# ICC

## Integrative Conservation Conference

February 16-17, 2024
Russell Building Special Collections Library
University of Georgia

cicr.uga.edu

# Integrative Conservation Conference

The Center for Integrative Conservation Research (CICR) at the University of Georgia is pleased to host the 2024 Integrative Conservation Conference (ICC). CICR's mission is to advance new visions for conservation and environmental governance that are more just and more effective in creating the conditions in which all life can thrive, through innovations in graduate education, research and societal engagement that embrace multiple ways of knowing and relating to the world around us. ICC actualizes this mission by bringing together researchers, practitioners, artists, storytellers, and other partners to discuss and advance conservation research and practice. This year's conference features presentations, workshops, panel discussions, and other contributions that address all aspects of conservation at local, regional, or international scales, including perspectives rooted in ecology, anthropology, biology, geography, environmental history, indigenous-led science and stewardship, public policy, community engagement, and natural resource management.

*New Visions for Conservation*: The concept of "conservation" has come under scrutiny in recent years. Critiques leveled against conservation highlight its tendency to separate people from the non-human world, its elevation of formal expertise at the expense of local knowledge, its role in dispossession and the disruption of lifeways, and the persistent disparities that conservation scholars and practitioners confront throughout higher education and later career stages. What would it mean to re-envision conservation as something other than its most troubling legacies? How might conservation be reconciled with paradigms, practices, and knowledges that have traditionally been excluded? How are students, researchers, and conservationists doing conservation differently, and how are Indigenous and other people with longstanding ties to place asserting their visions for more just and livable futures? This conference aspires to bring diverse perspectives together to explore the past, present, and possible futures of this complex and contested concept.

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### Saturday, February 17th

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|---|---|---|
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| **Sunday** | **Post-Conference Fieldtrips** | Location varies |

# Information for Attendees

## Hybrid format

Unless otherwise specified, **all sessions** will be hybrid. Each session will have an in-person room and a Zoom room. Zoom links will be provided to registrants closer to the conference date. If you plan to attend online, please ensure that you have downloaded and installed the latest free Zoom software prior to the start of the conference.

## Zero waste event

We are hopeful that this event will be as close as possible to zero waste. To that end, we kindly ask that our in-person attendees bring water bottles and/or reusable mugs for coffee and tea with them. We will also forego having printed programs at the registration table; instead, we will provide QR codes that link to the full program.

## Wi-Fi Access for off-campus guests

To access UGA Wi-Fi without a UGA myID, please select 'UGA_Visitors_WiFi.' A screen will then appear that requires you to 'Agree to Terms and Conditions'. After confirming that you agree and choosing 'Next', you will come to a screen where you will be able to receive a code via email or text. Once you receive the code, the next screen will ask for it, and then it should easily connect you to the network. If for some reason you do not receive the code, you can call the UGA EITS office, (706) 542-3106, to request a code over the phone.

## Parking at the Hull St. Deck

For conference attendees who purchased parking during registration, please head toward the third-floor pedestrian bridge after parking your car. The parking kiosk is here, and you can input the parking code provided to you to waive the fee. Parking is free in this deck on weekends.

## Russell Building Special Collections Library Floorplan

# Plenary Panel

Friday 9:45 – 11:00 am Room 271

## Fire Relationalities in U.S. Forests – Past, Present and Future

From the Australian bushfires or "Black Summer" of 2019-2020 – which burned 24.3 million hectares, affecting countless human and nonhuman lives and driving some species to extinction – to the 2023 Hawaiian wildfires that burnt the historic town of Lahaina to the ground, or the raging fire seasons in Canada and the U.S. in the past few years, fire is an increasingly unmistakable presence on landscapes and in the public imagination. Yet in the Western imagination, it looms largest as a major threat to land and life, rather than as a keystone ecological process or crucial life force – an orientation which might suggest less fire and more fire suppression is the answer. This facilitated exchange between Tommy Cabe (Tribal Forest Resource Liaison of the Eastern Band of Cherokee Indians), Kirsten Vinyeta (Assistant Professor of Sociology and Anthropology at Utah State University) and Joseph O'Brien (Project Leader for the Athens Prescribed Fire Science Laboratory of the USDA Forest Service) will explore human-forest-fire relationalities in the Eastern and Western forests of the United States. It will do so with an eye to the past, present and future: How did we come to this predicament, and how have forest ecologies and relationalities been transformed? How do path dependencies in forest ecologies, climate, institutions and ideologies constrain and complexify the task of managing so-called "wildlands" today? And how might we re-think fire futures, from the authority to set fires, to the knowledges and partnerships that undergird forest and fire stewardship?

## About the panelists

**Dr. Kirsten Vinyeta** is an Assistant Professor in the Department of Sociology and Anthropology at Utah State University. She is an environmental sociologist specializing in qualitative methods whose research focuses on federal land management, climate change, and the impacts of these on Indigenous peoples and sovereignty in the United States. Prior to her role at USU, Kirsten received her PhD in Environmental Sciences, Studies and Policy at the University of Oregon and her BS in Landscape Architecture at the University of Wisconsin-Madison. At the University of Oregon, she was a research fellow for the Tribal Climate Change Project and carried out a community-based participatory research project with the Coquille Indian Tribe as part of her master's thesis. Since 2016, she has served as a collaborating researcher and illustrator for the Karuk Tribe Department of Natural Resources, examining how federal wildfire management policies affect the Tribe's ability to adapt to climate change and protect the ecological integrity of the Klamath River Basin. As a settler frequently collaborating with Indigenous scholars, professionals, and communities, she is committed to community-based projects that honor Indigenous epistemologies and advance Indigenous sovereignty. She is also interested in projects that interrogate mainstream discourses of climate change vulnerability and resilience, and in exploring the applicability of multispecies justice frameworks.

**Mr. Tommy Cabe** is a Tribal member from the Bird Town Community. He is a senior employee to the newly evolved Agricultural & Natural Resource Department. He studied environmental & natural sciences at several higher education institutions before discovering his interest in forestry. During his completion of the forestry program at Haywood Community College in 2000, he was employed by the EBCI Environmental Department as an Air Quality Technician where he had field and technical responsibilities. He later advanced to the evolving Water Quality Program as the Non-Point Source Coordinator, where he managed several projects on Tribal lands to minimize pollution in the Tribal watersheds. Tommy then became the Tribal Environmental Planner. In this position, he oversaw both the Air Quality Program and the Non-Point Source program. In 2005 he became the Tribal Forest Resource Specialist where he is responsible for Forest Management Plan Development on the Trust Lands and on the forested Tribal acres. Cabe serves as a liaison in the "agency to agency" relationships with the USFS and the NPS for collaboration on Traditional Ecological Knowledge (TEK) and traditional gathering of certain resources within these adjacent landscapes. He represents the Tribe locally and nationally on natural resource issues that impact Indian country both positive and negatively. Tommy is an avid outdoorsman who thoroughly enjoys hunting, fishing, and hiking. In doing so he is constantly aware of traditional ceremonies that need to be practiced for a more definitive connection to the land. One of his favorite quotes is: "Bear in mind that every oak tree started out as a nut that stood its ground."

**Dr. Joseph O'Brien** is a Research Ecologist and Project Leader of the Athens Prescribed Fire Science Laboratory of the USDA Forest Service Southern Research Station. He received his undergraduate degree in Biology from SUNY Geneseo, and his MS and PhD in Biological Sciences from FIU. Since joining the Forest Service in 2002, Joe's research has centered on wildland fire science, specifically focusing on informing the use of fire to meet forest management objectives though a detailed understanding of the mechanisms driving fire behavior and fire effects. To achieve these goals, he has had to pioneer in-fire energy measurement techniques and wildland fire experiments. He also has 20 years of operational fire experience and is qualified as a Squad Boss, part of his commitment to the coproduction model of research and development. His training and prior work has given him expertise in plant ecology, ecophysiology, conservation science and forest management. He has worked on fire management globally, with ongoing projects in several Latin American and Caribbean nations.

**Moderated by Dr. Laura German**, CICR Director and Professor of Anthropology, UGA

# Plenary Lecture by Dr. Paige West

Saturday 4:00 – 5:15 pm Room 285

## Collaborative socio-ecological and socio-spiritual work in Papua New Guinea: An Anthropology of Letting Go

**Dr. Paige West** holds The Claire Tow Professorship in Anthropology at Barnard College and Columbia University, serves as the Director of the Columbia University Climate School Transdisciplinary Research Lab, and is a Guggenheim Fellow. She has worked in Papua New Guinea since 1996 and has conducted over 100 months of field-based research in the country. She has written about the linkages between environmental conservation and international development, the material and symbolic ways in which the natural world is understood by Indigenous peoples and natural scientists, and the production of biodiversity-based commodities. Her current research is focused on sea level rise, managed retreat, and the question of how people forge new lives in the face of climatic change.

Dr. West is the author of three books and the editor of five more. She has also published numerous scholarly papers. She is the founder of the journal Environment and Society: Advances in Research and served as its editor for a decade. Her most recent book, Dispossession and the Environment, won the 2017 Columbia University Press Distinguished Book Award.

In addition to her academic work, Dr. West is the co-founder of the PNG Institute of Biological Research, a small NGO dedicated to building academic opportunities for research in Papua New Guinea by Papua New Guineans. She is also the co-founder of the Roviana Solwara Skul, a school in Papua New Guinea dedicated to teaching at the nexus of indigenous knowledge and western scientific knowledge.

# Session Details

All presentation sessions will be hybrid

## Friday 11:15 am – 12:30 pm

### Pasts, Presents, and Futures — Room 271

**We Are Not Yet Conquered: Visualizing Submerged Cherokee Cultural Landscapes and Contemporary Public Spatial Awareness**
Justice Egan Britton, University of Georgia

**One Week Outweighs A Hundred Years: Conservation, Heritagization and Meaning Reproduction in Tibetan Zhuokeji Tusi Official Residence**
Botao Zhao, Yale University

**Decolonizing Conservation Practices: A Feminist Political Ecological Analysis of Conservation practices in Chittagong Hill Tracts (CHT), Bangladesh**
Mst. Sabikun Naher, University of Georgia

**Nurturing Tendrils of Fragile Dreams**
N Nitha Fathima, National Institute of Science Education and Research, Bhubaneswar, India

### Keystones, Cultures, and Co-Existence — Room 258

**Cultural keystone species as a tool for biocultural stewardship**
Giulia Mattalia[1], Alex McAlvay, Victoria Reyes-Garcia
[1]ICTA-UAB/NYBG

**Nurturing harmony between tigers and communities: insights from long-term monitoring of tigers in Kanha Tiger Reserve, India.**
Jayanta Kumar Bora[1], Ujjwal Kumar[1], Shravana Goswami[1], Neha Awasthi[1], Qamar Qureshi[1], Y.V. Jhala[2]
[1]Wildlife Institute of India, Dehrahun; [2] Fellow of the Indian National Science Academy, New Delhi

**Constructing Nature: Multispecies Justice in Human-Tiger-Wolf Relations in India**
Amit Kaushik, University of Georgia

**The Power of Story for Conservation**
Harshad Sambamurthy

## Friday 3:15 – 4:30 pm

### Film Screening: — Room 271

### *Awakening Dhꭰ (A-Tsi-Lv), Restoring Land Relations*

Matthew Tatz[1,2], Chelsea Wilson[3], Colin Peterson[1,2], Janaki M[1,4], Aoife Kate Pitts[1,4], Evan Crispell[1,4], Leonardo Tadashi Duarte[5], Laura German[1,4]
[1]Center for Integrative Conservation Research; [2]Odum School of Ecology; [3]Wilson Center for Humanities and Arts
[4] Department of Anthropology, University of Georgia; [5]Franklin College of Arts and Sciences

## Plants and People: Part One — Room 258

**Drivers of resilient agroforestry adoption: learnings from participatory action research project**
Kristen Jovanelly[1], Theresa W. Ong[1]
[1]Ecology Evolution Environment and Society Program, Dartmouth College

**The role of learning sources in familiarity with forest conservation programs and ecosystem services: the gendered case of family forest landowners in Georgia, United States**
Carolina Berget[1], Anne Mook[2], Puneet Dwivedi[1]
[1]Warnell School of Forestry and Natural Resources, University of Georgia; [2]Institute for Research in the Social Sciences, Colorado State University

**Using Cultural Consensus Analysis and Mental Model Approach for Ascertaining Perceptions of Forest-Based Ecosystem Services Among Female Forest Landowners in Georgia, United States**
Kanchana Balasubramanian[1], Puneet Dwivedi[1]
[1]Warnell School of Forestry and Natural Resources, University of Georgia

**Farmers United by Farm & Forest: Investigating Conservation Behaviors in Farmland-Only & Farmland-&-Woodland Owners**
Suraj Upadhaya, College of Agriculture, Community and the Sciences, School of Agriculture, Communities and the Environment, Kentucky State University

