Symposium on Integrative Conservation (SIC)

University of Georgia

FEBRUARY 17, 2023

Symposium on Integrative Conservation

Welcome to the 8th biennial Symposium on Integrative Conservation (SIC) at the University of Georgia (UGA)!

SIC is organized by graduate students in the Integrative Conservation (ICON) program, a multi-department and interdisciplinary PhD program at UGA. SIC serves as a forum to showcase graduate student research at all stages of development, and allows students to receive feedback on their ideas from others in the ICON community. It is also an opportunity to share ICON students' work with members of the five participating home departments (Anthropology, Geography, Odum School of Ecology, Warnell School of Forestry and Natural Resources, and Marine Sciences), prospective ICON students, and the broader UGA community.

We are excited about the diversity of events featured in this year's program. The full trajectory of the integrative research process will be on display, from proposed ideas presented by first- and second-year students to near-completed projects presented by senior students. For the first time at SIC, ICON faculty will be showcasing some of their own integrative research to facilitate mentorship opportunities with students. Additionally, a collaborative workshop session will allow students the opportunity to directly support each other's goals. It is also quite special to be bringing back an ICON alumna as the keynote speaker, who can uniquely understand the perspective of current students.

We wish to express our sincerest gratitude to all participants, attendees, and volunteers for making the event possible. We can't wait to see you there!

Sincerely,

Asa Julien and Colin Peterson
2023 SIC Co-Chairs

Dr. Dina Rasquinha is an Ecosystem Carbon Scientist with the Global Science Team at the World Wildlife Fund (WWF). At WWF, she works with network collaborators to develop frameworks for monitoring and evaluating the climate impact of projects, provides support in measuring, reporting, and verifying carbon stocks and fluxes from conservation, sustainable management and restoration activities and guidance on impact metrics for projects.

Currently, she is involved with multiple projects that use a landscape lens for the protection and restoration of critical ecosystems like mangroves and other carbon rich habitats. She is working on developing a mangrove monitoring framework for application to WWF project countries like Colombia, Madagascar, Fiji, and Mexico.

She is also involved in developing a database of nature metrics for projects across WWF's nature-based solutions initiative and is working on an evidence review of conservation finance schemes, especially climate to understand the synergies and tradeoffs between carbon-biodiversity-livelihood co-benefits of projects.

Dina is an interdisciplinary scientist and an alumnus of the ICON-Geography Program at the University of Georgia (UGA), where she also completed a PhD in Geography & Integrative Conservation. She is interested in applying evidence-based science and environmental justice principles towards blue carbon conservation, nature-based solutions, and coastal resilience. For her doctoral research, she studied the impact of tropical storms and fuelwood harvesting on mangrove blue carbon and community dynamics. She also researched the reciprocal relationship between people and mangroves, especially how communities value these forests and how that intersects with global- and national-level policies on climate change mitigation and adaptation.

Schedule: Friday, February 17

8:00 - 8:15		**Reception**
8:15 - 8:30	Asa Julien	Opening remarks

Session I — Full Talks

8:30 - 8:45	Andrew Paul	Indigenous conservation governance in Salween Peace Park
8:45 - 9:00	Shinyeong Park	Social-ecological interests in crane feeding practices of the Korean Demilitarized Zone
9:00 - 9:15	Asa Julien	The influence of nutrient loading on coastal resiliency: large-scale and long-term responses of downstream salt marsh ecosystems
9:15 - 9:30	Alyssa Quan	Effects of traditional management methods on growth of artisanal grade rivercane
9:30 - 9:45	Behnoosh Abbasnezhad	Incorporating social and policy drivers into future land-use and land-cover projections
9:45 - 10:00		**Coffee Break**

Session II — Speed Talks

10:00 - 10:05	Colin Peterson	Bird conservation in traditional wasabi farming landscapes
10:05 - 10:10	Aoife “Kate” Pitts	Integrating ethnoecology and conservation science in protected areas of the Peruvian Amazon
10:10 - 10:15	Janaki Mohanachandran	Space for place and Indigenous youth well-being in conservation and environmental education
10:15 - 10:20	Evan DesRosiers	Visual representation and conservation science in Sarawak, Malaysia

