

**99TH ANNUAL MEETING
& CENTENNIAL CELEBRATION
OF THE
AMERICAN SOCIETY OF MAMMALOGISTS
28 JUNE-2 JULY 2019
HYATT REGENCY WASHINGTON ON CAPITOL HILL
-WASHINGTON, DC-**



PROGRAM

The 2019 American Society of Mammalogists Annual Meeting logo was designed by John Megahan. It features the African bush elephant (*Loxodonta africana*), which for decades has welcomed visitors to Smithsonian's National Museum of Natural History. The Smithsonian Institution Building (aka, The Castle) is featured in the background.

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AMERICAN SOCIETY OF MAMMALOGISTS (ASM)

The American Society of Mammalogists (ASM) was established in 1919 for the purpose of promoting interest in the study of mammals.

AN OVERVIEW

In addition to being among the most charismatic of animals, mammals are important in many disciplines from paleontology to ecology and evolution. We, of course, are mammals and thus are in the interesting position of studying ourselves in quest of a greater understanding of the role of mammals in the natural world.

The ASM is currently composed of thousands of members, many of whom are professional scientists. Members of the Society have always had a strong interest in the public good, and this is reflected in their involvement in providing information for public policy, resources management, conservation, and education.

The Society hosts annual meetings and maintains several publications. The flagship publication is the *Journal of Mammalogy*, a journal produced six times per year that accepts submissions on all aspects of mammalogy. The ASM also publishes *Mammalian Species* (accounts of individual species) and *Special Publications* (books that pertain to specific taxa or topics), and we maintain a mammal images library that contains many exceptional photographs of mammals.

We encourage you to peruse the ASM web site (www.mammalogy.org) for information about mammals and the American Society of Mammalogists. Check out our interesting history by clicking on the Our History tab on the Archives Committee page. We hope it will stimulate your interest in mammals and further your appreciation of their importance.

ASM LEADERSHIP

The ASM is led by a group of scientists who are elected by the membership.

ASM COMMITTEES

Much of the work that the ASM does is accomplished through a large number of volunteer committees. These committees work to further the aims of the Society and the science of mammalogy as a whole.

ASM ENDORSES HUMAN DIVERSITY

The ASM is dedicated to ensuring the opportunity for active, equal participation in all ASM functions by all members, regardless of gender, race, ethnic background, age, physical disabilities, or sexual orientation.

<http://www.mammalsociety.org/>

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WELCOME

Dear ASM Attendee,

Welcome to the 99th annual meeting of the American Society of Mammalogists (ASM), our Centennial Celebration! The ASM held its first (organization) meeting at the Smithsonian Institution in April 1919. The ensuing century has been good for the ASM, and the ASM has proven to be a leader in the promotion of mammalogy. Our Centennial Celebration is intended to highlight the current status of this engaging field.

This is our 10th meeting at the Smithsonian Institution; we last met here for our 75th annual meeting in 1994. We held our picnic at the National Zoo, and the rotunda of the National Museum of Natural History provided a fitting venue for our closing social. I look forward to a repeat of these memorable events this year. Given the tremendous diversity that comprises the Smithsonian, I hope you will have the opportunity to come early or stay late and see some of these remarkable museums.

This year's program reflects the diversity that we embrace in the ASM – diversity in our membership as well as our subject animals and thematic pursuits. The ASM has worked diligently to ensure that our annual meetings provide an intellectually exciting and engaging time for all, and that every member feels safe and comfortable at all times. The ASM has always been my “home society” and our meetings feel like an extended family reunion; I hope that you will share this sense of comfort and, indeed, of restoration.

In addition to a record-shattering number of submitted abstracts, we have eight workshops and five symposia scheduled this week. Workshops range from genome assembly and bat acoustics to telemetry, acoustics, scientific communication, student mentoring, and a hackathon for mammal diversity. We also are sponsoring an additional workshop on bias awareness in academia, which will have limited seating, so sign up early. Symposia will be equally dynamic and diverse, focusing on reconciling scientific collecting with conservation, the challenges (and rewards) of integrating museum specimens into global databases such as GenBank and Red Lists, the remarkable Ecuadorian mammal fauna, the hyperdiverse Murinae as a model of adaptive radiation, and the biology of urban mammals. Of course, we will have multiple poster and thematic sessions as well. #ASM100 will be a meeting to remember!

We all come to the annual meeting for a mixture of the scientific and the social but remember that the ASM is a member-run society. You decide our leadership, and you have a voice in how and where we speak up on issues. I encourage you to attend our two Member's Meetings, where your voice and your vote truly counts. You can also make your voice heard through participation in one of our committees. ASM committees are active throughout the year, and they address important matters; if any of these appear particularly interesting to you, I encourage you to introduce yourself to current committee members.

The meeting isn't all work, of course. I hope you brought your running shoes for the annual Run for Research, and that you will join us at the National Zoo for the picnic. We will have various social events for casual conversation as well. The auction and associated social is always a highlight. This year's Capstone will include three speakers, followed by a closing social where we will announce the recipients of our various awards.