# Saturday 9:15 – 10:15 am

## Attention to Process — Room 271

**Resisting 'Conservation'**
Akanksha Sharma, Department of Geography, University of Georgia

**Using Collaborative Storytelling Games to Imagine Alternative Futures for Nature**
Alec Nelson[1], Katherine L. Reinberger[2],
[1]University of Georgia; [2]Center for Applied Isotope Studies, University of Georgia

**Conducting Sustainable and Equitable Science: Are We Walking the Walk?**
Star Scott, University of Georgia

## Conservation Models — Room 258

**Assessing ungulate response to conservation-oriented village relocations and their associated management practices in a tiger reserve in central India**
R Yashaswi Rao[1], Mahesh Sankaran[2], Devcharan Jathanna[3], Anish Andheria[4]
[1]National Centre for Biological Sciences; [2]National Centre for Biological Sciences; [3]Wildlife Conservation Society – India; [4]Wildlife Conservation Trust

**Understanding urban biodiversity co-existence model in kanker forest division, Chhattisgarh: a case study to recognize factors affecting wildlife space use in an urban landscape.**
Anam Ahsan, University of Missouri

**Re-storying Indigenous Conservation Practices**
Sharayu Jakhotiya, University of British Columbia

## Water Relations — Room 268

**Recognizing Human-Environment Water Conflict is A Critical Step for Water Security and Freshwater Biodiversity**
Charles van Rees, Odum School of Ecology, UGA

**Nature Based Solutions at COP 28: Exploring Trade-Offs and Opportunities in Water Infrastructure**
Katie Foster, University of Georgia

**Water Management and Biodiversity: Relationalities in the Peruvian Andes**
Alessandra Vidal Meza, Bren School of Environmental Science & Management

# Saturday 1:00 – 2:15 pm

## Plural Perspectives — Room 271

**Understanding cross-scale dynamics to inform integrated landscape approaches: Evidence from Ghana and Zambia**
Alida O'Connor[1,2], Terence Sunderland[3,4]
[1]University of British Columbia; [2]CIFOR COLANDS Initiative; [3]University of British Columbia; [4]Center for International Forestry Research (CIFOR)

**Non-Essentialist and Non-Cartesian Conservation: Alternatives from Indigenous NGOs and Religious Leaders in the Tibetan Plateau, China**
Junhan Hu, Yale University

**Re-imagining conservation futures through the eyes of forest-dwelling youth**
Shruthi Jagadeesh, University of Colorado Boulder

**The Canopy Collective- Collectivizing a new conservation paradigm for Northeast India**
Anuja Mital[1,2], Tejaswini Nagesh[2], Pranav Balasubramanian[2,3], Nandini Velho[2]
[1]Odum School of Ecology, UGA; [2]Canopy Collective, India; [3]Indian Institute of Science

## Plants and People: Part Two — Room 258

**Participatory ethnobotany: bridging livelihoods and conservation in the Colombian Amazon**
Aoife Kate Pitts, University of Georgia

**Embedded Conservation and Human-Plant Alliance: Traditional Seeds Saving Among Ethnic Minority Farmers in Yunnan, China**
Xiyao Fu, Yale University

**How to Train Rivercane**
Alyssa Quan[1], Caleb Hickman[2]
[1]University of Georgia; [2]Eastern Band of Cherokee Indians

**Examining spatial configuration of tree tenure and ownership norms among tribal communities around trees on forest land in India**
Sabyasachi Kar[1], Puneet Dwivedi[1], Tripp Lowe[1], Gaurav R. Sinha[2]
[1]Warnell School of Forestry and Natural Resources, University of Georgia; [2]School of Social Work, UGA

## Saturday 2:30 – 3:45 pm

## Policies and Infrastructure — Room 271

**Identifying inconsistencies in exotic pet regulations that perpetuate trade in risky species**
Elizabeth N. Pratt[1], Julie L. Lockwood[2], Elizabeth G. King[1,3], Elizabeth F. Pienaar[1,4]
[1]Warnell School of Forestry and Natural Resources, University of Georgia; [2]Department of Ecology, Evolution, and Natural Resources, School of Environmental and Biological Sciences, Rutgers, The State University of New Jersey; [3]Odum School of Ecology, University of Georgia; [4]Mammal Research Institute, University of Pretoria

**Blue Carbon Policy Analysis from the Perspective of Government, Market, and Scientific Research**
Xin Yan[1], Deepak Mishra[1], Sechindra Vallury[2]
[1]Department of Geography, University of Georgia; [2]Odum School of Ecology, University of Georgia

**Integrating Disaster risk management and climate change policies through conservation: Lessons from Latin America**
Ady Rosin Chinchay Tuesta, Princeton Institute for International and Regional Studies (PIIRS), Princeton University

**A Vision for Re-imagined Infrastructure and a Biodiverse Future**
Charles van Rees[1], Darixa D. Hernández-Abrams[2], Matthew Shudtz[3], Roderick Lammers[4], Jeb Byers[1], Brian Bledsoe[5], Matthew Bilskie[5], Jon Calabria[6], Matt Chambers[5], Emily Dolatowski[6], Susana Ferreira[7], Laura Naslund[1], Don Nelson[8], Nate Nibbelink[9], Burton Suedel[2], Amanda Tritinger[2], C. Brock Woodson[5], Kyle Mckay[2], Seth Wenger[1]
[1]Odum School of Ecology, University of Georgia; [2]U.S. Army Corps of Engineers Engineer Research and Development Center, Vicksburg, MS; [3]Institute for Resilient Infrastructure Systems, University of Georgia; [4]Department of Environmental Engineering, Central Michigan University; [5]College of Engineering, University of Georgia; [6]College of Environment and Design, University of Georgia; [7]College of Agricultural Economics, Department of Agricultural and Applied Economics, University of Georgia; [8]College of Arts and Sciences, University of Georgia; [9]Warnell School of Forestry and Natural Resources, University of Georgia

## Understanding Movement — Room 258

**Spatial overlap and parasite infections: Intersecting space use by humans and the Perrier's sifaka with the cross-species transmission of gastrointestinal parasites in northern Madagascar**
Mariana Matos, ICON and Anthropology, University of Georgia

**Human impacts on African mammal diel activity patterns and waterhole access**
Jessy Patterson[1], James C. Beasley[2], Stephanie Periquet[3]
[1]Warnell School of Forestry and Natural Resources, University of Georgia; [2]SREL, University of Georgia; [3]Ongava Research Centre

**A fence runs through it: The effects of land use on fence crossings wildlife at the interface of Etosha National Park and the surrounding human-dominated landscape**
Madeline Melton[1], Stephanie Periquet[2], J. Werner Kilian[3], Claudine Cloete[3], James Beasley[1]
[1]Savannah River Ecology Laboratory, Warnell School of Forestry and Natural Resources, University of Georgia; [2]Ongava Research Centre, Outjo,Namibia; [3]Etosha Ecological Institute, Okaukuejo, Etosha National Park, Namibia

**Conserving the Baird's tapir as a flagship species is an effective way to connect protected areas**
Jorge Rojas-Jiménez[1,2], Sonia M. Hernandez[1,3], Richard Chandler[1], Jeffrey Hepinstall-Cymerman[1], Theodore Gragson[4], Christopher Jordan[5], Esteban Brenes-Mora[5], Eleanor Flatt[6], Andy Whitworth[6]
[1]Warnell School of Forestry and Natural Resources, UGA; [2]Costa Rica Wildlife Foundation, San José, Costa Rica; [3]Southeastern Cooperative Wildlife Disease Study, Department of Population Health, College of Veterinary Medicine, UGA; [4]Department of Anthropology, UGA; [5]Re:Wild, Austin, TX; [6]Osa Conservation, Washington DC

# Poster Session

Friday 12:30 – 1:30 pm Room 285

Presenting authors will be available during this session for synchronous engagement with conference attendees.

**Community Connected Conservation: tradeoffs and synergies between wildlife movement and protein availability in South Africa**
Kristie Gill, Warnell School of Forestry and Natural Resources, University of Georgia

**Creating school gardens in the Peruvian desert for hummingbirds**
Oscar Gonzalez[1,2], Liliam Morante[1], Ernesto Malaga[1]
[1]Grupo Aves del Peru. Lima, Peru; [2]Anderson University, SC. USA

**Soft Skills Training for the Future of Forests in Liberia**
Elizabeth King[1], Janet Lolemeh[2], Philip Norrington Jr.[2], Johnson Fromayan[3], Mulbah Kortimai[3], Albertha Mulbah[3], Rebecca Benson[4], Adanta Lymas[4], Catherine Machalaba[5], Troy Bowman[6], Wubishet Tadesse[6], BK Robertson[7,1], Rashidah Farid[8], Kris Irwin[1], Layli Maparyan[9]
[1]University of Georgia; [2]Forestry Training Institute, Liberia; [3]University of Liberia; [4]Tolbert University, Liberia; [5]EcoHealth Alliance, USA and Liberia; [6]Alabama A&M University; [7]Alabama State University; [8]Tuskegee University; [9]Wellesley College

**Spreading Wildlife Conservation Message Through Evanescen Traditional Art of South India**
Brawin Kumar[1], Abinesh Muthaiyan, Deepika Brawin Kumar, Mohammed Shahidh, Mohammed Thanvir
[1]Action for Community Transformation India Foundation

**A conversation of conservation: perception analysis and redefining of conservation towards holistic collaborative thinking**
Ellie Lutz[1], Dillen Edwards[1], John Sanderson[1], Elias Quinonez[2]
[1]Warner College of Natural Resources, CSU; College of Agricultural Sciences, CSU

**Academic Spaces and Indigenous Places: Native American Dispossession and the University of Georgia**
Mariana Matos[1], Bruno Ubiali[1], Steven Scurry[2], Savannah Guenthner[1], Laura German[1]
[1]University of Georgia; [2]Local Historian

**The Orders of Nature: landscape design as philosophical questioning**
Katherine Melcher, University of Georgia

**"Other" expertise: Gendered knowledge and outsider perceptions of Mikea in southwestern Madagascar**
Nicole Rowley, Department of Anthropology, University of Georgia

**Tools and Topics for Anticolonial Environmental Studies**
Alessandra Vidal Meza[1], Daniel Kedansky[2]
[1]Bren School of Environmental Science & Management; [2]University of Puget Sound

# Friday Workshops and Roundtables

1:30 – 3:00 pm

## Collaborative Storytelling Game: Imagining Alternative Futures for Nature

### Room 268, in-person workshop, advance registration required

Alec Nelson[1] and Katherine L. Reinberger[2]
[1]University of Georgia; [2]Center for Applied Isotope Studies, University of Georgia

Collaboration is a useful mechanism to promote social ties, encourage deeper learning, and form networks of experience and practice. Fostering collaborative spaces can present many challenges for establishing common understanding or presenting evocative individual and collective visions. Storytelling games provide innovative and structured frameworks for participants to consider alternative futures through low-stakes opportunities that create a shared narrative space. Using the storytelling game "In This World", a group of up to 8 participants will engage in a collaborative worldbuilding experience where you will be asked to consider emerging environmental topics, such as the "rights of nature", "community conservation", and "climate resilience". Participants will have the opportunity to suggest alternatives to our current global, political, and economic conditions and co-create imagined futures. By participating in this exercise, participants can gain greater understanding, empathy, and motivation toward new avenues for promoting nature and their environment. No experience or preparation is required!

The workshop will be limited to **8 participants**. Please visit the registration desk to register.

## Placing Interdisciplinary Research at the Service of Tribal Agencies: Experiences of Integrative Conservation PhD Students at the University of Georgia

### Room 271, hybrid session

Justice Britton[1], Kanchana Balasubramanian[1], Amit Kaushik[1], Gabrielle Langhorn[1], Anuja Mital[1], and Andrew Paul[1]
[1]University of Georgia

There are growing calls for interdisciplinary and transdisciplinary research and training, as well as for building researcher competencies in navigating complex accountabilities to academia and historically marginalized groups. This panel brings together doctoral students in the Integrative Conservation PhD program at the University of Georgia to share their experiences and findings in carrying out research prioritized by, and in partnership with, the Natural Resources Department of the Eastern Band of Cherokee Indians.

# Exploring the Role of the Arts in Conservation

## Room 258, hybrid roundtable

Constanza Urresty-Vargas[1] and Fausto Sarmiento[1]
[1]Neotropical Montology Collaboratory, Department of Geography, University of Georgia

Art has outstanding potential to challenge paradigms and decolonize perceptions. We want to explore how this premise applies to conservation research and practice. We propose a curated conversation with indigenous and non-indigenous artists working on conservation and environmental topics, to reflect through their work about biocultural diversity, decolonization of knowledge, and novel formats of communication, such as multimodal methodologies. We seek to facilitate a dialogue about the role of the arts in conservation and the possibilities that the arts, both as language and as practice, offer to imagine new visions in conservation. We propose two main paths for these reflections: 1) Discuss how the arts can expand ways to communicate in conservation. Different artistic practices, involving several formats, techniques, and materials, have the potential to challenge and expand our reflections, languages, and the audiences we, as researchers and practitioners, interact with. The arts can help us move beyond mainstream communication formats used by Western sciences and governmental institutions, which usually exclude non-Western epistemologies. 2) Explore the role of conservation of arts and crafts as components of biocultural diversity. We propose discussing connections between biodiversity and land-based artistic and craft practices on several levels. This brings reflections on how biodiversity loss and different conservation approaches affect how livelihoods, languages, and identities are understood and how they can exist or resist.

