

**Colorado Chapter of The Wildlife Society**  
**Annual Meeting**  
**Feb 5<sup>th</sup>-7<sup>th</sup>, 2019**  
**Hilton Hotel, Fort Collins, Colorado**



**Wednesday, February 5, 2020**                      **Workshop: Camera Trapping**

**Workshop Organizer: Nate Seward**

This workshop will require a fee with meeting registration (workshop limited to 25 people, must preregister). A laptop with Microsoft Access 2007 or newer is required for this workshop.

8:00-10:00      Benefits of camera traps for wildlife monitoring and how to organize and manage photos in CPW's Photo Database  
*Jake Ivan, Colorado Parks and Wildlife*

10:00-10:15      Break – refreshments provided

10:15-12:00      Managing photographs and analyzing camera trap data: Focus on MS Access database  
*Jake Ivan, Colorado Parks and Wildlife*  
*Eric Odell, Colorado Parks and Wildlife*  
*Eric Newkirk, Colorado Parks and Wildlife*

**Wednesday, February 5, 2020**                      **Workshop: Bat Bioacoustics**

**Workshop Organizer: Matt Rustand**

This workshop is free and open to all.

8:00 am            Introduction – *Matt Rustand, CCTWS/Bureau of Land Management*

**What is bat acoustic monitoring?**

8:10-8:40            Bat Acoustics – What it is and is not – *Dan Neubaum, Colorado Parks and Wildlife*

8:40-9:10            How it works – *Jeremy Siemers, Colorado Natural Heritage Program*

**Examples of how acoustic data can be used**

9:10-9:25            Colorado National Monument Project – *Dan Neubaum, Colorado Parks and Wildlife*

9:25-9:40            State monitoring program – *Tina Jackson, Colorado Parks and Wildlife*

9:40-10:00          Rocky Mountain National Park Project – *Jeremy Siemers, Colorado Natural Heritage Program*

10:00-10:15          Break – refreshments provided

10:15-10:30          NABat – *Brian Reichert, U.S. Geological Survey*

10:30-11:40 Equipment Demonstrations

Three stations will be available to get hands on experience with a selection of the different set ups available. Presenters will walk through the equipment and discuss pros and cons of each. Groups will rotate every 20 minutes.

- Wildlife Acoustics
- Petterson – *Jeremy Siemers, Colorado Natural Heritage Program*
- Anabat – *Dane Smith, U.S. Geological Survey*

11:40-12:00 Q and A between workshop participants and presenters.

**12:00-1:00 Break for lunch (lunch not provided)**

**Wednesday, February 5, 2020                      Workshop: Wildlife Acoustics Equipment and Software**

**Organizer: Wildlife Acoustics**

1:00-5:00 Hands-on training

Please join Wildlife Acoustics for a hands-on training session in bat bioacoustics tools. This is a rare training opportunity for researchers just starting or already involved in using acoustics to monitor bats. During this comprehensive session, Wildlife Acoustics' staff will host a hands-on workshop to teach participants the features and set up of the Song Meter SM4BAT, Song Meter Mini Bat and Echo Meter Touch 2. Participants will also learn how Kaleidoscope Pro can be used to process large and small datasets to produce quantifiable outputs.

**Wednesday, February 5, 2020                      Symposium: Wildlife Disease**

**Organizer: John Hughes**

- 1:00 Welcome and introductions – *John Hughes, CCTWS*
- 1:10-1:30 One Health and the National Park Service Wildlife Health Branch – An Overview  
*Dr. Danielle Buttke, National Park Service*
- 1:30-1:50 Recent developments in the management of sylvatic plague – *Dan Tripp, Colorado Parks and Wildlife*
- 1:50-2:10 Chronic wasting disease monitoring in Colorado – *Dr. Mike Miller, Colorado Parks and Wildlife*
- 2:10-2:30 Management of white-nose syndrome in bats – *Kim Dickerson, U.S. Fish and Wildlife Service*
- 2:30-3:00 Break – refreshments provided
- 3:00-3:20 Population level effects of chytrid fungus for amphibians in Colorado – *Dr. Timothy Korpita, Colorado State University*
- 3:20-3:40 Status of West Nile Virus in Colorado – *Dr. Nick Komar, Centers for Disease Control*