10:20 - 10:25	Jorge Rojas Jimenez	(Virtual) Conserving Baird's Tapirs as flagship species is an effective way to connect protected areas: Preliminary results
10:25 - 10:45		Group Q&A
10:45 - 11:00		**Coffee Break**

Keynote Address

11:00 - 12:00	Dina Rasquinha	How to design integrative conservation projects at scale: An assessment of nature-based solutions

Lunch Break

12:00 - 12:45		Lunch
12:45 - 1:30		Prospective Student Q&A

Session III Faculty Speed Talks

1:30 - 1:35	Dr. Meredith Welch-Devine	Department of Anthropology
1:35 - 1:40	Dr. Amanda Spivak	Department of Marine Science
1:40 - 1:45	Dr. Jesse Abrams	Warnell School of Forestry and Natural Resources and Savannah River Ecology Laboratory
1:45 - 1:50	Dr. David Porinchu	Department of Geography
1:50 - 1:55	Dr. Sechindra Vallury	Odum School of Ecology and River Basin Center
1:55 - 2:05		Group Q&A
2:05 - 2:15		**Break**

Session IV Full Talks

2:15 - 2:30	Rachel Arney	Tracing the political life of science in the environmental planning process for border wall construction in the Lower Rio Grande Valley of South Texas
2:30 - 2:45	Amit Kaushik	Shapeshifting in seeing animals: Declining grasslands and increasing cow vigilantism in India
2:45 - 3:00	Justice Britton	A reassessment of submerged Cherokee and Muskogean historical landscapes and contemporary public spatial awareness
3:00 - 3:15	Matt Tatz	Pathogens and heavy metals in birds: How urban socioeconomic levels influence exposure risks and risk perceptions
3:15 - 3:30	Patty Torres	Defining and Mapping Emerging and Re-emerging Infectious Diseases
3:30 - 4:00		**Break**

Workshop

4:00 - 5:15	Amit Kaushik	Collab-Writing Workshop: Facilitating Collaborations among ICON Students and Faculty

Closing Remarks

5:15 - 5:30	Dr. Sonia Hernandez	ICON Awards

Reception & Social

5:30	Creature Comforts Brewery

Abstracts

Session I - Full Talks

8:30 - 10:00

Indigenous conservation governance in Salween Peace Park

Andrew Paul

Department of Anthropology, University of Georgia

This presentation examines Indigenous conservation governance in the Salween Peace Park, in the autonomous Karen territory of Kawthoolei on the border between Thailand and Myanmar. Covering more than 6,700 square kilometres and home to more than 400 rural villages, the Salween Peace Park is an example of territories and areas conserved by Indigenous Peoples and local communities, known internationally as ICCAs and Territories of Life. The Salween Peace Park is being collaboratively developed by local inhabitants, Karen civil society, and the Karen National Union de facto administration. Its three goals are: 1) to advance peace and self-determination in an area that has suffered decades of armed conflict; 2) to protect some of mainland Southeast Asia' most intact forest ecosystems; and 3) to maintain Indigenous Karen cultural traditions and land relationships. In this presentation, I share highlights from my masters research, which focused on Indigenous-spirit relations, environmental governance, and Indigenous political strategies in the Salween Peace Park. I conclude by sharing potential directions for my PhD in ICON and Anthropology. I plan to look more closely at the impacts of cultural/religious change on Indigenous environmental relations; politics of formalizing customary tenure systems; and land planning/zoning processes, as the Salween Peace Park seeks to both promote appropriate community development and maintain/enhance landscape-level forest and wildlife habitat continuity. Finally, I am exploring the mobilization of different forms of knowledge for Indigenous-led conservation as we collaboratively develop environmental curriculum for the Karen Indigenous higher education system in the Salween Peace Park.