Whether this is your first meeting or you're a long-time participant, ASM meetings should be both informational and enjoyable. We pride ourselves on our support of and for students. If you want to meet leaders of this society, please approach and introduce yourself. Nobody has ever caught rabies at an ASM meeting. Hopefully you will become as addicted as I did when I attended my first meeting (HSU – 1984).

Thank you for attending the meeting and making the ASM a priority in your lives. I especially thank our sponsors, exhibitors, and advertisers, whose support is critical to so many of our annual functions. Please take some time during the breaks and socials to visit their tables and displays and let them know how much you appreciate their participation and their support.

Enjoy the meetings, and enjoy the Smithsonian museums!



Douglas A. Kelt
President, American Society of Mammalogists

PROFESSIONAL CODE OF CONDUCT

STATEMENT OF INCLUSION

The American Society of Mammalogists (ASM) prohibits discrimination, harassment, and bullying against any member because of ancestry, color, national origin, marital status, veteran status, gender identity or expression, sexual orientation, race, ethnicity, religion, age, disability, political affiliation or any other characteristic protected by law. ASM expects its employees, volunteers, members and other constituents, whenever and wherever they are conducting Society business or participating in Society events or activities, to maintain an environment free of discrimination, harassment, bullying, or retaliation.

CODE OF CONDUCT

Ethical professional conduct is expected of all participants at ASM sponsored activities, including the annual meetings. Professional conduct applies to all professional, research, and learning environments. ASM is dedicated to ensuring the opportunity for active, equal participation in all ASM functions by all members, regardless of gender, race, national origin, ethnicity, age, physical appearance, disability, or sexual orientation. Discrimination and harassment are prohibited by the ASM; no individual should feel harassed, threatened, or unsafe at any ASM sponsored activity. All ASM members and participants in ASM sponsored activities are expected to follow the most recent version of ASM Professional Conduct policies (see QR Code and link below).

GENERAL GUIDELINES

1. ASM aims to operate in the best interest of the Society and its membership through policies and procedures, which are continually updated.
2. Unprofessional conduct by any ASM member or meeting attendee will not be tolerated and is subject to disciplinary action. Unacceptable behavior includes, but is not limited to, unwanted verbal attention, unwanted touching, intimidation, stalking, shaming or bullying in person or through social media outlets. If you experience such behavior, depending on the context and if you feel comfortable, you should let the offender know and tell him/her to stop and/or seek help from bystanders. Participants asked to stop any harassing behavior are expected to comply immediately. Concerns can also be presented to the Ombudspersons in person (contact information below) or reported anonymously online (see QR Code Below). Note that persistent offensive or unwelcome behavior may constitute harassment and that harassment presented in a joking manner is still harassment and both would be subject to disciplinary action.
3. Scientific presentations are expected to adhere to ASM standards of professional conduct and should not include inappropriate and/or graphic images or language that include (but are not limited to) pornography, demeaning or degrading images or language, or depictions of violence.
4. Established professionals and all ASM leaders should recognize that they hold positions of power, formal or informal, over students and aspiring professionals. These individuals are expected to lead by example regarding our high standards of professional and personal conduct.
5. All ASM members are potential bystanders to unprofessional or unwelcome behavior. Bystander intervention can prevent, divert, or mitigate harassment. Please do not look the other way.

REPORTING MISCONDUCT

Concerns or allegations of misconduct or harassment should be directed the Office of the Ombudsperson (John L. Koprowski [squirrel@ag.arizona.edu] and Jessica E. Light [jlight2@tamu.edu]) or reported anonymously online (see QR Code and link below).

ASM PROFESSIONAL CONDUCT POLICIES



<https://tinyurl.com/y4xbfm2j>

ASM ANONYMOUS ONLINE REPORTING



<https://tinyurl.com/y4qw4fpv>

ACKNOWLEDGEMENTS

PROGRAM COMMITTEE

Kayce C. Bell

Brad R. Blood

Patrice K. Connors

Elmer J. Finck

Daniel Greene

John D. Hanson

Andrew G. Hope

Sharon A. Jansa

Douglas A. Kelt (2021 Co-Host)

Eileen A. Lacey (2021 Co-Host)

Enrique P. Lessa (2021 Co-Host)

Jessica E. Light

Ryan A. Long

Jesus Maldonado (2019 Co-Host)

Verity L. Mathis

Christy McCain (2020 Host)

Michael McGowen (2019 Co-Host)

Lois Merkler

Link E. Olson (2021 Co-Host)

R. Neal Platt

Janet L. Rachlow

Andrew Ricketts

Luis A. Ruedas

James M. Ryan

Steven R. Sheffield

Robert S. Sikes (2021 Co-Host)

Winston P. Smith

PROGRAM COMMITTEE (CONT.)

Kelly A. Speer

Cody W. Thompson (Chair)

Don Wilson (2019 Co-Host)

Neal Woodman (2019 Co-Host)

LOCAL VOLUNTEERS

Alexis Alcala

Madeleine Becker

Susette Castaneda Rico

Marcus Chua

Leonard Dewaele

Ralph Eckerlin

Louise Emmons

Maya Juman

Darrin Lunde

John Ososky

Lillian Parker

Ingrid Rochon

Neha Singh

Kerri Smith

Alec Wilken

KANSAS STATE UNIVERSITY CONFERENCE PLANNING SERVICES

Dana Flynn

Debra Hagenmaier

John Murray

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2019 LOGO DESIGN

John Megahan

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GENERAL MEETING INFORMATION

REGISTRATION DESK

The ASM Registration Desk, located on the Regency Foyer Wall, will be open for registration from 7:00 am to 5:00 pm throughout the entirety of the meeting.

