

Pathways 2023: Human Dimensions of Wildlife Conference & Training Program



“Managing Wildlife in an Era of Mutualism”

May 31-June 3, 2023 | Colorado State University | Fort Collins, Colorado

Brought to you by:



PathwaysConf.org

CONTENTS

| | |
|--|------------|
| CONFERENCE ADVISORY BOARD | PAGE 2 |
| WELCOME | PAGE 3 |
| CONFERENCE PLANNING COMMITTEE | PAGE 3 |
| ABOUT OUR COHOSTS | PAGE 4-6 |
| CHECK-IN AND REGISTRATION | PAGE 7 |
| WIFI | PAGE 7 |
| CARBON OFFSET OPTIONS | PAGE 7 |
| CONFERENCE LOGISTICS | PAGE 8 |
| ABOUT FORT COLLINS, COLORADO | PAGE 9 |
| COLORADO STATE UNIVERSITY LAYOUT | PAGE 10 |
| BUILDING LAYOUTS | PAGE 11-12 |
| LOCAL ACTIVITIES & RECOMMENDATIONS | PAGE 13-14 |
| FIELD TRIPS & EXCURSIONS | PAGE 15 |
| PLENARY SPEAKERS | PAGE 16-19 |
| SCHEDULE OVERVIEW | PAGE 20-26 |
| SYMPOSIUM (ORGANIZED SESSION) DETAILS | PAGE 27-43 |
| SESSION DETAILS (DETAILED SCHEDULE OF ABSTRACTS) | PAGE 44-53 |
| POSTER SESSION | PAGE 54-55 |
| AUTHOR & PRESENTER LIST | PAGE 57-68 |

CONFERENCE ADVISORY BOARD

KAREN BAILEY - UNIVERSITY OF COLORADO

CHRISTIAN GAMBORG - UNIVERSITY OF COPENHAGEN

JENNY ANNE GLIKMAN - INSTITUTE FOR ADVANCED SOCIAL SCIENCE

COREN JAGNOW - PENNSYLVANIA GAME COMMISSION

MIKE QUARTUCH - COLORADO PARKS & WILDLIFE

NATALIE SEXTON - U.S. FISH & WILDLIFE SERVICE

KENNETH SHOCKLEY - COLORADO STATE UNIVERSITY

EICK VON RUSCHKOWSKI - ALFRED TOEPFER ACADEMY FOR NATURE CONSERVATION

CRISTINA WATKINS - N.C. WILDLIFE RESOURCES COMMISSION

Pathways 2023



WELCOME TO PATHWAYS 2023 - “MANAGING WILDLIFE IN AN ERA OF MUTUALISM”

This year’s conference theme is “Managing Wildlife in an Era of Mutualism.” With this in mind, among other topics, Pathways 2023 will be exploring wildlife viewing, wildlife interactions, building meaningful relationships with underserved communities, and human-wildlife conflict through the lens of mutualism.

Why: Our mission is to increase professionalism and effectiveness in the Human Dimensions of Wildlife Management field. We invite you to join us in this critical wildlife conservation effort.

About the Conference: Pathways 2023 is a part of the Pathways: Human Dimensions of Wildlife Conference and Training. Founded by Prof. Michael J. Manfredo and Prof. Jerry Vaske (Colorado State University), the program is designed to address the myriad issues that arise as people and wildlife struggle to coexist in a sustainable and healthy manner. Pathways 2023 marks the 13th iteration of the Pathways conference over the last 15 years.

Conference Planning Committee

Conference Co-Chairs



Michael J. Manfredo
Professor & Department Head
Human Dimensions
of Natural Resources,
Colorado State University



Dean Smith
North American Waterfowl
Management Plan Director;
Wildlife Liaison
Association of Fish and
Wildlife Agencies



Ashley Dayer
Associate Professor
Fish and Wildlife
Conservation
Virginia Tech



Rebecca Niemiec
Director
Animal-Human Policy Center
Colorado State University

Pathways 2023 Conference Team



Paul Layden
Conference Coordinator
Human Dimensions
of Natural Resources,
Colorado State University



Emily LeBlanc
Conference Coordinator
Human Dimensions
of Natural Resources,
Colorado State University



Kellen Ritzdorf
Conference Assistant
Human Dimensions
of Natural Resources,
Colorado State University

CONFERENCE COHOSTS



ASSOCIATION of
FISH & WILDLIFE
AGENCIES

ASSOCIATION OF FISH AND WILDLIFE AGENCIES

The Association of Fish & Wildlife Agencies represents North America's fish and wildlife agencies to advance sound, science-based management and conservation of fish and wildlife and their habitats in the public interest. The Association represents its state agency members on Capitol Hill and before the Administration to advance favorable fish and wildlife conservation policy and funding and works to ensure that all entities work collaboratively on the most important issues. The Association also provides member agencies with coordination services on cross-cutting as well as species-based programs that range from birds, fish habitat and energy development to climate change, wildlife action plans, conservation education, leadership training and international relations.



COLLEGE OF NATURAL RESOURCES AND ENVIRONMENT
FISH & WILDLIFE CONSERVATION
VIRGINIA TECH

DEPARTMENT OF FISH AND WILDLIFE, VIRGINIA TECH

Recognized widely as one of the premier programs in North America addressing fish and wildlife issues of state, national and global concern, we in the Department of Fish and Wildlife Conservation are passionate about natural resource conservation and management and about making a difference in how our society values sustainable natural resources. Through our commitment to excellence in research, teaching, and engagement we are training the next generation of leaders in natural resource conservation and management and influencing decisions and policy in Virginia, the nation, and the world.



HUMAN DIMENSIONS
OF NATURAL RESOURCES
COLORADO STATE UNIVERSITY

DEPARTMENT OF HUMAN DIMENSIONS OF NATURAL RESOURCES, COLORADO STATE UNIVERSITY

The Department of Human Dimensions of Natural Resources (HDNR) at Colorado State University is well positioned to meet complex challenges of natural resource management with a growing global population. We do this through understanding and attending to the needs and values of humans, human society and culture as they relate to the conservation and enjoyment of the natural environment. It is HDNR's mission to empower people to explore and sustain their world. With HDNR's belief in integrity, impact, diversity, innovation, sustainability and well-being, the vision of the department to re-imagine learning and discovery to benefit both people and the natural world. The department offers an M.S. and Ph.D. in human dimensions of natural resources, a Master of tourism management, and an M.S. in conservation leadership; as well as graduate certificates in adventure tourism, communications for conservation, and ski area management. The department is one of seven programs in the U.S. that offers a comprehensive bachelors, masters, and doctoral program.



ANIMAL-HUMAN POLICY CENTER
COLORADO STATE UNIVERSITY

ANIMAL-HUMAN POLICY CENTER, COLORADO STATE UNIVERSITY

The CSU Animal-Human Policy Center is a resource for policymakers and government agencies to help them solve and avoid problems related to interactions between animals and people. The Center synthesizes socio-ecological information and brings diverse perspectives together to help policymakers and government agencies facilitate positive relationships between animals and humans.

ABOUT COLORADO STATE UNIVERSITY

Colorado State University is one of the nation's top public research universities and an institution on the rise. In the last decade, CSU has produced record enrollment, built on all-time highs in student diversity and student success; record fundraising far outpacing ambitious goals; groundbreaking research driven by a highly productive faculty; a campus revitalized by a transformational building campaign; and, perhaps most important, an unrivaled learning environment where nine of 10 recent graduates say they would choose CSU again and rate their education as excellent.

SUSTAINABILITY AT CSU

- One of 10 universities worldwide ranked Platinum for comprehensive sustainability, AASHE STARS.
- The No. 1 Top Green College in Colorado and No. 5 in the nation, the Princeton Review.
- Bee-Campus Certified, Bee City USA.
- Platinum-Level Bike-Friendly University, League of American Cyclists.

WARNER COLLEGE OF NATURAL RESOURCES

The Department of Human Dimensions of Natural Resources is housed in the Warner College of Natural Resources, which is one of the largest and most comprehensive natural resource colleges in the nation. Offering students the opportunity to immerse themselves in their environmental fields of choice, Warner College is a leader in natural resources education, outreach, and research both in Colorado and around the world. The other departments housed in Warner College are:

- Ecosystem Science and Sustainability
- Fish, Wildlife, and Conservation Biology
- Forest and Rangeland Stewardship
- Geosciences

WARNER COLLEGE CENTERS & INSTITUTES

In addition to the five departments, Warner College houses labs, centers, and institutes. Throughout the conference, you'll hear presentations from many of Warner College's faculty and staff.

Center for Collaborative Conservation

The Center for Collaborative Conservation informs, promotes, and supports collaboration on complex conservation issues across Colorado, the American West, and the world. Our over-arching goal is to evolve how conservation is done to tap the power of diverse viewpoints, address social, economic, and ecological concerns and realities, and build trust for concerted action and enduring outcomes.

Center for Environmental Management of Military Lands

The Center for Environmental Management of Military Lands (CEMML) has supported military readiness and resource conservation for more than three decades. CEMML works closely with the Department of Defense, US Army Corps of Engineers, National Park Service, and other federal departments and agencies to provide expertise in managing natural and cultural resources.

Center for Human-Carnivore Coexistence

The Center for Human-Carnivore Coexistence (CHCC), an academic institution housed at Colorado State University, is focused on integrating transformative science, education, and outreach to minimize conflict and facilitate coexistence between humans and carnivores.

ABOUT COLORADO STATE UNIVERSITY

WARNER COLLEGE CENTERS & INSTITUTES, CONTINUED...

Center for Protected Area Management

The Center for Protected Area Management extends the CSU land-grant mission by contributing to the conservation, planning, and management of the world's protected areas and the landscapes and seascapes that connect them.

Colorado Cooperative Fish and Wildlife Research Unit

The unit supports research, education, and science related to fisheries and wildlife management in Colorado and throughout the United States. A part of the USGS wildlife co-op units, the Colorado unit has been at CSU since 1947.

Colorado Forest Restoration Unit

The Institute's purpose is to develop, synthesize, and apply the best available science to achieve forest restoration and wildfire hazard reduction goals.

Colorado Natural Heritage Unit

The Colorado Natural Heritage Program is Colorado's only comprehensive source of information on the status and location of Colorado's rarest and most threatened species and plant communities.

Colorado State Forest Service

The Colorado State Forest Service strives to achieve stewardship of Colorado's diverse forest environments for the benefit of present and future generations.

Environmental Learning Center

The CSU Environmental Learning Center inspires and educates people to foster connections with the natural world and encourage environmental stewardship through quality, positive, educational experiences in and about the environment. We educate and mentor future leaders in the fields of environmental education and communication and bring the knowledge, skills, and talent within the college to the outside community.

Geospatial Centroid

The "Centroid" is a geospatial resource and education center that serves students, faculty, and the greater community on all aspects of geographic information systems and other spatial technologies.

Larval Fish Laboratory

The Larval Fish Laboratory is a non-profit research, service, and educational facility whose purpose is to draw together, advance, and disseminate knowledge on methods of study, biology, ecology, and taxonomy of freshwater and anadromous fishes with particular emphasis on early-life-history stages and fish reproduction.

Natural Resource Ecology Lab

The Natural Resource Ecology Laboratory is an interdisciplinary ecology research and teaching unit at Colorado State University. Our mission is to improve understanding of the complex interactions between ecosystems, humans, and management activities.

Western Forest Fire Research Center

The Western Forest Fire Research Center promotes interdisciplinary solutions to Colorado's and the Nation's most pressing fire management problems. We seek and promote scientifically vetted solutions to fuels management, ecosystem restoration, suppression and rehabilitation.

CHECK-IN AND REGISTRATION

Upon arrival in Fort Collins, you can visit the Lory Student Center to check in or stop at your hotel first. University Housing will provide all-day checkin to attendees staying on campus.

Registration Desk Times:

WEDNESDAY: 11:00 A.M. - 5:00 P.M.

THURSDAY: 7:00 A.M. - 5:00 P.M.

FRIDAY: 7:00 A.M. - 5:00 P.M.

SATURDAY: 7:00 A.M. - 5:00 P.M.

**IT IS REQUIRED THAT YOU CHECK-IN PRIOR TO ATTENDING ANY CONFERENCE SESSIONS.
PLEASE WEAR YOUR NAME BADGE THROUGHOUT THE CONFERENCE.**

WIFI

While visiting Colorado State University, campus guests can connect to the **csu-visitor** wireless network. This network is a free service intended for use by visitors requiring short-term access to the internet. It is an unsecured connection and should not be used to send or receive sensitive information. Connections will last 24 hours; if you will be visiting campus for multiple days you will have to register and connect each day.

Visitors from eduroam-enabled institutions can use the University's eduroam network.

CARBON OFFSET OPTION

Trees, Water & People

Price: 10 USD (9.78 EUR) / 1 Ton of CO₂

The Trees, Water & People mission is to improve lives by helping communities to protect, conserve, and manage their natural resources. It designs conservation projects throughout Latin America and on U.S. Tribal Lands with one question in mind: How can we improve the environment while creating economic opportunity for local people? The TWP Development Model empowers communities to gain access to resources in a sustainable way. The human stakes around climate vulnerable locations have become critical. TWP offers real solutions and opportunities that change lives and address the roots of migration.

TWP's in-house carbon calculator provides us with an effective way to offset our impacts on our planet while tangibly improving quality of life in some of the world's most challenging places.

To purchase offsets, visit: <https://treeswaterpeople.org/offset>

We recommend attendees arriving from anywhere in North America to consider purchasing offsets of **2 tons** (the equivalent of a round trip direct flight, plus taxis, meals, and hotel stays) to cover their travel. From Europe, we recommend purchasing **3 tons**. Other calculations can be made online.

REGISTRATION INCLUSIONS



Daily registration includes access to all conference sessions, workshops, plenary talks, coffee breaks, lunch, and the evening social.

Full conference registration includes access to all conference sessions from Wednesday through Saturday, all lunches, coffee breaks, socials, and the Friday evening dinner.

GETTING AROUND FORT COLLINS



The three recommended hotels (The Hilton, The Best Western, and University housing) are within a short walk (10 minutes or less) to the conference center. If you are staying elsewhere in Fort Collins, such as the Old Town downtown area, you can use the reliable bus system to get to the university.

The City of Fort Collins and the Colorado State University campus are bikeable areas, with bike trails connecting most of the town.

Try out the Spin e-bikes and e-scooters throughout town by downloading the Spin App. Visit Spin.app to learn more.

If you prefer a non-electric bike, New World Sports, located in the Gearage, at 124 Remington Street (downtown Fort Collins) offers bicycle rentals starting at \$45 per day. Learn more at NewWorldSportsLLC.com.

EMERGENCIES



If you are unfamiliar with the area and have an emergency, dial 911 for local police, medical, or fire emergency services.

If you have other concerns that do not require emergency services, speak to the staff at your hotel or ask the conference staff any questions you may have.

The nearest Urgent Care is located on campus in the CSU Health building, and is run by Associates of Family Medicine. The clinic, called Village Medical, is open 7 am - 5 pm on weekdays and 9 am - 5 pm on weekends and is located at 151 West Lake St #1500.

The nearest Emergency Room is the UC Health ER at Poudre Valley Hospital, located at 1024 South Lemay Ave, Fort Collins, CO 80524. It is open 24 hours a day, every day.

ABOUT FORT COLLINS, COLORADO, U.S.A.

Located on the Front Range of the Rocky Mountains, Fort Collins is the perfect escape from big city living with your choice of beautiful wildlife refuges nearby. In addition to its proximity to Rocky Mountain National Park and other close mountain attractions, Fort Collins is known for its local craft beer scene.

This small-town nook is tucked in between Denver and Cheyenne, each one hour away by car. Additionally, it's one hour from Estes Park, a gateway to Rocky Mountain National Park, and about two and a half hours from beautiful mountain towns such as Breckenridge and Vail.

With bird-viewing refuges in the area and ample river access for fly fishing, Larimer County is the perfect location for a wildlife outing. Visit the gorgeous, flowing Poudre River, kayak in Horsetooth Reservoir, or delight in the red rocks of the Devil's Backbone trail. Sip some local craft brews and ride around on the rentable scooters and bikes, or take a walk through one of the many interspersed natural areas.

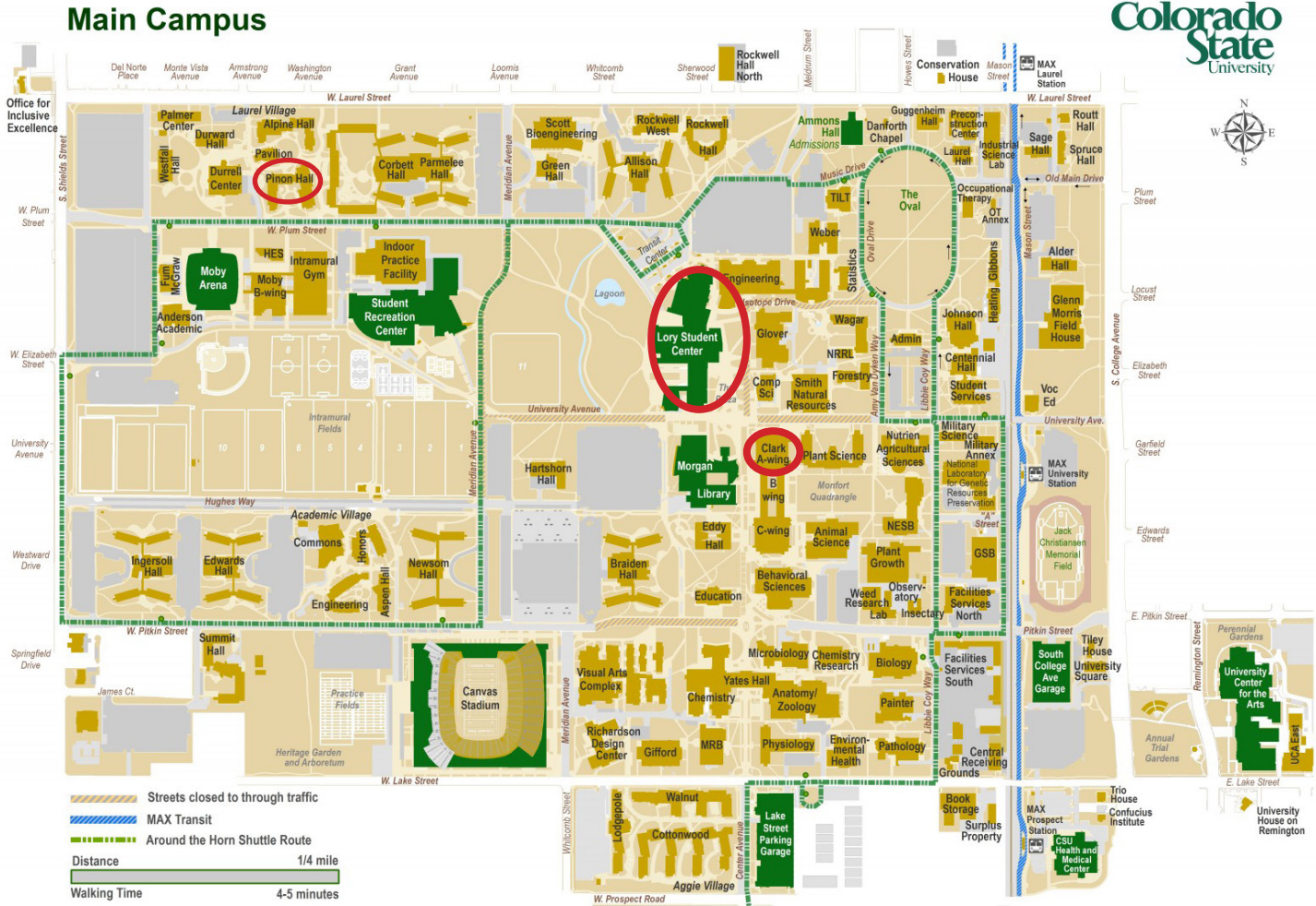
LOCAL MAP

KEY:

1. University housing
2. Lory Student Center
3. The Hilton Hotel
4. Old Town Fort Collins
5. Best Western Hotel



COLORADO STATE UNIVERSITY LAYOUT



ON-CAMPUS LOCATIONS

The conference will be located at the Lory Student Center, which is central to the Colorado State University main campus. Some of the sessions will be hosted just one building away, at the Clark Building, A-Wing. The Canvas Stadium will host one of our four socials. Finally, circled on this map is the University Housing building for any attendees residing on campus for the conference.