Guests:

- Manuel and Alejandra Carrión-Lira from the Catrileo-Carrión Mapuche Community
- César Cotacachi, Otavalo-Peguche community artist, Ecuador
- Éric Marty, Odum School of Ecology, UGA"

# Saturday Workshops and Roundtables

10:30 am – 12:00 pm

## Elevating Community Partnership for Conservation Impact: New Directions and Opportunities in Conservation Practice

### Room 268, in-person workshop

Shafkat Khan[1] and Jenn Torpie[1]
[1]Pittsburgh Zoo and Aquarium

Conservation practice continues to grapple with the emergent understandings from decolonial critiques of the field. While there's now a widespread recognition of needing to practice conservation differently than in recent history, at least in the mainstream, practitioners struggle to implement equitable and inclusive conservation on a number of fronts. These different challenges are perennial issues in effective community-based conservation: i. How does a disempowered stakeholder or community get included in the conservation agenda setting and decision-making process? ii. How can funding and structures of power be sensitive to local or community needs, even as the structures themselves resist change? iii. How can problems global in scope be transposed on a local scale, to landscapes in a manner that includes disempowered communities and stakeholders, while driving solutions to the global problems? Leveraging the backgrounds of the organizers, we will explore the implications and opportunities for public-facing private conservation organizations intent on changing their own practices. The workshop will solicit the participants' engagement and input in answering the questions highlighted above. Workshop format: We envision leading the discussions in small groups with assigned discussion leaders inviting practitioners' ideas and best practices. In a peer-to-peer learning model, the participants will drive the discussions and highlight shared understandings. We will synthesize and summarize the group discussions both in person during the workshop and in an electronic format for referencing after the conference.

## Environmental Ethics Reframing Conservation: From Leopold to Climate Justice

### Room 271, in-person roundtable

Christine Cuomo[1,2], Douglas Geiger[1], Kobi Korankye[1], Olivia Moskot[1], Sana Ullah[3], and Guillermo Zapata[1]
[1]Philosophy, University of Georgia; [2] Women's Studies, University of Georgia; [3]Agriculture Leadership, University of Georgia

This session will be a roundtable presenting research in environmental philosophy exploring the ethical dimensions of conservation ideals, and the ethical imperative of radically rethinking conservation values, policies and practices. Focus points will include a) the foundational role and meaning of 'conservation' in Aldo Leopold's mid-twentieth century land ethic; b) alternatives to conservation discourse presented by ecofeminist socialism, Indigenous

philosophy, and feminist care ethics; c) the relevance of aesthetics as another dimension of value informing environmental ethics; d) insights on using environmental ethics to communicate conservation values to farmers; and e) attention to critical work questioning conservation's complicity with racist histories. These elements will provide a foundation for collectively probing the meanings and significance of conservation today. We hope that attention to the ethical dimensions of conservation, such as underlying values and synergies, will create an opportunity for attendees to reflect on their own values and the presumed values embedded in conservation practices.

## Towards a Kinder Conservation Field and Healing Our Own Professional Community

### Room 258, in-person roundtable

Aireona Bonnie Raschke, Center for Collaborative Conservation, Colorado State University

Among the many positive changes that we seek for a new and improved conservation field, one piece of our vision should be caring more deeply and completely for the conservation community itself. Across a broad spectrum of conservation professionals, from early-career folks struggling to find their first conservation job, to late-career people who have weathered years of over-work, high-competition, and institutional strife – it is too often the case that we have normalized a system that prioritizes outcomes and metrics over the well-being of our own community. This paradigm isn't working, not for the world we are hoping to save and not for ourselves. Conservation should be about more than acres treated, papers published, or dollars raised, it should be about healing – healing the land, healing our connection to it, and healing ourselves. We need a culture of care to do this, and while there are many bright spots across the conservation field (including exceptional people and exceptional organizations dedicated to the well-being of their internal/external communities), we still have a long way to go. Join this roundtable discussion to share your experiences and map a path forward to a more caring conservation community. What does this future look like? And how do we get there? Some of the topics that we may discuss are:

- Funding for people not projects
- Measuring well-being among conservation professionals along with other metrics
- Addressing the impacts of capitalism on the conservation field
- Moving away from competition and the scarcity-mindset

# Closing Concert

Saturday, 5:30–6:30pm Room 271

## Composition x Conservation: New Music Inspired by Current Conservation Research

Join us for the premieres of new musical works inspired by current conservation research! These works are a result of collaborations between UGA student composers and ICON PhD students. Composers include Gianna DiMuzio, William Emde, William May, Sydney Moore, and Nkululeko Zungu. ICON students include Hannah Morris, Justice Britton, Cydney Seigerman, Alyssa Quan, and Janaki Mohanachandran. Supported in part by the UGA Arts Collaborative, an interdisciplinary initiative for advanced research in the arts at the University of Georgia.

Organized by Sierra Wojtczack, UGA Arts Collaborative

### Innaipu

Composed by Nkululeko Zungu, Hugh Hodgson School of Music
In collaboration with Janaki Mohanachandran, Department of Anthropology
Performed by William Freeman Leverett (tablas and voice)

*Innaipu* is synonymous with attachment or connection in Tamil, which is one of Janaki's native languages. This work sonically archives the conversation that discourses the understanding of place attachment. Here, the music traverses through the South Indian coast to the Eastern Himalayas, as it is echoed throughout the work through the various chants, and expressive exclamations heard as well as through the choice of including Tablas and Indian classical music. The Tabla is a South Asian instrument that reflects the embodiment of both Hindu and Islamic Mughal roots and continues to thrive within Indian classical music and global music landscapes. The chants and songs are recordings collected by Janaki during her fieldwork with the Galo tribe from Arunachal Pradesh (eastern Himalayas).

What does representation, or the sense thereof, mean to us? One may be born in one place, live in another, and find themselves belonging to both while simultaneously belonging to one - home. I, Nkululeko, felt it important to have Janaki heard audibly within this work, as the sounds captured, and the discussions had around this topic would not be possible without her journeying across these lands; She is heard opening and closing the work. Program notes prepared by Nkululeko Zungu (composer) and Janaki Mohanachandran (researcher)

### Eventos Brasileiros: I. Na Foresta Branca

Composed by William May, Hugh Hodgson School of Music
In collaboration with Cydney Seigerman, Department of Anthropology
Performed by William May (horn)

This is the first of what will become a multi-movement work. Here, the horn represents this idea of anticipated celebration. The people of this Brazilian region expect something great to happen. Greater than the vistas, the rain is coming. The people rejoice in hope. The horn call that bookends this movement signals and hints at greater moments to come. This work was created as a collaborative effort between the composer and researcher Cydney Seigerman (UGA).

## Sunrises, Sunsets

Composed by Gianna DiMuzio
In collaboration with Hannah Morris, Warnell School of Forestry and Natural Resources
Prerecorded audio

This piece is based off of the barrier islands that hug the coast of Georgia. The piece goes through what a day may look like on an island, from the crashing waves of the ocean to the birds and wildlife taking cover under the massive oak trees during a storm. This piece combines a string trio and electronic sounds to help immerse the listener into the scenery of an island in Georgia.

## I-HI-YA

Composed by Sydney Passmore
In collaboration with Alyssa Quan, Odum School of Ecology
Performed by: Sam Malavé (flute), Allyson Kate Mckoon (clarinet), Jhonnisvan Campos(violin), Daniel Boscan (viola), Charlton Hills (cello)

This piece was written in collaboration with Alyssa Quan and her research on the cultural and environmental impacts of rivercane. The title comes from the language of the Cherokee people, who used rivercane to make some of the products used for their everyday lives. This piece specifically depicts the creation of a rivercane basket. In the music, as the rivercane is being harvested, carved, and weaved into a basket, the hooded warbler, a bird depicted by the flute, can be heard overhead. This represents a balance between nature and man. Unfortunately, as the rivercane starts to disappear, the hooded warbler becomes weaker and eventually dies along with the rivercane.

## Wild Potatoes

Composed by William Emde
In collaboration with Justice Britton, Department of Anthropology
Performed by Dalton Hooper, Trey Heaton, Josh Hadaway, Zachary Nelson (trombones) William Emde, Jonas Vetrescas (bass trombones)

This piece was written in collaboration with Justice Britton, a researcher doing conservation work on the Cherokee Nation's history. As I was working on this piece, I struggled to find a way to write music about his work without creating some crude appropriation. I settled on a narrative that tells the story of what Justice is doing for his community. Using my own compositional voice, I hope to be able to amplify the good work Britton has been able to accomplish.

Justice's work, in its most essential part, centered around bringing a lot of parts of Cherokee culture out of obscurity. That's what I chose to have the piece about. The work starts out in a difficult listening environment, as clouded and chaotic as I could make it. Gradually the piece shifts and becomes more tangible. As the final chorale plays we've gained a stronger understanding for the emotional impact of Justice's work.

## Closing Remarks

# Post-Conference Fieldtrips

## Sunday, February 18th

We are excited to offer in-person attendees the opportunity to participate in field trips on Sunday, February 18th. Please read below for descriptions of the field trip options. **Field trips require pre-registration. If you are interested in attending one of the options below, please register here by Thursday, February 8th at 5pm.**

## Option 1: Hawk Effigy Mound

### 8:30 am – 1:30 pm

This field trip will visit Rock Hawk Effigy Mound in central Georgia, and explore what is known about the cultural history of the site and its current ownership, management and significance. While Native Americans were systematically removed from Georgia to make way for the plantation economy and the lucrative slave trade that accompanied it, multiple Tribal nations continue to have connections to the land through their shared memory; the ongoing significance of sacred sites in the state; and their aspirations of return. Rock Hawk Effigy Mound is one such sacred site. This field trip will accompany faculty from the Institute for Native American Studies and Department of Anthropology and members of the Native American Student Association to explore the site's history and ongoing cultural importance; explore the significance of who owns the site and how it is governed and managed; and discuss the results of recent archaeological work by UGA faculty.

Rock Hawk Effigy is an ancient white quartz effigy mound in the shape of a Hawk. The grounds around the mound, owned by UGA, include an outdoor classroom, hiking trails, a native plant trail, bird-watching areas in the nearby marsh (on the shore of Lake Oconee), and numerous historical markers discussing the history of the site and region. Hawk Effigy has been studied by archaeologists since the 1940s and ongoing research suggests the effigy mound may have been started around 12,000 years ago. Nearby Rock Eagle (20 miles northwest of Hawk Effigy) is a very similar mound of similar age that was reconstructed by WPA workers in the 1930s. The relationship between the two mounds is undetermined but it is clear that they were built by similar communities around the same time. Dr. James Owen, a historian of Native Georgia and member of the Historic Piedmont Scenic Byways Corporation, will lead a tour of the immediate area around the effigy to discuss the depth of Native presence in the region and their ecological legacies, and the narratives and myths that have been layered onto the site by scientists and the public over time. Justice Britton, NASA member and doctoral student in Anthropology and Integrative Conservation, will discuss how Indigenous knowledge is embedded in the landscape. Dr. Ervan Garrison (Choktaw), Professor of Anthropology at UGA, will discuss recent archaeological surveys of the site. Together, they will lead a discussion on the site's ownership, management and ongoing significance to living Native people.

**Logistics:**
Transportation will be provided in UGA vans. Attendees must be present by 8:30 am in order to participate. Bring Your Own Lunch - participants will have time to eat their lunch outside. There are bathrooms at the site.

## Option 2: Birdwatching Hike at the State Botanical Garden of Georgia

### 8:30am – 11:00 am

Join us for a birdwatching hike around the UGA Botanical Gardens (2450 S. Milledge Avenue, Athens, GA) on Sunday, Feb. 18 from 8:30 - 11:00 am! Participants will meet at 8:30 am near the benches outside of the conservatory. Parking and entry to the grounds are free.

**Logistics**
Carpooling can be arranged based on need. Attendees are encouraged to bring water bottles and packed lunches if they like. There are bathrooms available.

Self-guided tours are also available for those interested in learning more about Athens, GA. The Athens Welcome Center lists multiple self-guided tours on their website. (*Please note, the self-guided tours are not managed by CICR or ICC and we cannot speak to the content of those tours*).