PARKING INFORMATION

Getting around Washington, D.C., is ultra-convenient during a stay at Hyatt Regency Washington on Capitol Hill. The prime location puts you within walking distance of the U.S. Capitol Building, a smorgasbord of monuments, the National Mall, and the historic homes of Capitol Hill. Walk one block to the bus stop, three blocks to Union Station, or take a short drive.

Hyatt Regency valet parking rates are discounted 15% for the conference. Discounted rates are:

0 to 2 Hours	\$28.05
2 to 10 Hours	\$39.10
10 to 24 Hours*	\$52.80 (\$56.10 for oversized vehicles)

*Overnight rates include in-and-out privileges. Additional parking garages are within walking distance.

MEETING ROOM INFORMATION

Auction & Social — Hyatt Regency, Regency A
Board of Directors Meeting I — Hyatt Regency, Columbia B
Board of Directors Meeting II — Hyatt Regency, Hall of Battles
Capstone Session — Hyatt Regency, Regency BCD
Closing Social & Awards Ceremony — National Museum of Natural History (NMNH), Hall of Mammals
Committee Meetings — Hyatt Regency (rooms – Bryce, Everglades, Yellowstone, Yosemite, Capitol A, Congressional A, and Hall of Battles)
DEI Townhall – Hyatt Regency, Hall of Battles
Exhibit Area — Hyatt Regency, Regency Foyer
Field Trip I — NMNH, Museum Support Center (meet 30 minutes before in the Hyatt Regency Lobby)
Field Trip II — NMNH, Cullman Library (meet 30 minutes before in the Hyatt Regency Lobby)
Field Trip III — NMNH, Mammal Collection (meet 30 minutes before in the Hyatt Regency Lobby)
Members Meetings — Hyatt Regency, Regency BCD
Officers & Plenary I Speakers Lunch — Hyatt Regency, Article One
Opening Social — Hyatt Regency, Regency A
Picnic — National Zoo
Plenary Session I — Hyatt Regency, Regency BCD
Plenary Session II — Hyatt Regency, Regency BCD
Poster Session I — Hyatt Regency, Regency A
Poster Session II & Social – Hyatt Regency, Regency A
Refreshment Breaks — Hyatt Regency, Regency Foyer
Registration — Hyatt Regency, Regency Foyer Wall
Run for Research — National Mall (meet 30 minutes before in hotel lobby)
Student Social — Hyatt Regency, Thornton Room-11th Floor
Symposia — Hyatt Regency, Regency BCD
Technical Sessions — Hyatt Regency (rooms – Capitol A, Capitol B, Congressional A, and Hall of Battles)
Thematic Sessions — Hyatt Regency, Regency BCD
Workshop I — Hyatt Regency, Thornton A-11th Floor
Workshop II — NMNH, VZ Seminar Room WG 33 (meet 1 hour before in the Hyatt Regency Lobby)
Workshop III — Hyatt Regency, Thornton B-11th Floor
Workshop IV — Hyatt Regency, Thornton A-11th Floor
Workshop V — Hyatt Regency, Thornton Lounge-11th Floor
Workshop VI – Hyatt Regency, Hall of Battles
Workshop VII – Hyatt Regency, Capitol A & Capitol B
Workshop VIII – Hyatt Regency, Hall of Battles
Vendor Show – Hyatt Regency, Regency Foyer

INTERNET ACCESS

The guest rooms at the hotel have complimentary WiFi. For Internet access in the meeting rooms connect to SSID: HYATT_MEETING, when prompted, enter the Conference Code—ASM19 and click on “submit”.

BUSINESS CENTER

A FedEX® Office business center is located just off the main hotel lobby adjacent to the escalators. Hours are 7:00 am to 7:00 pm.

MESSAGES & JOB ANNOUNCEMENTS

Message boards are located near the Registration Desk on the Regency Foyer Wall. Participants may post messages or job announcements for friends and colleagues.

FOOD & BEVERAGE

Morning and afternoon refreshment breaks will be served in Regency Foyer. Breakfast and lunch are on your own each day. There are a number of restaurants, from casual to fine dining, on-site or nearby. A list of local restaurants is on page 13.