ADDRESSES

Lory Student Center:
1101 Centre Avenue Mall

Clark Building:
1200 Centre Avenue Mall

Pinon Hall:
900 W. Plum Street

LORY STUDENT CENTER LAYOUT

100 LEVEL



200 LEVEL



300 LEVEL



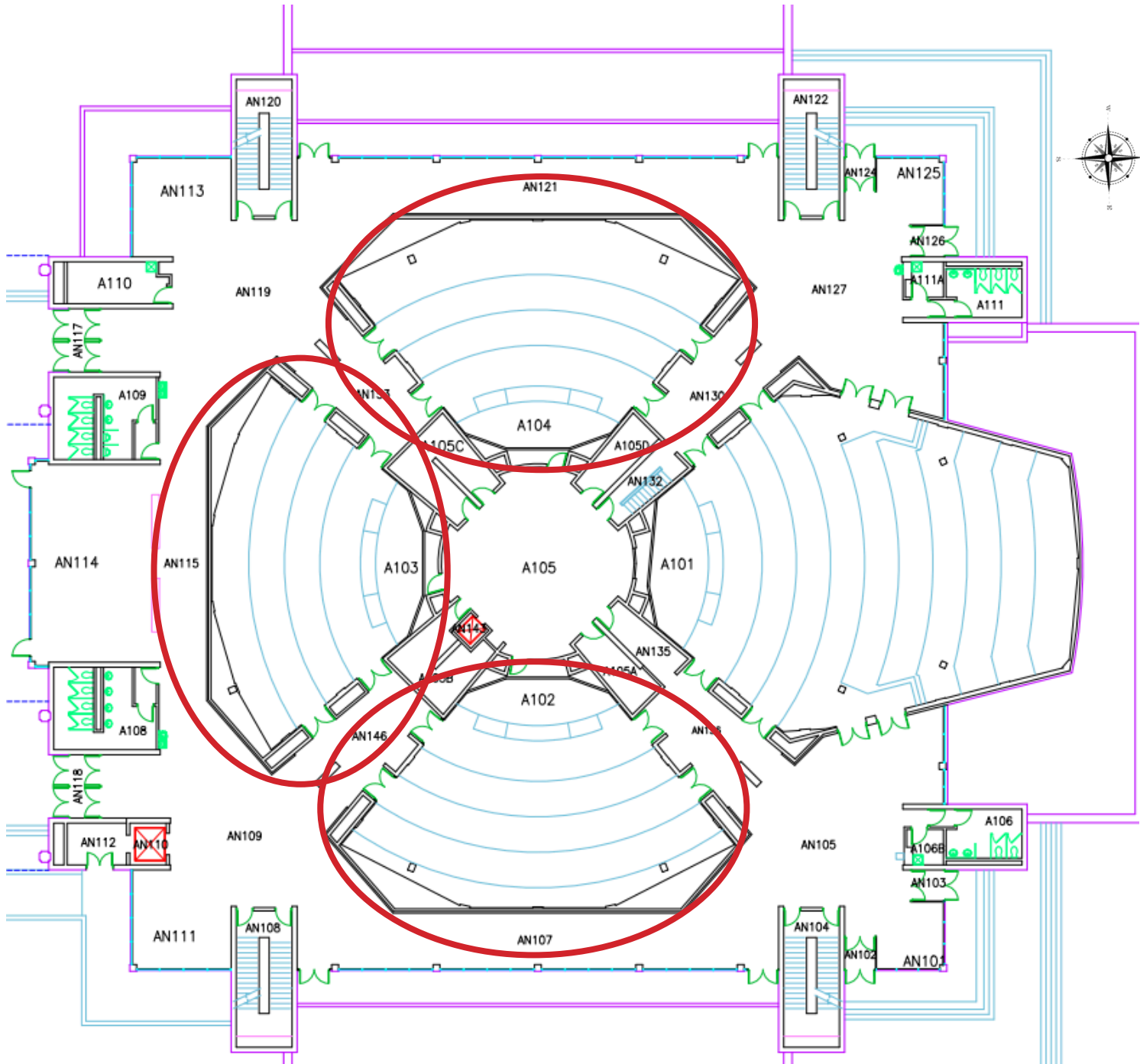
KEY:

- 1. Theatre
- 2. Grand Ballrooms A-D (plenary sessions, lunches, socials, dinner)
- 3. Meeting Spaces
- 4. Check-in/Registration Desk

Comfort rooms, lactation rooms, food courts, and more can be found online at

<https://lsc.colostate.edu/building/maps/>

CLARK BUILDING, A WING, LAYOUT



Breakout rooms A 102, A 103, and A 104 can be found in the image above.

LOCAL ACTIVITIES

RESTAURANTS

Breakfast/Lunch:

- Rainbow Restaurant: A casual eatery with high-quality meals within walking distance of campus, offering many vegetarian options.*
- Silver Grill Cafe: A Fort Collins staple for 90 years, offering breakfast classics, including sticky buns and cinnamon rolls. It fills up fast so get there early!
- Lucile's: A cajun-style breakfast restaurant with hearty breakfasts and sweet treats, within walking distance of downtown.
- La Creperie: A French bakery and breakfast spot in Midtown, with savory and sweet crepes, other French delicacies, and a take-away full bakery.

Casual Dining:

- DGT: An American-fusion taco restaurant within walking distance of campus, with a lot of fresh, vegetarian options.*
- Slyce Pizza Co: A casual by-the-slice pizza place with regular pies in addition to different toppings, such as BBQ chicken and mac-n-cheese.
- Music City Hot Chicken: For the perfect crispy chicken, visit Music City Hot Chicken. Music City has mastered the chicken & waffles and has tasty chicken sandwiches.*
- The Colorado Room: The Colorado Room is a local favorite, just a quick walk from campus. It has small sandwiches and snacks plus often has live music in the summer.*

Restaurants (for a nicer meal):

- The Regional: A modern American eatery with a farm-to-table rotating menu, located right downtown
- Nimo's Sushi: A family-run sushi restaurant with high-quality ingredients, located in Midtown.
- RARE Italian: Known for its high-quality steaks, RARE serves up delicious pasta, risotto, and more.
- Sonny Lubick's: A steakhouse located downtown.
- Nick's Italian: An Italian restaurant located near the university.*

*These restaurants are located within a mile of the conference venue.

BREWERIES

Fort Collins is known for its expansive brew scene. Now, even the CSU campus produces its own beer! Here are just a few of our favorites.

Downtown Locations:

- Gilded Goat: Gilded Goat is a family brewery, offering classic beer, sours, and some experimental brews.
- Equinox: Equinox has delicious staple brews and the perfect patio for summer days.
- Coopersmith's Pub and Brewing: A Fort Collins staple with English bar food and a long beer menu.

"Brewery Row" Locations:

- Horse & Dragon: This brewery is a family-run local establishment that is known for its stout, Sad Panda, along with other delicious beer.
- New Belgium: Home of "Fat Tire" and other famous brews, New Belgium promotes the love of beer and bicycles. Schedule one of the free tours or check out the calendar for events, such as bike-in cinema and evening music.

LOCAL ACTIVITIES

BREWERIES, CONTINUED...

- Odell: With a beautiful, huge outdoor patio, Odell offers a variety of classic and sour beers. Additionally, Odell now offers wine, which can be enjoyed in the outdoor patio.
- Funkwerks: Funkwerks is known for its Saisons and sours, choosing “funky” flavors over classic beer.
- Snowbank: With a focus on the Colorado landscape, beers are named after peaks and areas and made from Colorado snowmelt.

Other Locations:

- Zwei: Zwei is a German-style brewery that focuses on Old World brewing. It has a large outdoor patio.
- Stodgy: This brewery focuses on a sense of community, giving groups the perfect indoor and outdoor spaces to spend time with friends.
- Jessup Farm: Jessup Farm is known for its sour beers and for blending the flavors of oak barrels with its beer. The brewery is located upstairs and has outdoor seating.
- Maxline: Maxline is a community hub, often featuring local bands, craft shows, and more. The space is large and comfortable, with indoor and outdoor seating.

MUSEUMS & OTHER ATTRACTIONS

- The Fort Collins Museum of Discovery: A local science museum with exhibits for all ages. Open Tuesday – Sunday, 10 am – 5 pm, \$12.50 for adults.
- The Global Village Museum of Arts and Cultures: The museum strives to become an internationally renowned center for the celebration and preservation of world arts and cultures. Open Tuesday – Saturday, 11 am – 5 pm, \$5 for adults.
- The 1879 Avery House: A family home turned museum, located in downtown Fort Collins. Open Saturdays, 11 am – 2 pm, and Sundays, 1 – 4 pm, with tours on the half-hour, \$6 for adults.
- The Mishawaka: A music venue and restaurant located on the Poudre River. Join the Mishawaka for a discounted show on Saturday, June 3 (discounted for conference attendees)! More information on our website.

NATURAL AREAS

- Horsetooth Reservoir: On the East side of the Horsetooth Reservoir, you can hike, picnic, swim, and climb. Daily parking passes are required and can be purchased on-site.
- Lory State Park: On the West side of the Horsetooth Reservoir, you can hike, picnic, swim, and climb. Daily parking passes are required and can be purchased on-site.
- Horsetooth Rock Open Space: With miles of trails and Fort Collins’ favorite local landscape feature, this is the perfect day hiking area Southwest of town. Daily parking passes are required and can be purchased on-site.
- Coyote Ridge and Prairie Ridge Natural Areas: Just a short drive south of Fort Collins, the Coyote Ridge and Prairie Ridge Natural Areas are quiet hiking areas where you can observe the local flora and fauna.
- Colorado State University Annual Flower Trial Gardens: Every summer, CSU tests different varieties of annuals and perennials in a sprawling garden just Southeast of the main campus.

FIELD TRIPS & EXCURSIONS

WEDNESDAY, MAY 31

Guided bird tour at Barr Lake State Park with Bird Conservancy of the Rockies

6:30 am – 12:00 pm from Colorado State University; \$45 per person; maximum 20 people
Binoculars and field guides available to borrow

Guided bird tour at Lory State Park with Bird Conservancy of the Rockies

7:30 – 11:30 am from Colorado State University; \$35 per person; maximum 20 people
Binoculars and field guides available to borrow

Bike Tour: Cache La Poudre River Watershed *sponsored by City of Fort Collins Utilities*

9:00 am – 2:00 pm from Lory Student Center; \$15 per person; maximum 20 people
Learn about the Cache La Poudre River Watershed via bikes! We'll make several stops in the watershed to talk with experts on novel ways to keep the watershed healthy, such as a new monitoring program, green stormwater infrastructure, and more. A full-day e-assist bike rental is included in the \$15 cost (a \$25 value!) and we'll picnic (bring your own) in a local natural area during the program for lunch. Approximately 1.5 hours of biking on bike paths and through town and 45 minutes of walking in local natural areas.

Fort Collins Brewery Excursion

12:00 – 3:00 pm from Colorado State University; \$10 per person; maximum 24 people
Visit 1-2 local breweries. Drinks are not included, only transportation.

SUNDAY, JUNE 4

Nature Immersion in Fort Collins with Bird Conservancy of the Rockies

8:00 – 11:30 am from Colorado State University; \$55 per person; maximum 12 people
This workshop will be a combination of shinrin-yoku style forest bathing and mindful birding in a birding hot spot in the Fort Collins area.

Wildlands Restoration Volunteers hands-on volunteer excursion

Full-day excursion; \$20 per person; maximum 20 people for transportation
\$20 for transportation but others can join for free by driving if they contact Emily in advance at emily.leblanc@colostate.edu. RSVPs needed by April 30, 2023.

Rocky Mountain National Park

8:00 am – 4:00 pm; \$100 per person; maximum 39 people
Join us for a day trip to Rocky Mountain National Park. We will depart from Fort Collins at 8:00 am and arrive at the park around 10:00 after picking up our tour guides from the YMCA of the Rockies. We will break off into groups of nine, each with one tour guide to embark on different level hikes. After the 2-3 hour hikes, we will have some free time in Estes Park, where you can purchase lunch. We will return to Fort Collins around 4:00 pm.

Fort Collins Brewery Excursion

12:00 – 5:00 pm; \$15 per person; maximum 20 people for transportation
Visit 3-4 local breweries. Drinks are not included, only transportation.

PLENARY SPEAKERS



WORKING IN PARTNERSHIP WITH BEARS AS EMISSARIES FOR THE NATURAL WORLD, A CASE STUDY OF BROOKS CAMP, KATMAI NATIONAL PARK, ALAKASA, USA

Thursday, June 1, 2023 | 6:15 - 7:00 PM MT

MARK STURM: SUPERINTENDENT, KATMAI NATIONAL PARK

Biography: Mark Sturm, a career natural resource manager, is the superintendent at Katmai National Park and Preserve.

Prior to this position, since 2012, Sturm was the biological resource program manager for the National Park Service's Intermountain Region, a position that includes oversight of a wide range of professional staff supporting natural resource work in more than 80 areas in the National Park System. His team's work has included high profile wildlife projects involving bears, wolves, bison, elk and bighorn sheep; fisheries work on the Colorado River, habitat restoration; and even consideration of the implications of climate change on NPS trust resources.

His prior work – from 2008-2012 – included oversight of resource management at Organ Pipe Cactus National Monument in Arizona, a park with complex border security, cultural and natural resource, visitation and facility issues.



THE VALUES WAR IN CONSERVATION: CHANGE IS A COMING -- ARE WE READY?

Thursday, June 1, 2023 | 1:50 - 2:20 PM MT

SARA PARKER PAULEY: DIRECTOR, MISSOURI DEPARTMENT OF CONSERVATION

Biography: Sara Parker Pauley serves as the ninth director of the Missouri Department of Conservation since its formation in 1937. The Missouri Conservation Commission announced Pauley's selection effective November 1, 2016.

A native of Columbia, Pauley received both her law degree and bachelor's degree in journalism from the University of Missouri – Columbia, and did post-graduate studies in Australia as a Rotary Fellow. She previously served as director of the Missouri Department of Natural Resources since 2010. She has worked as project manager for D.J. Case & Associates, a natural resources communications firm, and as a deputy director for the Missouri Department of Natural Resources. She has been an instructor at the University of Missouri's School of Natural Resources, teaching a course in natural resource policy and administration.

Pauley began her professional career as a Policy Analyst with the Missouri Department of Conservation from 1993–1996. Over the years, though her career path varied, it has never strayed far from her personal desire to be engaged in the stewardship of Missouri's natural resources.

PLENARY SPEAKERS



CONSERVING INDIVIDUALS AT THE EXPENSE OF POPULATIONS: THE IRONY OF MUTUALISM

Wednesday, May 31, 2023 | 3:30 - 4:30 PM MT

TONY WASLEY: PRESIDENT, WILDLIFE MANAGEMENT INSTITUTE (AS OF MARCH 31, 2023)

Biography: Tony Wasley is the President of WMI, a 112-year-old, non-profit conservation organization dedicated to science-based, professional wildlife management. WMI's mission is to enhance North American wildlife populations, their habitat, and the continent's hunting heritage.

Tony serves on the Blue-Ribbon Panel Relevancy Working Group (Co-Chair), American Wildlife Conservation Partners, Council to Advance Hunting and Shooting Sports, and Theodore Roosevelt Conservation Partnership Policy Committee. He is a professional member of the Boone and Crockett Club and The Wildlife Society. Prior to joining WMI, Tony served as Director of the Nevada Department of Wildlife, and also served as the Deer Project Leader, a Game Biologist, and a Habitat Staff Specialist within that Department. Tony served as Chairman of the North American Wetland Conservation Council, on the Departments of Interior and Agriculture's Hunting and Wildlife Conservation Council, President of the Association of Fish and Wildlife Agencies, President of the Western Association of Fish and Wildlife Agencies, and as Chairman of the Intermountain West Joint Venture Management Board, Pacific Flyway Council, and Colorado River Fish and Wildlife Council.

Tony has received conservation-related awards from The Mule Deer Foundation, The Wild Sheep Foundation, Pheasants Forever, Pope and Young, and Back Country Hunters and Anglers. He received B.S. Degrees in Biological Sciences and Wildlife Management from California State University Chico and an M.S. Degree in Biology from Idaho State University.



NAVIGATING CONFLICTS OVER THE SUSTAINABLE USE OF WILDLIFE

Saturday, June 3, 2023 | 8:00 - 8:45 AM MT

DUAN BIGGS: OLAJOS GOSLOW CHAIR OF ENVIRONMENTAL SCIENCE AND POLICY,
NORTHERN ARIZONA UNIVERSITY

Biography: Duan is the Olajos Goslow Chair of Environmental Science and Policy at Northern Arizona University. He focusses on developing partnerships between researchers and NGOs, governments, and the private sector that supports and informs conservation actions and policies for the complex challenges of today's contested world. Duan is the founder of the Resilient Conservation. He was born in Namibia and grew up there and in South Africa's Kruger National Park. Duan has adjunct appointments at Griffith University in Australia, and Stellenbosch University in South Africa.

PLENARY SPEAKERS



WHY WE NEED CONFLICT RESOLUTION FOR THE FUTURE OF BIODIVERSITY CONSERVATION

Friday, June 2, 2023 | 8:00 - 8:30 AM MT

ALEXANDRA ZIMMERMANN: SENIOR RESEARCH FELLOW, WILDLIFE CONSERVATION RESEARCH UNIT, UNIVERSITY OF OXFORD

Biography: Dr. Zimmermann specializes in human-wildlife conflict, in particular conflict analysis, mediation, policy and training. Her applied work concentrates mostly on community engagement and stakeholder dialogue, while her research focusses on quantitative and qualitative social research on livelihoods and the socio-cultural aspects of living near wildlife. She also works on policy and capacity building for conservation conflict mediation, particularly at national and intergovernmental levels.

Zimmermann is Chair of the IUCN SSC Human-Wildlife Conflict Task Force and Senior Advisor on Human-Wildlife Conflict at the Global Wildlife Program of the World Bank. She is a Member of the IUCN Commission on Environmental, Economic and Social Policy (CEESP), the IUCN SSC Asian Elephant Specialist Group, the Cat Specialist Group, IUCN SOS Technical Advisory Board, and the Conservation Advisory Board of Elephant Family. She was previously with Chester Zoo for 18 years, most recently as Head of Conservation Science, focusing on research & development, strategic partnerships, and monitoring and evaluation.

Based at WildCRU, she leads a partnership between Chester Zoo and WildCRU which comprises an interdisciplinary team of doctoral and postdoctoral researchers studying a range of human-wildlife interactions around the globe. Her work on human-wildlife conflict has included jaguars and pumas in Brazil and Venezuela, elephants in India and Indonesia, tigers in Nepal, bears in Bolivia, and fruit bats in Mauritius. She also designed and led five Darwin Initiative grants on human-wildlife conflict in India, Indonesia, Nepal, and Bolivia. Zimmermann studied Zoology at Leeds University (BSc, 1997), Conservation Biology at the Durrell Institute for Conservation and Ecology (MSc, 2000), carried out her doctorate in WildCRU, Oxford University (DPhil, 2014), and trained in nonprofit strategic management at Harvard Business School (2015), conflict negotiation at Harvard Law School (2017) and diplomatic negotiation at the United Nations.



AGENCIES CAN MAKE NEW FRIENDS BUT KEEP THE OLD THROUGH WILDLIFE VIEWING

Friday, June 2, 2023 | 8:30 - 9:15 AM MT

ASHLEY DAYER: ASSOCIATE PROFESSOR, DEPARTMENT OF FISH AND WILDLIFE CONSERVATION, VIRGINIA TECH

Biography: Dr. Dayer is a conservation social scientist. Her research program focuses on understanding people's and organization's conservation behavior, especially related to bird conservation, private lands habitat conservation, human-wildlife conflict, endangered species management, and citizen science. As part of this research, she explores the role that policy tools and educational interventions can play in influencing behavior. Much of her current research is part of interdisciplinary (social and natural sciences) teams and focused on bridging the implementation gap between science and conservation.