Social-ecological interests in crane feeding practices of the Korean Demilitarized Zone

Shinyeong Park

Warnell School of Forestry and Natural Resources, University of Georgia

The Korean Demilitarized Zone (DMZ) provides the last remaining wintering sites for several red-crowned crane (*Grus japonensis*) populations. Supplemental feeding for cranes near the

DMZ region began as a voluntary effort by farmers to support crane populations during extreme cold in winter. It has become institutionalized and strongly affects the regional social-ecological system by influencing feeding activities, ecotourism, regional revitalization, education, religion, and potentially attracting non-target species. In this study, how crane feeding works in the Korean DMZ social-ecological system was examined through multi stakeholders' interests. Although crane feeding carries implications for various contrasting interests, it also plays an important role in that it emphasizes the relationship between cranes and humans, contributing to ecosystem conservation. The stakeholders involved in crane feeding recognize and agree on the objectives by and large, but there is no organization to draw a consensus while the potential intervening factors, including disease spread, climate change, and potential changes to DMZ-area land use policies, continue to influence social-ecological system dynamics. Close cooperation for a long-term crane-human alliance should be achieved by understanding mutual interests and sharing information among stakeholders.

The influence of nutrient loading on coastal resiliency: large-scale and long-term responses of downstream salt marsh ecosystems

Asa Julien

Department of Geography, University of Georgia

Anthropogenic nutrient enrichment and persistent eutrophication have increasingly impacted both inland and coastal waters since the mid-20th century. Beginning in the 1970-80s, states in the U.S. have implemented best management practices (BMPs) to reduce nonpoint source nutrient loads, with many aimed at reducing agricultural nutrient runoff. While the techniques are well-understood, it remains difficult to incentivize agricultural stakeholders to comply with BMPs, which can be financially burdensome. The downstream effects of nutrient enrichment on marine and freshwater ecosystems have been well-studied, yet there are questions that remain about the long-term responses of wetland ecosystems. Salt marsh estuaries, which are widespread on the eastern coast of the U.S., have traditionally been viewed as nutrient sinks by managers, able to effectively sequester excess nitrogen. Several recent studies have challenged this assumption, finding that persistent nutrient enrichment in salt marshes significantly increases the likelihood of marsh erosion and susceptibility to sea level rise.

This proposed study aims to address management systems designed to reduce agricultural nutrient loads, studying both the social and natural systems involved in water quality management in Georgia. It also seeks to understand the large-scale and long-term effects of nutrient enrichment on downstream salt marsh ecosystems. The ultimate goals of the proposed study are to 1. determine the influence of increased nutrient loads on salt marsh resiliency at broad spatiotemporal scales, and 2. assess stakeholder compliance with systems designed to reduce agricultural nutrient runoff and the tradeoffs associated with watershed management in Georgia.

Effects of traditional management methods on growth of artisanal grade rivercane

Alyssa Quan

Odum School of Ecology, University of Georgia

Traditional ecological knowledges (TEK) hold deep understanding of complex relationships within socio-ecological systems. Rivercane (*Arundinaria gigantea*), a native bamboo plant culturally important to Native American peoples, plays a major role in sustaining both cultural practices and habitat for various riparian species. The Eastern Band of Cherokee Indians (EBCI), an indigenous tribe residing on the Qualla Boundary in western North Carolina, have cultivated rivercane for centuries. In coproduction with the EBCI, my research explores the effects of EBCI cultural practices on present-day rivercane ecosystems with regard to the role of TEK in township selection. Understanding TEK alongside mainstream scientific approaches is key to fully grasping the mechanisms behind rivercane's impact on the watershed ecosystem. We are conducting an experiment in an unmanaged canebrake in western North Carolina to determine how traditional artisanal harvesting methods affect the long-term growth of rivercane culms. Experimental plots are set in the canebrake in which to implement artisanal harvesting treatments. In addition to this treatment, we will also have control plots as well as a clearing treatment in which all culms are removed. We hypothesize that the artisanal harvesting will lead to increased culm width and height. We also hypothesize the cleared plots will have overall decreased average growth rates, but an increase in density of new shoots. The results of this study will help inform riparian restoration efforts by strengthening riparian science with cultural knowledge in ways that benefit both the rivercane ecosystems and Cherokee tribes.

