

51st North American Symposium for Bat Research



11 – 14 October 2023
Winnipeg, Manitoba, Canada

Local Hosts: Craig Willis, Kaleigh Norquay, & Quinn Fletcher

Program Directors: Luis Viquez-R, Riley Bernard, & Emma Willcox

Bats Need You.

Support Evidence-Based Conservation!

Bat Conservation International leads with evidence-driven conservation, making us an Evidence Champion recognized by Conservation Evidence.



Conservation Evidence

Providing Evidence to Improve Practice



BAT CONSERVATION INTERNATIONAL

Be a Part of the Solution.



Join us today!

Become a member at batcon.org/membership.



NASBR appreciates the support it receives from its sponsors.

For information on sponsoring a future conference please contact the NASBR Board of Directors or visit www.nasbr.org

Conference Sponsors

Silver



Bronze



Copper



Supporter



THE UNIVERSITY OF WINNIPEG



Student Award Sponsors



7:00 AM - 8:00 AM	Breakfast		Gateway/Tache/La Verendrye
7:00 AM - 5:00 PM	Registration		Mezzanine
11:45 AM - 8:00 PM	Poster Session - Available for Viewing <i>Reception Sponsored by ESI</i>		Grand Ballroom
Arcadia Ballrooms 1 & 2			
8:00	Welcome	Craig Willis, Kaleigh Norquay, & Quinn Fletcher	
8:10	Introduction	Luis Viquez-r, Riley Bernard, & Emma Willcox	
8:15	Keynote Address	The Good News about White-Nose Syndrome, and an Opportunity	Robert Barclay
8:45	Spallanzani Award	Brazilian Bat Caves: Past, Present, and Future	Enrico Bernard
9:15	Villa Award	Systematics and Taxonomy of the Endemic Bat <i>Corynorhinus mexicanus</i> and the Implications for its Conservation	Issachar Lopez-Cuamatzi
9:30	Coffee Break		Loggia
Crystal Ballroom			
Student Honors Session 1		Chairs: Cullen Geiselman	
10:00	Evidence of Novel Molecular Mechanisms for Resisting Sensorineural Hearing Loss in <i>Pteronotus parnellii mesoamericanus</i>	Alexis Brown	
10:15	Phylogenetic, Morphological, and Niche Differentiation Analyses Unveil New Species Limits for the Caribbean Big Brown Bat	Pedro Monico	
10:30	Genome Analysis of Two Artibeus species <i>A. hirsutus</i> and <i>A. intermedius</i> Genetic Insights for Dietary Specialization	Diana Nadia Tamayo	
10:45	Genomes of Three Mexican Endemic <i>Myotis</i> Species. Assembly, Characterization and Annotation	Edgar Gutierrez	
11:00	Landscape Genomics of Yuma Myotis (<i>Myotis yumanensis</i>) in California	Joseph Curti	
11:15	Phylogenetic Position of Flat-headed bats (<i>Sauromys</i> and <i>Platymops</i>) with Molossidae	William McCoy	
11:30	Genetic Evaluation of the Southwestern Distribution and Morphological Differentiation Between <i>Lasiurus borealis</i> and <i>Lasiurus frantzii</i>	Zeinab (Rose) Haidar	
11:45	Airborne eDNA Documents a Diverse and Ecologically Complex Tropical Bat and Other Mammal Community	Nina Garrett	
12:00 - 1:30	Lunch - List of local eateries at NASBR Registration Desk		
	Lunch with a Mentor - Meet at NASBR Registration Desk		
Student Honors Session 3		Chairs: Michael Fishman & Nancy Simmons	
1:30	Bats Living Without Darkness? Effects of Northern Latitudes on Bat Nightly Activity Patterns in Western Canada	Camila Hurtado	
1:45	Tricolored Bats Overwinter in Thermally Stable Box Culverts in an Arkansas Region Without Caves	Anneka Lamb	
2:00	Tolerance to Urban Light and Sound Driving Novel Habitat Colonization	Aleana Savage	
2:15	The Behaviour of Reproductive Female Little Brown Bats in the Albertan Rocky Mountains	Thiago Monteiro	



Student Social at the Little Brown Jug

The student social will be held at the Little Brown Jug Brewery at 8:30pm until about 10:30/11pm (address: 336 William Ave, Winnipeg, MB R3A 0H7, Canada).

There will be light snacks and food provided (gf/vegetarian/vegan options). Of course, we will play some bat bingo so get ready to win some great art donated by some wonderful artists. You can find out more about the artists by selecting-“Art Sponsors 2023” in the Whova App.

Looking forward to seeing you all!

NASBR Intellectual Property Statement

NASBR considers the information contained in presentations to be the property of the authors. To limit potential distractions during presentations and unauthorized dissemination of others’ work, the Board of Directors requests registrants to refrain from taking photographs or video of oral or poster presentations at the annual conference. We encourage audience members to contact the author to request further information about their presentation.