PLENARY SPEAKERS

PLENARY PANEL: DIVERSE PERSPECTIVES ON THE MEANING OF CONSERVATION

Wednesday, May 31, 2023 | 4:30 - 5:30 PM MT



KAREN BAILEY: ASSISTANT PROFESSOR, ENVIRONMENTAL STUDIES, UNIVERSITY OF COLORADO, BOULDER

Biography: Karen Bailey is interested in human-environment interactions, climate change, and sustainable rural livelihoods. She is an interdisciplinary environmental social scientist and combines social science research with environmental and ecological data to understand feedbacks between communities and their environments, how we can build resilience to climate change, and how to support landscapes that meet human needs and sustainability goals. She also has an emphasis on justice, equity, diversity, and inclusion in environmental fields and STEM more broadly and is committed to research that supports, amplifies and engages the most vulnerable among us. Her current projects focus on climate adaptation in southern Africa, human health and well-being in east Africa, barriers to entry in natural resource fields, just and equitable climate change research, and urban communities and environmental engagement.



ALIX PEDRAZA: COMMUNITY ENGAGEMENT MANAGER, SOUTH CAROLINA DEPARTMENT OF NATURAL RESOURCES

Biography: Alix Pedraza serves as the Community Engagement Manager for the South Carolina Department of Natural Resources (SCDNR). She holds a bachelor's degree in biology from Coastal Carolina, and a master's degree from Clemson University in Parks Recreation and Tourism Management. Originally from Colombia, South America, Pedraza moved to South Carolina in hopes to learn English, today she facilitates SCDNR communication and education initiatives that connect Spanish speaking and African American communities to natural resources information, public events, opportunities, and advisories. Pedraza was honored by The Wildlife Society, receiving the 2016 Diversity Award for her invaluable contributions to South Carolina's Hispanic outreach efforts, by the Association for Conservation Information with the 2018 Education Award for her program "Caminatas Ecológicas" and by the Southeastern Association of Fish and Wildlife Agencies in 2021 with the Diversity and Inclusion Award.



AMY COFFMAN: NATIVE AMERICAN LIAISON, U.S. FISH AND WILDLIFE SERVICE

Biography: Amy Coffman is a Bitterroot Salish and Gros Ventre (both Montana Tribes). She was born and raised on the Flathead Reservation of Montana and was able to move home in 2019. She is a proud mother of three children and three dogs and has been married for 20 years to her husband, TJ. Her career with the federal government allowed her to be a refuge manager with the U.S. Fish and Wildlife Service for over 16 years. She is now a regional Native American Liaison for the Mountain-Prairie Region of the U.S. Fish and Wildlife Service.



EMMA GALOFRÉ GARCÍA: PHD STUDENT, UNIVERSITY OF COLORADO, BOULDER

Biography: Emma Galofré García (she/her/ella) is a PhD student interested in critical approaches to wildlife ecology and conservation. In addition to her bachelor's in Wildlife Ecology and master's in Public Policy, Emma has over a decade of experience in conservation, including working on projects domestically and abroad with an array of bird and mammal species in various habitats and with diverse human communities and stakeholders. Emma is also committed to advancing environmental and climate justice as well as equity, diversity, and inclusion in the conservation, academic, and outdoor recreation communities. Emma currently serves as an individual member of Latino Outdoors.

SCHEDULE OVERVIEW (ALL TIMES IN U.S. MOUNTAIN TIME ZONE)

WEDNESDAY, MAY 31

| | |
|--------------------|--|
| 11:00 AM - 5:00 PM | Registration Desk Open (<i>Lory Student Center, 3rd floor</i>) |
| 3:30 - 5:30 PM | Opening & Plenary Session (<i>Lory Student Center, Ballroom AB</i>) Welcome from conference hosts Conserving Individuals at the Expense of Populations: The irony of mutualism <i>Speaker: Tony Wasley, President, Wildlife Management Institute (more info on page 17)</i> A Long-Time Listener and First-Time Caller <i>Speaker: Jeff Davis, Director, Colorado Parks and Wildlife</i> Panel Discussion: Diverse Perspectives on the Meaning of Conservation <i>Moderator:</i> <i>Natalie Sexton, U.S. Fish and Wildlife Service</i> <i>Speakers:</i> <i>Karen Bailey, University of Colorado, Boulder (more info on page 19)</i> <i>Alix Pedraza, South Carolina Department of Natural Resources (more info on page 19)</i> <i>Amy Coffman, U.S. Fish and Wildlife Service (more info on page 19)</i> <i>Emma Galofré García, University of Colorado, Boulder (more info on page 19)</i> |
| 5:30 - 7:30 PM | Evening Social (<i>Lory Student Center, Ballroom CD</i>) <i>Heavy hors d'oeuvres and drinks provided. Use your BLUE STAR drink tickets for alcoholic beverages.</i> |

SCHEDULE OVERVIEW (ALL TIMES IN U.S. MOUNTAIN TIME ZONE)

| THURSDAY, JUNE 1 | | | | |
|-------------------------|---|---|--|--|
| 7:00 AM - 5:00 PM | Registration Desk Open (<i>Lory Student Center, 3rd floor</i>) | | | |
| Session T-4 | T-4E LSC Ballroom A | T-4B Clark A 102 | T-4C Clark A 103 | T-4D Clark A 104 |
| 8:00 - 9:30 AM | The 2022 National Survey of Fishing, Hunting, & Wildlife-Associated Recreation: A new approach (details on page 38) | Multimedia Uses in Wildlife Management (details on page 46) | Wolf-Human Coexistence (details on page 46) | Organized Session: City vs. Countryside: Rural-urban divides impact conservation? (details on page 30) |
| 9:30 - 9:45 AM | Coffee & Snack Break | | | |
| Session T-1 | T-1A LSC Ballroom A | T-1B Clark A 102 | T-1C Clark A 103 | T-1D Clark A 104 |
| 9:45 - 11:45 AM | Hunter & Angler Engagement (details on page 44) | Organized Session: Cooperation and Coordination in Wildlife Management (1 of 2; details on page 27) | Organized Session: Management and Conservation of Wild and Feral Equids (1 of 2; details on page 28) | Community-Based Conservation (details on page 44) |
| 11:45 AM - 12:00 PM | Coffee & Snack Break; Lunch is available starting at 11:45 am in Ballroom BCD | | | |
| Session T-2 | T-2A LSC Ballroom A | T-2B Clark A 102 | T-2C Clark A 103 | T-2D Clark A 104 |
| 12:00 - 1:30 PM | Organized Session: A Global Perspective on Wildlife Values (details on page 29) | Organized Session: Cooperation and Coordination in Wildlife Management (2 of 2; details on page 27) | Organized Session: Management and Conservation of Wild and Feral Equids (2 of 2; details on page 28) | Waterway Conservation (details on page 45) |

SCHEDULE OVERVIEW (ALL TIMES IN U.S. MOUNTAIN TIME ZONE)

THURSDAY, JUNE 1

| | | | | |
|---------------------------|--|---|--|--|
| <p>1:30 - 2:45 PM</p> | <p>Plenary Lunch Session (<i>Lory Student Center, Ballroom BCD</i>)</p> <p>The Values War in Conservation: Change is a Coming—Are We Ready? <i>Speaker: Sara Parker Pauley, Missouri Department of Conservation (more info on page 16)</i></p> <p>Vision of Wildlife Management in Colorado <i>Speaker: Colorado Governor Jared Polis</i></p> <p><i>Boxed lunch available throughout plenary session.</i></p> | | | |
| <p>Session T-3</p> | <p>T-3A LSC Ballroom A</p> | <p>T-3B Clark A 102</p> | <p>T-3C Clark A 103</p> | <p>T-3D Clark A 104</p> |
| <p>2:45 - 4:45 PM</p> | <p>Perspectives on Managing Wildlife in an Era of Mutualism (details on page 45)</p> | <p>Wildlife Management Tools, Theories, and Frameworks (details on page 45)</p> | <p>Coyote-Human Coexistence (details on page 46)</p> | <p>Organized Session: Governing Wildlife Conservation in the 21st Century (details on page 30)</p> |
| <p>6:00 - 8:00 PM</p> | <p>Plenary Dinner Session (<i>Lory Student Center, Ballroom BCD</i>)</p> <p>Working in Partnership with Bears as Emissaries for the Natural World, a Case Study of Brooks Camp, Katmai National Park, Alaska, USA <i>Speaker: Mark Sturm, Katmai National Park (more info on page 16)</i></p> <p><i>Dinner and drinks provided. Use your WHITE drink tickets for alcoholic beverages.</i></p> | | | |

SCHEDULE OVERVIEW (ALL TIMES IN U.S. MOUNTAIN TIME ZONE)

| FRIDAY, JUNE 2 | | | | |
|-----------------------|--|--|--|--|
| 7:00 AM - 5:00 PM | Registration Desk Open (Lory Student Center, 3rd floor) | | | |
| 8:00 - 9:15 AM | Plenary Session (Lory Student Center, Ballroom BCD): Why We Need Conflict Resolution for the Future of Biodiversity Conservation <i>Speaker: Alexandra Zimmermann, University of Oxford (more info on page 18)</i> Agencies Can Make New Friends but Keep the Old Through Wildlife Viewing <i>Speaker: Ashley Dayer, Virginia Tech (more info on page 18)</i> | | | |
| 9:15 - 9:35 AM | Coffee Break | | | |
| Session F-1 | F-1A LSC Ballroom A | F-1B Clark A 102 | F-1C Clark A 103 | F-1D Clark A 104 |
| 9:35 - 11:35 AM | Organized Session: Multi-State Survey of Wildlife Viewers: Research & application (details on page 31) | Organized Session: Social Science to Bring Back 3 Billion Birds (details on page 32) | Urban-Wildlife Interactions (details on page 47) | Organized Session: Conservation of What, Management for Whom? Wildlife Governance as if Democracy and Extinction Mattered (details on page 33) |
| 11:35 AM - 12:20 PM | Lunch Break (Lory Student Center, Ballroom BCD) | | | |
| Session F-2 | F-2A LSC Ballroom A | F-2B Clark A 102 | F-2C Clark A 103 | F-2D Clark A 104 |
| 12:20 - 2:20 PM | Human-Wildlife Interactions & National Parks (details on page 47) | Organized Session: Informing Conservation of the Central Grasslands of the U.S, Canada, and Mexico through Social Science (details on page 34) | Human-Carnivore Conflict (details on page 48) | Conservation in Practice (details on page 48) |
| 2:20 - 2:40 PM | Coffee Break | | | |

SCHEDULE OVERVIEW (ALL TIMES IN U.S. MOUNTAIN TIME ZONE)

| FRIDAY, JUNE 2 | | | | |
|-----------------------|---|--|--|---|
| Session F-3 | F-3A LSC Ballroom A | F-3B Clark A 102 | F-3C Clark A 103 | F-3D Clark A 104 |
| 2:40 - 4:40 PM | Rewilding (details on page 49) | Organized Session: Integrating Social Science into Regional Bird Conservation Efforts through the Migratory Bird Joint Ventures (details on page 35) | Big Cat-Livestock Predation (details on page 49) | Conservation Policies and Theories (details on page 50) |
| 4:40 - 5:00 PM | Coffee Break | | | |
| Session F-4 | F-4A LSC Ballroom A | F-4B Clark A 102 | F-4C Clark A 103 | F-4D Clark A 104 |
| 5:00 - 6:30 PM | Organized Session: Long Distance Relationships: Promoting ethical wildlife viewing (details on page 33) | Bird Conservation (details on page 50) | Big Cat-Human Interactions (details on page 50) | Roundtable Discussion: Collaborative Conservation Networking in the American West (details on page 33) |
| 6:30 - 8:30 PM | Evening Social & Poster Session (Lory Student Center, Ballroom BCD) <i>Heavy hors d'oeuvres and drinks provided. Use your ORANGE drink tickets for alcoholic beverages.</i> | | | |

SCHEDULE OVERVIEW (ALL TIMES IN U.S. MOUNTAIN TIME ZONE)

SATURDAY, JUNE 3

| | | | | |
|-------------------------|---|--|--|---|
| SATURDAY, JUNE 3 | | | | |
| 7:00 AM - 5:00 PM | Registration Desk Open (<i>Lory Student Center, 3rd floor</i>) | | | |
| 8:00 - 8:45 AM | Plenary Session (<i>Lory Student Center, Ballroom BCD</i>) Navigating Conflicts Over the Sustainable Use of Wildlife <i>Speaker: Duan Biggs, Northern Arizona University (more info on page 17)</i> | | | |
| 8:45 - 9:05 AM | Coffee Break | | | |
| Session S-1 | S-1A LSC Ballroom A | S-1B Clark A 102 | S-1C Clark A 103 | S-1D Clark A 104 |
| 9:05 - 11:05 AM | Organized Session: Innovative Engagement through State Wildlife Viewing Programs (details on page 36) | Organized Session: Integrating Social Science in Conservation: Lessons learned (details on page 37) | Workshop: Transatlantic Synthesis and Adaptive Design toward Transformative Human-Wildlife Coexistence (details on page 38) | Organized Session: Managing Human-Wildlife Conflicts and Public Perceptions (details on page 39) |
| 11:05 - 11:50 AM | Lunch Break (<i>Lory Student Center, Ballroom BCD</i>) | | | |
| Session S-2 | S-2A LSC Ballroom A | S-2B Clark A 102 | S-2C Clark A 103 | S-2D Clark A 104 |
| 11:50 AM - 1:50 PM | Community Engagement with Wild Animals (details on page 51) | Organized Session: Mainstreaming Social Science in Conservation Planning: A systems approach (details on page 40) | Access to Wildlife for Underserved Communities (details on page 51) | Organized Session: Human Dimensions of Fertility Control to Mitigate Human-Wildlife Conflicts (details on page 41) |
| 1:50 - 2:10 PM | Coffee Break | | | |

SCHEDULE OVERVIEW (ALL TIMES IN U.S. MOUNTAIN TIME ZONE)

| SATURDAY, JUNE 3 | | | | |
|-------------------------|--|--|--|--|
| Session S-3 | S-3A LSC Ballroom A | S-3B Clark A 102 | S-3C Clark A 103 | S-3D Clark A 104 |
| 2:10 - 3:40 PM | Exotic Pet Trade & Animal Trafficking (details on page 52) | Organized Session: Wildlife Management Needs Diversity, Transparency and Ethics (details on page 42) | Working with Underserved Communities (details on page 52) | Organized Session: Unifying Human Dimensions Research Capacity for Effective Chronic Wasting Disease Management (details on page 40) |
| 3:40 - 4:00 PM | Coffee Break | | | |
| Session S-4 | S-4A LSC Ballroom A | S-4B Clark A 102 | S-4C Clark A 103 | S-4D Clark A 104 |
| 4:00 - 6:00 PM | Human-Elephant Conflict (details on page 52) | Organized Session: Using Participatory Science to Benefit Outreach and Research (details on page 43) | Management Shifts for Recreational Area Use (details on page 53) | Chronic Wasting Disease Management (details on page 53) |
| 6:00 - 8:00 PM | Evening Social (Lory Student Center, Ballroom BCD) <i>Heavy hors d'oeuvres and drinks provided. Use your BLUE (the ones without a star) drink tickets for alcoholic beverages.</i> | | | |

SYMPOSIUM DETAILS

Cooperation and Coordination in Wildlife Management (Sessions 1 and 2)

Session Chair: Anne Short Gianotti (Boston University)

Thursday, June 1 | 9:45 - 11:45 AM & 12:00 - 1:30 PM MT

Sessions T-1B & T-2B | Clark Building, Room A 102

Wildlife management inherently involves coordination of stakeholders across properties and jurisdictions as wildlife and those seeking wildlife (for hunting, viewing, or other purposes) travel across the landscape. Likewise, those concerned with wildlife management may come from locations far from the site of management. As such, stakeholder engagement and coordination have long been central to wildlife management activities. Wildlife management, however, increasingly faces three intersecting processes that complicate this engagement: 1) shifting values within agencies, NGOs, and among the public, increasingly emphasizing biodiversity, ecosystem services, resiliency, and non-consumptive uses of nature; 2) ongoing transformation of land use and land cover, particularly urbanization, subdivision of properties, and changing ownership and norms, and 3) shifting distributions of wildlife populations. These social and ecological changes constitute novel conditions that may increase conflict and present significant challenges for coordinating stakeholders with diverse interests.

In this session, we explore the politics of these challenges and opportunities for cooperation and coordination among landowners, professionals and other stakeholders who hold a wide range of values, management goals, and relationships to wildlife. The papers in this session will explore emerging contestations about wildlife management associated with processes of social and environmental change. This session will address the shifting social and ecological context of wildlife management and the implications for management practice. Our goal in this session is to engage scholars and practitioners from diverse intellectual backgrounds in a conversation about cooperation and coordination in wildlife management, and the ways that politics, emotional labor, values and ethics, and policy shape these efforts.

Abstracts (Session 1):

Producing Partnership: Private interests and the funding of wildlife management

John Casellas Connors (Texas A&M University), Christopher Rea (The Ohio State University), Elizabeth Carlino (Texas A&M University)

Engaging “the Other:” Assessing pathways toward the inclusion of a pluralistic public

Leeann Sullivan (Boston College), Emily Boettger (Boston College)

Ecological Ethics of the Monyul: People, partnership and protection of wildlife

Devashish Saurav (Ashoka University)

Science, Uncertainty, and Emotions in Human Conflicts about Wildlife

Anne Short Gianotti (Boston University), Robert Anderson (Boston University), John Casellas Connors (Texas A&M University)

Fear, Adaptation, and Nature in Wildlife Management

Robert Anderson (Boston University)

Interpretations of Mutualism: Perspectives from environmental ethics

Clare Palmer (Texas A&M University)

Abstracts (Session 2):

Coproducing Knowledge to Aid Human-Carnivore Conflict Mitigation

Stewart Breck (USDA-APHIS-National Wildlife Research Center), Matthew Hyde (Colorado State University), Julie Young (Utah State University), Alex Few (Western Landowners Alliance), Jared Beaver (Montana State University)

Gaining Access for Wildlife Research: A suburban experience

Jamie Goethlich (University of Wisconsin-Madison), Tim Van Deelen (University of Wisconsin-Madison)

Challenges of Integrating Ecological and Human Dimensions Data

Anita Morzillo (University of Connecticut), Vanessa Hull (University of Florida)

Spatiotemporal Impacts of Deer Management in the Northeast

Allison Kohler (Colorado State University), Randall Boone (Natural Resource Ecology Laboratory, NESB, Colorado State University)

SYMPOSIUM DETAILS

Management and Conservation of Wild and Feral Equids (Sessions 1 and 2)

Session Chairs: Kate Schoenecker (USGS), Sarah King (Colorado State University)

Thursday, June 1 | 9:45 - 11:45 AM & 12:00 - 1:30 PM MT

Sessions T-1C & T-2C | Clark Building, Room A 103

Wild equids in their native habitat are among the most endangered ungulate species globally, with five out of the seven species threatened with extinction. Conversely, feral equids are overabundant in many places and pose stark management challenges to resource managers. In this symposium, we will explore the similar but contrasting challenges of managing free-ranging equids in human-dominated landscapes, touching on management of feral equids in the USA, and native wild equids in Iran and Mongolia. In all of these situations, human input and participation is critical for coexistence and solutions that benefit both humans and equids.