# Presentation Abstracts

## Pasts, Presents, and Futures

### We Are Not Yet Conquered: Visualizing Submerged Cherokee Cultural Landscapes and Contemporary Public Spatial Awareness

Justice Egan Britton, University of Georgia

Between 1936 and 1972 nearly all of the historic lower towns of the Cherokee located in Alabama, Tennessee, and Georgia, as well as many older Muskogean Island towns, were submerged with the damming of major riverways by the Tennessee Valley Authority during the Works Progress Administration era. In my dissertation work I am exploring what I have described as a "double submergence" of Indigenous history and cultural heritage. The first being a physical submergence by floodwaters, and the second being a cultural submergence through the prioritization of one-sided historical narratives which obscure past and present Indigenous landscapes and lifeways. By engaging with the experiential knowledge of local tribal descendant community members, historical and archaeological archives, and the proper tribal, state, and federal historic preservation offices, I aim to foster a more pluralistic understanding and memorialization of Indigenous lifeways and histories that embody such a richly diverse and complex cultural legacy. The federal agencies primarily responsible for the management of nearly all public freshwater resources in the southeastern United States, assures that they maintain cultural heritage sites through inter-tribal cooperation and the protection of any state-owned natural, archaeological and culturally significant resources. However, while recent community and tribally endorsed partnerships exist for the restoration, management, and monitoring of above-water historic sites, to-date, there has been little effort to apply the same standards for underwater sites.

### One Week Outweighs A Hundred Years: Conservation, Heritagization and Meaning Reproduction in Tibetan Zhuokeji Tusi Official Residence

Botao Zhao, Yale University

As a tangible repository of social and cultural heritage, heritage play a crucial role in the nation-building process. One of the most pressing challenges in heritage conservation lies in the gap between authoritative expert discourse and indigenous knowledge. Coined as "heritagization," this term encapsulates the transformation of an object or place from a utilitarian entity into an object for display or exhibition, shaped by the selective construction of images across different historical periods. This study delves into the heritagization process of the Zhuokeji Tusi Official Residence. Serving as the official abode of Zhuokeji Tusi, a prominent leader in the Jiarong Tibetan community and a pivotal figure in local politics, economics, and culture, this residence bears witness to three centuries of interaction between local peripheral Tibetan tribes and the central government. In 1935, it hosted the Chinese Red Army during the Long March, providing a brief sanctuary for leaders like Mao Zedong and Zhou Enlai. Since the 1980s, substantial resources have been allocated for its preservation and restoration. However, in the contemporary preservation efforts of the Zhuokeji Tusi Official Residence, the official narrative of the Chinese government selectively amplifies its political and cultural significance as a "patriotic education base steeped in revolutionary history," while diminishing the emphasis on its "nationality" and "autonomy," which are integral to its pre-revolutionary historical context. This study critically examines how conservation endeavors intersect with state-building efforts and the authoritative discourse from the vantage point of heritagization.

### Decolonizing Conservation Practices: A Feminist Political Ecological Analysis of Conservation practices in Chittagong Hill Tracts (CHT), Bangladesh

Mst. Sabikun Naher, University of Georgia

Bangladesh Conservation practices are not gender-neutral and are influenced by social relations, power dynamics, and knowledge construction, which either promote or hinder access and marginalize or mainstream certain perspectives over others. Marginalization can disadvantage some groups, like women and indigenous communities. Against this marginalization, including women, is an institutionalized and all-pervasive jargon of conservation activities. However, critically examined, all this jargon comes from either 'patriarchal' power dynamics or 'Western,' 'colonial' or 'capitalist' forms of governance mechanisms or institutions, such as a modern state. Feminist Political Ecology (FPE), based on feminist scholarship, focuses on the relations of individuals with nature and the social construction of relations based on gender relations. It asks who should receive the power, who and why users become marginalized, and which knowledge (local versus scientific) in conservation would prevail. Chittagong Hill Tracts (CHT) in Bangladesh, the only mountainous area of the country, home to 43% of the country's forest and 15 tribal communities, has a long history of conflict in colonial and post-colonial modern-day Bangladesh. Indigenous conservation practices are often constructed as 'backward' and 'unsustainable'. Although several studies have analyzed the political history of CHT, the power dynamics of knowledge production about conservation and gender are rare. From this research gap, I want to analyze the conservation politics in the CHT, and its gender dynamics based on secondary sources. The basic research question of this paper is 'how power relations construct the concept of conservation in the CHT and how it impacts women'. I will start with the colonial and historical background of CHT, then focus on current conservation practices. Through FPE analysis, I will place my analysis on power relations in the construction of conservation and its impact on women. I hope this research will be a diagnostic study for conservation construction in the CHT in connection with power and women from an indigenous perspective. Key words: conservation construction, feminist political ecology (FPE), Chittagong Hill Tracts (CHT), Bangladesh Session format: Paper presentation This paper speaks about decolonizing the conservation practices of indigenous women in a developing country, Bangladesh. This will shed a light on decolonization of knowledge production, state's role in conservation and their impact on indigenous women. I hope this paper will advance the conference theme: Create opportunities for all attendees to question and re-imagine our own practices.

### Nurturing Tendrils of Fragile Dreams

N Nitha Fathima, National Institute of Science Education and Research, Bhubaneswar, India

My poem will deal with the idea of queering nature and ourselves in a time where multiple forces are slowly eroding our ways of life. The poem will de in different parts and deal with questions such as - what does it mean to conserve in a rapidly changing landscape? What does it mean to evolve and survive in yet another cycle of global change? What does it mean to shed old skins, and nurture our thoughts in different directions? How do we expand our ways of knowing when the old foundations are being chipped off, when there is nothing left for us to stand on? What does it mean to be inclusive and accepting and growing when tendrils of thought fight, attack and consume? What does it mean to stay strong, to persist? What is it like to have an anchor, to be stable in a sea of turbulence? What is it like to have a home?

## Keystones, Cultures, and Co-Existence

### Cultural keystone species as a tool for biocultural stewardship

Giulia Mattalia[1], Alex McAlvay, Victoria Reyes-Garcia
[1]ICTA-UAB/NYBG

In addressing biological and cultural diversity decline, the cultural keystone species (CKS) concept (i.e., "species that shape in a major way the cultural identity of a people" as defined by Garibaldi and Turner in 2004) has been proposed as part of a common framing for the multiple entangled relationships between species and the socio-ecological systems in which they exist. However, the blurred and prolific definitions of CKS hamper its univocal application. This work examines the current use of the term CKS to reconcile its definition and explore its practical applications for biocultural stewardship. To do so, we ran a search of the term "cultural" AND "keystone" AND "species. From the 313 selected documents, the CKS concept appears to be increasingly accepted, however, no systematic and precise way of documenting CKS allows for global cross-cultural comparisons.We found that 47% of all the CKS reported and 38% of the works identified in our review are concentrated in North America. Several nature's contributions to people are associated with the CKS definitions. However, the contributions of the socio-cultural group to the survival and conservation of CKS (stewardship) are made explicit only in one-third of the documents reviewed. To advance biocultural stewardship as a paradigm in conservation, we suggest (a) defining CKS as an indissoluble combination of a non-human species and a socio-cultural groups; (b) acknowledging that species and socio-cultural groups relations should be classified according to gradients in a continuum; and (c) explicitly acknowledging the reciprocal relationships between socio-cultural groups and species.

### Nurturing harmony between tigers and communities: insights from long-term monitoring of tigers in Kanha Tiger Reserve, India.

Jayanta Kumar Bora[1], Ujjwal Kumar[1], Shravana Goswami[1], Neha Awasthi[1], Qamar Qureshi[1], Y.V. Jhala[2]
[1]Wildlife Institute of India, Dehrahun; [2] Fellow of the Indian National Science Academy, New Delhi

Amidst evolving conservation paradigms, we present a transformative case study from Kanha Tiger Reserve, a critical stronghold for tiger conservation within India's mega-biodiverse landscapes. India, home to over 70% of the world's wild tigers, with 1.5 billion people, employs tigers as an umbrella species for biodiversity conservation. The country's conservation strategy focuses on safeguarding inviolate source populations of tiger, managed as viable metapopulations interconnected through corridors within human-dominated forest habitats. We studied tiger demography in Kanha, a major source population in central India, using long-term (17years) annual camera trap-based mark-recapture and continuous monitoring of known tigers. The tiger population is growing at the rate of 6% per annum, with female-biased sex ratio and survivorship, underscoring the critical importance of inviolate habitats. This population exhibits high recruitment parameters and 8.5% of the population disperses to the larger landscape, making Kanha a vital source. These demographic insights inform tiger recovery planning, including reintroductions and population augmentations. Tiger conservation in Kanha also benefits local communities, increased tiger tourism-related activities have generated employment opportunities, and voluntary village relocations have expanded core tiger habitats while improving lifeways of remote, underprivileged communities. Tourism revenues, coupled with government policies, now facilitate essential amenities like healthcare, education, and electricity. The local communities' deep reliance on the reserve fosters higher tolerance for human-wildlife coexistence, creating a sustainable conservation scenario with a positive attitude toward conservation. This study demonstrates how tiger conservation can simultaneously protect biodiversity and uplift local communities, offering a compelling vision for the future of conservation efforts.

### Constructing Nature: Multispecies Justice in Human-Tiger-Wolf Relations in India

Amit Kaushik, University of Georgia

Conservation initiatives often prioritize their focus on threatened species, using their conservation status as indicators of ecosystem health. Frequently, these efforts employ surrogates or proxies, such as classifying species as keystone or charismatic. "Keystone" is an ecological term denoting a top-order species that regulates other organisms within an ecosystem, while "charismatic" is a socio-political term referring to species possessing attractive qualities like intelligence, beauty, or strong symbolic value. Wolves, exemplifying both keystone and charismatic attributes in North America and Europe, share a similar status with tigers (Panthera tigris) in India. Paradoxically, wolves (Canis lupus pallipes) are neither recognized as keystone nor charismatic species in India, being classified as secondary-level carnivores akin to coyotes in North America. This paper uses a social-class lens to examine biodiversity categories and explores how conservation proxies impact lesser-keystone or less charismatic species, exemplified by wolves in India. Utilizing triangulation methods in its analyses, this study elucidates how these categorizations influence perceptions of whether landscapes are deemed worthy of conservation. The paper posits the necessity to comprehend the social construction of biological categories and how it renders certain species vulnerable, leading to conservation inequalities. The research allows a better understanding of these dynamics to promote coexistence between wolves, tigers, and people in India, aiming for multispecies justice and multiple ways of knowing and doing conservation in South Asia and beyond.

### The Power of Story for Conservation

Harshad Sambamurthy

What is perhaps not emphasised enough in conservation today is the concept of interdependence; that is, the interconnection, rather than separation, between humans and the more-than-human environment; all part of one collective system. To reiterate this, storytelling has a powerful and pivotal role to play. Stories are not only avenues to creatively engage with the past but are crucial compasses to navigate the present and chart the future. Story helps evoke an emotional response to socio-environmental issues and can be a force for good, especially when combined with the predominating science-based approach to conservation. Stories can clarify and re-vision conservation's critiques and importantly highlight the value of indigenous knowledge systems, biocultural rights, and rights-based justice. My presentation combines spoken word, poetry, and rap to demonstrate mediums I use to assess, analyse and weave stories around key conservation challenges. Interspersed within these performances are stories from across the world—including India, where I work in conservation—which delve deeper into cultural associations with animals and the natural environment. These associations can serve as effective educational and pedagogical tools in strengthening conservation awareness and action in both academic and non-academic contexts. My presentation aims to meet three of the conference's four objectives: help attendees question existing practices and notions of conservation education, re-imagine newfound ways of engaging with conservation through the interdisciplinarity of story; via history, sociology, music, poetry, art, theatre and folklore; and finally, encourage collaboration across a spectrum of stakeholders; widening the canvas for creative and individualised engagement with conservation.

## Film Screening: *Awakening ᎠᏂᏍ (A-Tsi-Lv), Restoring Land Relations*

Matthew Tatz[1,2], Chelsea Wilson[3], Colin Peterson[1,2], Janaki M[1,4], Aoife Kate Pitts[1,4], Evan Crispell[1,4], Leonardo Tadashi Duarte[5], Laura German[1,4]
[1]Center for Integrative Conservation Research; [2] Odum School of Ecology; [3]Wilson Center for Humanities and Arts
[4] Department of Anthropology, University of Georgia; [5]Franklin College of Arts and Sciences

In collaboration with the Eastern Band of Cherokee Indians (EBCI), the 2022 Integrative Conservation PhD Cohort, MFA in Film, Media, and Television student Chelsea Wilson, and CICR Director Laura German, we produced a short film to explore the relationship between the EBCI and the United States Forest Service (USFS).The film is comprised of interviews with members of the EBCI and the USFS where ecological and cultural changes surrounding fire suppression and land sovereignty in the United States are discussed. The film speaks to the theme of "New Visions of Conservation" by discussing how indigenous cultural practices and modern scientific approaches can synergistically promote likewise objectives within forest management and conservation. By highlighting how indigenous forms of knowledge can coexist with and aid current western conservation practices, this film directly promotes multiple ways of knowing and doing conservation.