Thursday

Concert Ballroom

Student Honors Session 2

Chairs: Gerald Carter & Matina Kalcounis-Rueppell

10:00	CANCELLED - Bridge Trolls: Use of Bridges by Bats in Wyoming	<i>Logan Detweiler</i>
10:15	Inter- and Intra- specific Differences in Fur Cortisol Levels of Three North American Migratory Bats	<i>Dana Green</i>
10:30	Optimal Swarming Theory: Testing the Balance Between Sex and Survival in Swarming Bats	<i>Lauren Hooton</i>
10:45	The Influence of Agricultural Intensification on Bats in the Northern Great Plains	<i>Portia Mohrbutter</i>
11:00	Social Bonding Causes Convergence of Contact Cells in Vampire Bats	<i>Julia Vrtilek</i>
11:15	Role of Micro-RNAs in the Pathogenesis of White-nose Syndrome in <i>Myotis lucifugus</i>	<i>Anouska Agarwal</i>
11:30	Canada's Hottest Bats: Pronounced Evaporative Cooling by Big Brown Bats	<i>Dylan Baloun</i>
11:45	Dining in the Chilly Season: Bats’ Winter Diet in Private, Working Forests in the Southeastern US	<i>Santiago Perea</i>

12:00 - 1:30	Lunch - List of local eateries at NASBR Registration Desk	
	Lunch with a Mentor - Meet at NASBR Registration Desk	

Student Honors Session 4

Chairs: Nathan Fuller & Loren Ammerman

1:30	Responses to Heterospecific Feeding and Distress Calls by Bats in Saskatchewan	<i>Hannah Wilson</i>
1:45	Large Seed Dispersal by Bats Along a Disturbance Gradient in a Neotropical Rainforest	<i>Miguel Angel Martinez-Rodriguez</i>
2:00	Home is Where the Healing is: Critical Summer Roosting Habitats of Little Brown Bats	<i>Ershiya Bagheri</i>
2:15	Bats of Jamaica: New Records of <i>Phyllonycteris aphylla</i> and Challenging Public Perceptions of Bats	<i>Damion Whyte</i>

Crystal Ballroom		
Student Honors Session 3 (cont.)		Chairs: Michael Fishman & Nancy Simmons
2:30	Impacts of Perceived Predation on Foraging Behavior	Brandon Gulley
2:45	Intraspecific Roost Site Selection by the Little Brown Myotis in Cypress Hills, Saskatchewan	Emma Blanken
3:00	A Multi-isotope Approach to Identifying Seasonal Movements Relative to Birthplace of a Hibernating Bat Species	Caralie Brewer
3:15	Energetics of Fat Accumulation by Endangered Little Brown Bats During Prehibernation	Pranav Sadana
3:30	Coffee Break	Loggia
Student Honors Session 5		Chairs: Jonathan Reichard & Joy O'Keefe
4:00	Luring out the Truth: Separating the Motivations for Swarming by Characterizing How Bats Respond to Lures	Sepidar Golestaneh
4:15	Bat Traffic on a Forest Highway: Interspecific and Inter-individual variation in How Bats Use Trails	Caleb Ryan
4:30	Vertical Stratification of Insectivorous Bats in 100 Meter Altitude in Agricultural Areas of Central Thailand	Supawan Srilopan
4:45	Does Girdling Trees Create Viable Roosting Habitat for Indiana Bats?	Reed Crawford
6:00 - 8:00	Poster Session Reception with Hors d'Oeuvres and Cash Bar	Grand Ballroom Sponsored by ESI
P-001	<i>Myotis lucifugus</i> Nighttime Foraging Activity and Distance from Daytime Roost Sites in Cypress Hills, Saskatchewan	Siobhan Cunningham
P-002	Impact of Biopsy Size and Bat Species on DNA Yields	Carly Trujillo
P-003	Ultrasonic Surveys to Assess Local Distribution of Bat Species in Annandale-on Hudson, New York	Marxe Orbach
P-004	Bat Seasonal Richness (Chiroptera-Blumenbach, 1779) in an Urban Zone "Centennial Ecological Park" in Zacatecas City, Mexico	Guillermo Martínez
P-005	The Effects of Environmental Factors on Social Calling Behavior of Insectivorous Bats	Jordan Morgan
P-006	Salivary Gland Diversification During the Adaptive Radiation of Noctilionoid Bats	Marina Zernik
P-007	Bat Assemblage Change Following White-Nose Syndrome Establishment in the Black Hills of South Dakota	Renee Lile
P-008	Social Dominance Hierarchies in Mixed-Sex Groups of <i>Carollia perspicillata</i>	Jessica Montoya
P-009	Summer Variation in N:L Ratios of <i>Eptesicus fuscus</i> is Associated with Sex and Female Reproductive Condition	Nicole Castaneda
P-010	Landscape Genetics and Establishment of Biological Corridors of <i>Molossus molossus</i> in Puerto Rico	Edgardo Lopez
P-011	Angolan Rousette Bat Foraging Site Consistency in the Mount Elgon Region of Uganda	Kalani Williams
P-012	Characterization of Indonesian <i>Pteropus alecto</i> Immunoglobulin Genes	Thongthai Thavornwatanayong