Abstracts (Session 1):

Effects of Domestication Increase Management Challenges

Kate Schoenecker (USGS), Saeideh Esmaili (Colorado State University), Sarah King (Colorado State University)

The Current State of U.S. Feral Equid Management

Jacob Hennig (Oklahoma State University), Courtney Duchardt (Oklahoma State University), Jeffrey L. Beck (University of Wyoming), Saeideh Esmaili (Oklahoma State University), Derek Scasta (University of Wyoming)

Increasing Feral Horses Affect Greater Sage-Grouse Nest Survival

Jeffrey L. Beck (University of Wyoming), Jacob Hennig (Oklahoma State University), Derek Scasta (University of Wyoming)

Systematic Review of Wild Equid Mortalities Caused by Dehydration

Derek Scasta (University of Wyoming), Jacob Hennig (Oklahoma State University)

Different Impacts of Horses When Wild and Wilder

Sarah King (Colorado State University), Kate Schoenecker (USGS)

Cost of Coexistence with a Globally Endangered Ungulate in a Multi-Use Landscape

Saeideh Esmaili (Colorado State University), Kate Schoenecker (USGS), Sarah King (Colorado State University), Mahmoud-Reza Hemami (University of Wyoming), Jacob Goheen (Isfahan University of Technology)

Abstracts (Session 2):

Knowledge from Nomads: Lessons from Mongolian horse management

Gana Wingard (Ikh Nart Nature Reserve)

Reliable Aerial Surveys for Wild Horse Management

Michelle Crabb (Bureau of Land Management, Wild Horse and Burro program)

Mountain Lion Predation on Feral Horses: Implications for population growth

David C. Stoner (Department of Wildland Resources, Utah State University), Kate Schoenecker (USGS)

Dietary and Gut Microbiome Differences in Feral Horses

Courtney Buchanan (University of Wyoming), Derek Scasta (University of Wyoming), Jeffrey L. Beck (University of Wyoming)

SYMPOSIUM DETAILS

A Global Perspective on Wildlife Values

Session Chairs: Michael Manfredo (Colorado State University), Tara Teel (Colorado State University), Benjamin Ghasemi (Colorado State University), Jenny Anne Glikman (Institute for Advanced Social Studies)

Thursday, June 1 | 12:00 - 1:30 PM MT

Session T-2A | Lory Student Center, Ballroom A

There has been growing emphasis on the importance of understanding social values as a leverage point in addressing the loss of biodiversity worldwide. Here we report on results of a project undertaken to improve such understanding at a global scale. Using a crowd sourcing approach, we enlisted the collaboration of more than 40 international scientists and practitioners and have obtained wildlife values data for over 30 different countries thus far. In this session, we will describe the methodology and some initial results of this effort, which we plan to expand into other countries in the future. The session will consist of the following four presentations.

Abstracts:

Global Values Study Methodology

Benjamin Ghasemi (Department of Human Dimensions of Natural Resources, Colorado State University), Michael Manfredo (Department of Human Dimensions of Natural Resources, Colorado State University), Tara Teel (Department of Human Dimensions of Natural Resources, Colorado State University)

The Enduring Colonial Legacies Affecting Biodiversity Conservation

Michael Manfredo (Department of Human Dimensions of Natural Resources, Colorado State University), Tara Teel (Department of Human Dimensions of Natural Resources, Colorado State University), Benjamin Ghasemi (Department of Human Dimensions of Natural Resources, Colorado State University)

Factors Affecting Response to Human-Wildlife Conflict Across Europe and the Americas

Tara Teel (Department of Human Dimensions of Natural Resources, Colorado State University), Mike Manfredo (Department of Human Dimensions of Natural Resources, Colorado State University), Benjamin Ghasemi (Department of Human Dimensions of Natural Resources, Colorado State University)

Wildlife Value Orientations and Conflict Situations with Wolves Across Europe

Jenny A. Glikman (Institute for Advanced Social Studies, Spanish National Research Council), Michael Manfredo (Department of Human Dimensions of Natural Resources, Colorado State University), Tara Teel (Department of Human Dimensions of Natural Resources, Colorado State University), Benjamin Ghasemi (Department of Human Dimensions of Natural Resources, Colorado State University), Maarten Jacobs (Wageningen University), Miguel Mateos-Delibes (Institute for Advanced Social Studies, Spanish National Research Council)

SYMPOSIUM DETAILS

Governing Wildlife Conservation in the 21st Century

Session Chair: Christopher Serenari (Texas State University)

Thursday, June 1 | 2:45 - 4:45 PM MT | Discussion

Session T-3D | Clark Building, Room A 104

Over the past century, governments have worked to conserve, restore, and protect declining wildlife populations and degraded ecosystems. And while these activities have produced many successes, there is growing consensus that our current social-ecological crises do not fit neatly into our old precepts of how to govern human-wildlife relations at scale and across myriad contexts. Governance, which broadly refers to structures, processes, laws, and rules that prescribe, constrain, and enable government activity, is a foundational component to defining and solving our 21st Century problems, including but not limited to increased demand for the expansion of fish and wildlife agency programs and services, incorporation of environmental equity principles, rising biodiversity and habitat loss, power struggles over traditional or status quo management ideology and approaches, and declining interest in historically vital aspects of wildlife recreation such as hunting.

In this session, we move beyond assessment of prevailing wildlife governance core structures and processes to open a space for reflecting and interrogating them to improve their validity and efficacy in a radically changing world. This symposium will explore why increased scholarly attention and practical adaptations to governance is necessary; discuss important and innovative theoretical ideas and debates; critique existing mechanisms, arrangements, and decision-making approaches; and highlight opportunities, challenges, and applications across different contexts ranging from expanding service boundaries to institutional redesign. A primary goal of this session is to plant the seeds of wildlife governance designs for the future that will unite all segments of the public and embrace new ideas.

City vs. Countryside: Rural-urban divides impact conservation?

Session Chairs: Claudia Grünewald (Independent Researcher), Tom Fish (National Park Service), Eick von Ruschkowski (Alfred Toepfer Academy for Nature Conservation)

Thursday, June 1 | 8:00 - 9:30 AM PM MT | World Cafe

Session T-4D | Clark Building, Room A 104

With cities growing all over a modernizing world and progressing urbanization a proclaimed divide between rural and urban seems to deepen and grow as well not only in the geographical, but for example also in a socio-economic, political and cultural sense. While decisions seem to be made by urbanites others feel left behind and their lifestyles seem at stake to just mention one potential dimension of this conflict. This may touch upon many aspects of our lives including impacts on and consequences for nature conservation efforts. Yet, from a German and European perspective at least, only very few conservationists, mostly scientists, but practitioners even less so, have taken this divide into consideration for their work, while empirical evidence remains scarce as well.

In this open session, we want to give a short input by outlining the European angle on a rural-urban divide and its potential ramifications for nature conservation. Based on this we want to use the opportunity to exchange transatlantic and cross-cultural perspectives on the topic as well as best practice examples while discussing dimensions and impacts of the rural and urban for nature conservation outcomes in a World Café style format which also aims at developing potential solutions and transdisciplinary approaches.

SYMPOSIUM DETAILS

Multi-State Survey of Wildlife Viewers: Research & application

Session Chairs: Ashley Dayer (Virginia Tech), Emily Sinkular (Virginia Tech)

Friday, June 2 | 9:35 - 11:35 AM MT

Session F-1A | Lory Student Center, Ballroom A

Wildlife viewing (intentionally observing, feeding, or photographing wildlife; traveling to parks or other natural spaces to view wildlife; and maintaining plantings or natural areas for the benefit of wildlife) is among the fastest growing recreation activities in the U.S., with significant implications for the work of fish and wildlife agencies. Past research shows that wildlife viewers, especially those who view and do not hunt or fish, tend to hold mutualist wildlife value orientations.

Through a project supported by a 2021 Multistate Conservation Grant, researchers at Virginia Tech collaborated with the Association of Fish and Wildlife Agencies Wildlife Viewing and Nature Tourism Working Group (WVNT) to survey 4,030 wildlife viewers nationwide. The study illuminates how to better engage this broad constituency of wildlife recreationists, increasing agency relevancy. This session will include six presentations with a mix of results and application from both state agency staff and Virginia Tech researchers. First, we will set the stage by describing the project partnership between WVNT and Virginia Tech, and highlight the products from the project that could be useful to academics, agencies, and wildlife viewing professionals alike. Then we will provide two presentations with interesting insights from the research. The first will explore how the COVID-19 pandemic impacted participation in wildlife viewing; specifically, whether people were recruited, retained, reactivated, or churned and what influenced these outcomes. The second will compare the strength of wildlife viewing identity and social support for Black, Indigenous, and people of color compared to white viewers. Then three state agency case studies will showcase how agencies can move to better engaging wildlife viewers, in line with research findings. Finally, we will describe how we are using a Community of Practice approach, engaging researchers and state agency staff from over 25 states, to support state agencies in implementing findings.

Abstracts:

Wildlife Viewing by BIPOC Groups Across Urbanization Gradients

Willandia Chaves (Virginia Tech), Ashley Dayer (Virginia Tech)

Encouraging BIPOC Viewers: Importance of support and identity

Kelsey Jennings (Virginia Tech), Willandia Chaves (Virginia Tech), Ashley Dayer (Virginia Tech), Emily Sinkular (Virginia Tech)

Implementing Equity and Inclusion in the Outdoors

Alix Pedraza (South Carolina Department of Natural Resources), Diana Prestigiacomo (South Carolina Department of Natural Resources)

Wildlife Viewing Survey Benefits: A state agency perspective

Anne Glick (Florida Fish and Wildlife Conservation Commission), Ashley Dayer (Virginia Tech), Emily Sinkular (Virginia Tech), Christy Pototsky (Virginia Tech)

Virginia's Wildlife Viewing Plan

Jessica Ruthenberg (Virginia Department of Wildlife Resources)

Research to Action: Implementing a community of practice

Ashley Dayer (Virginia Tech), Shelly Plante (Texas Parks and Wildlife Department), Willandia Chaves (Virginia Tech), Emily Sinkular (Virginia Tech), Kelsey Jennings (Virginia Tech)

SYMPOSIUM DETAILS

Social Science to Bring Back 3 Billion Birds

Session Chairs: Kathleen Holland (Virginia Tech), Todd Fearer (Appalachian Mountain Joint Venture), Tammy Vercauteren (Bird Conservancy of the Rockies), Osel Hinojosa-Huerta (Cornell University), Sami Livingston (Virginia Tech)

Friday, June 2 | 9:35 - 11:35 AM MT

Session F-1B | Clark Building, Room A 102

The bird conservation community has been energized in recent years but the alarming documentation of a loss of 3 billion birds in North America since the 1970's (Rosenberg et al. 2019). This landmark Science paper capture the attention of the news media, general public, research and conservation communities and sparked critical conversation about efforts to conserve bird populations. The North American Bird Conservation Initiative published a set of 5 Game Changing Paradigms to guide and coordinate efforts across the bird conservation community to respond to the urgent need to population recovery. The paradigms are as follows:

Paradigm 1. Unprecedented Diverse, Equitable, and Inclusive Coalitions to address the Bird Crisis

Paradigm 2. Advancing "Road to Recovery Science" to identify the limiting factors causing bird declines

Paradigm 3. Road Maps for Population Recovery and full life cycle conservation

Paradigm 4. Bold, new policy agenda (Recovering America's Wildlife Act, North American Grasslands Conservation Act)

Paradigm 5. Unified messaging to bring back 3 billion birds

This session will bring together recent examples of success related to each of the 5 Game Changing Paradigms. Coordination and communication of interdisciplinary approaches to recovering North America's birds is imperative to stop the steep population declines that are occurring. Coproduction of research and the incorporation of human dimensions throughout the recovery process is essential. This session will contribute to ongoing efforts across the bird conservation community to share approaches, successes, and innovative conservation planning to build partnerships and maintain shared momentum.

Abstracts:

Five Game Changing Paradigms: A NABCI call to action to address the three billion birds crisis

Todd Fearer (Appalachian Mountain Joint Venture)

A Multi-National Initiative to Save Our Grasslands

Tammy Vercauteren (Bird Conservancy of the Rockies), Matt Gray (Rocky Mountain Innovation Lab), Jim Giocomo (American Bird Conservancy), Brian Smith (U.S. Fish and Wildlife Service), Emily Boyd-Valandra (Citizen of Sicangu Lakota Oyate)

Road to Recovery Social Science

Kathleen Holland (Virginia Tech)

Advancing Shorebird Conservation through Social Innovation and Capacity Building

Osel Hinojosa-Huerta (Cornell Lab of Ornithology), Viviana Ruiz-Gutiérrez (Cornell Lab of Ornithology), Diana P. Ochoa (Cornell Lab of Ornithology)

A Bold, New Policy Agenda for Bird Conservation

Erik Schneider (National Audubon Society)

Addressing Shorebird Disturbance through Community-Based Social Marketing

Sami Livingston (Virginia Tech), Ashley Dayer (Virginia Tech)

SYMPOSIUM DETAILS

Conservation of What, Management for Whom? Wildlife Governance as if Democracy and Extinction Mattered

Session Chairs: Kevin Bixby (Wildlife for All), Michelle Lute (Wildlife for All), Samantha Bruegger (Washington Wildlife First), Lorna Smith (Washington Fish and Wildlife Commission)

Friday, June 2 | 9:35 - 11:35 AM MT | Discussion
Session F-1D | Clark Building, Room A 104

This session will explore the proposition that the system of state wildlife management in the U.S. is based on an outdated paradigm that is out of alignment with modern ecological understanding, public values and attitudes, public trust principles and norms of democratic governance. This gives rise to a perpetual series of wildlife controversies (e.g., aggressive carnivore killing, wildlife killing contests, trapping) that are, at least in part, symptoms of underlying systemic problems and hegemonic governance structures that disenfranchise diverse publics and sovereign tribal nations. These underlying problems, which will be addressed by panelists in this session, include: the prioritization of game species and consumptive uses (hunting, angling, trapping); outdated state laws and policies that restrict the mission and management authority of wildlife managers; a lack of diversity of perspectives, value orientations and life experiences on wildlife commissions; a legacy of intolerance towards carnivores and indifference towards non-hunted species; agency revenues that are tied to the sale of licenses and guns. Panelists will also outline potential solutions to current governance woes, including: ensuring Recovering America's Wildlife Act supports conservation of non-hunted species; reaching consensus on a definition of conservation among diverse publics that addresses the global extinction crisis; applying public trust principles to wildlife management; bringing ethics, justice and science to wildlife decisions; reforming wildlife governance to reflect the full range of public values; and respecting tribal sovereignty and best practices for wildlife co-management.

Long Distance Relationships: Promoting ethical wildlife viewing

Session Chairs: Mary McCormac (Colorado Parks and Wildlife), Debra Reynolds (U.S. Fish and Wildlife Service), Sami Livingston (Virginia Tech)

Friday, June 2 | 5:00 - 6:30 PM MT | Discussion
Session F-4A | Lory Student Center, Ballroom A

Wildlife viewing is one of the fastest growing wildlife-related recreation activities in the United States. And with a growing human population recreating outdoors, potential for negative human-wildlife interactions, particularly by people seeking up-close opportunities to encounter wildlife, will continue to increase. Join us for an interactive session to learn more about what programs states have implemented to address this issue, as well as participate in a brainstorm discussion to help generate new and innovative ways to help keep humans' love of wildlife a long distance relationship.

Collaborative Conservation Knowledge-Exchange and Networking in the American West

Session Chairs: Candice Carr Kelman (Arizona State University), John Sanderson (Western Collaborative Conservation Network), Aireona Raschke (Western Collaborative Conservation Network), Tahnee Robertson (Southwest Decision Resources), Shawn Johnson (University of Montana)

Friday, June 2 | 5:00 - 6:30 PM MT | Roundtable Discussion / Workshop
Session F-4D | Clark Building, Room A 104

The Center for Collaborative Conservation at Colorado State University and the CollabLab from Arizona State University invite you to a roundtable discussion about how we can better facilitate knowledge exchange between academic researchers and practitioners for collaborative conservation. Together, we will explore what kinds of research is most actionable for practice, what topics are most in need of this kind of knowledge-exchange, what the value of academic and practice networking, and what the next steps might be for expanding the space for connecting practice and academia.

SYMPOSIUM DETAILS

Informing Conservation of the Central Grasslands of the U.S, Canada, and Mexico through Social Science

Session Chairs: Samantha Brooke (U.S. Fish and Wildlife Service), John Carlson (U.S. Fish and Wildlife Service), Christian Artuso (Canadian Wildlife Service)

Friday, June 2 | 12:20 – 2:20 PM MT

Session F-2B | Clark Building, Room A 102

The goal of this session will be to convene grassland scientist, managers, and practitioners to discuss the state of knowledge around the human dimension of grasslands conservation. This discussion is critical to informing decision-making and actions that stop and prevent loss of the Central Grasslands of Canada, the United States and Mexico, and support sustainable grasslands, wildlife, and human communities. There have been limited formal discussions on the state of grasslands social science; this forum will seek to bring together panelist from diverse backgrounds to provide insight on current research with a focus on understanding socio-economic factors and human dimensions (motivations, values, economics, needs of communities and barriers) to inform grasslands conservation strategies.

The proposed panel will begin with a context setting presentation welcoming participants and setting the stage for a journey through grasslands social science across the three countries. We will next discuss the results of landowner surveys conducted in CA, US, and MX, highlighting shared challenges, constraints, and drivers for grasslands conservation. A series of presentations delving specifically into grasslands social science projects from the three countries will follow. We will finish with a presentation from the Central Grasslands Roadmap that highlights future directions this conversation could take. As time allows, we will ask each of the speakers to share their thoughts on next steps.

Our goal is to help decision-makers and conservation practitioners understand the values, needs, and barriers to address to increase participation in grassland conservation programs and implement successful conservation actions. This panel also supports the work of the Central Grasslands Roadmap, specifically actions to use community-centered social science research to better understand the human dimensions of grassland conversion and conservation, and leverage this knowledge to build and enhance collaborative, locally relevant programs and actions.

Abstracts:

Social Science to Support Central Grasslands Conservation

Drew Bennett (University of Wyoming)

North American Assessment of Local Stakeholder Input

Zach Hurst (Playa Lakes Joint Venture)

Social Science to Advance Grassland Conservation in Canada

Raphael Ayambire (University of Manitoba), Andrea Olive (University of Toronto, Mississauga)

Integrating Multidisciplinary Data to Inform Grassland Bird Conservation

Brandt Ryder (Bird Conservancy of the Rockies), Chris Latimer (Bird Conservancy of the Rockies), Kathleen Holland (Virginia Tech), Barry Robinson (Canadian Wildlife Service), John Carlson (U.S. Fish and Wildlife Service)

The Resilience of Indigenous People is Essential to the Resilience of Grasslands

Katia Carranza (University of Nebraska - Lincoln), Aimee Roberson (American Bird Conservancy), Ada Smith (University of Montana), Emily Boyd-Valandra (Citizen of Sicangu Lakota Oyate), Tammy VerCauteren (Bird Conservancy of the Rockies)

Study and Conservation of Grassland Birds Wintering in the Chihuahuan Desert of Mexico: A 15-year review

Irene Ruvalcaba Ortega (Universidad Autónoma de Nuevo León)

SYMPOSIUM DETAILS

Integrating Social Science into Regional Bird Conservation Efforts through the Migratory Bird Joint Ventures

Session Chairs: Ashley Gramza (Playa Lakes Joint Venture), Shannon Westlake (U.S. Fish and Wildlife Service)

Friday, June 2 | 2:40 – 4:40 PM MT

Session F-3B | Clark Building, Room A 102

Migratory Bird Joint Ventures (JVs) are cooperative, regional partnerships that work to conserve habitat for the benefit of birds, other wildlife, and people across much of North America. Started in 1986 to focus on waterfowl conservation, they now focus on all bird habitat conservation. Because most of North America is in private ownership and bird conservation decisions affect and are affected by humans, JVs have realized that relevance to the people in their landscape is crucial for effective bird habitat conservation delivery. The inclusion of people in bird conservation was formalized in the 2012 North American Waterfowl Management Plan (NAWMP) revision and also the most recent iteration of the Partners in Flight Landbird Plan. Despite this acknowledgement of the importance of people, JVs have formally and informally integrated social science at uneven paces and with various approaches, such as hiring social science staff to conduct applied research, contracting social science research with external scientists, using secondary research to inform implementation planning and conservation delivery, or not yet integrating human dimensions into their work. In 2021, the Bird Plans' Unified Science Team and NAWMP Science Support Team conducted an inquiry to document the status and approaches to social science integration among JVs to determine the extent of this integration into bird conservation planning and habitat delivery. They also explored human assumptions made by JVs and challenges, barriers, and needs to expand social science capacity. This symposium summarizes the findings of this state of JV social science inquiry and provides a range of real-world examples of applied social science integration into JVs to benefit conservation delivery of bird habitat across a diverse geographic landscape. We end with a panel discussion to spur ideas for future social science collaboration ideas to benefit on-the-ground bird habitat conservation.