Incorporating Social and Policy Drivers into Future Land-Use and Land-Cover Projections

Behnoosh Abbasnezhad

Warnell School of Forestry and Natural Resources, University of Georgia

Forestlands in the southeastern U.S. generate a great variety of ecosystem services (ESs) that contribute to the wellbeing of humans and nonhumans alike. Despite their importance, forests continue to be lost to expanding urbanizations. There are several relevant social and policy drivers and constraints as a function of human decision making essential to project future Land use/land cover (LULC) and quantify the ES consequences of continued urbanization. Hence, we incorporated key socio-economic factors, conservation policies, societal preferences, and landscape biophysical features to future LULC projection techniques under three different development scenarios. We used publicly available data for the coterminous U.S, therefore our approach can be replicable to various study regions within the nation. In the present study, we

applied this approach in the Upper Flint watershed (UFW) located in the southern part of the Atlanta metropolitan area, Georgia. The UFW is traversed by major transportation corridors and the world's busiest airport, Hartsfield-Jackson. Extensive deforestation due to urbanizations have limited provisioning of some important ESs within the watershed. Our results suggest that incorporating social and policy drivers in future LULC projection approaches lead to more realistic results with higher accuracy levels which offer decision-makers, development planners, and policymakers a reliable opportunity to forecast the effects of anticipated changes on availability of ESs in the future. Conservation organizations and public agencies can benefit from such analysis to identify regions requiring conservation interventions for prioritizing their conservation efforts.

Session II - Student Speed Talks

10:00-10:45

Bird conservation in traditional wasabi farming landscapes

Colin Peterson

Odum School of Ecology, University of Georgia

Traditional farming systems are a unique type of agricultural landscape, and their historic stewardship practices are gaining recognition not only for their cultural significance, but also for their ability to conserve biodiversity. Japanese wasabi farming has existed for centuries in the form of aquatic terraced fields along steep mountainous slopes. In streams, a multi-tiered layering of stonework slows water flow to create the shallow, nutrient-rich aquatic environment required for wasabi plants to flourish. Previous ecological studies in wasabi fields have demonstrated high rates of biodiversity for rare plant and insect species, yet no research has been conducted on their conservation value to other taxa, including birds. In addition, pressures such as climate change and rural depopulation are leading to the abandonment of many wasabi farms, and the effect of this abandonment on local biodiversity is unknown. To test if and how wasabi agroecosystems function as important water habitats for forest birds, I propose exploratory field research in Shizuoka Prefecture, Japan, the birthplace of wasabi cultivation. I aim to elucidate the taxonomic and functional diversity of avian communities around wasabi fields compared to natural habitats and abandoned farms, examine the extent to which avian species rely on wasabi fields for foraging and nesting behaviors, and identify relationships between avian diversity and various environmental characteristics of wasabi fields. The goal of this research is to progress global understanding of how conserving traditional cultural practices and agricultural systems may play a role in mitigating biodiversity loss.

Integrating ethnoecology and conservation science in protected areas of the Peruvian Amazon

Aoife Kate Pitts

Department of Anthropology, University of Georgia

Conservation initiatives like protected areas (PA) are laden with socio-ecological tradeoffs, many of which impact communities' traditional knowledge systems and their interactions with the environment. These changes in governance influence the access and utilization of resources used for nutritional, medicinal, cultural and spiritual purposes, impacting community well-being and intricate socio-ecological relationships. Conservation efforts often fail to adequately consider and respond to existing biocultural ecologies and ways of being, resulting in disenfranchised communities and ineffective conservation efforts. My research will utilize the integration of ethnoecology and conservation science to work towards equitable and effective biocultural conservation initiatives in the Peruvian Amazon. The successful integration of ethnoecology and conservation rests upon an amplification of traditional ecological knowledge (TEK) and indigenous governance practices. An amplification of TEK that informs communities' ecological practices could bridge the gap between the on ground realities of PAs and their socio-ecological trade-offs. Additionally, amplifying TEK can help researchers and stakeholders consider ways in which protected areas in the Peruvian Amazon can be co-governed to protect multispecies biocultural ecosystems.