Host and/or cash bars will be available during:

- Opening Social, 7:00 to 10:00 pm, Friday, June 28th
- Student Social, 7:00 to 10:00 pm, Saturday, June 29th
- Picnic, 7:00 to 10:00 pm, Sunday, June 30th
- Poster Session II & Social, 7:00 to 8:30 pm, Monday, July 1st
- Auction & Social, 8:30 to 10:00 pm, Monday, July 1st
- Closing Social & Awards Ceremony, 7:00 to 10:00 pm, Tuesday, July 2nd

NAME BADGE COLOR SCHEME

Associate Editors – Turquoise
Award Recipient – White
Board of Directors – Emerald Green
Committee Chair – Royal Blue
Editors – Turquoise
Honorary Members – TBD
Human Diversity Committee – Purple
Membership Committee – Lavender
Mentors – Red
Ombudspersons – Emerald Green
Past Presidents – Black
President – Emerald Green
President-Elect – Emerald Green
Program Committee – Red
Program Director – Emerald Green
Publications Director – Emerald Green
Recording Secretary – Emerald Green
Secretary Treasurer – Emerald Green
Sponsors – TBD
Trustee – Emerald Green
Vice President – Emerald Green

21ST ANNUAL GORDON L. KIRKLAND GRAND RUN/WALK FOR RESEARCH

Date and Race Start Time—Sunday, June 30th, 6:00 am (meet 30 minutes before in hotel lobby)

Start Location—The route begins at the Hyatt Regency.

Race Course—Runners will take off toward the National Mall and then proceed toward the Washington Monument. They will proceed past the National Gallery of Art, The Smithsonian Museums of Natural History and American History. Stopping just short of the Washington Monument, they'll return running past the Hirshorn Museum, Smithsonian National Air and Space Museum and passing the US Capitol on the way back to the finish at the Hyatt Regency. See map on the meeting website for details.

Sign-up—Register on-line or during Registration hours at the Registration Desk on the Regency Foyer Wall at the Hyatt Regency.

Entry Fee—\$20 (no t-shirt); \$35 (includes tech t-shirt). **All proceeds go to the ASM Future Mammalogists Fund!!!**

PRESENTATION INFORMATION

ORAL PRESENTERS

Equipment—The computers provided in the session rooms will be Windows based PCs with Microsoft Office. Your presentation must be created in, or converted to, Microsoft's PowerPoint (.ppt or .pptx) format or Adobe PDF (.pdf) format. PowerPoint files created on Macintosh computers should be previewed on a PC to ensure cross-platform compatibility. Most meeting rooms will have widescreen (16:9) screens. However, both standard (4:3) and widescreen (16:9) formatted presentations will work in all rooms. Laser pointers will be available.

Length & Format— Standard oral presentations will be allotted 12 minutes for the talk and 3 minutes for questions. Lightning talks will be allotted 4 minutes for the talk and 1 minute for questions.

Moderators—Session moderators will be designated to facilitate each session. The names of the moderators are noted in the session schedule. The session moderator will provide technical assistance with displaying your presentation.

POSTER PRESENTERS

Poster session dates and times are as follows:

Poster Session I: Saturday, June 29th, 1:30 to 3:00 pm

Poster Session II & Social: Monday, July 1st, 7:00 to 8:30 pm

At least one author must be present during the entire poster session time period.

Poster Size—Maximum poster size is 36 inches high x 48 inches wide in landscape format (86.36 x 121.92 cm). It is important to adhere to these size limitations given multiple posters will be hung simultaneously on a single board. Pushpins and display boards will be provided.

Poster Board Assignments—All poster boards will be numbered. Because some posters are being evaluated, please make sure that you place your poster in the correct location.

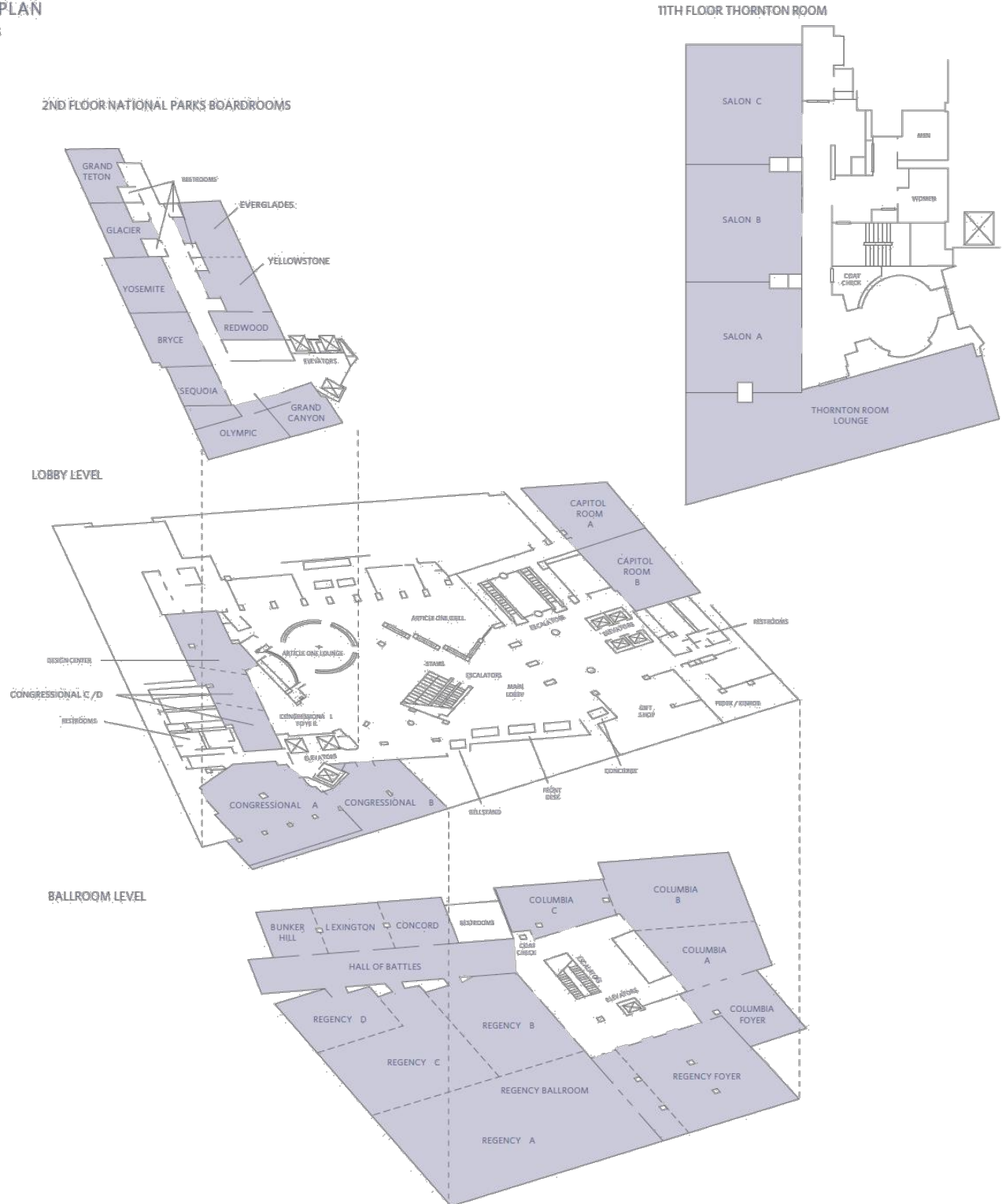
Poster Board Set-up and Take-down—**All posters** should be displayed beginning at 12:00 pm on Saturday, June 29th and removed by 10:00 pm following the Auction & Social on July 1st. **Posters are expected to be displayed during this entire time.** If your poster is not removed or claimed by the end of Auction, it will be discarded by conference staff.