Abstracts:

Social Science Integration Summary across Bird Joint Ventures

Ashley Gramza (Playa Lakes Joint Venture), Greg Soulliere (Upper Mississippi / Great Lakes Joint Venture - U.S. Fish and Wildlife Service), Diane Eggeman (Ducks Unlimited, Inc.), Dale Humburg (Ducks Unlimited, Inc.), Mark Petrie (Ducks Unlimited, Inc.)

Social Science Foundations for the Gulf Coast Joint Venture

Kelly Guilbeau (U.S. Fish and Wildlife Service), Barry Wilson (Gulf Coast Joint Venture)

Improving Conservation Program Delivery Using Social Science

A. Priest (University of Arkansas at Monticello), Elena Rubino (University of Arkansas at Monticello), Jerrod Penn (Louisiana State University), Anne Mini (Lower Mississippi Valley Joint Venture), Shannon Westlake (U.S. Fish and Wildlife Service)

Evolution of Upper Mississippi/Great Lakes Joint Venture and Roadmap Forward: Integrating social science to benefit bird conservation and people

Kiandra Rajala (U.S. Fish and Wildlife Service), Kristin Hurst (Southern Illinois University), Ashley Gramza (Playa Lakes Joint Venture), Greg Soulliere (Upper Mississippi / Great Lakes Joint Venture - U.S. Fish and Wildlife Service), Doug Gorby (Upper Mississippi / Great Lakes Joint Venture - U.S. Fish and Wildlife Service)

Integrating Social Science and Communications to Drive Conservation

Ryan Roberts (Playa Lakes Joint Venture), Ashley Gramza (Playa Lakes Joint Venture), Miruh Hamend (Playa Lakes Joint Venture), Lindsay Shorter (Playa Lakes Joint Venture), Mike Carter (Playa Lakes Joint Venture)

SYMPOSIUM DETAILS

Innovative Engagement through State Wildlife Viewing Programs

Session Chair: Shelly Plante (Texas Parks and Wildlife Department)

Saturday, June 3 | 9:05 - 11:05 AM MT

Session S-1A | Lory Student Center, Ballroom A

State fish and game agencies have been developing and implementing programs for several decades to engage wildlife viewers. Programs have evolved as we find innovative ways to engage a broader constituency, increasing agency relevancy to a larger audience. While birding was a top activity for engaging the masses for many years, programs have grown to include viewers for all types of wildlife. Join us as we share a variety of programs created to serve and connect with wildlife viewers from states throughout the United States.

Shelly will start off by sharing how the first birding trail in the United States led to the development of a conservation fundraising and outreach event in Texas's premiere birdwatching tournament, the Great Texas Birding Classic. Jeff will show how Arizona is using remote wildlife viewing cameras to share the wonders of nature with people all over the world! Olivia created a birding web guide and interactive map using tools such as online apps instead of the traditional printed maps as a way to engage birders in Nebraska, improving on birding trail formats utilized in other states. Rachel found inspiration in the midst of a pandemic by creating an online scavenger hunt to entice Floridians to visit state managed lands and rack up points along the way, bringing gamification into wildlife viewing and nature exploration. Cheyenne will share background and information on innovative cost-recovery programs for wildlife viewing presentations and experiential events in Arizona that have proven sustainable and educational year after year. Finally, Deniz will bring it back to where our conservation future begins by sharing how a K-12 community science educational program provides students access to the natural world, engages them in scientific discovery, and fosters a lasting appreciation for nature.

Abstracts:

Gone Fishing: Raising conservation funds through competitive birding

Shelly Plante (Texas Parks and Wildlife Department)

Connecting People to Wildlife via Streaming Cams

Jeff Meyers (Arizona Game and Fish Department)

Soaring Through a State Birding Trail

Olivia DaRugna (Nebraska Game and Parks Commission)

Gamifying Nature Exploration: Florida goes on a WildQuest

Rachel Penrod (Florida Fish and Wildlife Conservation Commission)

A Pathway to Full Constituent Engagement through Wildlife Viewing

Cheyenne Towne (Arizona Game and Fish Department)

Fledging our Future: Bird by Bird Idaho

Deniz Aygen (Idaho Department of Fish & Game)

SYMPOSIUM DETAILS

Integrating Social Science in Conservation: Lessons learned

Session Chairs: Mike Quartuch (Colorado Parks and Wildlife), Natalie Sexton (U.S. Fish and Wildlife Service), Ashley Gramza (Playa Lakes Joint Venture), Betsey York (Oklahoma Department of Wildlife Conservation), Faren Wolter (U.S. Fish and Wildlife Service)

Saturday, June 3 | 9:05 - 11:05 AM MT

Session S-1B| Clark Building, Room A 102

As societal attitudes about wildlife continue to change, it is important for conservation organizations to understand how these changes may affect support for wildlife management. Conversely it is also beneficial to know whether and to what extent current wildlife management efforts are reflective of broader societal values. Social scientists are uniquely positioned to measure these trends and other social attributes. However, social science is not always systematically integrated into wildlife research and management efforts despite calls for it to be proactively integrated throughout these processes. This is often due to limited social science capacity within conservation organizations, a limited understanding of social science and ability to coordinate social science research, and other institutional barriers. Additionally, social scientists working with or in state wildlife agencies often find themselves relying on a diversity of analytical tools and approaches to meet agency needs, because the process for developing a management policy or program does not always allow for or require a comprehensive research project to ensure social science is a critical input into decision-making. Thus, the purpose of this session is to illustrate how researchers and practitioners have attempted to integrate social science into conservation planning and management and in doing so, highlight some of the successes and challenges they encountered. To accomplish this, the AFWA Social Science Subcommittee selected six presentations, spanning a variety of topics including agency relevance, R3 program and partnership development, and waterfowl management. Presenters include social scientists from academia, state wildlife agencies, federal agencies, and non-governmental organizations. The first hour of this session will be organized as fast-paced research presentations with talks lasting 10 minutes. The final hour will be a facilitated discussion that aims to engage the audience by drawing connections across presentations and experiences of those in the room, and summarizing insights from the conversation.

Abstracts:

Pathway to Relevancy: An evaluation of the NCWRC Wildlife Education Division

Cristina Watkins (NC Wildlife Resources Commission), Kathryn Jewell (NC Wildlife Resources Commission)

Using Social Science to Inform and Advance R3 Programming in North Carolina

Lincoln Larson (North Carolina State University), Richard von Furstenberg (North Carolina State University), Liz Rutledge (NC Wildlife Federation)

The Integration of Social Science in Informing an Experimental Regulation: Insights from the two-tier waterfowl hunting regulations in South Dakota and Nebraska

Christopher Chizinski (University of Nebraska), Rocco Murano (South Dakota Game, Fish and Parks), Matthew Gruntorad (University of Nebraska), Mark Vrtiska (University of Nebraska), John McKinney (Nebraska Game and Parks Commission)

Evaluating Pennsylvania Waterfowl Hunter Preferences for Duck Seasons: Do hunters mean what they say?

Nathaniel Huck (Pennsylvania Game Commission), Coren Jagnow (Pennsylvania Game Commission)

The Collaborative to Combat the Illegal Trade in Turtles' Socio-Ecological Approach to Address Wildlife Trafficking

Michelle Christman (U.S. Fish and Wildlife), Emily Horton (U.S. Fish and Wildlife)

SYMPOSIUM DETAILS

Transatlantic Synthesis and Adaptive Design toward Transformative Human-Wildlife Coexistence

Session Chairs: Eick von Ruschkowski (Alfred Toepfer Academy for Nature Conservation), Tom Fish (National Park Service)

Saturday, June 3 | 9:05 - 11:05 AM MT | Workshop
Session S-1C | Clark Building, Room A 103

The workshop aims at preparing a joint transatlantic effort to engage in good management practices exchange to achieve human-wildlife coexistence. The focus will lie on (semi-) open grasslands due to their high biodiversity value, the provision of ecosystem services, and their key role in achieving sustainability on a broader scale. For centuries, they have been shaped by grazing and other human-induced activities.

Due to the intensification of agricultural production, many of these high biodiversity value areas face abandonment as they are no longer competitive. Rural depopulation and cessation of grazing endangers the conservation value. The recovery of large carnivores such as bears and wolves, but also ungulates like bison or moose, increases economic pressure on livestock farming and agricultural production in these areas and intensifies the challenges.

Along this important conflict line, often associated also with a perceived or factual rural-urban divide, it is necessary to develop new strategies that enable and foster social, economic, and ecological sustainability, including human-wildlife coexistence. The designated project intends to build new capacities in the transformative and adaptive design of human-wildlife coexistence scenarios. Its intention is to follow an integrative holistic approach based on a theory of change. This implies to discuss and design research questions, develop tools, and evaluate their implementation jointly with affected stakeholders, such as livestock farmers, ranchers, and landscape managers, rather than just for them.

The workshop aims at outlining the scope of such a transatlantic approach by defining the narratives and setting up a group of key coordinators to further the process. The objective is to develop a full-grown proposal by the end of 2023. Workshop participation will be invitation-based, but please submit your interest to the organizers who will select participants based on a balanced approach of e.g., geography, field of expertise, profession, etc.

The 2022 National Survey of Fishing, Hunting, & Wildlife-Associated Recreation: A new approach

Session Chairs: Ned English (NORC at the University of Chicago), Dan Malato (NORC at the University of Chicago)

Thursday, June 1 | 8:00 - 9:30 AM MT
Session T-4E | Lory Student Center, Ballroom A

For more than six decades, the National Survey of Fishing, Hunting, and Wildlife-Associated Recreation (FHWAR) was conducted with in-person and telephone interviews. The survey provides federal and state agencies estimates of participation and expenditures in fishing, hunting, and wildlife watching activities. Rising costs and challenges with in-person interviewing in recent years led the Association of Fish and Wildlife Agencies (AFWA) and U.S Fish and Wildlife Service (FWS) to seek an alternative approach for the 2022 survey. The organizations selected NORC at the University of Chicago to redesign the methodology and conduct a nationally representative survey. NORC partnered with AFWA and FWS to develop a multi-sample, multimode survey that leverages auxiliary data and innovative calibration weighting. The survey features three samples: 1) an address-based sample invited via mail to complete the survey either online, via phone, or with a paper-and-pencil questionnaire; 2) the AmeriSpeak Panel, NORC's nationally representative, probability-based panel, in which respondents can complete surveys online and via phone; 3) non-probability online panels. To combine these samples, NORC tailored a proprietary calibration weighting approach to reduce any potential avidity bias associated with participation in fishing, hunting, and other outdoor recreation activities. This session will present a description of these innovative methods used to collect data for the latest round of the survey. It will also explain what to expect in the data release, emphasizing the establishment of a new trendline and providing some tips for working with the data.

SYMPOSIUM DETAILS

Managing Human-Wildlife Conflicts and Public Perceptions

Session Chairs: Bryant White (Association of Fish and Wildlife Agencies), Pat Jackson (Nevada Department of Wildlife), Stewart Breck (USDA-APHIS-National Wildlife Research Center), Brian Wakeling (Montana Fish, Wildlife, and Parks), John Tomecek (Texas A&M University)

Saturday, June 3 | 9:05 - 11:05 AM MT

Session S-1D | Clark Building, Room A 104

Managing human-wildlife conflicts is one of the most challenging issues facing wildlife managers. In addition, public perceptions about the various methods used can create additional challenges. This session will explore lethal and non-lethal methods used for managing various conflicts, understanding public perceptions surrounding species/techniques and leave participants with a better understanding of how to successfully navigate the landscape of human-wildlife conflict management.

Abstracts:

Common Raven Management: A tiered approach

Pat Jackson (Nevada Department of Wildlife), Peter Coates (USGS), Seth Dettenmaier (USGS), Cali Roth (USGS), Shawn O'Neil (USGS)

Trapping in Human-Wildlife Conflict Management

Bryant White (Association of Fish and Wildlife Agencies)

Effectiveness and Producer Perception and Interest of Fladry and Range Riding Employed by USDA Wildlife Services Operations to Protect Livestock from Depredation

Stewart Breck (USDA-APHIS-National Wildlife Research Center), Keith Carlisle (National Wildlife Research Center), Jeff Schultz (USDA-APHIS-National Wildlife Research Center), Julie Young (Utah State University), Eric Gese (USDA-APHIS-National Wildlife Research Center)

Urban Coyote as a Conflict Source: Management options

Brian Wakeling (Montana Fish, Wildlife, and Parks), Paul Curtis (Cornell University), David Bergman (USDA Wildlife Services), Bryant White (Association of Fish and Wildlife Agencies)

Using Fladry to Reduce Carnivore Conflict

Dustin Ranglack (USDA APHIS WS NWRC Utah Field Station)

Feral Swine Conflicts and Public Perceptions

John Tomecek (Texas A&M University)

SYMPOSIUM DETAILS

Mainstreaming Social Science in Conservation Planning: A systems approach

Session Chairs: Natalie Sexton (U.S. Fish and Wildlife Service), Mike Quartuch (Colorado Parks and Wildlife), Alexandria Safiq (University of Minnesota), David J. Trimbach (WA Department of Fish and Wildlife), Rebecca Niemiec (Colorado State University)

Saturday, June 3 | 11:50 AM – 1:50 PM MT | Workshop
Session S-2B | Clark Building, Room A 102

Systems thinking approaches can help address complex conservation challenges through co-development of holistic and novel solutions, as well as provide a starting point to effectively integrate social science into strategic conservation planning and adaptive management frameworks. While conservation social science capacity and application has proliferated in recent years, strategies to encourage and support systematic and collaborative integration are needed. Additionally, clear guidance is lacking on how to apply diverse social science approaches throughout conservation planning. Distilling the possible applications of social science into four primary phases of conservation planning 1) defining the problem and project team; 2) defining goals; 3) identifying impact pathways and designing interventions; and 4) developing and evaluating indicators of success (or failure) can aid practitioners in more consistently utilizing appropriate social science approaches. This workshop-style organized session is designed for researchers and practitioners and will provide participants with a foundational understanding of recent frameworks for systems thinking for conservation social science (e.g., Browne et al. 2021), and social science integration into conservation planning (Niemiec et al. 2021). The session will be highly interactive, with two 40-minute facilitated breakout discussions following each 20-minute presentation of foundational material. Participants will benefit from and contribute to a practitioner-researcher feedback loop by discussing the opportunities and challenges related to applying a systems thinking approach and applying a systematic integration of social science in their conservation issues. Through this session practitioners will develop tangible strategies for social science integration and researchers can better hone the application and accessibility of their work; all participants will gain a better understanding of how these systematic approaches can improve collaboration and conservation outcomes.

Unifying Human Dimensions Research Capacity for Effective Chronic Wasting Disease Management

Session Chairs: : Coren Jagnow (Pennsylvania Game Commission), Mike Quartuch (Colorado Parks and Wildlife), Brad Milley (U.S. Fish and Wildlife Service), Nicholas Cole (USGS)

Saturday, June 3 | 2:10 – 3:40 PM MT | Discussion / Roundtable
Session S-3D | Clark Building, Room A 104

The importance of investigating the Human Dimensions (HD) of Chronic Wasting Disease (CWD) management has been recognized for decades, but the capacity for sharing this research is often isolated to a few regions with historically high CWD prevalence. Since the first documented case of CWD in wild cervids in the 1980s, it now has been detected in 29 states and 5 other countries. Given the consistent spread of CWD to new management jurisdictions, unifying HD research capacity and communicating breakthroughs within the scientific community are even more important for effective and in some cases, proactive, CWD management. At present, there is no centralized location for HD researchers to identify, locate and learn from previous CWD research projects. Further complicating matters is the fact that many summary reports, white papers, and survey instruments exist as unpublished reports within state wildlife agencies. At the 2022 Pathways Conference in Bremerton, WA, HD professionals from across North America have partnered with U.S. Geological Survey and U.S. Fish and Wildlife Service to develop an HD of CWD Clearinghouse, the purpose of which is to support and improve HD of CWD research capacity and streamline communication about CWD management across jurisdictions, regions, and conservation agencies. This state-driven project will allow HD professionals to share materials (e.g., survey questions, project reports) highlighting different ways they collected their data and learned from their various efforts. This follow-up discussion will provide updates on the development of the HD of CWD Clearinghouse and seek input on implementation and planning next steps.

SYMPOSIUM DETAILS

Human Dimensions of Fertility Control to Mitigate Human-Wildlife Conflicts

Session Chairs: Stephanie Boyles Griffin (Botstiber Institute for Wildlife Fertility Control), Keith Carlisle (National Wildlife Research Center)

Saturday, June 3 | 11:50 AM – 1:50 PM MT

Session S-2D | Clark Building, Room A 104

Human-wildlife conflicts (HWC) are increasing worldwide, and traditionally, have often been managed by lethal methods. However, research suggests that opposition to lethal methods may become more commonplace as societies become more urban, educated, and wealthy. A study by Colorado State University researchers, for example, found that between 2004 and 2018, western U.S. states experienced a nearly 5% increase in Mutualists, a segment of the population that tends to view wildlife “as part of one’s social network and worthy of care and compassion.” This growing antipathy toward lethal methods places increasing constraints on wildlife management options. Resolving HWCs requires achieving a difficult balance between several competing goals: mitigating the impacts of a local animal population, maintaining the ecological role of that species within the environment, ensuring animal welfare standards, and managing public expectations. In these contexts, wildlife fertility control (WFC) may provide an important nonlethal alternative to traditional lethal methods and may garner broader stakeholder support for wildlife management decisions over time. In the last three decades, significant progress in the field of WFC has been made, but for years, understanding public values and attitudes associated with this fast-growing field has taken a back seat to the development and field testing of new agents, delivery methods, and procedures. Through trial and error, the WFC field has learned the hard way that, to be successful, practical field applications must be preceded by dynamic stakeholder engagement and outreach processes. The proposed session will explore the need to incorporate these types of processes on the front end of HWC mitigation planning to ensure that management actions are justified and have broad public and stakeholder support prior to implementation.

Abstracts:

Stakeholder Engagement for a Horse Population Management Tool

Brian Folt (USGS), Kate Schoenecker (USGS), Dan Adams (The Langdon Group), Terry Messmer (Berryman Institute, Utah State University)

Stakeholder Engagement for Genetic Biocontrol of Common Carp in the Great Lakes Region

Jason Delborne (North Carolina State University)

Wildlife Fertility Control: What’s possible versus what’s practical

Jason Bruemmer (USDA Wildlife Services National Wildlife Research Center)

SYMPOSIUM DETAILS

Wildlife Management Needs Diversity, Transparency and Ethics

Session Chairs: Jill Fritz (The Humane Society of the United States), Wendy Keefover (The Humane Society of the United States), Katie Stennes (The Humane Society of the United States), Amanda Wight (The Humane Society of the United States)

Saturday, June 3 | 2:10 – 3:40 PM MT

Session S-3B | Clark Building, Room A 102

The North American Model of Wildlife Conservation Management (“NAM”) has come under fire by a host of scholars who argue that the NAM embraces a revisionist history that privileges white male hunters over all other stakeholders, particularly women and people of color (Peterson and Nelson 2017, Serfass et al. 2018). The focus of the NAM is not on conservation, but rather on hunting “overabundant” game species—to the detriment of native carnivores like bears and wolves and the ecosystem services they provide (Peterson and Nelson 2017).

Under the NAM, wildlife are purportedly managed in the public trust and “hunting is democratized” (Organ et al. 2012). Yet, because of the NAM, wildlife are largely managed for key stakeholders while ignoring the majority public’s values (Peterson and Nelson 2017, Vucetich et al. 2017). As American values have shifted toward mutualism, the orientation that embraces wildlife as part of our extended social network (Dietsch et al. 2018), hunters and traditionalists have increased their hold on power (Manfredo et al. 2017).