- 3:40-4:00 New developments in the management of disease in free-ranging bighorn sheep populations in Colorado – *Dr. Karen Fox, Colorado Parks and Wildlife*
- 4:00-4:20 Genome-wide Association Analyses reveal differential response of feral swine to enzootic pathogens - *Dr. Timothy Smyser, USDA APHIS National Wildlife Research Center*
- 4:20-4:50 Roundtable – wildlife diseases dynamics in the face of climate change (all speakers)
- 4:50-5:00 Closing remarks

**Wednesday, February 5, 2020 Internal Meetings**

- 1:00-5:00 USFWS Colorado Partners for Fish and Wildlife Program meeting  
 1:00-5:00 US Forest Service Wildlife Biologist meeting

**Wednesday, February 5, 2020 Opening Networking reception**

**Organizers: Nathan Galloway and Andrew Don Carlos**  
**Co-Sponsored by Backcountry Hunters and Anglers**

- 6:00-9:00 Location: Fort Collins Hilton, donated beer and cash bar, heavy appetizers



**Thursday, February 6, 2020 Student Networking Breakfast**

- 7:00-8:00 Invite only, Location & sign up: <https://forms.gle/GVW79Q35MhrZaNb2A>

Students who are interested in attending should contact their local student chapter president.  
**Professionals: if you are interested in helping with this event or mentoring future wildlife biologists please contact Katie Gray.** Contact info can be found on CCTWS website.

**Thursday, February 6, 2020 Wildlife Photo Contest**

**Organizer: Marcella Tarantino**

Bring up to three of your best photos to display at the conference. Photos will be judged by popular vote in the following categories: 1. Amphibians, Reptiles, and Fish; 2. Birds; 3. Invertebrates; 4. Mammals; 5. Game Camera; 6. Human Dimensions; 7. Landscapes and Still Life (including flora); and 8. Creative/Comedic. Prizes will be awarded in each category. See CCTWS website for details: <https://wildlife.org/colorado/meetings/annual-meeting/#PHOTO%20CONTEST>

**Thursday, February 6, 2020 Plenary Session: Emerging Topics in Wildlife Conservation**

**Organizers: Marcella Tarantino and Jesse McCarty**

- 8:00 am Welcome and introductions – *Jesse McCarty, President CCTWS*
- 8:10-8:50 Overview of emerging wildlife issues in 21<sup>st</sup> century - *Bill Gains, Conservation Science Institute*
- 8:50-9:10 Climate Change and wildlife – *David Inouye, Rocky Mountain Biological Laboratory*
- 9:10-9:30 Wildfire in the 21<sup>st</sup> century – *Brian Logan, U.S. Forest Service*

- 9:30-9:50 Avian beetle outbreak impacts – *Quresh Latif, Bird Conservancy of the Rockies*
- 9:50-10:20 Panel Discussion Q&A
- 10:20-10:40 BREAK – refreshments provided
- 10:40-11:00 New Disease Interactions – *Erik Hofmeister, U.S. Geological Survey*
- 11:00-11:20 Invasive Species Impacts (cheatgrass) – *Derek Sebastian, Bayer*
- 11:20-11:40 Impacts of tech on Naturalism – *Karl Malcolm, U.S. Forest Service*
- 11:40-12:00 Panel Discussion Q&A
- 12:00-12:05 President’s closing remarks
- 12:05-1:45 Business meeting and lunch for all members**

**Thursday, February 6, 2020                      Emerging Wildlife Technologies and Solutions**

**Organizers: Marcella Tarantino and Jesse McCarty**

- 1:45 Welcome and introductions – *Jesse McCarty, President CCTWS*
- 1:50-2:50 *Emerging Challenges in Human/Wildlife Conflict Resolution*
- Moderator – *Chris Parmeter, DWM Colorado Parks and Wildlife*
- Human-Wildlife Conflicts: Nature Disconnect – *Cassidy English, DWM Colorado Parks and Wildlife*
- Human-Wildlife Conflicts: Messaging for the Masses – *Elissa Slezak, DWM, Land Use Specialist Colorado Parks and Wildlife*
- Human-Wildlife Conflicts: Science vs Emotion – *Lucas Martin, DWM Colorado Parks and Wildlife*
- 2:50-3:10 Collar-Based Biologging – *Dr. George Wittemyer, Colorado State University*
- 3:10-3:30 Drones/UAVs used in wildlife conservation – *Dr. David Bird*
- 3:30-3:50 UAV-RT Software development and uses– *Michael Shafer, Northern Arizona University*
- 3:50-4:10 New Telemetry Possibilities – *Michael Crawford, LOTEK*
- 4:10-4:20 Panel Discussion Q&A
- 4:20-4:25 President’s closing remarks