CONFERENCE VENUE & MAPS

Area maps for Washington, DC can be found here (<https://washington.org/things-do-washington-dc>).

FLOOR PLAN

All Floors



LOCAL RESTAURANTS & BREWERIES

Wherever you roam, Hyatt Regency Washington on Capitol Hill is the perfect place to begin your adventures. From the hotel, stroll on Capitol Hill and start with a tour of the U.S. Capitol Building. Next, visit the Smithsonian museums, stop for a photo op in front of the White House, or make a reservation at one of D.C.'s top-ranked restaurants (take our word and Michelin's—there are many).

LOCAL RESTAURANTS

Ambar	District Doughnut
Art and Soul	Garrison
Barrel	Hank's Oyster Bar
Belga Cafe	Market Lunch
Beuchert's Saloon	Medium Rare
Bistro Bis	Pineapple and Pearls
Bullfrog Bagels	Rose's Luxury
Cava Mezze	Ted's Bulletin
Charlie Palmer Steak	Tune Inn

BARS AND BREWERIES

Craft Beer Cellar DC	The Brig Beergarden
Peninsulas Brewing	The Public Option
Red Bear Brewing	Trusty's Full-Serve Bar
Schneider's of Capitol Hill	Union Pub

COFFEE SHOPS

Bliss Cafe	Jefferson Coffee Shop
Ebenezers Coffeehouse	I L Creation of MD Inc

VENDOR SHOW

Exhibitors are located in the Regency Foyer during the following hours:

Saturday, June 29th	8:00 am to 5:00 pm
Sunday, June 30th	8:00 am to 5:00 pm
Monday, July 1st	8:00 am to 5:00 pm, 7:00 to 8:30 pm (optional)
Tuesday, July 2nd	8:00 am to 12:00 pm

EXHIBITORS

iDigBio is the National Resource for Advancing Digitization of Biodiversity Collections (ADBC) funded by the National Science Foundation.

The Johns Hopkins University Press publishes books, journals, and online collections for students, professionals, and general readers.

Odd Angel Studios LLC specializes in visual science communication, tattooing, and fine art.

Oxford University Press is the world's largest university press with the widest global presence.

RTLGenomics (A Division of Research and Testing Laboratory) offers services in the evaluation of microbial diversity, sequencing, bioinformatics, and biostatistics.

Smithsonian's National Zoo and Conservation Biology Institute provides engaging experiences with animals and creates and shares knowledge to save wildlife and habitats.

Titely Scientific specializes in the design and manufacture of wildlife tracking and bat acoustic monitoring equipment to researchers across the world.

LITERATURE ONLY

All Packaging Company provides custom rigid set-up boxes, slipcases, retail packaging, custom corrugated packaging, stock boxes, and packaging supplies.

Bone Clones, Inc. produces skulls and skeletons that are "virtually indistinguishable from the original"™.

Princeton University Press is an independent publisher with close connections to Princeton University.

University of Chicago Press is the largest and one of the oldest university presses in the United States.

Wildlife Acoustics is the leading provider of bioacoustics monitoring technology for scientists, researchers, and government agencies all over the world.