Concert Ballroom	
Student Honors Session 4 (cont.) <i>Chairs: Nathan Fuller & Loren Ammerman</i>	
2:30	Rural Structures are an Important Interface for Human-bat Contacts in Kenya <i>Reilly Jackson</i>
2:45	Effects of Hurricane Maria on the Bat Community on the Caribbean Island of Dominica <i>Lisa Sims</i>
3:00	Bats in Remnant Maternity Colonies Can Balance the Energetic Costs of White-nose Syndrome Healing and Recovery <i>Lily Hou</i>
3:15	Neotropical Bats Show Variation in Sugar Metabolism Corresponding with Dietary Guild <i>Jerrica Jamison</i>
3:30	Coffee Break <i>Loggia</i>
Student Honors Session 6 <i>Chairs: Teague O'Mara & Erin Gillam</i>	
4:00	Isotopic niche partitioning among a diverse community of phytophagous bats in Sylvan, Zona Sur, Costa Rica <i>Phillip Oelbaum</i>
4:15	What's Going on in the Morning? Untangling the Mystery of Pre-dawn <i>Myotis lucifugus</i> Roost Activity <i>Michela Contursi</i>
4:30	Hierarchically Embedded Scales of Movement in Vampire Bats <i>Raven Hartman</i>
4:45	Do Extreme Morphologies Limit Niche Breadth in Phyllostomidae <i>Ronald Hall</i>
6:00 - 8:00	Poster Session <i>Reception with Hors d'Oeuvres and Cash Bar</i> <i>Grand Ballroom</i> <i>Sponsored by ESI</i>
P-033	Migration Distance and Mating System Are Not Associated With Genetic Diversity and Differentiation Among Bat Species <i>Alicia Korpach</i>
P-034	Development of an automated bat box detection system to assess use in response to microclimate <i>Catherine Haase</i>
P-035	The Bacteriome of Bat Organ Tissues: A Molecular Identification With Emphasis on Bats from Guyana <i>Alejandro Biganzoli-Rangel</i>
P-036	Does Age Similarity Shape Social Bond Formation in Vampire Bats <i>Haley Gmutza</i>
P-037	Correcting for Microphone Differences in Long-term Monitoring Datasets <i>Erin Gillam</i>
P-038	Can HotSpotter Identify Individual Big Brown Bats Via Collagen-Elastin Bundle Patterns? <i>Shane Seheult</i>
P-039	Investigating Body Condition of <i>Myotis grisescens</i> Entering Hibernation <i>Vic Pineiro</i>
P-040	Enhanced Quality Control and Streamlined Processing of Large Datasets for NABat <i>Ben Neece</i>
P-041	Response of an African Fruit Bat to Immunization with Ebola Virus-like Particles <i>Lisa Powers</i>
P-042	Effects of the El Nino Southern Oscillation on Bat Diversity and Abundance in the Ecuadorian Choco <i>Phoebe Reuben</i>
P-043	Understanding Continental Differences in Bat-virus Richness <i>Name</i>
P-044	Canada Bat Training Program: Online Training for Pest Control Operators Working with Bats <i>Susan Holroyd</i>

