlands in the Great Basin)
I will give an overview of this collaborative landscape planning project, which is taking place in the Bridgeport District of the Humboldt-Toiyabe National Forest. This partnership between Tribes, researchers, and land managers aims to promote diverse and healthy landscapes, develop and evaluate new prescriptions to increase woodland resilience, and build a woodland monitoring toolkit.

VanDerwarker, Amber. **Tree Fruit Domestication in the Americas: 8,000 Years of *Spondias purpurea* Domestication at El Gigante, Honduras.** (XXIV. Poster Session)

Recent research demonstrates that ancient Mesoamericans engaged in forest management long before they domesticated field crops like maize (*Zea mays*) and beans (*Phaseolus* spp.). Our research from El Gigante, a dry rockshelter in southeastern Honduras boasting an extensive desiccated plant assemblage, provides additional evidence for the antiquity of tree management practices in several different economically useful species over a period of 10,000 years. This presentation focuses on ciruela (hog plum; *Spondias purpurea*), represented at El Gigante by more than 2,000 seeds. Chronological control of the assemblage has been well established based on Bayesian analysis of 292 directly-dated macrofossils, allowing for a fine-grained morphometric analysis seed size and shape through time. Statistical analysis of seeds reveals a long history of domestication by local groups during the last 8,000 years, evidenced by size increases and a trend toward more elongated seeds.

Vanhaelen, Justine. **Governmental Management of Bats, Insects, and Pesticides: Interspecies Relationships (Taiwan).** (XVIII. Bats, Biodiversity and Ecological knowledge)

Taiwan is home to over thirty species of bats. During my fieldwork across different parts of the island—ranging from a tourist bat cave to NGO-led conservation sites—I observed the intricate relationships between bats, humans, and insects. Through participant observation, this presentation delves into how human interactions and management practices shape these dynamics. It highlights the impacts of pesticide use on bat populations and their role as natural pest controllers. Field observations

also reveal a growing governmental interest in using bat boxes in agricultural areas as eco-friendly alternatives to chemical pesticides. In Chinese and Taiwanese culture, the bat, known as "bienfu" (福), symbolizes luck and prosperity. Often depicted in temple decorations and seamlessly integrated into urban architecture, bats hold both ecological and cultural significance. This presentation aims to provide a comprehensive understanding of bats as cultural icons and key players in Taiwan's biodiversity.

Villar, Daniel, Edwin Gutiérrez Gutiérrez Tito, Anahi Paca-Condori, Paola Velásquez-Noriega, Edilio Mamani Mamani, Mario Arivilca Vilca, Edmundo Moreno Terrazas, Bastian Thomsen, Andrew Gosler. **Totora as a Case Study of Declines of Traditional Resource Management in the Central Andes through Market Integration.** (I. Land Stewardship)

Even long-standing and regulated forms of LEK are vulnerable to erosion as market forces spread to regions which have historically been peripheral to them. We consider changes in knowledge and use of a cultural keystone species, totora sedge (*Schoenoplectus californicus* subp. *tatora*), in the Altiplano of Bolivia and Peru around Lake Titicaca. Totora has been used for a variety of purposes and historically its cultivation and planting was regulated by village co-operative councils, called ayllus. However, recent ethnographic surveys have shown significantly reduced totora use. This decline, alongside with the disappearance of the regulatory power of ayllus have primarily been driven by the integration of the Altiplano into the global market system, which has led to the replacement of totora with industrially manufactured goods, such as plastics and concrete.

Vinogradova, Daria. **Bats, Lemurs and Birds in Madagascar. Local Meanings and Perspectives in Wild Nature Conservation Initiatives**. (XVIII. Bats, Biodiversity and Ecological knowledge)

Madagascar has been experiencing deforestation since the early colonial period, leading to severe impact on its unique and endemic biodiversity. Many species, most particularly bats, lemurs, and some birds, are facing the threat of extinction and are classified as vulnerable. In response, various governmental and non-governmental organizations have been established across the country to mitigate the human-animal interactions that are considered harmful for the ecosystem and promote sustainable environmental practices. Frequently, this involves restricting local populations' access to areas of animal cohabitation, excluding them from forests on which they may rely for their livelihoods and to which they may attach significant cultural and spiritual meanings. This article seeks to examine indigenous environmental knowledge concerning harmonious coexistence, species interdependence, and conservation practices. It further aims to highlight how such knowledge is considered in both international and national policies directed at preserving Madagascar's fragile ecosystems.