BOARD OF DIRECTORS, MEMBERS, AND COMMITTEE MEETINGS

-All meetings will occur in the Hyatt Regency unless otherwise noted-

FRIDAY, JUNE 28TH

8:00 am – 5:00 pm Board of Directors Meeting I – Columbia B (refreshments & lunch provided)

SATURDAY, JUNE 29TH

12:00 – 1:00 pm Conservation Awards Committee – Everglades
12:00 – 1:00 pm Systematic Collections Committee – Congressional A
12:30 – 1:30 pm Honoraria & Travel Awards Committee – Yellowstone
12:30 – 1:30 pm African Graduate Student Research Fund – Yosemite
12:30 – 1:30 pm Mammal Images Library – Bryce
12:30 – 2:00 pm Conservation Committee – Capitol A
1:00 – 3:00 pm Publications Advisory Board – Congressional A
3:30 – 5:00 pm Members Meeting I – Regency BCD

SUNDAY, JUNE 30TH

11:00 am – 12:30 pm Members Meeting II – Regency BCD
12:30 – 1:30 pm Nomenclature Committee – Yellowstone
12:30 – 1:30 pm Human Diversity Committee – Congressional A
12:30 – 2:00 pm Informatics Committee – Bryce
12:30 – 2:00 pm Membership Committee – Everglades
12:30 – 2:00 pm Publications Advisory Board – Hall of Battles

MONDAY, JULY 1ST

12:00 – 1:30 pm Public Education Committee – Bryce
12:00 – 1:30 pm Board of Directors Meeting II – Hall of Battles (lunch not provided)
12:30 – 1:30 pm Education & Graduate Students Committee – Everglades
12:30 – 1:30 pm Jackson Award Committee – Yellowstone
12:30 – 2:00 pm Conservation Committee – Congressional A

TUESDAY, JULY 2ND

12:00 – 1:00 pm Biodiversity Committee – Congressional A
12:00 – 1:30 pm DEI Townhall (hosted by Human Diversity Committee) – Hall of Battles
12:00 – 1:30 pm International Relations Committee – Bryce
12:00 – 1:30 pm Program Committee – Capitol A

COMMITTEE MEETINGS NOT SCHEDULED

Animal Care & Use Committee
Archives Committee
Conservation Committee
Coordination Committee
Development Committee
Grants-In-Aid Committee
Grinnell Award Committee
Honorary Membership Committee
Latin American Fellowship Committee
Legislation & Regulations Committee
Marine Mammals Committee
Merriam Award Committee
Office of Ombudsperson
Planning & Finance Committee
Resolutions Committee
Student Science Policy Award Committee

FIELDTRIPS

Field Trip I: Smithsonian Museum Support Center Tour

Field Trip Leaders: John Ososky and Michael McGowen

Friday, June 28th, 1:00 – 4:00 pm — Museum Support Center, Suitland, Maryland

Group Meeting Location: Meet 30 minutes before in Hotel Lobby

This tour will show attendees offsite facilities of the National Museum of Natural History, which stores many of our largest mammal specimens. This tour will be led by John Ososky, MSC Mammals Collections Specialist and Michael McGowen, Curator of Marine Mammals. Participants will meet in the Hyatt Regency Lobby and be shuttled to the facility in Suitland, Maryland. First, you will see 'Pod 2', which houses carnivores, ungulates, and other groups such as xenarthrans and pangolins. Highlights will include elephants collected by Theodore Roosevelt, one of the last Caribbean monk seals, and our extensive collection of large ungulates. We will then proceed to the 'Whale Warehouse' in the Garber Facility, which houses the largest cetacean collection in the world. Highlights of this portion of the tour include one the largest blue whale skulls in any collection, our diversity of large mysticetes, narwhal tusks, beaked whales, and more. Organizer: Michael McGowen.

Field Trip II: Cullman Library of Natural History Tour

Field Trip Leader: Leslie K. Overstreet

Friday, June 28th, 1:00 – 2:30 pm — National Museum of Natural History

Group Meeting Location: Meet 30 minutes before in the Hotel Lobby

Come see the original books that early naturalists and explorers wrote about their travels and discoveries! The Smithsonian Libraries' Joseph F. Cullman 3rd Library of Natural History will have on display a wide selection of publications documenting the early centuries of mammalogical research and species identifications. You'll be able to browse through a Renaissance edition of Pliny's *Historia naturalis*, many of the first 13 editions of Linnaeus' seminal *Systema naturae*, Audubon's stunning *Viviparous quadrupeds*, and other classic works by explorers, collectors, and naturalists from the 16th through the 19th centuries. Special features of books from the hand-press period (1450 – approx. 1850) – such as publication in parts, dating for nomenclatural priority, and the hand-coloring of illustrations, for example – will be highlighted as well. For more information on the Cullman Library collections, go to <http://library.si.edu/libraries/cullman/collections> and click on the pdf at the bottom of the page. **Please note: The Cullman Library is a high-security facility; you will be required to deposit coats and bags in the Cullman lockers, so the less impedimenta the better. No food or drink is allowed in the library. Photography is allowed, but no flash. And very importantly, clean hands, please!** Organizer: Neal Woodman.