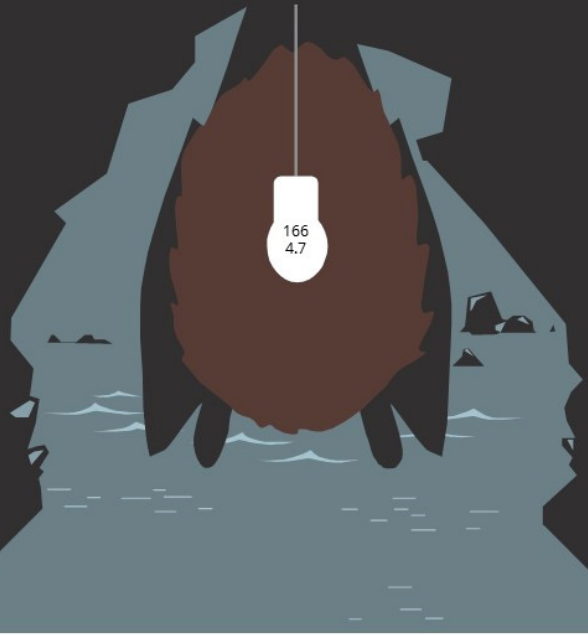
Thursday

P-013	Response of Free-flying Conspecifics to <i>Eptesicus fuscus</i> Social Calls	<i>Katherine Armenta</i>
P-014	Oxytocin Receptor Density in the Social Behavior Neural Network of Phyllostomid Bats	<i>Kelly Mitzel</i>
P-015	Novel Insights into Migration, the Global Virome, and Zoonotic Risk	<i>Alicia Roistacher</i>
P-016	Every Gene, Every Region All at Once: Local Adaptation in Three Ecuadorian Bat Communities	<i>Andrea Calderon Brito</i>
P-017	Glitter Guano	<i>Lydia Nixon</i>
P-018	ARU Listening? Can Acoustic Monitors be Used to Locate Big Brown Bats (<i>Eptesicus fuscus</i>) Maternity Roosts	<i>Eric Maquignaz</i>
P-019	CANCELLED - Adaptive Radiations of Miniopterus? Comparing the Eco-morphology of Sister Clades	<i>Stefania Briones</i>
P-020	Acro-bats: A Biomechanical Analysis of Terrestrial Locomotion in <i>Myotis leibii</i>	<i>Aidan Wouters</i>
P-021	Thinking Big: Reviewing the Drivers Behind Sexual Size Dimorphism in Little Brown Myotis	<i>Sara Laursen</i>
P-022	Hoary for the Home Team: Migratory Connectivity of California's Hoary Bats	<i>Gabriel Reyes</i>
P-023	Movement Ecology of Bats in an Urban Forest in the Greater Toronto Area	<i>Chloe Pearson</i>
P-024	Energy Landscapes and the Relationship Between Heart Rate and Accelerometry Metrics of <i>Phyllostomus hastatus</i> in Panama	<i>Travis Bayer</i>
P-025	Keeping Up With Names: The Global Bat Taxonomy Working Group	<i>Nancy Simmons</i>
P-026	Simple Guidelines for Creating Bat Habitat in Eastern North America using Native Plants	<i>Julie Snow</i>
P-027	Tracking the Coronaviruses Diversity in Brazilian Bats	<i>Larissa Bueno</i>
P-028	Ultraviolet Light Reveals Cryptic Markings in Greater Antillean Long-tongued Bats	<i>Allen Kurta</i>
P-029	Is There Latitudinal Variation in Hibernation by Big Brown bats?	<i>Sara Burns</i>
P-030	Characteristics of the <i>Eptesicus fuscus</i> Immunoglobulin Repertoire Following Rabies Vaccination	<i>Ashley Reers</i>
P-031	Detecting Bat Hibernacula From Acoustic Data	<i>Joel Jameson</i>
P-032	Singing Silver-haired Bats	<i>Cori Lausen</i>
8:30	Student Social <i>Light food, cash bar and great company. All students are welcome.</i>	<i>Little Brown Jug</i>

P-045	A New Species of <i>Witwatia</i> (Chiroptera: Philisidae) and Evaluation of the Diet of Large Eocene Bats	<i>Matthew Jones</i>
P-046	Hibernation Energetics of <i>Myotis lucifugus</i> in their Northern Range	<i>Malcolm Reimer</i>
P-047	Comparative Embryology of the Specialized Nasal Turbials of Chiroptera	<i>Alexa Kane; Alisa Hutagalung</i>
P-048	Pup Teat Preference?	<i>Paul Faure</i>
P-049	Development of a National Database in Canada to Manage Bat Marking Records	<i>Derek Morningstar</i>
P-050	Fungal Disease Evasion in Aboveground Non-traditional Hibernacula	<i>Leah Crowley</i>
P-051	Detection of Listed Bat Species Under Bridges Through the Use of Fecal DNA	<i>Faith Walker</i>
P-052	An Inventory of Unusual Roosts Used by Canadian Bats	<i>Lori Phinney</i>
P-053	Resilience and Recovery? Bat Population Trends in Central Canada Following White-nose Syndrome	<i>Jayanti Monga</i>
P-054	Detection Ranges of Small, Omni-directional Motus Stations	<i>Elisa Elizondo</i>
P-055	Tag Loss and Recapture Rates of Banded and PIT-tagged <i>Myotis lucifugus</i> and <i>M. septentrionalis</i>	<i>Taylor Cangemi</i>
P-056	Ascending Vertical Habitats: Locating and Protecting Yosemite's Big Wall Bats in the Face of Imminent Stressors	<i>Austin Waag</i>
P-057	Does Habitat Management Around Hibernacula Matter for Pre-Hibernating Indiana Bats?	<i>Katie Fitzgerald</i>
P-058	Using Covariates to Improve Activity Trend Models in British Columbia's North American Bat Monitoring Program	<i>Jason Rae</i>
P-059	Accelerometry-based Activity Patterns of <i>Phyllostomus hastatus</i>	<i>James Lee</i>
P-060	Heat Tolerance of Bats at the Edges of Their Geographic Ranges	<i>Tina Watters</i>
P-061	Identifying Areas of Greatest Significance of the Bats of Kenya	<i>Angelo Soto-Centeno</i>
P-062	Bats and Wildfire Smoke: A Preliminary Study	<i>Robert Barclay</i>
P-063	Saskatchewan Bat Habitat Conservation and Citizen Science Programs	<i>Lauren E. MacDonald</i>
P-064	The Collaborative Response to White-nose Syndrome: Updates and Perspectives	<i>Jeremy Coleman</i>
8:30	Student Social <i>Light food, cash bar and great company. All students are welcome.</i>	<i>Little Brown Jug</i>

SMALL TAGS BIG RESULTS

Visit our booth to learn more!