Walshaw, Sarah. **Study of Teaching and Learning (SOTL) in Ethnobiology: Sharing Food, Connecting People.** (XVII. Ethnobiology Education Approaches)

Ethnobiology offers rich opportunities to study teaching and learning, and contribute to the broader experience in knowledge exchange. In 2019, Simon Fraser University's Institute for the Study of Teaching and Learning (ISTLD) pioneered a project studying the conditions for well-being in learning environments, targeting social connectivity, civic engagement, optimal challenge, and personal development, among other measures. Here I present the findings from one such study, conducted across several cohorts of classes in food history and African history. While anecdotal evidence suggested that instructor food sharing led to students feeling strongly that the instructor cared about them, the target in the study cohorts was student food sharing. Did student sharing lead to increased social connection? And, beyond eating, can learning from other students through restaurant reviews, experimental cooking, and reporting "Food in the News" impact student well-being? I end by reflecting on unique contributions that ethnobiologists can make to the field of teaching and learning.

Watson, Tyler. **From Tradition to Treatment: How Plants Become Drugs.** (XVI. Ethnomedicine)

Ethnobotanical knowledge provides a foundational framework for identifying plants with pharmacological potential, serving as an entry point for natural products discovery. By integrating traditional plant use with advanced scientific methods, researchers have developed systematic approaches to isolate and characterize bioactive compounds. These methods include targeted extraction techniques, bioassay-guided fractionation, and metabolomic profiling, which together uncover the chemical complexity of natural products and their therapeutic potential. The study of plants like Datura, whose traditional uses point to the presence of bioactive compounds, has led to the discovery of novel tropane alkaloids and facilitated screening efforts to evaluate their biological activities. By bridging traditional knowledge and modern techniques, the process of natural products discovery transforms culturally significant plants into a pipeline for developing new drugs, underscoring the role of ethnobotany in advancing global health.

Welker, Martin, David Byers, Jesse Alston. **Historical Declines of Bighorn Sheep in the Southwest: Evidence for Shifting Baselines in Conservation?** (IV. Traversing Past Landscapes and Human-Environment Interactions)

The bighorn sheep (*Ovis canadensis*) is an iconic North American mammal that is often the focus of intensive conservation programs. These conservation programs typically judge success against historical data--often range maps dating to the 1850s, which coincide with the United States assuming possession of the Southwest from Mexico. Notably, commonly cited 1850s range maps indicate that northeastern Arizona, today largely the Diné (Navajo) Reservation, was devoid of bighorn sheep, even though this region is ecologically suited to the species. One explanation for this incongruity is population decline caused by the transmission of diseases like pneumonia (*Mycoplasma ovipneumoniae*) from domestic sheep (*Ovis aries*) introduced to the region by the Spanish as much as 250 years earlier, and prior to accounts written in English. We examine this idea by documenting the distribution and relative frequency of archaeological bighorn sheep remains and assess whether notable declines occurred prior to the 1850s.

Wohlgemuth, Eric. **Chenopodium Use in Precolonial California.** (XV. Chenopod Cuisines: Spatial and Temporal Explorations of Chenopodium Use Across the Western Hemisphere)

Second only to renowned acorn as the most common food remains in California archaeobotanical assemblages, Chenopodium was clearly important in California Native subsistence. But its importance varied greatly over different parts of California. Chenopodium seems to have been most important in the lower reaches of the Sacramento and Santa Clara Valleys, where it comprised more than 50% of the abundant small seeds found, and may have rivaled acorn as a staple food. An initial pilot study found no clear evidence of human selection. Native Chenopodium might have potential as a modern food crop as an alternative to water-intensive rice agriculture in some areas of the Sacramento Valley.