**Thursday, February 6, 2020**                      **Contributed Papers Related to the Plenary**

**Organizers: Aran Johnson and Marcella Tarantino**

4:25-4:45            The dissonance between doing science and achieving conservation to protect long distance migration corridors – **Joel Berger** (CSU and Wildlife Conservation Society)

**Thursday, February 6, 2020**                      **IGNITE Session**

**Organizers: Aran Johnson and Marcella Tarantino**

4:45-5:15            Introduction to the IGNITE session  
Changes in chronic wasting disease ecology in elk at Rocky Mountain National Park – **Nathan L. Galloway** (National Park Service), **Jenny G. Powers** (NPS), **Ryan J. Monello** (NPS), and **Margaret A. Wild** (Washington State University)

Examining the impacts of prey availability and snow compaction on Canada Lynx – **Courtney L. King\*\*** (Western Colorado University)

Revisiting GPS fix success and habitat selection – **Ryan M. Nielson** (Eagle Environmental, Inc.), **David Vales** (Muckleshoot Indian Tribe), and **Michael Middleton** (Muckleshoot Indian Tribe)

Questions for Ignite Presenters

**Thursday, February 6, 2020**                      **Poster Session, Reception, Banquet, Auction, Awards**

**Organizers: Aran Johnson and Marcella Tarantino**

5:30-6:30            Reception and Poster Session

Marking duration of Rhodamine B from opportunistic sampling of raccoon whiskers – **Alison P. Barbee** (APHIS – Wildlife Services – National Wildlife Research Center), **Shylo R. Johnson** (APHIS), **Molly Selleck** (APHIS), **Chad Wickham** (APHIS), **Amy T. Gilbert** (APHIS)

Ecology of the Great Blue Heron (*Ardea Herodias*) rookery on the Slate River, Crested Butte, Colorado and impacts of human recreation – **Jake Bartholomew\*** (Western Colorado University), **Ellie Orr\*** (Western Colorado University), and **Patrick Magee** (Western Colorado University)

Differences in migratory timing between neotropical migrant populations – **Taylor Bobowksi\*\*** (Colorado State University), **Kristen Ruegg** (CSU), **Christen Bossu** (CSU)

Effects of drought on the avian community on the short grass prairie – **Angeline Canney\*** (CSU – Pueblo), **Claire Ramos** (CSU – Pueblo), and **Clark Jones** (USFWS)

The effects of territory size and territory quality on mating and nesting success of male Cassin's Sparrow (*Peucaea cassinii*) in Southern Colorado – **Augustus W. Forrest\*\*** (Colorado State University – Pueblo), **Claire Ramos** (CSU – Pueblo), **Garrett Visser** (CSU – Pueblo)

The Status of North American Bat Monitoring (NABat) Program – **Lee O'Brien** (USFWS)

Evaluating the effects of climate change on Yellow Warblers using telomeres as a biomarker of fitness – **Marina D. Rodriguez\*\*** (CSU), and *Kristen Ruegg* (CSU)

What attracts sagebrush obligate birds to breeding sites in a sea of sage? – **Kristin Ross\*\*** (Western Colorado University), *Patrick Magee* (Western Colorado University), and *Kathy Brodhead* (BLM)

The effects of drought on sex biasing in Cassin’s Sparrows (*Peucaea cassinii*) – **Alexandria Sinker\*** (CSU Pueblo), *Clark B. Jones* (U.S. Fish and Wildlife Service), and *Claire Ramos* (CSU – Pueblo)

Potential interspecific transmission of *Protostrongylus* species between mountain goats and bighorn sheep in Colorado – **Rocky L. Spencer II\*\*** (CSU – Pueblo), *Claire Ramos* (CSU – Pueblo), *Nate Bickford* (CSU – Pueblo), and *Brian Vanden Heuvel* (CSU – Pueblo)