REAL SCIENCE. REAL SOLUTIONS.

Hire Us!



Join Us!



PICTURE YOUR PROJECT IN THE HANDS OF INDUSTRY EXPERTS WHO APPLY REAL SCIENCE AND OFFER REAL SOLUTIONS TO VARYING REGULATORY CHALLENGES.

WWW.ENVSI.COM

Environmental Solutions & Innovations, Inc.
4525 Este Avenue
Cincinnati, OH 45232
T: 513.451.1777 | F: 417.755.3321

PICTURE YOURSELF WORKING IN AN ENVIRONMENT WITH DIRECT ACCESS TO OUR EXPERT STAFF OFFERING REAL OPPORTUNITY AND GROWTH.

MEET THE NEXT GENERATION

SONG METER MINI BAT 2

Bigger Battery Life. Same Small Size.



Evolutionary Design for Revolutionary Discovery

Our new recorders take their cue from nature—and you. Based on millions of collective hours in the field and feedback you've shared, they've adapted to help you discover even more.

Now, spend less time replenishing your power supply and more time recording bats.

- Record up to 50 or 125 ten-hour nights (AA or Lithium-ion models, respectively).
- Easily access & secure your recorders via a redesigned, hinged, lockable enclosure
- Deploy in the most rugged terrestrial environments with tougher, IP67 weatherproof housing.
- Record birds & more with an optional acoustic stub mic.

The Natural Selection for Your Next Breakthrough.

3 Mill and Main Place, Suite 110 | Maynard, MA 01754, USA | +1-978-369-5225

 @WildlifeAcoustics  @wildlifeacoustics  @WildlifeAcoust  @WildlifeAcoustics

7:00 AM - 8:00 AM	Breakfast	<i>Gateway/Tache/La Verendrye</i>
7:00 AM - 5:00 PM	Registration	<i>Mezzanine</i>
Crystal Ballroom		
<i>Beyond Ecology</i>		<i>Chairs: Abby Rutrough & Joanna Coleman</i>
8:00	Bat Taxonomic Alignment Tool: Don't Attempt to Analyze Data Mined from Literature Without It	<i>Cullen Geiselman</i>
8:15	The Global Union of Bat Diversity Networks (GBatNet): Strategic Directions for Sustainable Bat Diversity	<i>Tigga Kingston</i>
8:30	Bat Perspective on Insect Migrations	<i>Gary McCracken</i>
8:45	The Big Picture and Future Directions for Urban Bat Conservation and Research	<i>Krista Patriquin</i>
9:00	Protein Limitation Alone Does Not Drive Hunting in Bat Diversity Hotspots: A Spatial Structural Equation Model	<i>Abigail Rutrough</i>
9:15	<i>Kerivoula picta</i>: A Hot Online Commodity	<i>Joanna Coleman</i>
9:30	Coffee Break	<i>Loggia</i>
<i>Natural History</i>		<i>Chairs: Elizabeth Clare & Jon Flanders</i>
10:00	Uncovering the Life History Traits of the Critically Endangered Hill's Horseshow Bat in Nyungwe National Park	<i>Jon Flanders</i>
10:15	Air Sampling for eDNA in Tropical Bat Roosts Surveys	<i>Elizabeth Clare</i>
10:30	Social Bond Formation in Vampire Bats: Do "First Impressions" Matter?	<i>Gerald Carter</i>
10:45	Spatial Learning Overshadows Novel Odors and Sounds in Both Predatory and Frugivorous Bats	<i>May Dixon</i>
11:00	Long-term Monitoring of Indiana Bats on Fort Knox Military Base, Kentucky	<i>Piper Roby</i>
11:15 - 12:00	Business Meeting I in Crystall Ballroom	
12:00 - 1:30	Lunch Lunch with a Mentor - Meet at NASBR Registration Desk	
Crystal Ballroom		
<i>Ecophysiology</i>		<i>Chairs: Gerald Wilkinson & Luis Viquez-R</i>
1:30	Gut Environment Differences in Phyllostomid Bats	<i>Laurel Yohe</i>
1:45	Thick Skin: The Horizontal Association of Microbiotas in the Tequila Bats and their Ectoparasites	<i>Luis Viquez-R</i>
2:00	Amino Acids at the Races: Vampire Bats Rapidly Fuel Running with Blood Meal Protein	<i>Kenneth Welch</i>
2:15	Mechanisms of Cellular Aging, or the Lack Thereof, across Diverse Bats	<i>Karen Sears</i>
2:30	Mexican Endemic Bat Species (<i>Rhogeessa</i> spp.): First Characterization of the Mitochondrial Genome	<i>Anahi Martinez</i>