North America’s native carnivores are killed for trophies (Darimont et al. 2017, Batavia et al. 2018) to satisfy exaggerated concerns that carnivores endanger humans (Mattson et al. 2011, Obbard et al. 2014), prey on too many game species (Trump et al. 2022), or cause livestock conflicts (Kareiva et al. 2022). States permit trophy hunting and/or killing wildlife as part of contests (The Wildlife Society 2019) based under the guise of “science” while failing to adhere to sound science (Artelle et al. 2018).

As hunter numbers decline (U.S. Fish and Wildlife Service 2011, 2017), mutualism (Manfredo et al. 2018, Manfredo et al. 2021) and humaneness (George et al. 2016), should inform wildlife stewardship. The makeup of wildlife commissions should better reflect all of the various stakeholders in wildlife management and conservation.

Abstracts:

Managing in an Echo Chamber: The lack of diverse values in wildlife agencies and wildlife commissions

Jill Fritz (Humane Society of the United States)

No Evidence that Black Bear Hunting Reduces Attacks in the U.S.

Wendy Keefover (Humane Society of the United States), Sean M. Murphy (Department of Forestry and Natural Resources, University of Kentucky)

Science and Public Attitudes Surrounding the Killing of Wildlife for Cash and Prizes

Katie Stennes (Humane Society of the United States)

Intersections of Science and Values in Wolf Conservation

Amanda Wight (Humane Society of the United States)

SYMPOSIUM DETAILS

Using Participatory Science to Benefit Outreach and Research

Session Chairs: Scott Anderson (NC Wildlife Resources Commission), Mags Edwards (MN Department of Natural Resources), Christy Pototsky (Virginia Tech), Lincoln Larson (NC State University)

Saturday, June 3 | 4:00 – 6:00 PM MT

Session S-4B | Clark Building, Room A 102

Citizen Science (or more broadly, Participatory Science) can be defined as “any public involvement in scientific research” (Citizen Science Association). Energizing the public to collect information enables large-scale research that would otherwise be financially prohibitive. However, researchers’ highest priority is often ensuring data are defensible and actionable, potentially limiting outreach and engagement efforts to a narrow demographic. For example, the North Carolina Bird Atlas requires skilled birders to accurately map the distribution of birds in the state, but the majority of contributors can only identify the most common species. This session will explore the benefits of casting a wider net for participants with the explicit intent to expand public appreciation for natural resources, boost awareness and support of sponsoring organizations, and foster broader and more diverse conservation coalitions. Talks in this session will discuss the benefits of Participatory Science beyond data collection using case studies and wildlife viewer survey data.

Abstracts:

Crowd Source or Sink? Striking a balance between data quality and increased engagement in citizen science

Mags Edwards (MN Department of Natural Resources)

Mapping a Path to Success in a Bird Atlas Through Novices and Experts

Scott Anderson (NC Wildlife Resources Commission), John Carpenter (NC Wildlife Resources Commission)

Understanding and Engaging Wildlife Viewers in Participatory Science

Christy Pototsky (Virginia Tech), Ashley Dayer (Virginia Tech), Emily Sinkular (Virginia Tech)

Broader Impacts of Citizen Science: Exploring volunteer motivations and learning outcomes

Lincoln Larson (NC State University)

SESSION DETAILS

T-1A: Hunter & Angler Engagement | Thursday, June 1

9:45 – 11:45 AM | Lory Student Center Ballroom A

Session Chair: Emily Horton (U.S. Fish and Wildlife Service)

Cessation of Mentors to Waterfowl Hunting

Matthew Gruntorad (University of Nebraska), Mark Vrtiska (University of Nebraska), Christopher Chizinski (University of Nebraska)

Canadian Waterfowl Hunter Trip Preferences: Implications for management

Howie Harshaw (University of Alberta), Katie Sainsbury (University of Alberta)

Hunters' Willingness to Adopt and Support Biosecurity Actions to Prevent the Spread of Rabbit Hemorrhagic Disease

Hannah Shapiro (Warnell School of Forestry and Natural Resources, University of Georgia), Gino D'Angelo (Warnell School of Forestry and Natural Resources, University of Georgia), Mark Ruder (Southeastern Cooperative Wildlife Disease Study, College of Veterinary Medicine, University of Georgia), Elizabeth F. Pienaar (Warnell School of Forestry and Natural Resources, University of Georgia)

Collaboration and Engagement with Decision-Makers Needed to Reduce Evidence Complacency in Wildlife

Hunter Motivations for Mandatory Harvest Reporting

Amanda Van Buskirk (Daniel B. Warnell School of Forestry and Natural Resources, University of Georgia), B. Bynum Boley (Warnell School of Forestry and Natural Resources, University of Georgia), Charlie H. Killmaster (Georgia Department of Natural Resources), Kristina Johannsen (Georgia Wildlife Resources Division), Gino D'Angelo (Warnell School of Forestry and Natural Resources, University of Georgia)

T-1D: Community-Based Conservation | Thursday, June 1

9:45 – 11:45 AM | Clark Building, Room A 104

Session Chair: James Danoff-Burg (The Living Desert Zoo and Gardens)

Exploring Environmental Citizenship Through Personal Narratives

Katherine Graham (University of Nebraska - Lincoln), Kjersten Hyberger (University of Nebraska - Lincoln), Christopher Chizinski (University of Nebraska - Lincoln)

Talking Trash: Incentivizing restaurants to cover dumpsters

James Danoff-Burg (The Living Desert Zoo and Gardens), Kaitlyn Shaw (The Living Desert Zoo and Gardens)

Incorporating Landowner Values into Communications Improves Conservation Outcomes

Jared Messick (Texas State University), Christopher Serenari (Texas State University), Elena Rubino (University of Arkansas at Monticello), Floyd Weckerly (Texas State University), Kristy Daniel (Texas State University)

Social Impacts of the Black Mambas Anti-Poaching Unit

Kaitlyn Shaw (The Living Desert Zoo and Gardens), James Danoff-Burg (The Living Desert Zoo and Gardens)

What's on the Horizon for Community Conservation? Emerging threats and opportunities

Nafeesa Esmail (Wilder Institute, Calgary Zoo), Jana McPherson (Wilder Institute, Calgary Zoo)

SESSION DETAILS

T-2D: Waterway Conservation | Thursday, June 1

12:00 – 1:30 PM | Clark Building, Room A 104

Session Chair: Deborah January-Bevers (Houston Wilderness)

Tools for Coexistence with Wildlife Species in Greater Houston (TX)

Deborah January-Bevers (Houston Wilderness)

Ecological Solidarity with Warta River in Poland and River Stewardship

Marianna Strzelecka (School of Business and Economics, Linnaeus University in Kalmar), B. Bynum Boley (Warnell School of Forestry and Natural Resources, University of Georgia), Joanna Tusznio (Institute of Environmental Sciences, Jagiellonian University in Krakow), Adela Malak (Jagiellonian University, Faculty of Geography and Geology, Institute of Geography and Spatial Management)

Stormwater Best Management Practices and their Impacts on Wildlife

Basil Hamdan (City of Fort Collins)

Examining Sense of Place and Salmon in Puget Sound through a More-than-Human Lens

David J. Trimbach (WA Department of Fish and Wildlife)

T-3A: Perspectives on Managing Wildlife in an Era of Mutualism | Thursday, June 1

2:45 – 4:45 PM | Lory Student Center, Ballroom A

Session Chair: David S. Miller (Miller Veterinary Services, LLC)

Mutualism in Marine Value Orientations on Cape Cod

Jennifer Jackman (Salem State University), Rachel Bratton (University of Massachusetts – Boston), Jerry Vaske (Colorado State University - Fort Collins), Seana Dowling-Guyer (Cummings School of Veterinary Medicine at Tufts University), Stephanie Wood (University of Massachusetts – Boston)

Invasive Species Control in an Era of Mutualism

Keith Carlisle (National Wildlife Research Center)

Managing Wildlife in the Alps in an Era of Mutualism

Sandra Notaro (University of Trento), Gianluca Grilli (European Research Institute on Cooperative and Social Enterprises), Jerry Vaske (Colorado State University)

Mutualism is Here, is Our Conservation System Ready?

Richard von Furstenberg (NC State University), Lincoln Larson (NC State University)

Wildlife Welfare: Values, tradeoffs, and practical challenges

David S. Miller (Veterinary Services, LLC)

Invasive Lionfish Management in Florida: Aligning incentives with motivations

Kaylin Clements (USGS), Jennifer Solomon (Colorado State University)

T-3B: Wildlife Management Tools, Theories, and Frameworks | Thursday, June 1

2:45 – 4:45 PM | Clark Building, Room A 102

Session Chair: Hilary Byerly Flint (University of Wyoming)

Reconceptualizing Motivation in Human Dimensions Using Self-Determination Theory

Adam Landon (Minnesota Department of Natural Resources), Kyle Smith (University of Minnesota), Colin Yoder (USGS), Gerard Kyle (Texas A&M University)

Enhancing Stakeholder Engagement in the Wild World of Wild Horse Issues

Celeste Carlisle (Return to Freedom), Dan Adams (The Langdon Group)

Application of Hybrid Choice Models to Wildlife Management

Kyle Smith (University of Minnesota), Adam Landon (Minnesota Department of Natural Resources), Colin Yoder (USGS)

An Analysis of State and Local Landscape Connectivity Policies

Travis Brammer (University of Wyoming), Sharon Buccino (University of Wyoming), Drew Bennett (University of Wyoming), Zack Wurtzbech (Center for Large Landscape Conservation), Temple Stoellinger (University of Wyoming)

Quantifying Anthropogenic Influences on Carnivore Distribution and Connectivity

Keifer Titus (Clemson University), David Jachowski (Clemson University)

Applied Autoethnography: Unveiling the full story of research

Kilian Murphy (University College Dublin), Laura Griffin (University College Dublin), Grace Nolan (University College Dublin), Simone Ciuti (University College Dublin), Adam Kane (University College Dublin)

SESSION DETAILS

T-3C: Coyote-Human Coexistence | Thursday, June 1

2:45 – 4:45 PM | Clark Building, Room A 103

Session Chair: James Danoff-Burg (The Living Desert Zoo and Gardens)

Testing Message Frames for Urban Coyote Coexistence

Mary Magnuson (University of Wisconsin-Madison), Bret Shaw (University of Wisconsin-Madison), David Drake (University of Wisconsin-Madison)

The Relationship Between Human Emotions and Human-Coyote Coexistence

Caroline O'Connor (University of Calgary), Shelley Alexander (University of Calgary)

Coyote Family Activity in a Landscape of Fear

Robert Mitchell (University of Calgary), Shelley Alexander (University of Calgary)

Psychological drivers for Limiting Take Among Coyote Hunters

Kristina Slagle (Ohio State University), Jeremy Bruskotter (Ohio State University)

Hunter Ethics in Illinois: Do hunters support hunting contests?

Eric Walberg (Illinois Natural History Survey), Craig Miller (Illinois Natural History Survey)

T-4B: Multimedia Uses in Wildlife Management | Thursday, June 1

8:00 – 9:30 AM | Clark Building, Room A 102

Session Chair: Kelly Miller (Deakin University)

Birds of a Feather Flock Together: A longitudinal study of a social media outreach effort shows audience similar to project team

Sarah Cavanah (Southeast Missouri State University), Seth Owens (University of North Dakota), Kaylan Kemink (Ducks Unlimited, Inc), Collin Riley (University of North Dakota), Soojung Kim (Ducks Unlimited, Inc)

Social Marketing to Prevent Wildlife Feeding in Campgrounds

Katie Abrams (Colorado State University Department of Journalism & Media Communication), Channing Bice (Colorado State University)

Do Submitted Comments Influence the Species Listing Process?

Krista Lyons (Boise State University)

YouTube's Influence on Public Perceptions of Controversial Carnivore Species

Lincoln Larson (North Carolina State University), Will Casola (University of Florida), Justin Beall (North Carolina State University), Nils Peterson (North Carolina State University)

T-4C: Wolf-Human Coexistence | Thursday, June 1

8:00 – 9:30 AM | Clark Building, Room A 103

Session Chair: Christian Gamborg (University of Copenhagen)

Wolf Conflict in the Nordic Media

Aku Ahlholm (Metsähallitus, Wildlife Service Finland), Jani Pellikka (Natural Resources Institute Finland)

Stakeholder Identity and Wildlife Value Orientations Related to Grey Wolf Management Preferences in Minnesota

Madison Stevens (University of Minnesota), Adam Landon (Minnesota Department of Natural Resources, University of Minnesota), Colin Yoder (U.S. Geological Survey), Susan Schroeder (University of Minnesota), Leslie McInenly (Minnesota Department of Natural Resources, University of Minnesota)

Wolf Policy and Politics in Central and Eastern Europe

Krzysztof Niedziałkowski (Institute of Philosophy and Sociology Polish Academy of Sciences)

What Drives Lethal Removal of Wolves?

Leandra Merz (University of Michigan), Neil Carter (University of Michigan), Jeremy Bruskotter (Ohio State University)

SESSION DETAILS

F-1C: Urban-Wildlife Interactions | Friday, June 2

9:35 - 11:35 AM | Clark Building, Room A 103

Session Chair: Danielle Ross-Winslow (Sonoran Joint Venture)

Applying Immunocontraception to Limit Suburban Deer Populations

Allen Rutberg (Cummings School of Veterinary Medicine at Tufts University) , Kali Pereira (Humane Society of the United States), John Griffin (Humane Society of the United States)

Transforming Policy Conflict into Cooperation for Cat Management

Jennie Duberstein (Sonoran Joint Venture), Kirsten Leong (Pacific Islands Fisheries Science Center National Marine Fisheries Service-NOAA), Ashley Gramza (Playa Lakes Joint Venture), Chelsey Bryson (East-West Center, University of Hawaii), Angela Amlin (Scottish Oceans Institute, University of St. Andrew)

Public Attitudes Towards Urban Wildlife in Metro-Atlanta

Mahi Puri (Warnell School of Forestry and Natural Resources, University of Georgia), Elizabeth F. Pienaar (Warnell School of Forestry and Natural Resources, University of Georgia), Kaitlin Goode (Georgia Wildlife Resources Division), Kristina Johannsen (Georgia Wildlife Resources Division)

Citizens Like Animals but Not in Their Garden: Perspectives of decision-makers and the public about urban wildlife

Simon Moesch (Humboldt Universität zu Berlin), Jonathan Jeschke (Freie Universität Berlin), Stephanie Kramer-Schadt (Leibniz Institute for Zoo and Wildlife Research), Tanja Straka (Technische Universität Berlin), Dagmar Haase (Humboldt Universität zu Berlin)

Tolerance and Management of Alabama's Nine-Banded Armadillos

Olivia Sciandra (Auburn University), Wesley Anderson (Auburn University), Kelly Dunning (Auburn University), Sarah Zohdy (Auburn University)

F-2A: Human-Wildlife Interactions & National Parks | Friday, June 2

12:20 - 2:20 PM | Lory Student Center, Ballroom A

Session Chair: Christian Gamborg (University of Copenhagen)

Addressing Human-Wildlife Interactions in the National Park Service

Nicole Turner (National Park Service), Brendan Moynahan (National Park Service)

Human-Wildlife Conflict in Old Oyo National Park

Olakunle Kazeem Azeez (National Park Service), Ibrahim Goni (National Park Service), Anthony Adekunle Ogunjinmi (Department of Ecotourism and Wildlife Management, Federal University of Technology Akure), Oluyink a Sunday Odewumi (Department of Ecotourism and Wildlife Management, Federal University of Technology Akure)

Managing Roadside Bear Viewing: A human dimensions perspective

Annie Pumphrey (University of Northern British Columbia), Zoe Meletis (University of Northern British Columbia)

Viewing and Conserving Transboundary Wildlife in National Parks

Hilary Byerly Flint (University of Wyoming), Drew Bennett (University of Wyoming), Aaron Enriquez (University of Alaska, Anchorage), Arthur Middleton (University of California Berkeley)

Park Revenue Sharing Policy in Reducing Park-People Conflict

Sweta Dixit (University of Tennessee), Neelam C. Poudyal (University of Tennessee), Thakur Silwal (Institute of Forestry Pokhara)

The Human Dimensions of Conserving a Keystone Species in Katmai National Park, Alaska

Leslie Richardson (National Park Service)

SESSION DETAILS

F-2C: Human-Carnivore Conflict | Friday, June 2

12:20 - 2:20 PM | Clark Building, Room A 103

Session Chair: Benjamin Ghasemi (Colorado State University)

Investigating Socioeconomic Barriers to Carnivore-Livestock Conflict Mitigation

Avery Shawler (University of California Berkeley)

Developing and Validating Psychometric Scales to Measure Willingness to Coexist and Attitudes towards Coexistence with Terrestrial Carnivores

Benjamin Ghasemi (Colorado State University), Gerard Kyle (Texas A&M University), Tara Teel (Colorado State University), Kevin Crooks (Colorado State University), Rebecca Niemiec (Colorado State University)

Demographics, Attitudes, and Support for Bear Management in Illinois

Samantha Pallazza (University of Illinois Urbana-Champaign), Jerry Vaske (Colorado State University), Craig Miller (Human Dimensions Program, Illinois Natural History Survey), Brent Williams (University of Illinois Urbana-Champaign), Xiaohan Zhang (University of Illinois Urbana-Champaign)

Spatial Risk Mapping to Mitigate Human-Andean Bear Conflict in the Western Ecuadorian Andes

Santiago Garcia (Cornell University), Angela Fuller (Cornell University), Richard Stedman (Cornell University)

Public Perspectives on Hunting Black Bears and Mountain Lions in Colorado

Benjamin Ghasemi (Colorado State University), Tara Teel (Colorado State University), Kevin Crooks (Colorado State University), Rebecca Niemiec (Colorado State University)

F-2D: Conservation in Practice | Friday, June 2

12:20 - 2:20 PM | Clark Building, Room A 104

Session Chair: Derek Franklin (Iowa State University)

Human Dimensions of Native Prairie on Midwestern Farms

Derek Franklin (Iowa State University)

The Human Dimensions of Management to Biological Invasions

Nicole Jennings (U.S. Geological Survey Fort Collins Science Center), Aimee C. Agnew (U.S. Geological Survey Fort Collins Science Center), Amy K. Wray (U.S. Geological Survey Fort Collins Science Center), Sara E. Piccolomini (U.S. Geological Survey Fort Collins Science Center), Brian E. Reichert (U.S. Geological Survey Fort Collins Science Center)

Visitors' Attitudes and Willingness to Take Actions to Prevent Pathogen Spillover in Natural Areas

Kevin Cavazos (University of Tennessee), Matthew J. Gray (Department of Forestry, Wildlife, & Fisheries, University of Tennessee), Neelam C. Poudyal (University of Tennessee), Alexa Warwick (Department of Fisheries and Wildlife, Michigan State University), Ram Adhikari (Department of Forestry, Wildlife, & Fisheries, University of Tennessee)

Local Hunters' Lived Experiences of Climate Change: Environmental impacts and adaptive responses

Malek Jamaliah (The University of Jordan), Mohammad Alazaizeh (Zayed University)

Croc-Sitters! Ecotourism and monitoring crocodiles

Paul Evans (Lamanai Field Research Center), Venetia Briggs-Gonzalez (Lamanai Field Research Center), Frank Mazzotti (University of Florida)

SESSION DETAILS

F-3A: Rewilding | Friday, June 2

2:40 – 4:40 PM | Lory Student Center, Ballroom A

Session Chair: Peter Sandøe (University of Copenhagen)

Rewilding Europe and Rewilding North America: Rival approaches?

Linde De Vroey (University of Antwerp), Arthur Obst (University of Washington)

Hunting, Utilitarianism, and Rewilding in European Bison Conservation

Joanna Tusznio (Jagiellonian University in Krakow), Luis Ernesto Santillan Gutierrez (Jagiellonian University in Krakow), Marianna Strzelecka (School of Business and Economics, Linnaeus University in Kalmar), Krzysztof Niedziałkowski (Institute of Philosophy and Sociology Polish Academy of Sciences), Małgorzata Grodzińska-Jurczak (Jagiellonian University in Krakow)

Translocation Rewilding: How are outdoor recreational consequences perceived?