Space for place and Indigenous youth well-being in conservation and environmental education

Janaki Mohanachandran

Department of Anthropology, University of Georgia

Narratives of development and progress in combination with rapid environmental change disproportionately impacts indigenous communities. These impacts often manifest through changing place attachment, disrupted cultural continuity, food security and forced human mobility. Here, the indigenous youth is placed at a unique position – the Outsider-Insider perspective - as they find themselves between the generational relationship with their land and amidst the changing perceptions brought by the 'globalized' world. Several studies address this unique position occupied by indigenous youth that influences their ecological grief, self-efficacy and self-concept, which subsequently impacts intergenerational environmental learning, ideas around stewardship and environmental leadership. In the last decade, advocacy for community-based conservation interventions have increased. However, the paradigm with which we approach conservation tends to prioritize ecological well-being over social well-being. Through my research, I intend to explore the importance of indigenous youth well-being, especially in the context of changing place attachments influenced by development and

conservation projects. By centering indigenous youth well-being as a conservation and stewardship goal, I propose a reexamination of current conservation interventions and suggest more inclusive and place-based initiatives. I also intend to co-produce this research with indigenous youth counterparts in the field. This process can aid the documentation of methods, ethos and challenges around co-producing action-based research while serving as a self-reflexive exercise to mitigate the bias that I bring.

Visual representation and conservation science in Sarawak, Malaysia

Evan DesRosiers

Department of Anthropology, University of Georgia

Visual representation and practices involved with visual perception of the environment are pronounced features of conservation practices informing land use in Sarawak. Emerging through the colonial-era exploration undertaken by naturalists and their practices of taxonomic identification and illustration and carried forward through contemporary practices of cartography, infographics, photography and other media, practices of visual representation shape both scholarly and public understandings of conservation issues. This speed-talk will unpack the historical development and contemporary salience of visual representation in the context of conservation science.

Conserving Baird's Tapirs as Flagship Species is an Effective Way to Connect Protected Areas: Preliminary Results

Jorge Rojas Jimenez

Warnell School of Forestry and Natural Resources, University of Georgia; Costa Rica Wildlife Foundation

Biological Corridors in Costa Rica such as the Tenorio-Miravalles (TMBC), exhibit frequent human-wildlife interactions. At the TMBC, 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. This shift in behavior may lead to negative interactions with people (vehicular accidents, retaliation poaching etc). We aimed to: 1) monitor tapir distribution, locations, movement patterns, and hotspots of human-tapir conflict by outfitting tapirs with radio collars and by developing a community-based camera trap, and 2) reduce conflicts by implementing and assessing mitigation strategies across TMBC. Through both radiocollar and camera data, we have determined human-tapir interaction hotspots. Since July 2021, we have radio collared 7 tapirs and thus far have found high individual variation of home ranges size and habitat use including primary forests, regeneration patches, rivers, crops and pasture use in the

TMBC. We have implemented electric fencing in 6 farms across TMBC. We have also documented tapir-friendly practices already implemented by local farmers including selective fencing, crop rotation, etc., and are currently implementing and assessing the response of tapirs to electric fencing. Electric fencing appears as the most efficient method for excluding tapirs from crops. Conservation of tapirs has been focused on protection of large, protected areas, but viable, connected populations will require research and protection in adjacent corridors.