Friday

7:00 AM - 8:00 AM	Breakfast	<i>Gateway/Tache/La Verendrye</i>
7:00 AM - 5:00 PM	Registration	<i>Mezzanine</i>
Concert Ballroom		
<i>Acoustics</i> Chairs: Cori Lausen & María Cristina Mac Swiney González		
8:00	Do You See What I Hear? Do I Hear What You See?	<i>Caroline Byrne</i>
8:15	Utilizing Passive Acoustic Monitoring (PAM) for the Long-term Monitoring of Bat Species in the White Mountains	<i>Jessica Jones</i>
8:30	Mixing Outgoing Hyoid-borne Calls and Returning Airborne Echoes at the Eardrum in <i>Rhinolophus ferrumequinum</i>	<i>Richard Carter</i>
8:45	Investigating Bat Phenology Through Québec Biodiversity Monitoring Network	<i>Anouk Simard</i>
9:00	Surveys of Bridges Across Western Canada: Applications for Bat Species Inventories and Monitoring	<i>Cory Olson</i>
9:15		
9:30	Coffee Break	<i>Loggia</i>
<i>Wind Energy</i> Chairs: Quinn Fletcher & Liam McGuire		
10:00	Partial Migration Among <i>Perimyotis subflavus</i> Overwintering in the American South	<i>Liam McGuire</i>
10:15	CANCELLED -ATOMic TIMR: A Multi-sensor Approach for Bat-Turbine Interaction Monitoring and Mitigation	<i>Eran Amichai</i>
10:30	Evaluating Curtailment on a Regional Scale using Acoustic Exposure to Wind Turbine Operation	<i>Trevor Peterson</i>
10:45		
11:00		
11:15 - 12:00	Business Meeting I in Crystal Ballroom	
12:00 - 1:30	Lunch Lunch with a Mentor - Meet at NASBR Registration Desk	
Concert Ballroom		
<i>An expanding wind energy market and implications for bat populations</i> Chairs: Kate MacEwan & Michael Whitby		
1:30	The Wind Energy Boom is Just Starting: Understanding Implications for Bat Populations	<i>Teague O'Mara</i>
1:45	Bats Over the Ocean – Migratory Bat Activity in Coastal and Offshore Environments	<i>Bethany Schulze</i>
2:00	Pathway to Protection in Canada: the Migratory Bat Bundle (Hoary, Eastern Red, and Silver-haired Bats)	<i>Stephen Petersen</i>
2:15	Bat behavior, airflow dynamics, and wind turbines	<i>Donald Solick</i>
2:30	History and Future of Deterrent Applications at Wind Farms	<i>Jeff Clerc</i>

Friday

2:45	Settling into the the Grove: Decreases in Metabolic Rate with Increasing Flight Duration in <i>Eptesicus fuscus</i>	Lucas Greville
3:00	Sex and Age Influence Function in Greater Spear-nosed Bats	Gerald Wilkinson
3:15	Coffee Break	Loggia
Behavior		Chairs: Frank Bonaccorso & Kristin Jonasson
4:00	Predatory Flight Kinematics and Pursuit Strategy of the Highly Maneuverable Bat <i>Corynorhinus townsendii</i>	Aaron Corcoran
4:15	Masked Seducers: Lek of <i>Centurio senex</i>	Bernal Rodriguez-Herrera
4:30	Survivorship of <i>Ficus sycomorus</i> Through Two Decades in Kruger National Park: Implications for <i>Epomophorus</i> Foraging Movements	Frank Bonaccorso
4:45	How Do Northern Long-eared Bats Respond to Timber Harvest in Managed Central Hardwood Forest?	Elizabeth Beilke
5:00	Foraging Ecology of the Hawaiian Hoary Bat on Maui	Dave Johnston
5:15	Go With the Flow: Migrating Bats Harness the Power of the Nocturnal Jet	Kristin Jonasson
5:30	Migration is a Key Factor Driving Distribution and interactions with Energy Development	CJ Campbell
5:45		
7:30 - 10:30	Fruit Bat Social (LGBTQIA+ Community Event)	Across the Board