## Plants and People: Part One

### Drivers of resilient agroforestry adoption: learnings from participatory action research project

Kristen Jovanelly[1], Theresa W. Ong[1]
[1]Ecology Evolution Environment and Society Program, Dartmouth College

On various working lands, adoption of conservation practices is often seen as a process in which the farmer merely adopts or rejects the technology; however the farmers themselves play an important role in the development. Many conservation projects on working lands encourage farmers to transition, but often fail to capture how there may be different implications for the resilience and equity of new systems depending on the adoption process and diversity of farmers themselves. Participatory action research (PAR) is touted as a more collaborative, democratic approach to learning and education built on communication, negotiation, observation, reflection and analysis between scientists and nonscientists sharing local knowledge and expertise to collectively investigate conservation approaches. The PAR approach pays explicit attention to power imbalances and can contribute to more resilient systems through multiple-loop social learning in which diverse individuals collectively examine their own assumptions and values on which management decisions are based. In this presentation, I will share results from a PAR project developing agroforestry systems on diverse farms in the Northeastern United States. I will share results from the development of projects and how various experts have collaborated to envision what resiliency and livable future means on their farms at various scales and how trees play a part. This project centers the experiences of Black, Indigenous, and People of Color (BIPOC) farmers, focusing on how they conceptualize resilience, what their preferences are for networks of support, and how system design can be guided by their diverse value sets and motivations.

**The role of learning sources in familiarity with forest conservation programs and ecosystem services: the gendered case of family forest landowners in Georgia, United States**

Carolina Berget[1], Anne Mook[2], Puneet Dwivedi[1]
[1]Warnell School of Forestry and Natural Resources, University of Georgia; [2]Institute for Research in the Social Sciences, Colorado State University

This study of Georgia family forest landowners used a gender approach to examine with mixed-methods: 1) the extent to which learning networks predict landowners' familiarity with forest conservation programs; 2) the association between familiarity with and participation in conservation programs; and 3) landowners' familiarity with forest-based ecosystem services (ESs). Professional forest-management advice and training were associated with familiarity with conservation programs, but being female was a negative predictor. There was a slight association between familiarity with and participation in conservation programs. In comparison to women, men were more familiar with ESs, and this familiarity is linked to the effectiveness of learning networks. We conclude that learning networks are crucial for information dissemination and, we recommend that professional advice-giving be improved to boost participation in conservation programs and raise landowners' awareness of ESs. Special attention should be given to women who are a growing forest landowners' population. As a traditionally excluded and under-represented segment of society, women need to be included in conservation research, both as researchers and as research subjects. This research speaks to both: 1) the first two of three authors are female, and 2) we assessed gender differences regarding the role of learning networks in familiarity with conservation programs and ecosystem services. This research advances the first two objectives by offering an opportunity to present scarce but crucial gendered research on family forest landowners, highlighting women's importance and learning needs regarding forest conservation programs and ecosystem services. This work will be presented as a traditional research PowerPoint presentation.

**Using Cultural Consensus Analysis and Mental Model Approach for Ascertaining Perceptions of Forest-Based Ecosystem Services Among Female Forest Landowners in Georgia, United States**

Kanchana Balasubramanian[1], Puneet Dwivedi[1]
[1]Warnell School of Forestry and Natural Resources, University of Georgia

In the southern United States (US), female forest landowners (FeFLs) represent 27% of forest landowners, owning approximately 12.1 million ha of forestland. FeFLs have doubled at the national level between 2006 and 2018. Understanding FeFLs' perceptions of ecosystem services (ESs) is crucial, as their decisions impact the flow of forest-based ESs. Our mixed-method study employed cultural consensus analysis and a mental model approach to gain cultural knowledge and a comprehensive understanding of FeFLs' socio-cultural perceptions of ESs. Based on the interviews with 39 FeFLs in Georgia, US, FeFLs' perceptions of cultural knowledge about forest based ESs consisted of wide-ranging benefits and associated socio-cultural factors. The mental model of FeFLs revealed five thematic areas: primary benefits for self and family, economic benefits, forestland as a place for family time, forestland as a place for social activity, and environmental benefits. Sole owners were more likely to appreciate tax and social benefits, while co-owners were more likely to value their forestland as a portfolio of assets and enjoy a place to live away from the city. Further, FeFLs who lived in their forestland were likely to place a higher emphasis on financial benefits than those who lived away. Our findings provide crucial insights for shaping inclusive strategies and policies to enhance forest management among FeFLs, fostering a sense of community and ensuring forestland sustainability. Our research contributes to the often-overlooked gender-based discussions. This submission, in a traditional presentation format, provides an opportunity for attendees to rethink conservation from a gender-nuanced and gender-inclusive perspective.

### Farmers United by Farm & Forest: Investigating Conservation Behaviors in Farmland-Only & Farmland-&-Woodland Owners

Suraj Upadhaya, College of Agriculture, Community and the Sciences, School of Agriculture, Communities and the Environment, Kentucky State University

There has been extensive knowledge of the attributes, outlooks, and actions of U.S family forest owners and agricultural landowners when examined separately. It is well-known about attitudes, characteristics, and behaviors of woodland owners with and without farmland. Little is known about farmers who own both farmland and woodland. To address this knowledge gap, we conducted a survey of 930 Iowa farmers, of whom 238 owned both farmland and woodland. We investigated the conservation behaviors of farmers with farmland only (FFO) and farmland and woodland both (FFW) in agricultural-dominated landscapes. Farmers who own both farmland and woodland are more likely to adopt conservation practices compared to farmers who own farmland only. The study found that farmers with both farmland and woodland were significantly more likely to have received cost-share funding for conservation practices, consulted with conservation professionals, and enrolled in the Conservation Reserve Program. Farmers with both farm and woodland owned smaller total acreage of land and had higher academic qualifications. The findings suggest that woodland ownership along with farmland may motivate farmers to greater conservation efforts on their agricultural land. Agricultural and forestry professionals have opportunities to promote conservation practices among farmers who own both farmland and woodland. Outreach highlighting co-benefits of conservation practices for both land use types may further motivate these farmers. Policies and programs supporting joint farmland and woodland ownership could also increase conservation practice adoption in agricultural areas.

## Attention to Process

### Resisting 'Conservation'

Akanksha Sharma, Department of Geography, University of Georgia

This 'presentation' is a personal reflection on the messy and confusing process of understanding and undertaking work in 'conservation'. Conservation as it has been practiced within academia and by dominant actors across the world has a violent, problematic, reductive, and colonial legacy, which continues in our present. Through spoken word, poetry, and visuals, this reflection aims to consider how we may fit into these realities. I intend to focus on struggling with belonging within conservation worlds, attempts at rejecting frustrating conservation paradigms, trying to unravel and unlearn our own baggage, and how we may resist the ways in which we are being shaped into conservation practitioners or scholars that we may not want to become. By sharing some challenges and mistakes in the process of learning how to, doing, or even refusing conservation, and highlighting some key questions that often emerge as we go about our work, I hope to engage the audience in a reflection of their own journeys as well. I hope that these reflections, and the understandings that may emerge from them, can support us in envisioning brighter futures for the communities we work alongside, for the world we live in, and also for ourselves and for our field of work.

### Using Collaborative Storytelling Games to Imagine Alternative Futures for Nature

Alec Nelson[1], Katherine L. Reinberger[2],
[1]University of Georgia; [2]Center for Applied Isotope Studies, University of Georgia

Collaboration is a useful mechanism to promote social ties, encourage deeper learning, and form networks of experience and practice. Fostering collaborative spaces presents many challenges for bridging common understanding and presenting evocative individual or collective visions. In particular, modern complexities and challenges often limit how we talk about and imagine

our relationships to environmental conservation and the natural world. Collaborative spaces can also be limited by institutional norms, political incentives, and varying degrees of willingness to entertain other possibilities for action. Storytelling games provide innovative and structured frameworks for participants to consider alternative futures through low-stakes opportunities that create a shared fictional narrative space. By participating in co-creation, participants gain greater understanding, empathy, and motivation toward new avenues for promoting nature and their environment. Following in a folk art tradition and inspired by storytelling games such as "In This World," "Fall of Magic," and "i'm sorry did you say street magic," we conduct a case study of a collaborative roleplaying experience in which participants will be asked to consider emerging environmental topics, such as the "rights of nature", "community conservation", and "climate resilience". Participants will have the opportunity to suggest alternatives to our current global, political, and economic conditions and co-create imagined futures. From this process, we hope to provide an example of collaborative brainstorming and co-learning practices. These games have sparked imaginations worldwide and we believe they can inspire communities of practice with vivid images of more equitable and thoughtful worlds.

### Conducting Sustainable and Equitable Science: Are We Walking the Walk?

Star Scott, University of Georgia

Despite the many beneficial and positive outcomes of the global scientific research enterprise, it also contributes to many of the exact environmental and social issues we are collectively working to solve. Through objective inquiry and systems-level observation, this presentation explores opportunities to bring greater sustainability and equity to our scientific operations and processes; not only for those working in science, but also for those outside the scientific community. We must redefine what it means to "do good science" and be willing to review our own processes to ultimately become more conscientious, sustainable and equitable. This session speaks to the theme of a "New Vision for Conservation" as the scientific enterprise has long operated under the assumption that our positive contributions outweigh our environmental and social footprint. It is time to look inward at our own operations and examine how we can mitigate and reduce these negative impacts while still making positive scientific contributions. This body of work questions and re-imagines our own practices through the lens of Green Labs and Sustainable Science. This **session** will educate attendees about the current state of the global scientific research enterprise, provide examples of ways to reduce the negative impact of scientific operations and encourage the expansion of thought to include "upstream" and "downstream" considerations.

## Conservation Models

### Assessing ungulate response to conservation-oriented village relocations and their associated management practices in a tiger reserve in central India

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Conservation-oriented village relocations are used as prominent tools for wildlife conservation in developing nations like India despite being associated with social injustice. Meanwhile, little is known about the ecological implications of relocations. In tiger reserves in central India, abandoned village sites are developed as grasslands to improve prey numbers so they may cater to a growing population of predators. The aim of the study was to assess the efficacy of village relocations and their associated management interventions in achieving conservation goals choosing ungulates as a model system. The study focused on five species (sambar, chital, gaur, nilgai, wild pig) in Satpura tiger reserve and how the intensity of habitat use by these species changed with time since relocation and distance from the edge of a site. The faecal accumulation

rate technique was used to quantify intensity of habitat use and ungulate droppings were sampled across villages relocated at different points in time with replicates at varying distances from the edge of a site. The intensity of habitat use by sambar, chital, gaur, and nilgai was found to increase with time since relocation, while for wild pigs, it decreased. The intensity of habitat use by all the five species of ungulates was negatively correlated with distance from the edge of a site. The study suggests that relocations followed by grassland management activities aid wild ungulates indicating benefits for conservation; but further interdisciplinary research is required to better understand the viability of relocations as tools for conservation.

**Understanding urban biodiversity co-existence model in kanker forest division, Chhattisgarh: a case study to recognize factors affecting wildlife space use in an urban landscape.**
Anam Ahsan, University of Missouri

Valuation of Urban Biodiversity Co-Existence Model in Kanker Forest, Chhattisgarh aims to address the critical issue of urban expansion encroaching upon natural habitats, particularly in the context of Kanker Forest in Chhattisgarh, India. The work is about wildlife space use assessment, Human-Wildlife Conflict mitigation, Policy recommendations, Socio-Economic Analysis, Community Engagement, Community Workshops. The study will involve extensive fieldwork, ecological assessments, and socio-economic surveys to gain insights into the complex dynamics at play. Aims include recognizing ecological hotspots and corridors for wildlife movement, evaluating the impact of urbanization on biodiversity, and engaging with local communities to promote co-existence practices. This piece of project seeks to comprehensively study the unique urban ecology of Kanker Forest and develop a model that promotes the sustainable co-existence of humans and diverse wildlife within the urban interface. The decisions from this research will contribute to informed policy recommendations and community-driven initiatives for maintaining the delicate balance between urban development and the preservation of biodiversity in kanker Forest. This study's insights will guide policymakers, land-use planners, and local communities in devising strategies to balance urban development with wildlife conservation. The knowledge gained from this case study will have broader implications for similar urban-wildlife coexistence challenges worldwide, contributing to a more sustainable and appropriate coexistence between humans and the natural world.