Field Trip III: Smithsonian Mammal Collection Tour

Field Trip Leader: Darrin Lunde

Friday, June 28th, 3:30 – 4:00 pm — National Museum of Natural History

Group Meeting Location: Meet 30 minutes before in the Hotel Lobby

The National Museum of Natural History's mammal collection comprises nearly 600,000 specimens and is the largest collection of its kind in the world. The collections are split between two sites, with roughly half of the collection in the natural history museum on the national mall. This tour will begin with a pre-arranged selection of specimens representing the full history and scope of the entire NMNH collection. Highlights will include specimens from the U.S. Exploring Expedition (1838-1842), the Smithsonian-Roosevelt African Expedition (1909-10), the collections of the U.S. Biological Survey, as well as treasures from some more recent expeditions. The highlights overview will be followed by a walking tour of the bat, rodent, primate, and marsupial collections areas and will end with an open discussion on any collections-related topics of interest. Organizer: Neal Woodman.

WORKSHOPS

Workshop I: Conducting a Bat Acoustics Research Project or Teaching Class Module

Instructors: Kim Livengood & Chris Corben

Friday, June 28th, 8:00 am – 12:00 pm — Hyatt Regency, Thornton A

Bat acoustics is an interesting and fast-moving field of research. Many researchers use this technique and more university mammalogy programs are including bat acoustics as class modules or independent projects. This workshop is meant to provide an overview of bat acoustics including the techniques, the equipment, understanding deployment, and finally points in analyzing data once collected. Participants will gain a basic knowledge and an understanding of what is required to conduct acoustic monitoring and research. Organizers: Titley Scientific.

Workshop II: A Roadmap to the De Novo Assembly of Mammalian Genomes

Instructors: Andreas Chavez & Zachery Hanf

*Friday, June 28th, 10:00 am – 5:00 pm — National Museum of Natural History, VZ Seminar Room WG 33
Group Meeting Location: Meet at 9:00 am in the Hotel Lobby, will walk to NMNH*

Whole-genome based analyses are becoming more important in biological research, be it in an evolutionary, medical, as well as in conservation biology. Genome assembly, usually the first step in genomic analyses, is a fast-developing area of research. The rapid growth in assembly approaches has also made it difficult to stay current with emerging approaches, especially for new researchers to the field. Furthermore, assemblies for mammalian taxa require special considerations both in lab preparation and bioinformatically. Our workshop is targeted for both researchers with either little or an advanced background knowledge of the topic. This workshop will function as a roadmap that will guide researchers from designing projects to a “final” genome assembly, with some brief discussions on downstream analyses. We will start with basics, such as lab preparation methods, different sequencing technologies, and how to decide on which sequencing platform to choose. Then we will outline the steps needed to process raw sequencing data, as well as the different assembly and assembly quality assessment methods. To make it more user-friendly, we will discuss popular tools applied in the different steps to help researchers to decide on which to use. We believe this workshop is timely for mammalogists that are interested in any kind of genomic application because the costs and ease of generating high-quality reference genomes has dropped dramatically in the past few years, while more and more biologists, not just geneticists, are generating genome-wide data that can be enhanced with good reference genomes. Organizer: Andreas Chavez & Zachery Hanf.

Workshop III: Wildlife Telemetry Technologies

Instructors: Alex Campos

Friday, June 28th, 1:00 – 5:00 pm — Hyatt Regency, Thornton A

At different levels Telemetry can allow a minimum invasion to the species and their habitats, while at the same time allows to collect data that is otherwise very difficult or impossible to gather, such as habitat uses, survival rates, home range, domain areas, reproductive and feeding behavior, interactions, and a long etcetera. During the workshop we will learn about the most widely accepted Telemetry techniques for Wildlife research, with emphasis on VHF Radio-tracking and GPS with wireless and satellite data transmission. Associated sensors, scopes and limitations, diagnosing how to select the best option in terms of technology, weight, dimensions and attachment techniques according to the particular species of interest is also included. If conditions allow it, we can include a practice with functional equipment. This is an extremely useful tool for any researcher who is interested in implementing telemetry equipment for wildlife, it does not matter if the need is immediate, for a future project, or you simply want to be better qualified in case it is ever needed. Organizers: Telenax.

Workshop IV: Hackathon for the Mammal Diversity Database

Instructors: Connor Burgin, Jocelyn Colella, Nathan S. Upham, and Jane Widness

Friday, June 28th, 1:00 – 5:00 pm — Hyatt Regency, Thornton B

The Mammal Diversity Database (MDD) is an updatable and online database of mammal taxonomic and biodiversity information hosted by ASM at <http://mammaldiversity.org/>. It was launched in Feb 2018 with the goal of providing the latest information on species-level and higher taxonomic changes to mammals, and thereby promote rigorous study of mammalian biodiversity worldwide. So far, this online database aims to aggregate, curate, and compile new citations on species descriptions and taxonomic revisions into regular releases that are downloadable in comma-

delimited format. Downstream goals include expanded hosting of data on synonyms, type localities, link-outs to *Mammalian Species* accounts and Mammal Images Library photos, and greater interaction on an online forum for discussing mammalian taxonomy. For the proposed ASM 2019 workshop, we aim to host a “hack-a-thon” in the spirit of gathering like-minded biodiversity nerds to help improve the content and interface of the MDD. We are pleased to invite Philip Kahn, our primary web developer on the MDD, to join us for this event to do some real-time hacking on the website. Our plan is to give short introductions to recent progress on the MDD, a tutorial on how to use the website, organize breakout groups for exploring different taxonomic areas of the website, and then hosting a back-and-forth discussion and web development session to improve the MDD. Organizers: Nathan S. Upham and Jocelyn Colella.