2:45	Refining Curtailment to protect bats and boost power production	<i>Michael Whitby</i>
3:00	A Global Framework for Establishing Bat Fatality Thresholds at Wind Energy Facilities	<i>Kate MacEwan</i>
3:15	Coffee Break	<i>Loggia</i>
<i>Integrative Models & White-nose Syndrome</i>		<i>Chairs: Bethany Straw & Jeremy Coleman</i>
4:00	Information needs from decision makers considering impacts of WNS and wind energy	<i>Jon Reichard</i>
4:15	Weighing Trade-Offs When Exploring Future Wind Energy Built Out and Bat Population Interactions	<i>Bethany Straw</i>
4:30	Climatic Factors and Host Species Composition at Hibernation Sites Drive the Incidence of Bat Fungal Disease	<i>Thomas Lilley</i>
4:45	Geographic Shifts in Hibernating Indiana Bats Driven by Conflicting Effects of Climate Change and White-nose Syndrome	<i>Justin Boyles</i>
5:00	Selection's Shadow: WNS Fatalities Reflect Ecology and Adaptation in an Epidemic	<i>Giorgia Auteri</i>
5:15	Current and Historical Population Estimates of <i>Myotis velifer</i> reveal Dramatic Population Declines Following WNS Invasion	<i>Nate Fuller</i>
5:30	The Effect of Stress, Viruses and Cytokines on Recovery from White-nose Syndrome in <i>Myotis lucifugus</i>	<i>Christopher Richardson</i>
5:45	Minimal Recovery of Bat Populations in Maritime Canada Ten Years after the Arrival of <i>Pseudogymnoascus destructans</i>	<i>Hugh Broders</i>
7:30 - 10:30	Fruit Bat Social <i>(LGBTQIA+ Community Event)</i>	<i>Across the Board</i>

7:00 AM - 8:00 AM	Breakfast	<i>Gateway/Tache</i>
7:00 AM - 8:00 AM	Diversity Breakfast	<i>La Verendrye</i>
7:45 AM - 4:00 PM	Registration	<i>Mezzanine</i>
Crystal Ballroom		
Movement <i>Chairs: Riley Bernard & Emma Willcox</i>		
8:00	Winter Bat Activity in Southeast Alaska	<i>Jesika Reimer</i>
8:15	Landscape Level Correlates of Bats in the Boreal Region of Alberta, Canada	<i>Alberto De Rosa</i>
8:30	CANCELLED -Prey Availability and Forest Clutter Mediate the Effects of Bark Beetle Outbreaks on Bat Activity	<i>Amanda Bevan</i>
8:45	Investigating Bat Activity in the Colorado River Basin: Acoustic Surveillance Along a 1,000 Mile River Corridor	<i>Riley Bernard</i>
9:00	From a Bird's to a Bat's 'Eye' View: Relating Bat Activity to Drone-Captured Canopy Structure	<i>Adam Sprott</i>
9:15	A Test of Automated Tracking Software (ThruTracker) Using 14 Years of Cave Emergence Data	<i>Loren Ammerman</i>
9:30	Coffee Break	<i>Loggia</i>
Roosting Ecology <i>Chairs: Winifred Frick & Erin Baerwald</i>		
10:00	Shades of Gray: Warming Effects of Bat box Color Vary According to Weather Conditions	<i>Joy O'Keefe</i>
10:15	Canadian Bat Box Project	<i>Karen Vanderwolf</i>
10:45	Male Indiana Bat Use of Indiana Caves in Summer: An Energy Budget and Game Theoretic Approach	<i>Darwin Brack</i>
11:00	Roosting Behaviour of Little Brown Myotis Following a Severe Wildfire in the Canadian Rocky Mountains	<i>Erin Low</i>
11:15	Cave Bat Conservation	<i>Winifred Frick</i>
11:30 - 12:30	Business Meeting II in Crystal Ballroom <i>All attendees are encouraged to attend</i>	
12:00 - 1:30	Lunch Lunch with a Mentor - Meet at NASBR Registration Desk Board Meeting	
Crystal Ballroom		
Working Across Cultures <i>Chairs: Allyson Menzies & Ted Weller</i>		
1:30	Barriers & Opportunities to Achieving Equitable Bat Conservation	<i>Amanda Adams</i>
1:45	Ethical Research on Indigenous Land - How Do We Engage Communities When We Study "Uncharismatic" Animals?	<i>Dani Nowosad</i>