Keynote Address

11:00 - 12:00

How to design integrative conservation projects at scale: An assessment of nature-based solutions

Dr. Dina Rasquinha

Ecosystem Carbon Scientist, World Wildlife Fund

Session IV - Full Talks

2:15 - 3:30

Tracing the political life of science in the environmental planning process for border wall construction in the Lower Rio Grande Valley of South Texas

Rachel Arney

Geography Department, University of Georgia

The U.S.-Mexico border is a biodiverse landscape continually threatened by the presence of the international border wall. In 2006, the Department of Homeland Security waived all environmental regulations to build hundreds of miles of border wall, including the National Environmental Policy Act (NEPA). These waivers remain today despite changes in the congressional landscape and ongoing border wall construction. Yet, Customs and Border Protection (CBP), the agency responsible for building the border wall, claim they follow the NEPA process and conduct rigorous environmental planning standards. This is especially relevant in the Lower Rio Grande Valley of South Texas – a region constantly under state occupation from the border wall. Given this, I ask: what knowledge claims does CBP make about the borderlands environment and how are these claims incorporated into the border wall planning process? In weaving together theories on the settler colonial state and science and technology studies, I trace the political life of the knowledge produced about the environment in the border wall planning process. Through participant observation and document analysis of

border wall planning meetings, I identify how knowledge about the environment is produced and packaged in a way that naturalizes the harm, dispossession, and premature migrant death from the border wall. I argue that these narratives become entangled in claims to scientific expertise, reinforcing the existence of the border wall. Ultimately, the way the environment is understood becomes a powerful tool for informing and legitimating settler state practice and policy in the U.S.-Mexico borderlands.

Shapeshifting in Seeing Animals: Declining Grasslands and Increasing Cow Vigilantism in India

Amit Kaushik

Department of Anthropology, University of Georgia

Cows (*Bos taurus*; 'gai' in Hindi) in India continue to influence nationalistic imaginaries with increasingly violent overtures against those perceived as undermining the cow's symbolic significance. When phrases like ‘cow vigilantism’ become gradually normalized in mainstream conversations, this paper brings our attention to another remarkable species, Nilgai (Boselaphus tragocamelus), whose colloquial association with the cow can help us understand how interspecies associations change human-animal relationships. Nilgai’s typical habitat is deciduous scrub forests and grasslands. However, with a decline in such habitats, the species has found its refuge in agricultural fields, waste dumps, and city parks. The paper inquires through what representations, Nilgai (*B. tragocamelus*) gets associated with a cow (*B. taurus*). How do such associations between these two species envisage urban-rural gradients as increasingly disappearing in the national capital, New Delhi, India, and broadly in the Global South? Following methods like ethnography, unstructured interviews, and archival research, this paper outlines encounters with the Nilgai in different spatial and political contexts that produce contradictory interventions—on one side, Nilgai has been actively managed by the state in urban parks as symbols of wilderness, on the other, a few Indian states demand culling the species as an agricultural pest.

A Reassessment of Submerged Cherokee and Muskogean Historical Landscapes and Contemporary Public Spatial Awareness

Justice Britton

Department of Anthropology, University of Georgia

Much of what remained of Cherokee and Muskogean settlements along the Tennessee, Little Tennessee, French Broad, and Chattooga rivers were either plowed over, dismantled for materials, burned, or flooded over the last two centuries. Between 1936 and 1967 virtually all of the historic Lower towns of the Cherokee Nation, and many even older Muskogean Island towns, were physically submerged with the damming of major riverways by the Tennessee Valley Authority and have largely not been engaged with since. Considering such processes of

cultural erasure, I am seeking more qualitative means to identify these significant heritage sites. To best engage with such layered realities, I will conduct a series of ethnographic interviews with cultural, historical, and tribal authorities, as well as with Indigenous and non-Indigenous community members currently inhabiting historic Cherokee and Muskogean homelands. I will then conduct an initial sonar and photogrammetric mapping survey of the remaining flooded historic sites along these waterways. Photographic and GPS recordings, as well as land cover maps, and 3D reconstructions can then be made of any discernible above ground or submerged structures and any culturally significant plant communities which may persist within such historic landscapes. And by cross-referencing historical and ethnographic sources, maps, Sonar, GPS, and ethnobotanical mapping points, I will synthesize an array of integrative datasets and images to present to Cherokee and Muskogean tribal officials to petition for the appropriate designation of such sites as historically and culturally significant landscape features deserving of public recognition, proper memorialization, representation, and tribal access.