Christian Gamborg (University of Copenhagen), Frank Søndergaard Jensen (University of Copenhagen), Peter Sandøe (University of Copenhagen)

Public Perception of Animal Welfare in Rewilding Projects

Peter Sandøe (University of Copenhagen), Clare Palmer (Texas A&M University), Frank Søndergaard Jensen (University of Copenhagen), Christian Gamborg (University of Copenhagen)

In an Age of Mutualism, Do Nature-Based Spiritual Values Create More Sustainable Conservation?

Dr. Alexandria Safiq (University of Minnesota)

F-3C: Big Cat-Livestock Predation | Friday, June 2

2:40 – 4:40 PM | Clark Building, Room A 103

Session Chair: David S. Miller (Miller Veterinary Services, LLC)

Participation in Predator Control Experiments Changed Attitudes

Alexandra Pineda-Guerrero (University of Wisconsin-Madison), Adrian Treves (University of Wisconsin-Madison)

Pastoralists in Chile: A conservation conflict within a Megadrought context – an analysis through a One Welfare lens

Matías Hargreaves Méndez (Universidade Federal de Santa Catarina), Juan Pablo del Valle Menéndez (Fundación Yastay, Creando Coexistencia), Solange Vargas (Universidad de Atacama)

Ranchers' Tolerance to Jaguar Varies Across a Loss Gradient

Lou Lecuyer (French National Institute for Agriculture, Food, and Environment (INRAE)), Tobias Borger (Berlin School of Economics and Law), Sophie Calme (Université de Sherbrooke), Birgit Schmook (El Colegio de la Frontera Sur), Rehema White (University of St Andrews)

Jaguar Tolerance and Retaliation on Colombian Ranchlands

Matthew Hyde (Colorado State University), Tara Teel (Colorado State University), Angélica Diaz-Pulido (Alexander von Humboldt Biological Resources Research Institute), Stewart Breck (USDA-APHIS-National Wildlife Research Center), Kevin Crooks (Colorado State University)

SESSION DETAILS

F-3D: Conservation Policies and Theories | Friday, June 2

2:40 – 4:40 PM | Clark Building, Room A 104

Session Chair: Richard Berl (U.S. Geological Survey, Eastern Ecological Science Center)

Scenarios for Biodiversity and Ecosystem Services Towards Human Well-Being in Cameroon

Ntumwel Bonito chia (Ministry of Environment, Nature Protection and Sustainable Development), Gounes Tougoulou John (Ministry of Environment, Nature Protection and Sustainable Development), Forbi Funwi Preasious (University of Yaoundé), Beyala Epse Eloundou Josephine Therese (Ministry of Environment, Nature Protection and Sustainable Development)

Participatory Methods to Study Wildlife Conservation Policy: The case of Eswatini

Thomas Moorman (Auburn University), Stephen Ditchkoff (Auburn University), Phumlile Simelane (All Out Africa), Caroline Ward (Auburn University), Kelly Dunning (Auburn University)

Applications of Cultural Evolutionary Science to Natural Resource Management and Conservation

Richard Berl (U.S. Geological Survey, Eastern Ecological Science Center), Michael Gavin (Department of Human Dimensions of Natural Resources, Colorado State University), Jonathan Salerno (Department of Human Dimensions of Natural Resources, Colorado State University), Lily van Eeden (Arthur Rylah Institute for Environmental Research) & the Natural Resource Management Applied Working Group, Cultural Evolution Society

Conserving Less Charismatic Species Using Social Science Techniques

Sandra Sneckenberger (U.S. Fish and Wildlife Service), Kristi Yanchis (U.S. Fish and Wildlife Service)

F-4B: Bird Conservation | Friday, June 2

5:00 - 6:30 PM | Clark Building, Room A 102

Session Chair: Kelly Miller (Deakin University)

Does the Public Value Ecosystem Services Secured by Private Bobwhite Properties in the Southeastern United States?

Nicole Nimlos (Warnell School of Forestry and Natural Resources, University of Georgia), Elizabeth F. Pienaar (Warnell School of Forestry and Natural Resources, University of Georgia)

Should I Feed the Birds: Global and local perspectives on attitudes, norms, and policy

Kelly Miller (Deakin University), Michael Weston (Deakin University), Emily McLeod (Zoos Victoria), Ella Henson (Deakin University), Sinead Baverstock (Deakin University)

Success of Community-Based Hornbill Conservation at Budo Mountain from Human Perspectives

Jiraporn Teampanpong (Faculty of Forestry, Kasetsart University), Noppawan Tanakanjana Phongkieoa (Faculty of Forestry, Kasetsart University), Preeda Thiensongrusamee (Faculty of Science, Mahidol University), Nureehua Da-U-Re (Faculty of Science, Mahidol University)

F-4C: Big Cat-Human Interactions | Friday, June 2

5:00 - 6:30 PM | Clark Building, Room A 103

Session Chair: Benjamin Ghasemi (Colorado State University)

Human-Snow Leopard Conflict in Tibet

Xiaoxing Bian (University of Florida), Vanessa Hull (University of Florida), Jessica S. Kahler (University of Florida)

Examining Unprovoked Attacks: Spatiotemporal clustering of leopard attacks on humans in Western Himalayas, India

Shweta Shivakumar (Centre for Wildlife Studies (CWS)), Krithi Karanth (Centre for Wildlife Studies (CWS)), Vidya Athreya (Wildlife Conservation Society – India), David Carricondo Sanchez (Inland Norway University of Applied Sciences), Srinivas Vaidyanathan (Foundation for Ecological Research Advocacy and Learning (FERAL))

Regional Variation in Media Portrayals of Mountain Lions

Grace Nolan (University College Dublin), Adam Kane (University College Dublin)

Texas Residents' Attitude Toward Mountain Lions and Their Management

Gerard Kyle (Texas A&M University), Benjamin Ghasemi (Colorado State University)

SESSION DETAILS

S-2A: Community Engagement with Wild Animals | Saturday, June 3

11:50 AM – 1:50 PM | Lory Student Center, Ballroom A

Session Chair: David S. Miller (Miller Veterinary Services, LLC)

Human-Wild Dog (*Lycaon Pictus*) Relations in South Africa

Rosa Deen (Durrell Institute of Conservation and Ecology, University of Kent)

Challenges to Treating Injured Key Deer

Brian Powell (U.S. Fish and Wildlife Service)

Assessment of Animal Welfare for Australian Feral Horses

Jordan Hampton (University of Melbourne), Andrea Harvey (University of Technology Sydney)

Barriers to Wild Pig Management on Private Land

Brier Ryver (University of Florida), Hance Ellington (University of Florida)

A Social Network Analysis of Actors Involved in Wild Pig (*Sus scrofa*) Management in Missouri

Hailey Ellis (Colorado State University), Meredith Grady (Colorado State University), Lauren Jaebker (Colorado State University), Alan Bright (Colorado State University), Keith Carlisle (National Wildlife Research Center)

S-2C: Access to Wildlife for Underserved Communities | Saturday, June 3

11:50 AM – 1:50 PM | Clark Building, Room A 103

Session Chair: Amanda Gonzales (U.S. Fish & Wildlife Service)

The Making of Ban-manas, or Lesser-than-Human: Tribal perspectives of living with wildlife in a modern world

Amit Kaushik (Centre for Integrative Conservation, Department of Anthropology University of Georgia)

Conservation of the Threatened African Wild Ass (*Equus Africanus*) in the Danakil Desert, Eritrea

Redae Tesfai (Natural Resource Ecology Laboratory, NESB, Colorado State University, Fort Collins), Norman Owen-Smith (School of Animal, Plant and Environmental Sciences, University of the Witwatersrand), Francesca Parrini (School of Animal, Plant and Environmental Sciences, University of the Witwatersrand), Patricia Moehlman (IUCN/SSC Equid Specialist Group)

Supporting Ethno-Racial Diversity in Outdoor Spaces

Aida Bagheri Hamaneh (Virginia Tech), Willandia Chaves (Virginia Tech), Ashley Dayer (Virginia Tech), Tiffany Drape (Virginia Tech)

Vulnerable Demographic Groups Benefit from an Invasive Snail

Ana Rita Canhão Pereira (Centre for Ecology, Evolution and Environmental Changes), Martina Panisi (Centre for Ecology, Evolution and Environmental Changes), Jorge Palmeirim (Centre for Ecology, Evolution and Environmental Changes), Ricardo Faustino de Lima (Centre for Ecology, Evolution and Environmental Changes), Ana Nuno (Centre for Ecology, Evolution and Environmental Changes)

The Confluence of Diverse Recreationists and Invasive Carp

Susan Steffen (Kansas Department of Wildlife and Parks), Lucas Kowalewski (Kansas Department of Wildlife and Parks), Chris Steffen (Kansas Department of Wildlife and Parks), Michael Parr (Kansas Department of Wildlife and Parks)

Investigating Access to Wildlife and Other Natural Resources in the Urbanizing Brazilian Amazon

Lisley Gomes (Virginia Tech), Willandia Chaves (Virginia Tech)

SESSION DETAILS

S-3A: Exotic Pet Trade & Animal Trafficking | Saturday, June 3

2:10 – 3:40 PM | Lory Student Center, Ballroom A

Session Chair: Lauren Jaebker Lueth (U.S. Fish & Wildlife Service)

Can Participatory Systems Modeling Improve Collaborative Problem-Solving in Conservation?

Erica Rieder (North Carolina State University), Lincoln Larson (NC State University), Michael 't Sas-Rolfes (University of Oxford), Birgit Kopainsky (University of Bergen)

Tracking Illegal Cheetah Trade in East Africa

Patricia Tricorache (Natural Resource Ecology Laboratory, NESB, Colorado State University), Paul Evangelista (Natural Resource Ecology Laboratory, NESB, Colorado State University), Nicholas Young (Natural Resource Ecology Laboratory, NESB, Colorado State University), Darin Schulte (Natural Resource Ecology Laboratory, NESB, Colorado State University), Matthew Luizza (U.S. Fish and Wildlife Service)

Expert Perspectives on the Exotic Cat Trade in the United States

Taylor Heid (University of Georgia), Elizabeth F. Pienaar (Warnell School of Forestry and Natural Resources, University of Georgia)

State Agency and Invasion Ecologists' Perceptions of the Risks and Regulation of the Exotic Pet Trade

Elizabeth Pratt (Warnell School of Forestry and Natural Resources, University of Georgia), Elizabeth F. Pienaar (Warnell School of Forestry and Natural Resources, University of Georgia)

S-3C: Working with Underserved Communities | Saturday, June 3

2:10 - 3:40 PM | Clark Building, Room A 103

Session Chair: Matías Hargreaves Méndez (Universidade Federal de Santa Catarina)

Mapping Women's Hunting and Fishing Groups to Increase Retention of Women

Shelby Isensee (South Dakota State University), Lauren Redmore (U.S. Forest Service), Jennifer Cheek (South Dakota State University)

Social Value Mapping Native Hawaiian Kuleana to Place

Alohi Nakachi (University of Hawai'i at Mānoa), Kirsten Leong (Pacific Islands Fisheries Science Center National Marine Fisheries Service-NOAA), Kirsten Oleson (University of Hawai'i at Mānoa)

Natural Areas Use Among Hispanics in South Carolina

Alix Pedraza (SCDNR), Mariela Fernandez (University of Illinois Urbana-Champaign), Stefanie Ruiz (Clemson University), Ben Fowler (Clemson University), Bob Brookover (Clemson University)

Implementing the Relevancy Roadmap in Nevada

Bobby Jones (Nevada Department of Wildlife)

S-4A: Human-Elephant Conflict | Saturday, June 3

4:00 – 6:00 PM | Lory Student Center, Ballroom A

Session Chair: Matthew Luizza (U.S. Fish and Wildlife Service)

Shifts in the Conflict-Coexistence Continuum: Exploring social-ecological determinants of human-elephant interactions

Grace Malley (University of Dar es salaam)

Psychological Drivers of Human-Elephant Coexistence in Peninsular Malaysia

Natasha Zulaikha Zahirudin (School of Environmental and Geographical Sciences, University of Nottingham Malaysia), Salman Haji Saaban (Department of Wildlife and National Parks Peninsular Malaysia), Steve Stewart-Williams (School of Psychology, University of Nottingham Malaysia), Ee Phin Wong (School of Environmental and Geographical Sciences, University of Nottingham Malaysia)

A Quantitative Assessment of the Indirect Impacts of Human-Elephant Conflict

Shari Rodriguez (Clemson University), Christie Sampson (University of the Ozarks), Peter Leimgruber (Smithsonian Conservation Biology Insitutute), Qiongyu Huang (Smithsonian Conservation Biology Insitutute), David Tonkyn (Clemson University)

Human-wildlife conflict and rural livelihoods: A case study of the Hluhluwe-iMfolozi Park, South Africa

Sakhile Nsukwini (University of Mpumalanga)

SESSION DETAILS

S-4C: Management Shifts for Recreational Area Use | Saturday, June 3

4:00 – 6:00 PM | Clark Building, Room A 103

Session Chair: Jennie Duberstein (U.S. Fish and Wildlife Service)

Amongst the Biologists

May Lehmensiek (Florida Fish and Wildlife Conservation Commission), Chelsey Crandall (Florida Fish and Wildlife Conservation Commission)

Understanding Recreational Use on Managed Wildlife Areas

Emily Pomeranz (Michigan Department of Natural Resources), Melissa Nichols (Michigan Department of Natural Resources, Wildlife Division), Barbara Avers (Michigan Department of Natural Resources), Jeremiah Heise (U.S. Forest Service), Mauri Liberati (Michigan Department of Natural Resources)

Lessons on Collaborative Governance: From qualitative to quantitative analysis

Candice Carr Kelman (Arizona State University), Michael Schoon (Arizona State University)

Shifting Wildlife Managerial Perspectives on Recreational Uses in Michigan

Lydia Kiewra (Michigan State University), Elizabeth Perry (Protected Areas & Natural Resources Recreation Management, Michigan State University), Emily Pomeranz (Michigan Department of Natural Resources, Wildlife Division), Melissa Nichols (Michigan Department of Natural Resources, Wildlife Division), Shelby Marocco (Undergraduate Research Assistant, Michigan State University)

Understanding Wildlife-Associated Recreationists in North Carolina

Cristina Watkins (NC Wildlife Resources Commission), Kathryn Jewell (NC Wildlife Resources Commission), Carrie Ruhlman (NC Wildlife Resources Commission)

S-4D: Chronic Wasting Disease Management | Saturday, June 3

4:00 – 6:00 PM | Clark Building, Room A 104

Session Chair: Kathryn Jewell (NC Wildlife Resources Commission)

Applying Theories of Change to CWD Management

Brad Milley (U.S. Fish and Wildlife Service), Nicholas Cole (USGS)

Hunter Motivations Behind Voluntary CWD Testing

Kathryn Jewell (NC Wildlife Resources Commission), Cristina Watkins (NC Wildlife Resources Commission), Carrie Ruhlman (NC Wildlife Resources Commission), Moriah Boggess (NC Wildlife Resources Commission)

Legitimacy and Wildlife Disease: Should chronic wasting disease be managed without government?

Christopher Serenari (Texas State University), Elena Rubino (University of Arkansas at Monticello)

Using a Community-Based Approach to Develop CWD Outreach with Diverse Hunting Communities

Roger Faust (University of Minnesota, Twin Cities), Tiffany Wolf (University of Minnesota), Lauren Bernstein (University of Minnesota), Colin Yoder (University of Minnesota), Madeline Struck (University of Minnesota)

POSTER SESSION AND EVENING SOCIAL

Friday, June 2, 2023
6:00 - 8:00 PM U.S. MT

The Increasing Numbers of Poaching Incidents in Post-COVID Lockdown at Ditholo Nature Reserve, South Africa

Forgive Maluleke (Nature Conservationist)

Sitting Ducks: Landscape factors, impacts, and management strategies for black vulture conflicts near animal care facilities

Hannah Partridge (University of North Carolina - Charlotte), Sara Gagné (University of North Carolina - Charlotte), Colleen Hammelman (University of North Carolina - Charlotte)

Towards Agenda 2030: Livelihoods and dependence of forest-driven rural economies in the Congo Basin

Nina Flora Ngate Ndongo (KSM Consulting), Ntumwel Bonito chia (Service of Sustainable Development, Ministry of Environment, Nature Protection and Sustainable Development), Endamana Dominique (International Union for the Conservation of Nature)

The Provocations and Scope of Accompany with Nilgai Antelope (*Boselaphus tragocamelus*) in the Anthropoid Dominated Landscapes of India

Suday Prasad (Bihar Agricultural University)

HDgov: Sharing social science through multi-agency collaboration

Kaylin Clements (USGS), Nicholas Cole (USGS), Tom Fish (National Park Service), Brad Milley (US Fish and Wildlife Service), Rudy Schuster (USGS)

Dark Skies: The need to combat light pollution

Jean Orlando (Zoo New England)

Rock Climbers' Willingness to Participate in Citizen Science

Morgan Siebka (Slippery Rock University), Emily Gross (Colorado State University), Robert Schorr (Colorado State University), Shawn Davis (Slippery Rock University)

Collaborative Conservation Networks Enhance Diversity, Equity, and Inclusion

Kaitlyn Tiffany (NC State University), Nils Peterson (NC State University), Lincoln Larson (NC State University), Kathryn Stevenson (NC State University), Erin Seekamp (NC State University)

Characterizing and Assessing Women's Access to the Outdoors for Hunting and Fishing

Nash Jackson (South Dakota State University), Jennifer Cheek (South Dakota State University), Lauren Redmore (U.S. Forest Service)

Entanglement of Elite Falconry, Wildlife Laws and Conservation

Asif Sandeelo (University of Georgia)

POSTER SESSION AND EVENING SOCIAL

Friday, June 2, 2023
6:00 - 8:00 PM U.S. MT

No Picnic for Yogi: A social marketing solution

Channing Bice (Colorado State University Department of Journalism & Media Communication), Katie Abrams (Colorado State University Department of Journalism & Media Communication)

How Indigenous LA Holds Sustainability

Ariella Gaughan (University of California Los Angeles)

Human Dimensions of Newfoundland and Labrador's Murre Harvest

Claire Brenton (Grenfell Campus of Memorial University), Hayley Myers (Grenfell Campus of Memorial University)

Stakeholders' Opinion on Turkey Management in Tennessee

Binod Chapagain (Tennessee Wildlife Resources Agency)

Rodents! Diverse damage management research with the Rodents Unit of USDA's Wildlife Services, National Wildlife Research Center, Fort Collins

Lauren Scott (USDA, APHIS, Wildlife Services, National Wildlife Research Center), Aaron B. Shiels (USDA, APHIS, Wildlife Services, National Wildlife Research Center), Danika R. Spock (USDA, APHIS, Wildlife Services, National Wildlife Research Center)

Understanding BIPOC Audiences: Using survey and email data to understand Audubon's challenges engaging black and hispanic audiences

Rodrick Leary (National Audubon Society), Josh Uretsky (National Audubon Society), Sarah Friedman (National Audubon Society), Nick Mason (National Audubon Society), Ella Zafra (National Audubon Society)

IN MEMORIAM

Dr. Ketil Skogen, Senior Research Fellow at the Norwegian Institute for Nature Research, passed away suddenly while skiing this past April. Ketil was a sociologist that was a frequent attendee at Pathways from our beginnings and is known particularly for his work on wolves. He will be missed.