**Re-storying Indigenous Conservation Practices**
Sharayu Jakhotiya, University of British Columbia

The Indigenous communities of India, better known as Adivasis, have developed unique governance models to manage their natural resources over many generations. These models have a direct impact on ecosystems. Every community is unique since they are part of widely varying ecosystems, socio-economic conditions, and political scenarios and yet, they share similarities in their belief systems such as nature worship and their dependence on forests for survival and sustenance. While some communities have developed better, more sustainable governance models, other communities are struggling with managing their natural resources. It is important to understand these governance models and the reasons behind their success or failure. This knowledge will enable the Indian government to better define the role of Adivasi communities in protecting and conserving India's forests, including Protected Areas which have mostly excluded them. India's conservation models have largely been based in a fortress conservation paradigm though there have been efforts to include local communities in conservation through the introduction of the Forest Rights Act. I would like to present a photo story presentation which would narrate stories about the various governance models of Adivasi communities. I had the opportunity to closely work with some of these communities. These photo stories will highlight the implementation of governance models, impacts of these models on ecosystems and the communities and the impact of policy on how these models are shaped.

The photo stories will showcase some of the 'ancient' visions of conservation which have the potential to bring 'new' paradigms to conservation science.

## Water Relations

### Recognizing Human-Environment Water Conflict is A Critical Step for Water Security and Freshwater Biodiversity

Charles van Rees, Odum School of Ecology, University of Georgia

21st-century water management is a wicked environmental problem marked by burgeoning demand, shrinking supply, growing risks from floods and droughts, and declining freshwater biodiversity. Conservation efforts for freshwater biodiversity are hampered by tradeoffs between human and environmental water needs, making prevailing technocratic approaches incompatible with local socioeconomic and cultural contexts. Accordingly, 21st century frameworks call for increased stakeholder participation and methods navigating complex water resources tradeoffs. Here, I introduce the concept of Human-Environment Water Conflict, which I argue catalyzes much-needed transdisciplinary synthesis and collaboration to manage water resources and biodiversity in the Anthropocene. Advantages of this framework include bridging top-down conservation prioritization approaches with bottom-up, locally relevant and negotiated methods for water management (2) accelerating implementation of important practices like e-flows, multiple-use protected areas, and Nature-based Solutions, and (3) facilitating the inclusion of marginalized local and Indigenous communities by providing space and representation for their values and worldviews.

### Nature Based Solutions at COP 28: Exploring Trade-Offs and Opportunities in Water Infrastructure

Katie Foster, University of Georgia

As global climate change exacerbates stresses on water systems throughout the world, natural infrastructure is increasingly deployed as a way to build resiliency and promote ecological, social, and economic co-benefits. Also known as "nature-based solutions" (NBS), these encompass a range of initiatives such as wetland restoration, riparian zone protection, and coastal ecosystem management to harness natural systems and enhance ecosystem services like water purification, disaster management, and biodiversity conservation. In this presentation, I give an overview of the adoption of NBS in global climate negotiations based off of research conducted in December 2023 at the annual meeting of the United Nations Framework Convention on Climate Change (UNFCCC), also known as COP 28. Specifically, I will explain the approaches that are being most commonly promoted at the COP, which organizations are promoting them, and the locations of these initiatives. I then describe the major trade-offs and limitations of the adoption of NBS and compare this with the features that are most commonly used to measure success. Finally, I connect these insights to work that is being done in the United States to bridge government, academic, and community-based organizations to explore how NBS can be designed in a manner that is responsive to local needs and knowledge systems, especially in light of the historic exclusion of many stakeholder perspectives in water infrastructure development.

### Water Management and Biodiversity: Relationalities in the Peruvian Andes

Alessandra Vidal Meza, Bren School of Environmental Science & Management

Over millennia, mountain freshwater scarcity and vulnerability has formed water social-ecologies and inspired knowledge systems and material practices in the Andes. Corongo is a pueblo in the region of Ancash at over 3,000 MASL with vast topographical richness. The pueblo manages its water under the organizational method of Los Jueces de Aguas de Corongo

(Traditional System of Corongo's Water Judges). Through local governance and semi-independent networks of labor reciprocity, water in Corongo exists as a resource and relation under the fundamental principles of solidarity, equity, and respect for nature. Today's transformations to the physical landscape and shifts in kincentricity reveal new dynamics in environmental decision making across its altitudinal gradient and stress the importance of water management for environmental conservation. I present a survey of this system from archival research and informal interviews, in my position as a granddaughter of Corongo. This research contributes to the literature on how the resilience and revitalization of ancestral systems may protect biodiversity and considers how Andean people with longstanding ties to place practice conservation with resource management for past, present, and future generations. It advances the conference objective to center multiple ways of doing.

## Plural Perspectives

### Understanding cross-scale dynamics to inform integrated landscape approaches: Evidence from Ghana and Zambia

Alida O'Connor[1,2], Terence Sunderland[3,4]
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There is growing recognition global challenges such as biodiversity loss, climate change, food insecurity, and poverty are interconnected issues. This signals the need for a shift from conventional sectorial management to integrated solutions, and integrated landscape approaches (ILAs) are an opportunity in this regard. ILAs are broadly defined as long-term participatory processes for reconciling competing land uses for improved socioeconomic and environmental outcomes. ILAs are predicated on the assumption collaboration across scales, sectors, and diverse social groups can and will occur to achieve more equitable and sustainable landscape governance. Yet, there is little evidence showing if, how, and when collaborative governance occurs. The Center for International Forestry Researchers (CIFOR) COLANDS initiative facilitated the process of operationalizing ILAs in three landscapes. This study explores the constraints and opportunities of collaborative landscape governance in two of the landscapes: Kalomo District, Zambia and Ghana's Western Wildlife Corridor. To understand the cross-scale dynamics that influence collaborative governance in each landscape, we conducted 78 in-depth, semi-structured interviews and 13 focus group discussions. Data collection took place with community members, traditional leadership, and institutional representatives such as NGOs, private sector, and government departments. Results from five months of fieldwork provide important insight into the political ecological forces (such as power, scale, and other social constructs) that shape existing governance structures in these two landscapes. These findings are critical for understanding the process of collaboration expected to underpin ILAs and advancing historically sectoral approaches to conservation and natural resource management.

### Non-Essentialist and Non-Cartesian Conservation: Alternatives from Indigenous NGOs and Religious Leaders in the Tibetan Plateau, China

Junhan Hu, Yale University

Both scholars and practitioners have increasingly recognized the fatal limitations of Cartesian human-nature dichotomy in past conservation and been calling for a transformative change. Globally, indigenous people are believed to play a critical role here with their stewardship and knowledge. In China, the similar role of Tibetan people is recognized but often stereotyped, without acknowledging the diverse ontologies behind their conservation. Drawing from twelve-month ethnographic fieldwork and the literature around "ontological turn" in environmental anthropology, this research compared the projects of two Tibetan conservation NGOs and the

discourses of their Buddhist leaders: blue sheep and river conservation of NGO Badma Rimto, and upland buzzard and grassland conservation of NGO Ganjia. The results showed that: 1) For wildlife, Tibetan conservation is based on the ontology of "equality of all beings". Yet it could vary from seeing blue sheep as friend with intimate relations to coexisting with upland buzzard without special attention. 2) For landscape, Tibetan conservation is based on the ontology of "interdependence". Yet it could vary from cleaning both the outer river and herders' hearts with self-focus to understanding herders' livelihoods as a necessary part of the grassland unity. 3) These diversities are attributed to Buddhist leaders' personal propositions and local social contexts, which made Tibetan conservation a contextualized, dynamic process rather than a stereotyped, static culture. In short, this research provided diverse non-Cartesian alternatives for the emergent "people are nature" conservation paradigm, and argued for a non-essentialist view of indigenous people by grounding their ontologies in real-world conservation practices.

### Re-imagining conservation futures through the eyes of forest-dwelling youth

Shruthi Jagadeesh, University of Colorado Boulder

Conservation has long been critiqued for its colonial roots, its dispossession of indigenous and local peoples, and its perpetuation of nature-society binary. As calls for biodiversity conservation become increasingly urgent, so too is the need to think critically about the models we have used to 'save nature' thus far, and to think collectively about new visions. Drawing from research in three sites in India, I bring attention to the relationship between the conservation apparatus and young adults who have grown up in and continue to live within conservation spaces. As the social group that will embody the futures of conservation spaces, forest-dwelling youth are an important yet overlooked demographic in both research and advocacy. Following Feminist Political Ecology's call to do research that is engaged, intersectional and reflexive, I present data that speaks to both the difficult choices young people at the margins have to make, and the ways in which they are re-imagining more just futures in the everyday. In this research paper, I argue for the need to include the experiences of forest-dwelling youth as a central tenet of unfolding dialogues on re-imagining conservation such as this conference. As an early career scholar I hope to come at these questions in collaborative, interdisciplinary forums and I hope my research can contribute constructively to spaces that are trying to 'cultivate new visions' for conservation.

### The Canopy Collective- Collectivizing a new conservation paradigm for Northeast India

Anuja Mital[1,2], Tejaswini Nagesh[2], Pranav Balasubramanian[2,3], Nandini Velho[2]
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The 'Canopy Collective' is a collectivization of multi-peoples, multi-species learning, knowledge and tools, working towards conservation in Northeast India. This region is home to India's densest tropical forests, multitudes of endemic species, and varied human cultures. Initiated in early 2023, the collective brings together researchers, practitioners, designers, and community members, to work collaboratively in this diverse ecological and social landscape that requires focused conservation attention. The collective operates as a decentralized leadership model, where conservation practitioners in working groups initiate projects, engage with multiple stakeholders, and establish balances of power and interest, leading to community conservation and stewardship. We will demonstrate this working model through short video clips of collective members explaining these concepts. We will highlight some of the active multi-disciplinary projects initiated by the collective, such as a workshop model developed called 'How to think like an Ant'. Using an art-science-design interface, it encourages people to think of non-anthropocentric perspectives, develop empathy, and learn from systems in nature. In this presentation we will conduct a 2-3 minute activity where the audience thinks about how ant colonies build consensus, and how this can provoke a shift in mindsets. Another upcoming project includes embedded site work towards flood mitigation in the Brahmaputra basin, that

aims to co-develop flood awareness material with river dependent communities. The Canopy Collective encapsulates a new vision for conservation as it aims to build a socially regenerative network that transcends disciplinary boundaries, reimagines institutional support, and fosters connections and collaborations in the pursuit of biodiversity conservation.

## Plants and People: Part Two

### Participatory ethnobotany: bridging livelihoods and conservation in the Colombian Amazon

Aoife Kate Pitts, University of Georgia

The Amazon plays a critical role in global efforts to mitigate biodiversity loss, and the conservation sector in this area must respond to complex social, economic, and ecological dynamics. The Tres Fronteras border, the Amazonian area shared by Colombia, Peru, and Brazil is a hotspot for conservation initiatives. It is also home to three indigenous communities. Communally managed Resguardos and the traditional ecological knowledge protected within them informally preserve much of the resources and biodiversity targeted by global policies. However, there is often little allowance for utilization of these resources. This is especially harmful in Amazonian regions where communities are highly dependent on natural resources and utilize varied subsistence strategies in accordance with seasonal flooding patterns. I propose that participatory ethnobotanical methodologies can mitigate this disenfranchisement and support conservation policies that center voices and experiences traditionally excluded by conservation. Participatory ethnobotanical approaches like forest walks, creating herbaria records, and interviews with individuals not typically considered "experts" can center diverse voices and foster greater collaboration within communities, thus empowering better management decisions. Furthermore, NGOs and research institutions gain a greater understanding of local social-ecological relationships through these approaches. Stronger and more inclusive ethnobotanical knowledge can be utilized internally and externally and supports the inclusion of multiple ways of knowing and seeing at all stages of conservation planning and implementation. This results in transformative and just conservation and management decisions, which is necessary to balance inextricably linked livelihood development goals and biodiversity conservation initiatives.

### Embedded Conservation and Human-Plant Alliance: Traditional Seeds Saving Among Ethnic Minority Farmers in Yunnan, China

Xiyao Fu, Yale University

Conservation has historically antagonized forests and farmers but increasingly recognized the links between biodiversity and cultural diversity in agrarian landscapes. Although Yunnan hosts Asia's largest seed bank, formal measures for in-situ agrobiodiversity conservation are absent, and the engagement of indigenous people in conservation is tokenistic. This ethnographic study with three ethnic minorities in Yunnan explores what conservation means and looks like for indigenous farmers themselves. Bringing together the literature of biocultural conservation and swidden history, and taking a more-than-human approach, I show that de facto conservation is not a conscious goal but embedded in livelihood practice and sociocultural history that forge flexible human-plant alliances. First, the quotidian social and ecological reasons – from soil conditions, gardening habits, to festival food – for growing traditional seeds reveal the informal nature of seed conservation. Second, a history of plant introduction since the time of swidden cultivation contextualizes the concept of "traditional seeds" in its cultural history beyond the native/invasive dichotomy in conservation. Third, the indigenous human-plant alliance is adaptive to change, which is exemplified in how farmers use cultural rituals to mediate conflicts among the ancient grains, traditional dry rice, and modern wet rice, and collaborate with them together against market uncertainty. Overall, my research challenges the pure, archetypal biodiversity with a hybrid, emergent biodiversity through the conservation embedded in the

daily life of indigenous farmers. The study calls for shifting the focus of conservation from the object of seeds or plants to the relations between humans and plants configured in indigenous culture.