Saturday

7:00 AM - 8:00 AM	Diversity Breakfast	<i>La Verendrye</i>
7:45 AM - 4:00 PM	Registration	<i>Mezzanine</i>
Concert Ballroom		
Ecology		<i>Chairs: Aja Sherman & Cristina Davy</i>
8:00	Where are Bats Hanging Out? Mining 200 Years of Inaccessible Literature for Bat Roosting Patterns	<i>Aja Sherman</i>
8:15	Movements and Roost Site Networks of <i>Perimyotis subflavus</i> Around a Maternity Roost	<i>Erin Stukenholtz</i>
8:30	Demography of a <i>Tadarida brasiliensis</i> Roost in Eastern Nevada	<i>Jason Williams</i>
8:45	Increased Rainfall and Temperature Drive Phenologically Variable Body Size Declines in Little Brown Myotis (<i>Myotis lucifugus</i>)	<i>Christina Davy</i>
9:00	Bats of the California Islands: New Species Records for Capture, Sightings, and Acoustic Monitoring	<i>Patricia Brown</i>
9:15	How Long Does it Take to Create an Indiana Bat Roost Tree	<i>Joseph Petit</i>
9:30	Coffee Break	<i>Loggia</i>
Evolution		<i>Chairs: Angelo Soto-Centeno & Scott Pedersen</i>
10:00	Niche Breadth through time and Overlap in Tailed Tailless Bats	<i>Camilo Calderon Acevedo</i>
10:15	The Cartilago Scutiformis and Sehnenplatte in Bats	<i>Scott Pederson</i>
10:45	The Relationship Between Wing Morphology and Foraging Guilds: Exploring the Evolution of Wing Ecomorphs in Bats	<i>Cristina Macswiney</i>
11:00	Species Limits and Taxonomic Evaluation of Caribbean Minor Red Bats (<i>Lasiurus minor</i>)	<i>Angelo Soto-Centeno</i>
11:15	Ancestral Biogeographic Range Estimation of Old-World Horseshoe Bats (Rhinolophidae) and Leaf-Nosed Bats (Hipposideridae)	<i>Ada Chornelia</i>
11:30 - 12:30	Business Meeting II in Crystal Ballroom <i>All attendees are encouraged to attend</i>	
12:00 - 1:30	Lunch Lunch with a Mentor - Meet at NASBR Registration Desk Board Meeting	
Concert Ballroom		
Evolution (continued) & Disease Ecology		<i>Chairs: Luz de Wit & Stephen Rossiter</i>
1:30	Comparative Genomics Provides Insight into Chromosomal Evolution and Immunological Adaptation in Horseshoe Bats	<i>Stephen Rossiter</i>
1:45	The Genomic and Developmental Basis of Bat Teeth Diversification During Adaptive Radiations	<i>Alexa Sadier</i>

Saturday

2:00	Building Capacity in the Matawa Member First Nations for Monitoring Bats in Northern Ontario	<i>Kimberly Jorgenson</i>
2:15	Fostering Bat Conservation Through Indigenous Collaboration: Apakwaanajiin (Bats) of Mnidoo Gamii (Georgian Bay)	<i>Steven Kell</i>
2:30	The Niisaachewan Bat Project: What we Learned from the Bats, and from One Another	<i>Dylan White</i>
2:45	A Two-eyed Seeing Approach to Bat Monitoring in Georgian Bay, Ontario	<i>Michelle Beltran</i>
3:00	Rethinking the Scientific Method for Inclusive Ecological Research and Two-Eyed Seeing	<i>Alexandria Cosby</i>
3:15	Developing Bat Conservation Capacity in Native American Communities of Northern California	<i>Ted Weller</i>
3:30	White-nose Syndrome Grants to Tribes and Laddering Bat Research Opportunities for Native American Students	<i>Bronwyn Hogan</i>
6:00	Cocktail Social - Cash Bar (Open to all)	<i>Grand Ballroom</i>
7:00	Banquet (Tickets Required)	<i>Grand Ballroom</i>
8:30	Awards & Silent Auction (Open to all)	<i>Grand Ballroom</i>
8:30	Live Auction (Open to all)	<i>Grand Ballroom</i>

STRANGE SPECIES

ODD CREATURES, CURIOUS CURIOS & THE UNNATURAL HISTORY OF UNKNOWN PLACES





 @STRANGESPECIESART
 WWW.STRANGESPECIES.ART

The Student Social thanks all these fantastic Artists that have donated wonderful art pieces for the Prizes!!!



Saturday

2:00	UCE-derived Phylogenies Reveal Complex Evolutionary History of South American <i>Eptesicus</i> with Pervasive Mitochondrial Nuclear Discordances	<i>Xueling Yi</i>
2:15	Adipose Tissues from Human and Bat-derived Cell Lines Support Ebola virus Infection	<i>Lauren Garnett</i>
2:30	Monitoring risk of SARS-CoV-2 exposure in North American bat populations	<i>Luz de Wit</i>
2:45	Ecological Epidemiology of Protozoan Parasites of Indiana Bats at Two Missouri Hibernacula	<i>Andrew Bennett</i>
3:00		
3:15		
3:30		
6:00	Cocktail Social - Cash Bar (Open to all)	<i>Grand Ballroom</i>
7:00	Banquet (Tickets Required)	<i>Grand Ballroom</i>
8:30	Awards & Silent Auction (Open to all)	<i>Grand Ballroom</i>
8:30	Live Auction (Open to all)	<i>Grand Ballroom</i>