Pathogens and heavy metals in birds: How urban socioeconomic levels influence exposure risks and risk perceptions

Matt Tatz

Odum School of Ecology, University of Georgia

Wildlife and humans are often simultaneously exposed to contaminants and pathogens, yet they tend to be studied separately. Heavy metals can reduce immune function in wildlife, which could increase pathogen infection and shedding. Urban wildlife may also be excellent indicators for contaminant and pathogen exposure significant to public health. Prior urban wildlife health studies have primarily focused on comparing urban and natural systems, yet within urban systems there exists heterogeneity in socioeconomic levels, wildlife communities, and contamination. My research will address whether relationships among these factors and human attitudes toward wildlife result in higher pathogen exposure risk and subsequently higher risk perception toward wildlife in low-income areas. An integrative framework is requisite to determine the ecological and social implications of concomitant heavy metals and pathogen exposure to humans and local wildlife. Birds are frequently exposed to both contaminants and pathogens simultaneously in urban habitats and are often in proximity with people where spillover transmission of pathogens may occur. Further, birds frequently move across gradients in household incomes/socioeconomic levels. We propose to investigate how heavy metal contamination and pathogen exposure varies in urban birds and how this may impact pathogen exposure to people from different socioeconomic backgrounds. We hypothesize that people and birds in lower income areas have increased exposure to heavy metals and pathogens, resulting in lower income people associating risk with birds more than higher income people.

Defining and Mapping Emerging and Re-emerging Infectious Diseases

Patty Torres

Center for the Ecology of Infectious Diseases, Odum School of Ecology, University of Georgia

As the threat of future pandemics increases driven in part by rapid anthropogenic change, so does the need to understand where infectious diseases are emerging and re-emerging. Existing research has shown that reports of infectious disease outbreaks have increased significantly in recent decades. With the objective of mapping and classifying emerging and re-emerging infectious diseases, we reviewed the literature to construct a database of human outbreaks. We listed a total of 418 unique events spanning from the 1918 Spanish Influenza to the COVID-19 pandemics. We classified all outbreaks by agent type, location, date, emerging vs. re emerging and species vs. subspecies. For our initial mapping efforts, we focused on viral diseases. Our map displays 119 unique viral outbreaks with 90 classified as species and 29 as subspecies. Due to a lack of uniformity among sources, we established our own criteria for classifying outbreaks as emerging and re-emerging. Therefore, we encourage standardization in definitions of these terms to make better use of datasets across studies. Future work will include the development of a more robust map featuring bacterial, fungal, and prion emerging and re-emerging diseases throughout the world.

Session 4 - Workshop

4:00 - 5:15

Collab-Writing Workshop: Facilitating Collaborations among ICON Students and Faculty

Amit Kaushik

Department of Anthropology, University of Georgia

The Center for Integrative Conservation Research (CICR), encompasses a large group of students and faculty with diverse backgrounds and expertise. In this workshop, participants are invited to propose a research idea, share it with others, and look for potential collaborators in the meeting. After this workshop, it is up to the participants to carry their ideas and collaborations forward. We imagine these collaborations might help to build long-term partnerships. Through this process, we might generate more publications, share challenges with each other, and learn from our collective strengths and experiences.

Acknowledgements

SIC is a truly collaborative endeavor and could not have happened without the assistance of many dedicated individuals. We would first like to thank Dina Rasquinha for being the keynote speaker for this event. We would also like to thank Sonia Hernandez and Laura German for serving as the fearless leaders of the Integrative Conservation PhD Program.

We also extend our appreciation to all of the faculty volunteers for giving presentation feedback throughout the day. This feedback is critical for students at all stages of their research development. We would especially like to thank all of the student-run committees for their dedication to making this Symposium happen.

We express our endless gratitude to Talley Vodicka for her tireless support of the ICON program and students. We also acknowledge both the Center for Integrative Conservation Research and the Integrative Conservation PhD Program for their financial support of this event. Finally, we thank all the attendees for their interest in and engagement with integrative conservation research at UGA.

SIC Planning Committees

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Workshop Moderator…..……..……..…...Amit Kaushik