### How to Train Rivercane

Alyssa Quan[1], Caleb Hickman[2]
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Rivercane (Arundinaria gigantea) is a bamboo plant native to the Southeastern United States that has played a major role in sustaining cultural practices and ecological systems for many Indigenous communities since time immemorial. Though once prolific throughout the Southeast, approximately only 2% of rivercane's historical coverage remains today. Not only are rivercane ecosystems threatened, but key Southeast Indigenous cultural traditions linked to rivercane have become increasingly challenging to pass on in the face of severely limited access to rivercane sources and dwindling numbers of aging basket makers who rely on rivercane for their art. Current efforts to restore riparian ecosystems have led to growing interest in the reestablishment of canebrakes, as well as increasing collaboration between tribes in the Southeast and federal and non-governmental conservationists. Coproduction in rivercane research is necessary to account for the long history of Indigenous cultural practices that have developed alongside rivercane ecosystems. In this coproduced project, we are studying a canebrake in Yancey County, North Carolina to investigate the effects of traditional artisanal harvesting and various environmental parameters on rivercane growth. The conclusions and relationships formed from this study will help inform riparian restoration efforts by strengthening rivercane science with cultural knowledge in ways that contribute to mutually beneficial collaborations between Indigenous peoples and broader conservation researchers in the Southeast. Continuous reflexivity and transparency are necessary to support strong partnerships amongst contributors of differing backgrounds. Addressing underlying differential biases and privileges can create a pathway for shared ownership and implementation of solutions for conservation goals. This will be a mixed-format presentation.

### Examining spatial configuration of tree tenure and ownership norms among tribal communities around trees on forest land in India

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Most often, tree ownership is tied to land ownership. However, tribal households in India exercise ownership over trees in government-owned forestlands. To exercise those rights, tribal communities have developed sociocultural norms around tree ownership creation, intergenerational transfer, and distribution of tree rights. The primary objective of this study is to analyze the spatial configuration of tree tenure in forestlands and the related ownership norms around those trees. The study also seeks to investigate factors that influence these norms and shape management practices, livelihoods, and forest conditions. This presentation explores new visions for conservation by highlighting the importance of Indigenous knowledge and practices, challenging the top-down paradigm, and proposing a new vision based on equity, justice, and respect for Indigenous rights. It aligns with the conference objectives by exploring the historical and potential trajectories of conservation, examining the dynamic relationship between conservation and Indigenous knowledge and practices, and identifying and promoting just and equitable visions of conservation. The presentation will follow a traditional research format, including a brief overview of what is already known in scholarly literature, how this research was conducted, presentation of findings, and drawing implications for tree rights norms. Audio-visual aids such as maps, charts, photographs, and video clips will support the presentation. This presentation is expected to contribute to the conference's discourse by

bringing fresh perspectives on the conservation of tribal forest tree ownership in India. It will be of interest to a wide range of participants, including conservation scientists, practitioners, policymakers, and Indigenous leaders.

## Policies and Infrastructures

### Identifying inconsistencies in exotic pet regulations that perpetuate trade in risky species

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Regulatory inconsistencies at different jurisdictional levels have contributed to the global expansion of the exotic pet trade, with resultant increases in the spread of invasive species and pathogens. Researchers have enumerated multiple limitations and environmental risks posed by international and national rules that govern the exotic pet trade, yet little attention has been focused on regulation of the exotic pet trade within national borders. We reviewed state-level regulations that apply to the trade of vertebrate animal taxa in the United States (US). Definitions and classifications for regulating different vertebrate taxa varied greatly across states, and the terms 'pet' and 'companion animal' were poorly defined and inconsistent across states. States implemented regulations that permit trade in exotic vertebrate pets that are banned from import into the US owing to public health and conservation concerns. Once species have been imported into the US, inconsistent internal regulations facilitate movement of animals that pose substantial invasion and disease risks. Violations of state laws were typically listed as misdemeanors, and the median fine for violating state wildlife trade laws was $1,000. Inconsistent and incomplete regulation of exotic vertebrate pets across state borders, in conjunction with limited penalties for violating regulations, has facilitated continued possession of exotic pets in states where these animals are banned. Based on our review of regulatory weaknesses, we conclude that transition to a federally enforced list of vertebrate species that may be traded as pets is needed, with all other vertebrate species banned from the exotic pet trade unless their potential invasion and disease risks have been assessed and demonstrated to be low or nonexistent.

### Blue Carbon Policy Analysis from the Perspective of Government, Market, and Scientific Research

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Global climate change is one of the greatest threats to vulnerable human lives and livelihoods in coastal communities worldwide. Blue Carbon, which refers to organic carbon captured and stored by the oceans and coastal ecosystems, can help coastal nations meet their climate mitigation and adaptation targets. It has attracted the attention of a diverse group of actors beyond the scientific community, including conservation and private sector organizations, governments, and intergovernmental bodies committed to marine conservation and climate change mitigation and adaptation. Nevertheless, the blue carbon policy is still in its preliminary stages, and there is relatively insufficient knowledge and few related policy studies. I will combine the data mining technologies to review and synthesize the current thousands of blue carbon policy literature to demonstrate the current status of research, summarize the blue carbon policies that governments and organizations have adopted, and explore different policy options for blue carbon, such as market-based climate policy; and analyze uncertainties in blue carbon policy development, implementation, and management. We advocate unprecedented

collaboration across disciplines, where scientists, conservationists, and policymakers could interact intensely to advance shared conservation goals. As a first-year doctoral student, I am eager to have an opportunity to engage with other experts in the conservation field and get more support and advice. The multifaceted nature of BC and multiple perspective analyses of BC policies could provide new insights to relevant researchers, policymakers, and stakeholders.

### Integrating Disaster risk management and climate change policies through conservation: Lessons from Latin America

Ady Rosin Chinchay Tuesta, Princeton Institute for International and Regional Studies (PIIRS), Princeton University

The increasingly frequent and ferocity of natural disasters are caused by Climate Change (CC). While in the past disasters were considered "acts of god", now is recognized that their primary source is anthropogenic (O'Brien et al. 2010; Peterson, 2021; Lizarralde, 2021). Despite their deep connection, CC and disaster risk management (DRM) literature are studied as if they were isolated from each other when CC and DRM policies should be integrated to generate resilient populations. One way to achieve this integration is through conservation policies, because conservation not only generates carbon sinks and mitigates the effects of CC, but also, helps increase social and environmental resilience when implemented in spaces with high vulnerability. Thus, conservation can contribute to building more just and sustainable places. Latin America is a highly vulnerable region to CC, and has the highest levels of inequality in its population (WID,2020), a phenomenon that exacerbates the impacts of CC and its vulnerability to disasters. However, conservationist efforts to face CC and improve DRM are not the same in Latin American countries. Thus, while some countries show progress on these policies after a shock or extreme event, other countries seem to be stuck without making progress on reforms, despite having faced extreme events. To identify and analyze the drivers that promote and limit these reforms, this paper analyzes three case studies (Costa Rica, Chile, and Peru); and dialogues with recent literature about CC (Rowan, 2022), and institutional change theories (Mahoney and Thelen,2010; Soifer, 2012; Pierson, 2000).

### A Vision for Re-imagined Infrastructure and a Biodiverse Future

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Civil infrastructure will be essential to face the interlinked existential threats of climate change and rising resource demands while ensuring a livable Anthropocene for all. However, conventional infrastructure planning largely neglects the contributions and maintenance of Earth's ecological life support systems, which provide irreplaceable services supporting human well-being. The stability and performance of these services depends on biodiversity, but conventional infrastructure practices narrowly focused on controlling natural capital have inadvertently degraded biodiversity while perpetuating social inequities. Here, we envision a new infrastructure paradigm wherein biodiversity and ecosystem services are a central objective of civil engineering. In particular, we re-imagine infrastructure practice such that 1) ecosystem integrity and species conservation are explicit objectives from the outset of project planning; 2)

infrastructure practices integrate biodiversity into diverse project portfolios along a spectrum from conventional to nature-based solutions and natural habitats; 3) ecosystem functions reinforce and enhance the performance and lifespan of infrastructure assets; and 4) civil engineering promotes environmental justice by counteracting legacies of social inequity in infrastructure development and nature conservation. This vision calls for a fundamental rethinking of the standards, practices, and mission of infrastructure development agencies and a broadening of scope for conservation science. We critically examine the legal and professional precedents for this paradigm shift, as well as the moral and economic imperatives for manifesting equitable infrastructure planning that mainstreams biodiversity and nature's benefits to people. Finally, we set an applied research agenda for supporting this vision, and highlight financial, professional, and policy pathways for achieving it.

## Understanding Movement

### Spatial overlap and parasite infections: Intersecting space use by humans and the Perrier's sifaka with the cross-species transmission of gastrointestinal parasites in northern Madagascar

Mariana Matos, ICON and Anthropology, University of Georgia

Human interactions with the environment are creating new ecological conditions that challenge wildlife's ability to survive and alter host-parasite dynamics, posing serious health threats to both populations. The complex nature of these interactions calls for holistic and transdisciplinary approaches that incorporate human, animal, and environmental health into global strategies to prevent, control, and mitigate the emergence and transmission of infectious diseases. However, these approaches are often criticized for oversimplifying the local contexts that shape human practices in the human-wildlife interface. In this presentation, I will describe how I integrate this framework into my dissertation research to investigate the role of spatial proximity and overlap in the cross-species transmission of gastrointestinal parasites, by focusing on human landscape use and the spatial behavior of the Critically Endangered Perrier's sifaka in the Andrafiamena-Andavakoera Protected Area, northern Madagascar. GPS collars will provide movement data for sifakas inhabiting forests with a gradient of fragmentation and human presence, and this information will be paired with ethnographic data collected through participatory mapping, interviews, and participant observation to elucidate the land use practices performed inside and around forest areas. To assess patterns of infection and transmission, fecal samples from sifakas and domesticated animals will be analyzed to measure the presence of parasites and identify those infections shared among them. This study aims to provide a more complete analysis of the link between multiple species space use and the dynamics of parasite transmission while providing a detailed account of the factors that shape the organization of human practices.

### Human impacts on African mammal diel activity patterns and waterhole access

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Wildlife-based tourism is beneficial for educating tourists, generating income for conservation efforts, and providing local employment, but more information is needed to understand how this industry may impact wildlife. Investigating how human presence modifies animal behavior is vital in understanding the effect of wildlife viewing by tourists. We used motion-activated cameras at 12 waterholes in northern Namibia to determine if the presence of humans and permanent infrastructures affected mammal visits by examining their (i) frequency of visits, (ii) time spent, and (iii) diel activity patterns. Our results from 216 trap nights for 17 mammal species revealed no differences in the number of visits between periods of observer presence for

any species. However, three species (spotted hyenas [Crocuta crocuta], leopards [Panthera pardus], and giraffes [Giraffe camelopardalis]) showed differences in the amount of time spent at waterholes based on human presence. We found that 82.4% of our study species changed their diel activity patterns in response to human presence. Our results reveal modifications of mammal temporal activity patterns due to human presence, which could lead to changes in community structure and trophic dynamics because of altered predator-prey interactions. As humans continue to expand into wildlife habitat, and wildlife-based tourism increases globally, it is imperative that we fully understand the effects of anthropogenic pressures on mammal behavior. Monitoring of wildlife behavioral changes in response to human activity is crucial to further develop wildlife tourism opportunities in a way that optimizes the impact of conservation goals.

**A fence runs through it: The effects of land use on fence crossings wildlife at the interface of Etosha National Park and the surrounding human-dominated landscape**

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Protected areas have implemented the use of conservation fences in an attempt to decrease human-wildlife conflict between wildlife inside and people living in adjacent areas. However, conservation fences and their role in management plans are still poorly understood since several studies demonstrate the lack incorporation of local knowledge and of longer-term and broad-scale effects on the social, ecological, and economic impacts. In northern Namibia, Etosha National Park (Etosha) is surrounded by an 820km two-meter-high fence, in addition to a veterinary cordon fence along the southern border and an additional elephant-proof fence dispersed through high conflict areas. Several studies have demonstrated the fence is permeable to lions, (Panthera leo), spotted hyenas (Crocuta crocuta), and elephants (Loxodonta africana), which create weak points for other species to move freely between the park and surrounding human-dominated landscape. We placed 50 motion activated cameras at crossing points between the Etosha fence and three land-use types outside Etosha to determine the composition and frequency of crossings among species and to determine the effects of land use, break type, and season on fence crossing behavior. Preliminary results showed certain fence structures deterred large ungulates from leaving or entering Etosha, while most carnivores were not impeded by land use or fence structure. Results from this study will help Etosha park officials and land managers understand the behavioral, biological, and environmental drivers of fence crossings by wildlife to develop context-specific management plans. Using a PowerPoint, this presentation will engage attendees in questioning a traditional conservation practice such as fencing.