Wooding, Stephen and César Peña. **A Tradition of Diversity: Biological and Cultural Variation in Yuca (Cassava, Manioc) in an Indigenous Bora Community.** (XIV. Community, Climate and Food)

Yuca (cassava, manioc) is a tuber crop central to diets throughout the Amazon basin. It is represented by myriad cultivars, which vary substantially in growth rate, morphology, nutritional content, and other traits. In this study, we examined diversity in yuca cultivated by a Bora community in the Peruvian Amazon, and compared it with diversity across the surrounding region. We found that measures of single traits in Boran yuca overlapped with those of the broader region. However, their mean values were significantly different, and their variance was significantly lower. In addition, cyanide production by tubers, a key determinant of yuca cultivation and use, was two-fold higher than across the broader

region, and more variable. Thus, diversity in Boran yuca overlapped with that of the broader region, but was distinct overall. These findings suggest that the Bora select specific traits in yuca to address agricultural constraints, cultural traditions, or both.

Zandvliet, Alyssa, Jennifer Grenz, Chelsey Armstrong. **Using Historical-Ecological Approaches to Better Understand Land-Use Histories: Quw'utsun Food Systems and Settler Histories in the Cowichan Bay Estuary.** (IX. Food Systems)

Using historical-ecological approaches, this research presents pathways for better understanding settler colonial and Quw'utsun (Cowichan, Coast Salish) land-use histories over decadal and centennial scales. Focusing on the Cowichan Bay Estuary, a highly developed and industrialized inlet on eastern Vancouver Island, and in collaboration with Cowichan Tribes, this research will integrate primary source data (early surveys, colonial era letters, etc.), ecological surveys, and ethnographic interviews, to assess how land-use in the estuary has changed over time. Preliminary results indicate that at the onset of early colonial incursions, the estuary was a dynamic food system characterized by forest gardens of Garry oak savannah, native fruit tree orchards, and intertidal root gardens. Within decades, commercial logging and farming resulted in a net turn-over in species and increased sediment loading (upwards of 2 m of sediment deposited in ~70 years), drastically reducing plant diversity and Quw'utsun food system resilience.

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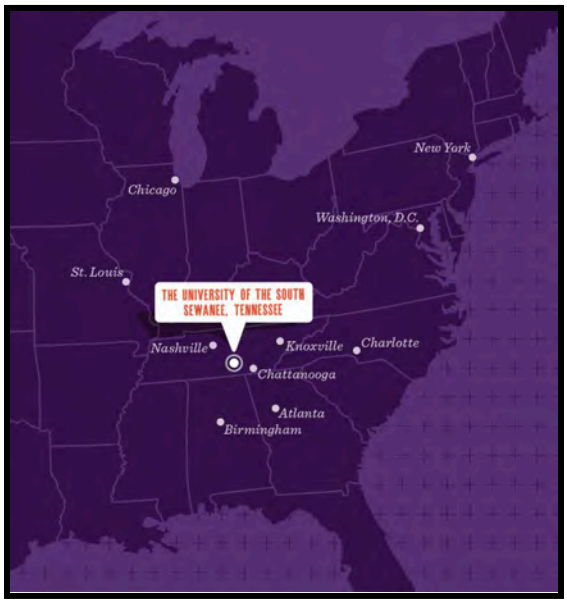
Save the Date for SoE'26!

Thank you for joining us in Incline Village!

We are looking forward to welcoming you next year to the 2026 Annual Conference of the Society of Ethnobiology!



Please make sure to mark your calendar and save the date for the **47th Annual Conference of the Society of Ethnobiology** hosted at the **University of the South**, **May 20–23, 2026.**

Dates: Wednesday, May 20–Saturday, May 23, 2026
Location: The University of the South, Sewannee, Tennessee

More details to follow soon on the Society's website.

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