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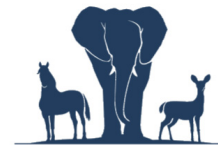
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| Adams | Dan | T-3B, S-2D |
| Adhikari | Ram | F-2D |
| Agnew | Aimee C. | F-2D |
| Ahlholm | Aku | T-4C |
| Alazaizeh | Mohammad | F-2D |
| Alexander | Shelley | T-3C |
| Amlin | Angela | F-1C |
| Anderson | Robert | T-1B, T-2B |
| Anderson | Scott | S-4B |
| Anderson | Wesley | F-1C |
| Arlinghaus | Robert | T-2D |
| Artuso | Christian | F-2B |
| Asselin-Nguyen | Antoine | F-2B |
| Athreya | Vidya | F-4C |
| Avers | Barbara | S-4C |
| Ayambire | Raphael | F-2B |
| Aygen | Deniz | S-1A |
| Azeez | Olakunle Kazeem | F-2A |
| Bagheri Hamaneh | Aida | S-2C |
| Baverstock | Sinead | F-4B |
| Beall | Justin | T-4B |
| Beardmore | Ben | T-2D |
| Beaver | Jared | T-2B |
| Beck | Jeffrey L. | T-1C, T-2C |
| Bennett | Drew | T-3B, F-2A, F-2B |
| Bergman | David | S-1D |
| Berl | Richard | F-3D |
| Bernstein | Lauren | S-4D |
| Bian | Xiaoxing | F-4C |
| Bice | Channing | T-4B, Poster |
| Bixby | Kevin | F-1D |
| Boettger | Emily | T-2B |
| Boggess | Moriah | S-4D |
| Boley | B. Bynum | T-1A, T-2D |
| Bonito chia | Ntumwel | F-3D, Poster |
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| AUTHOR LAST NAME | AUTHOR FIRST NAME | SESSION ID |
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| Bratton | Rachel | T-3A |
| Breck | Stewart | T-2B, F-3C, S-1D |
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| Briggs-Gonzalez | Venetia | F-2D |
| Bright | Alan | S-2A |
| Brooke | Samantha | F-2B |
| Brookover | Bob | S-3C |
| Bruegger | Samantha | F-1D |
| Bruemmer | Jason | S-2D |
| Bruskotter | Jeremy | T-3C, T-4C |
| Bryson | Chelsey | F-1C |
| Buccino | Sharon | T-3B |
| Buchanan | Courtney | T-2C |
| Byerly Flint | Hilary | F-2A |
| Calme | Sophie | F-3C |
| Canhão Pereira | Ana Rita | S-2C |
| Carlino | Elizabeth | T-1B |
| Carlisle | Celeste | T-3B |
| Carlisle | Keith | T-3A, S-1D, S-2A, S-2D |
| Carlson | John | F-2B |
| Carpenter | John | S-4B |
| Carr | Anna | F-2D |
| Carr Kelman | Candice | F-4D, S-4C |
| Carranza | Katia | F-2B |
| Carricondo Sanchez | David | F-4C |
| Carter | Mike | F-2B, F-3B |
| Carter | Neil | T-4C |
| Casellas Connors | John | T-1B, T-2B |
| Casola | Will | T-4B |
| Cavanah | Sarah | T-4B |
| Cavasos | Kevin | F-2D |
| Chapagain | Binod | Poster |
| Chaves | Willandia | F-1A, S-2C |
| Cheek | Jennifer | S-3C, Poster |
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| Christman | Michelle | S-1B |

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| Clements | Kaylin | T-3A, Poster |
| Coates | Peter | S-1D |
| Cole | Nicholas | S-3D, S-4D, Poster |
| Cooke | Steven | T-1A |
| Crabb | Michelle | T-2C |
| Crandall | Chelsey | S-4C |
| Crooks | Kevin | F-2C, F-3C |
| Curtis | Paul | S-1D |
| D'Angelo | Gino | T-1A |
| Da-U- Re | Nureehua | F-4B |
| Daniel | Kristy | T-1D |
| Danoff-Burg | James | T-1D |
| DaRugna | Olivia | S-1A |
| Darville | Ray | F-1C |
| Davis | Shawn | Poster |
| Dayer | Ashley | F-1A, F-1B, S-2C, S-4B |
| De Vroey | Linde | F-3A |
| Deen | Rosa | S-2A |
| del Valle Menéndez | Juan Pablo | F-3C |
| Delborne | Jason | S-2D |
| Dettenmaier | Seth | S-1D |
| Diaz-Pulido | Angélica | F-3C |
| Ditchkoff | Stephen | F-3D |
| Dixit | Sweta | F-2A |
| Dominique | Endamana | Poster |
| Dorow | Malte | T-2D |
| Dowling-Guyer | Seana | T-3A |
| Drake | David | T-3C |
| Drape | Tiffany | S-2C |
| Dubenstein | Jennie | F-1C |
| Duchardt | Courtney | T-1C |
| Dunning | Kelly | F-1C, F-3D |
| Edwards | Mags | S-4B |
| Eggeman | Diane | F-3B |
| Ellington | Hance | S-2A, Poster |

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| AUTHOR LAST NAME | AUTHOR FIRST NAME | SESSION ID |
|------------------|-------------------|------------------------|
| Ellis | Hailey | S-2A |
| English | Ned | T-4E |
| Enriquez | Aaron | F-2A |
| Esmaeili | Saeideh | T-1C |
| Esmail | Nafeesa | T-1D |
| Evangelista | Paul | S-3A |
| Evans | Paul | F-2D |
| Faust | Roger | S-4D |
| Faustino de Lima | Ricardo | S-2C |
| Fearer | Todd | F-1B |
| Fernandez | Mariela | S-3C |
| Few | Alex | T-2B |
| Fish | Tom | T-4D, S-1C, Poster |
| Flowers | Veronica | Poster |
| Folt | Brian | S-2D |
| Fowler | Ben | S-3C |
| Franklin | Derek | F-2D |
| Fritz | Jill | S-3B |
| Fuller | Angela | F-2C |
| Gagné | Sara | Poster |
| Gamborg | Christian | F-3A |
| Garcia | Santiago | F-2C |
| Gaughan | Ariella | Poster |
| Gavin | Michael | F-3D |
| Gese | Eric | S-1D |
| Ghasemi | Benjamin | T-2A, F-2C, F-4C |
| Giocomo | Jim | F-1B |
| Glick | Anne | F-1A |
| Glikman | Jenny Anne | T-2A |
| Gloria-Martinez | Ariana | F-2B |
| Goethlich | Jamie | T-2B |
| Goheen | Jacob | T-1C |
| Gomes | Lisley | S-2C |
| Goni | Ibrahim | F-2A |
| Goode | Kaitlin | F-1C |
| Gorby | Doug | F-3B |
| Gosnell | Hannah | T-1D |
| Grady | Meredith | S-2A |
| Graham | Katherine | T-1D |
| Gramza | Ashley | F-1C, F-2B, F-3B, S-1B |

AUTHOR & PRESENTER LIST

| AUTHOR LAST NAME | AUTHOR FIRST NAME | SESSION ID |
|-------------------------|--------------------------|-------------------|
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| Griffin | John | F-1C |
| Griffin | Laura | T-3B |
| Grilli | Gianluca | T-3A |
| Grodzińska-Jurczak | Małgorzata | F-3A |
| Gross | Emily | Poster |
| Grünewald | Claudia | T-4D |
| Gruntorad | Matthew | T-1A, S-1B |
| Guilbeau | Kelly | F-3B |
| Haase | Dagmar | F-1C |
| Haji Saaban | Salman | S-4A |
| Hamdan | Basil | T-2D |
| Hamed | Miruh | F-2B, F-3B |
| Hammelman | Colleen | Poster |
| Hampton | Jordan | S-2A |
| Hargreaves Méndez | Matías | F-3C |
| Harshaw | Howie | T-1A |
| Harvey | Andrea | S-2A |
| Hayes | Stu | F-2D |
| Heid | Taylor | S-3A |
| Heise | Jeremiah | S-4C |
| Hemami | Mahmoud-Reza | T-1C |
| Hennig | Jacob | T-1C |
| Henson | Ella | F-4B |
| Hinojosa-Huerta | Osvel | F-1B |
| Holland | Kathleen | F-1B, F-2B |
| Horton | Emily | T-1A, S-1B |
| Huang | Qiongyu | S-4A |
| Huck | Nathaniel | S-1B |
| Hull | Vanessa | T-1B, F-4C |
| Humburg | Dale | F-3B |
| Hurst | Kristin | F-3B |
| Hurst | Zach | F-2B |
| Hyberger | Kjersten | T-1D |
| Hyde | Matthew | T-2B, F-3C |
| Isensee | Shelby | S-3C |
| Jachowski | David | T-3B |
| Jackman | Jennifer | T-3A |

AUTHOR & PRESENTER LIST

| AUTHOR LAST NAME | AUTHOR FIRST NAME | SESSION ID |
|-------------------|----------------------|---|
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| Jackson | Pat | S-1D |
| Jacobs | Maarten | T-2A |
| Jaebker | Lauren | S-2A |
| Jagnow | Coren | S-1B, S-3D |
| Jamaliah | Malek | F-2D |
| January-Bevers | Deborah | T-2D |
| Jennings | Kelsey | F-1A |
| Jennings | Nicole | F-2D |
| Jensen | Frank Søndergaard | F-3A |
| Jeschke | Jonathan | F-1C |
| Jewell | Kathryn | S-1B, S-4C, S-4D |
| Johannsen | Kristina | T-1A, F-1C |
| John | Gounes Tougoulou | F-3D |
| Johnson | Shawn | F-4D |
| Jones | Bobby | S-3C |
| Josephine Therese | Beyala Epse Eloundou | F-3D |
| Kahler | Jessica S. | F-4C |
| Kane | Adam | T-3B, F-4C |
| Karanth | Krithi | F-4C |
| Kaushik | Amit | S-2C |
| Keefover | Wendy | S-3B |
| Kemink | Kaylan | T-4B |
| Kiewra | Lydia | S-4C |
| Killmaster | Charlie H. | T-1A |
| Kim | Soojung | T-4B |
| King | Sarah | T-1C |
| Kohler | Allison | T-1B |
| Kopainsky | Birgit | S-3A |
| Kowalewski | Lucas | S-2C |
| Kramer-Schadt | Stephanie | F-1C |
| Kyle | Gerard | T-3B, F-2C, F-4C |
| Landon | Adam | T-3B, T-4C |
| Larson | Lincoln | T-3A, T-4B, S-1B, S-3A, S-4B, Poster |
| Latimer | Chris | F-2B |
| Lecuyer | Lou | F-3C |
| Lehmensiek | May | S-4C |
| Leimgruber | Peter | S-4A |

AUTHOR & PRESENTER LIST

| AUTHOR LAST NAME | AUTHOR FIRST NAME | SESSION ID |
|------------------|-------------------|--------------------|
| Leong | Kirsten | F-1C, S-3C |
| Liberati | Mauri | S-4C |
| Livingston | Sami | F-1B, F-4A |
| Luizza | Matthew | S-3A |
| Lute | Michelle | F-1D |
| Lyons | Krista | T-4B |
| Magnuson | Mary | T-3C |
| Malak | Adela | T-2D |
| Malato | Daniel | T-4E |
| Malley | Grace | S-4A |
| Maluleke | Forgive | Poster |
| Mateos-Delibes | Miguel | T-2A |
| Manfredo | Michael | T-2A |
| Marocco | Shelby | S-4C |
| Mazzotti | Frank | F-2D |
| McCormac | Mary | F-4A |
| McInenly | Leslie | T-4C |
| McKinney | John | S-1B |
| McLeod | Emily | F-4B |
| McPherson | Jana | T-1D |
| Meletis | Zoe | F-2A |
| Mendis | Roshayne | Poster |
| Merz | Leandra | T-4C |
| Messick | Jared | T-1D |
| Meyers | Jeff | S-1A |
| Middleton | Arthur | F-2A |
| Miller | Craig | T-3C, F-2C |
| Miller | David S. | T-3A |
| Miller | Kelly | F-4B |
| Milley | Brad | S-3D, S-4D, Poster |
| Mini | Anne | F-3B |
| Mitchell | Robert | T-3C |
| Moehlman | Patricia | S-2C |
| Moesch | Simon | F-1C |

AUTHOR & PRESENTER LIST

| AUTHOR LAST NAME | AUTHOR FIRST NAME | SESSION ID |
|------------------|-------------------|------------|
| Montgomery | Charlotte | Poster |
| Moorman | Thomas | F-3D |
| Morzillo | Anita | T-1B |
| Moynahan | Brendan | F-2A |
| Murano | Rocco | S-1B |
| Murphy | Kilian | T-3B |
| Murphy | Sean M. | S-3B |
| Mutune | Jane | F-3C |
| Myers | Hayley | Poster |
| Nakachi | Alohi | S-3C |
| Ngate Ndongo | Nina Flora | Poster |
| Nichols | Melissa | S-4C |
| Niedziałkowski | Krzysztof | T-4C, F-3A |
| Niemiec | Rebecca | F-2C, S-2B |
| Nimlos | Nicole | F-4B |
| Nolan | Grace | T-3B, F-4C |
| Notaro | Sandra | T-3A |
| Nsukwini | Sakhile | S-4A |
| Nuno | Ana | S-2C |
| O'Connor | Caroline | T-3C |
| O'Neil | Shawn | S-1D |
| Obst | Arthur | F-3A |
| Ochoa | Diana P. | F-1B |
| Odewumi | Oluyinka Sunday | F-2A |
| Ogunjinmi | Anthony Adekunle | F-2A |
| Oleson | Kirsten | S-3C |
| Olive | Andrea | F-2B |
| Orimaye | Jacob | F-2A |
| Orlando | Jean | Poster |
| Owen-Smith | Norman | S-2C |
| Owens | Seth | T-4B |
| Pagel | Thilo | T-2D |
| Pallazza | Samantha | F-2C |
| Palmeirim | Jorge | S-2C |
| Palmer | Clare | T-1B, F-3A |
| Panisi | Martina | S-2C |
| Parr | Michael | S-2C |
| Parrini | Francesca | S-2C |
| Partridge | Hannah | Poster |

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| AUTHOR LAST NAME | AUTHOR FIRST NAME | SESSION ID |
|------------------|-------------------|------------------------|
| Pedraza | Alix | F-1A, S-3C |
| Pellikka | Jani | T-4C |
| Penn | Jerrod | F-3B |
| Penrod | Rachel | S-1A |
| Pereira | Kali | F-1C |
| Perry | Elizabeth | S-4C |
| Peterson | Nils | T-4B, Poster |
| Petrie | Mark | F-3B |
| Piccolomini | Sara E. | F-2D |
| Pienaar | Elizabeth F. | T-1A, F-1C, F-4B, S-3A |
| Pineda-Guerrero | Alexandra | F-3C |
| Plante | Shelly | F-1A, S-1A |
| Pomeranz | Emily | S-4C |
| Pototsky | Christy | F-1A, S-4B |
| Poudyal | Neelam C. | F-2A, F-2D |
| Powell | Brian | S-2A |
| Prasad | Suday | Poster |
| Pratt | Elizabeth | S-3A |
| Preasious | Forbi Funwi | F-3D |
| Prestigiacomio | Diana | F-1A |
| Priest | A. | F-3B |
| Pumphrey | Annie | F-2A |
| Puri | Mahi | F-1C |
| Quartuch | Mike | S-1B, S-2B, S-3D |
| Rajala | Kiandra | F-3B |
| Ranglack | Dustin | S-1D |
| Raschke | Aireona | F-4D |
| Rawat | Karun | F-2D |
| Rea | Christopher | T-1B |
| Redmore | Lauren | S-3C, Poster |
| Reichert | Brian E. | F-2D |
| Reynolds | Debra | F-4A |
| Rieder | Erica | S-3A |
| Richardson | Leslie | F-2A |
| Riley | Collin | T-4B |
| Roberts | Ryan | F-2B, F-3B |
| Roberson | Aimee | F-2B |
| Robertson | Tahnee | F-4D |
| Robinson | Barry | F-2B |
| Rodriguez | Shari | S-4A |
| Rojas | Camilo | F-1C |

AUTHOR & PRESENTER LIST

| AUTHOR LAST NAME | AUTHOR FIRST NAME | SESSION ID |
|---------------------|-------------------|------------------|
| Roth | Cali | S-1D |
| Rubino | Elena | T-1D, F-3B, S-4D |
| Ruder | Mark | T-1A |
| Ruhlman | Carrie | S-4C, S-4D |
| Ruiz | Stefanie | S-3C |
| Ruiz-Gutiérrez | Viviana | F-1B |
| Ruschkowski | Eick von | T-4D, S-1C |
| Rutberg | Allen | F-1C |
| Ruthenberg | Jessica | F-1A |
| Rutledge | Liz | S-1B |
| Ruvalcaba Ortega | Irene | F-2B |
| Ryder | Brandt | F-2B |
| Ryver | Brier | S-2A |
| Safiq | Alexandrea | F-3A, S-2B |
| Sainsbury | Katie | T-1A |
| Salerno | Jonathan | F-3D |
| Sampson | Christie | S-4A |
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| Sanderson | John | F-4D |
| Sandøe | Peter | F-3A |
| Santillan Gutierrez | Luis Ernesto | F-3A |
| Saurav | Devashish | T-1B |
| Scasta | Derek | T-1C, T-2C |
| Schenk | Todd | Poster |
| Schmook | Birgit | F-3C |
| Schneider | Erik | F-1B |
| Schoenecker | Kate | T-1C, T-2C, S-2D |
| Schoon | Michael | S-4C |
| Schorr | Robert | Poster |
| Schroeder | Susan | T-4C |
| Schulte | Darin | S-3A |
| Schultz | Jeff | S-1D |
| Schuster | Rudy | Poster |
| Sciandra | Olivia | F-1C |
| Scott | Lauren | Poster |
| Seekamp | Erin | Poster |
| Serenari | Christopher | T-1D, T-3D, S-4D |
| Sexton | Natalie | S-1B, S-2B |
| Shapiro | Hannah | T-1A |
| Shaw | Bret | T-3C |

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| AUTHOR LAST NAME | AUTHOR FIRST NAME | SESSION ID |
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| Shawler | Avery | F-2C |
| Shiels | Aaron B. | Poster |
| Shivakumar | Shweta | F-4C |
| Short Gianotti | Anne | T-1B, T-2B |
| Shorter | Lindsay | F-3B |
| Siebka | Morgan | Poster |
| Silwal | Thakur | F-2A |
| Simelane | Phumlile | F-3D |
| Sinkular | Emily | F-1A, S-4B |
| Slagle | Kristina | T-3C |
| Smith | Ada | F-2B |
| Smith | Brian | F-1B |
| Smith | Kyle | T-3B |
| Smith | Lorna | F-1D |
| Sneckenberger | Sandra | F-3D |
| Solomon | Jennifer | T-3A |
| Soulliere | Greg | F-3B |
| Spock | Danika R. | Poster |
| Stedman | Richard | F-2C |
| Steffen | Chris | S-2C |
| Steffen | Susan | S-2C |
| Stennes | Katie | S-3B |
| Stevens | Madison | T-4C |
| Stevenson | Kathryn | Poster |
| Stewart-Williams | Steve | S-4A |
| Stoellinger | Temple | T-3B |
| Stoner | David C. | T-2C |
| Straka | Tanja | F-1C |
| Struck | Madeline | S-4D |
| Strzelecka | Marianna | T-2D, F-3A |
| Sullivan | Leeann | T-2B |
| Tanakanjana Phongkieoa | Noppawan | F-4B |
| Teampanpong | Jiraporn | F-4B |
| Teel | Tara | T-2A, F-2C, F-3C |
| Tesfai | Redae | S-2C |
| Thenya | Thuita | F-3C |
| Thiensongrusamee | Preeda | F-4B |
| Tiffany | Kaitlyn | Poster |
| Titus | Keifer | T-3B |

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| Tonkyn | David | S-4A |
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| Wakeling | Brian | S-1D |
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| Wight | Amanda | S-3B |
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| Wilson | Barry | F-3B |
| Wingard | Gana | T-2C |
| Wolf | Tiffany | S-4D |
| Wolter | Faren | S-1B |
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| Wray | Amy K. | F-2D |
| Wurtzebach | Zack | T-3B |

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| Yanchis | Kristi | F-3D |
| Yoder | Colin | T-3B, T-4C, S-4D |
| York | Betsey | S-1B |
| Young | Julie | T-2B |
| Young | Nathan | T-1A |
| Young | Nicholas | S-3A |
| Young | Julie | S-1D |
| Zahirudin | Natasha Zulaikha | S-4A |
| Zhang | Xiaohan | F-2C |
| Zohdy | Sarah | F-1C |

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