**Conserving the Baird's tapir as a flagship species is an effective way to connect protected areas**

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Biological Corridors such as the Tenorio-Miravalles (TMBC), in Northwestern Costa Rica, exhibit frequent human-wildlife interactions. Here, the endangered and elusive Central American tapir (Tapirus bairdii) has shifted its behavior, with tapirs moving outside protected areas, and traveling through small-scale farms, interacting with people and domestic animals, while consuming crops during the day. These interactions result in economic losses for farmers.

The increase in these farmer-tapir interactions can be attributed to the tremendous efforts of local communities to promote tapir conservation over the past two decades. This project research objectives were to: 1) measure occupancy and distribution of tapirs through a community-based camera-trap network, and describe habitat preferences, activity and movement patterns by outfitting tapirs with GPS radio collars at the TMBC, and to 2) inform evidence-based management and territorial planning within the frameworks of the Management and Territorial Planning from the Tenorio Volcano National Park (TVNP) Administration and the Municipalidad de Upala, respectively. Since July 2021, we have deployed 114 camera-trap stations, with 57 recording tapir detections. Furthermore, we have captured and collared 10 tapirs to gain insights into their habitat use and identify hotspots of human-tapir interaction. We have integrated tapir distribution and movement data into the Natural Resources Management of the TVNP through two participatory workshops. This ensures that science-based conservation strategies are incorporated into official government plans and executed across the TMBC and neighboring communities, ultimately promoting human-tapir coexistence.

## Poster Presentations

### Community Connected Conservation: tradeoffs and synergies between wildlife movement and protein availability in South Africa

Kristie Gill, Warnell School of Forestry and Natural Resources, University of Georgia

In South Africa, a landscape consisting of government-protected areas, private reserves, and public land supporting rural settlements, forms a complex socio-ecological system (SES). This system supports ecosystem services such as wildlife habitat, landscape connectivity, tourism opportunities, and livelihoods for local rural communities. Privately owned land dominates the country (>80%), including over 9000 private reserves. Understanding the role of private reserves in this complex SES is vital, yet severely understudied. This project will evaluate how private land management affects both wildlife connectivity and the livelihoods of local rural communities. State-owned protected areas exclusively serve photographic safari ecotourism. Rural community settlements lack basic resources and protein due to limited access to productive land, high unemployment, and insufficient government services. Communities benefit from hunting and culling activities on private reserves which often donate excess game meat from these activities directly to rural settlements, alleviating some protein deficits. While government-protected areas can alleviate some local poverty by hiring community members as hospitality associates, these protected areas do not provide game meat to communities. Utilizing data from this project, I propose to develop an SES model that captures the dynamics of landscape connectivity for focal wildlife species that are indicators of ecosystem health and/or provide protein for rural communities. This project speaks to pluralistic knowledge and integrative conservation strategies that view human and nature-based systems as intertwined. This collaborative initiative will shed light on ways to enhance the futures of rural communities in the region and simultaneously increase landscape connectivity for key wildlife species.

### Creating school gardens in the Peruvian desert for hummingbirds

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A significant part of the western coast of South America is an extremely arid desert. However, some valleys cross the desert, allowing cities and natural communities to flourish. People and nature must coexist to share spaces with limited access to water. Pisco city in Peru (150,800 inhabitants) has zones where people live in the desert. These are areas of low income, so it is challenging for people to have gardens and care for local biodiversity. We collaborated with local teachers of Pisco to create gardens for hummingbirds in their schools. Up to five hummingbird

species are in the area; our objective was to provide a habitat for them inside the schools. The students and their parents were involved in garden creation, monitoring of plant development, and bird observation. The teachers and some student's parents used their traditional knowledge to select and care for the plants that might attract hummingbirds. Six flowering plant species were selected, three native to the area and three non-native. After the plants blossomed, we observed hummingbirds typical of the region (Mainly Amazilia Hummingbirds) coming to the new gardens, which inspired the school community to keep caring for their gardens. Children and teachers had an opportunity to learn about the value of these birds and ecological interactions, as well as to care for their environment. This project was a citizen science experience. Hummingbirds and plants with flowers in a highly arid region gave hope to a local community looking for a better future.

### Soft Skills Training for the Future of Forests in Liberia

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Liberia has the most forest cover of any West African country, and these forests have sustained indigenous societies for millennia. Today, Liberia's forested landscapes face a future that holds both great promise and peril. The sustainability challenges arise at the nexus of the forests' high commercial value as timber, their irreplaceable biodiversity value, their cultural and livelihood values to forest dwelling communities, and their carbon sequestration value for mitigating climate change. Achieving balance and building synergies among these values will require a new vision for Liberia's forestry sector and its workforce, which has focused heavily on timber extraction for several decades. A team of Liberian and U.S. forestry scholars and practitioners are collaborating to design a new national forestry curriculum that complements commercial forestry with content on biodiversity conservation, and multiple forest benefits to communities and climate. A salient and unique aspect of the new vision for forestry training is the inclusion of a Soft Skills Co-Curriculum, which aims to build personal, interpersonal, communications, and strategic competencies for the emerging, pluralistic forest sustainability job market, green entrepreneurship, and support of livelihoods in forest dwelling communities. Here we describe the aims, co-production process, and early implementation of the Soft Skills Co-Curriculum at the University of Liberia and Liberia's Forestry Training Institute.

### Spreading Wildlife Conservation Message Through Evanescen Traditional Art of South India

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South India has a rich biodiversity with over 16,187 species of both flora and fauna, of which more than 325 are globally threatened, 129 are vulnerable, 145 are endangered, and 51 have critically endangered status. Lack of awareness, myths and misunderstandings are a barrier to the community's understanding of species extinction. The Hedgehog Conservation Alliance, and the Tamil Nadu Forest Department to work on species like Madras hedgehogs (Parachinus nudiventris) and Indian pangolins (Manis crassicaudata). Presenting a conservation message to people who have shared their habitats for generations was not an easy task. Using the traditional but vanishing shadow puppetry art, conservation messages were propagated in 17 rural villages and 14 schools in Tamil Nadu. Schools and villages were prioritized based on the presence or recently sighted status of the endemic, endangered, or threatened species. Fun-filled activities included colouring for kindergarten students and wildlife posters for schools and villages. A

general wildlife conservation awareness program was conducted in 21 schools, most of which are in rural areas of protected forest in Salem, Kanyakumari, Tirunelveli, and Erode Districts of Tamil Nadu. At the end of each program, students made a pledge to save wildlife and were given complementary items like stationery, comic books, and pangolin and hedgehog stickers. A questionnaire survey consisting of pre-assessment and post-assessment was conducted with 864 students from 16 villages. The results show that students gained more knowledge about pangolins, hedgehogs, and other animals.

### A conversation of conservation: perception analysis and redefining of conservation towards holistic collaborative thinking

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Conservation eludes objectivity with a passion after its many uses in human history. It has been both the reason for protection and eradication of species, including humans, so long as the ends seemingly fulfilled the current society's wants. This way of thinking has caused singular generations to create larger conflicts for the next several generations to then try and rectify. This pattern born under colonial ideals generated centuries before has remained in the wake of drastic change in civil/humanitarian ideals. Our society has been moving towards unity in diversity, and finding a holistic front in which we all have equal influence. By giving an overview of with a traditional research presentation and asking a brief question to the audience at our poster session, we hope to give light to the current views of conservation and how our research plans to find new functional fundamentals for its use. By engaging with students, staff, and faculty at Colorado State University in collaboration with agricultural groups, tribes, and U.S. affiliated management of wilderness and wildlife, we surveyed and interviewed individuals to ask about current perspectives on the history, contemporary views, and potential future of how we define conservation. In our poster we will share the range of perspectives we heard, and suggestions on what can be done to make a shift that benefits the now and what will be.

### Academic Spaces and Indigenous Places: Native American Dispossession and the University of Georgia

Mariana Matos[1], Bruno Ubiali[1], Steven Scurry[2], Savannah Guenthner[1], Laura German[1]
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The work of historians and reporters has begun to shed light on histories of Native American dispossession and the role of universities therein. A March, 2020 report entitled, “Land-Grab Universities: Expropriated Indigenous land is the foundation of the land-grant university system” published in High Country News had a particularly galvanizing effect. This presentation aims to summarize findings from a research project aiming to: (a) bring together what is known by historians and others about the University of Georgia’s role in Native American dispossession, and, where not already documented, to (b) articulate linkages between broader histories of dispossession and UGA. Our goal is to inform campus debates surrounding how best to acknowledge the institution’s roles within broader processes of dispossession and our individual and institutional accountability to Tribal peoples and nations. Current literature and discussions along these lines within large institutions, academic and otherwise, often lead to land acknowledgements and little else. By contributing to greater awareness on campus surrounding the histories of Native oppression that are often hidden behind the grandeur of U.S. land-grant universities, we hope to stimulate dialogue and reflection on UGA’s particular history, and inspire individual and institutional accountability towards the Native nations affected by it. How might UGA more effectively address these lingering effects of its existence on Native nations today, and how can this knowledge positively affect our own scholarship?

### The Orders of Nature: landscape design as philosophical questioning

Katherine Melcher, University of Georgia

The Orders of Nature is a conceptual design for the forecourt of the Museum of Natural History in Paris; it would be best presented in a non-traditional poster/visual art format but could also be explained in an oral presentation. The Museum of Natural History and the Jardin des Plantes, formerly the Royal Garden of Medicinal Plants, are – historically and currently – dedicated to scientific research on the natural world. Therefore, it is an ideal setting for questioning sedimented ways of seeing nature and exploring alternatives. How one perceives and conceives of nature is at the core of how one approaches conservation. Although the scientific approaches to nature developed during the European Enlightenment are now frequently challenged, these perspectives still structure much of our thought. This presentation utilizes landscape design as a means for expressing philosophical thought. It interprets the philosophies Henri Bergson, Michel Foucault, Luce Irigaray, and Michael Marder into a physical design. Inspired by Bergson's élan vital and Marder's Plant Thinking, the design juxtaposes two forms order: a taxonomic order and a vital entanglement. While the taxonomic respects the existing axial design and follows a grid pattern; vital entanglement aims to encounter, enchant, and engage people within the landscape, expressing the dynamic and unfolding connections between all living beings. The design is not intended to have a literal application into conservation practice. Instead, it aims to playfully and creatively inspire reflection and discussion about the differing ways we can order nature – or is it the other way around?

### "Other" expertise: Gendered knowledge and outsider perceptions of Mikea in southwestern Madagascar

Nicole Rowley, Department of Anthropology, University of Georgia

I will present my proposed doctoral dissertation research project using a traditional poster presentation. The aim of this proposed research is to investigate how gendered norms and traditions influence the production and intergenerational transfer of traditional ecological knowledge among Mikea people living in southwestern Madagascar. The project also examines how interventionists (conservation, development, and aid practitioners) perceive knowledge and expertise among Mikea. In much of the world, rural women are vulnerable to environmental change, yet are systematically excluded from the decisions that shape their environment. While interventionists attempt to address unequal power relations in their projects by integrating local knowledge, women's knowledge is often overlooked or undervalued. However, the knowledge gained by women during their work in both the productive and reproductive realms is extremely important for community resilience. This research will examine how interventionists working in the southwest of Madagascar engage with and recruit knowledge from Mikea communities, and whether these processes allow Mikea women to meaningfully participate. My presentation fits well with the conference theme because it calls for a re-imagining of environmental expertise in conservation that includes women, adolescent girls, and their experience in the realms of domestic, care, and reproductive work. The southwest of Madagascar is known in development circles as the "graveyard of projects," a designation that may reflect an insufficient focus on women's experiences. If women's expertise and knowledge is better recruited and integrated into interventions, these programs may be more successful at improving women's agency and meeting conservation and development goals for all.

**Tools and Topics for Anticolonial Environmental Studies**

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Anticolonial voices in environmental studies coursework are frequently homogenized, unaccredited, and romanticized for a skewed Eurocentric viewpoint in an attempt to further scientific neutrality and universality. We created an anticolonial environmental studies database with several traditional and nontraditional learning materials, including peer-reviewed papers, podcasts, talks, and articles, to amplify these diverse perspectives in the undergraduate curriculum. This database is actively used by faculty and scholars at several institutions today and creatively addresses the unequal access to and representation of the different visions for environmental studies. It advances the conference objective to center multiple ways of knowing and creates opportunities for attendees to question and re-imagine our own training within the academy. Visit database here:
https://avidalmeza.shinyapps.io/anticolonial-envstudies/

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