Extra-pair copulation and male parental investment in Cassin’s Sparrow (*Peucaea cassinii*) – **Garrett Visser\*\*** (CSU – Pueblo) and *Claire Ramos* (CSU – Pueblo)

\*Denotes student presenter (single asterisk = undergraduate student, double asterisk = graduate student)

6:30-10:00 2020 CCTWS Annual Banquet, awards, and auction

**Friday, February 7, 2020** **Contributed Papers Session**

**Organizers: Marcella Tarantino and Aran Johnson**

8:00-8:10 Contributed papers, welcome and introduction

8:10-8:30 Wildlife use of abandoned mines – **Tim Armstrong** (Adams State University), *Tyler Cerny* (ASU), *Brett Fuller* (ASU), *Jose Mix* (ASU), and *Wyatt Moran* (ASU)

8:30-8:50 Developing a behavioral profile for urban coyotes: do coyotes ignore people? – **Emily Beam\*\*** (University of Colorado – Boulder), *Stewart Breck* (CSU and USDA National Wildlife Research Center), and *Joanna E. Lambert* (CU – Boulder)

8:50-9:10 Spatiotemporal shifts in use of wildlife corridors as a response to traffic noise and light – **Amy C. Collins\*\*** (University of California – Davis), *Travis Longcore* (University of Southern California), *Winston Vickers* (UC – Davis), and *Fraser Shilling* (UC – Davis)

9:10-9:30 The American Redstart genoscape – **Matt DeSaix\*\*** (CSU), *Christen Bossu* (CSU), *H. Lisle Gibbs* (Ohio State University), *Peter Marra* (Georgetown University), *Thomas Sherry* (Tulane University), *Thomas Smith* (University of California – Los Angeles), *Michael Webster* (Cornell University), and *Kristen Ruegg* (CSU)

- 9:30-9:50 Carnivores that colonize urban habitat – are behavioral changes a cause, consequence, or neither? – **Joanna E. Lambert** (CU – Boulder) and **Stewart Breck** (CSU and USDA National Wildlife Research Center)
- 9:50-10:10 Determining bat occupancy, colonization, and extirpation probabilities using acoustic point surveys on public land: a two-year study at the Royal Gorge Field Office – **Jordan McMahon** (Bureau of Land Management, Conservation Legacy, and Southwest Conservation Corps)
- 10:10-10:30 BREAK – refreshments provided
- 10:30-10:50 Less but better: interaction between habitat amount and quality drives mammalian habitat occupancy in the Pantanal Wetland – **André Luis Regolin\*\*** (CSU and Universidade Estadual Paulista Júlio de Mesquita Filho (UNESP)), **Luiz Gustavo Oliveira-Santo** (Universidade Federal do Mato Grosso do Sul), **Milton Cezar Ribeiro** (UNESP), and **Larissa Lynn Bailey** (CSU)
- 10:50-11:10 Snow information for wildlife research and management applications – **Adele K. Reinking** (CSU), **Glen E. Liston** (CSU), **Kelly Elder** (U.S. Forest Service Rocky Mountain Research Center), **Stine Højlund-Pedersen** (CSU and University of Alaska – Anchorage)
- 11:10-11:30 Completing the monitoring cycle by using data to improve survey design and participation: an example using Integrated Waterbird Management and Monitoring – **Mindy B. Rice** (U.S. Fish and Wildlife Service), **Alexander Kumar** (University of Montana), and **Heath Hagy** (USFWS)
- 11:30-11:50 Effects of source population and release strategy on translocated scaled quail reproduction – **Rebekah E. Ruzicka\*\*** (CSU and Rolling Plains Quail Research Foundation), **Paul F. Doherty, Jr.** (CSU), and **Dale Rollins** (Rolling Plains Quail Research Foundation)
- 11:50-12:10 Ecological drivers of black bear fecundity in an anthropogenic landscape – **Shelley L. Nelson\*\*** (CSU), and **Lise M. Aubry** (CSU)
- 12:10-12:20 Student poster and paper awards, photo contest awards
- 12:20 Conference concludes
- 12:30 CCTWS Board Meeting

Thanks to all our sponsors!

**Lotek**  
advancing wildlife science





**VECTRONIC  
Aerospace**