Workshop V: Wildlife Acoustics Monitoring

Instructor: Nicole Wright

Friday, June 28th, 1:00 – 5:00 pm — Hyatt Regency, Thornton Lounge

Acoustic recorders provide a non-invasive and cost-effective technique to assess species biodiversity within a region. This will be a hands-on workshop based on the Song Meter SM4 family of acoustic and ultrasonic recorders and Kaleidoscope Pro analysis software. The first half of the workshop will focus on the set-up and deployment of the Song Meter SM4/SM4BAT recorder accounting for power considerations, site selection, recorder settings, recording schedules, etc. The second half of the workshop will focus on data analysis with Kaleidoscope Pro to automatically organize, sort, view, label similar calls into Clusters, use labeled Clusters to create species-specific Classifiers, and perform advanced queries in large datasets. To make the most of this class please download the SM4 Configurator from the Wildlife Acoustics website. Closer to the workshop date, we will send an email with instructions for a demo license of Kaleidoscope Pro Analysis Software along with some sample recordings for hands-on practice. Join Wildlife Acoustics on a bat walk at 8:00 pm on Saturday, June 29th. Participants will gather in the Hotel Lobby at the Hyatt Regency and will walk to the National Mall. Organizers: Wildlife Acoustics, Inc.

Workshop VI: #SciComm: Developing Strategies for Effective & Trustworthy Communication

Speakers: Katie Hinde, Roland Kays, Danielle Lee, and Karen Mabry

Saturday, June 29th, 12:00 – 1:30 pm — Hyatt Regency, Hall of Battles

Scientific communication and public engagement are not new aspects of biological research; our work means little if we cannot engage and explain it to the general public. Scientists need to be effective communicators and articles and examples abound about the importance of scientific communication (see “Resources” below). A Google search of “Science Communication” results in large numbers of academic (undergraduate and graduate) programs, workshops, journal articles, etc. Everyone is on board with recognizing the importance of public engagement and scientific communication. But how can we *actually* succeed at communicating our research findings to the public? The variety of platforms scientists can use to engage the general public (e.g., social media such as blogs, Twitter, and Instagram; interviews, public talks, etc.) is overwhelming. Is there a best way to communicate our science? The goal of the workshop is the professional development of needed science communication skills; thus empowering ASM members to share their research to broad and diverse audiences, not just practitioners in related fields. Specifically, we will provide support and training to build communication tools that convey scientific concepts beyond disciplines and improve connection with a variety of audiences in public and professional interactions. Organizers: Jessica E. Light, Sean P. Maher, and Karen Munroe.

Workshop VII: Increasing Inclusivity: Bias Awareness in Academia

Instructors: PowerPlay Interactive Development, University of New Hampshire

Saturday, June 29th, 5:00 – 7:00 pm — Hyatt Regency, Capitol A & Capitol B

This interactive development and training workshop will use professional actors and applied theatre techniques to facilitate dialogue and promote awareness around the critical issues of diversity and implicit bias. Actor-Improvisers will present prepared scenes based on real-world scenarios after which participants can ask the characters questions about their perspective on the scene. The actor’s then “rewind” the scene and examine in real time how effective alternative strategies might be. The result is a lively, interactive way of learning directed at improving academic interactions for both students and faculty of richly diverse backgrounds. If you have yet to try this form of experiential learning – join us and see for yourself how engaging and effective it can be! And, don’t worry – the actors are the ones who do the emotional heavy lifting, so you can sit back and reflect. Organizers: Becca Rowe and John Hanson.

Workshop VIII: 1-on-1 Mentoring Workshop – Networking for Success in Mammalogy

Instructors: Kayce Bell & Corey Welch

Saturday, June 29th, 5:00 – 7:00 pm — Hyatt Regency, Hall of Battles

Using a student pre-conference questionnaire, we will match undergraduate, graduate, and post-baccalaureate students with individual Mammalogists (PhDs) to develop a strategic plan for their career goals. Selected applicants will get a skills assessment, advising, and develop a plan to reach their academic, research, and professional goals. A selected group of 50-100 students will be matched by career interest with a ASM Mentor to participate in a modified Individualized Development Plan (IDP). Session goals are to: 1) deliver a hands-on, interactive progress assessment of students' intended career goals and readiness, 2) a skills assessment to identify gaps in training, 3) strategic planning of short-term and long-term goals, and 4) have a broader understanding of the science career pathways. Organizers: Corey Welch and Kayce Bell.

SYMPOSIA

Symposium I: Reconciling Scientific Collecting with Conservation

Presenters: Larry Heaney, Andrew Hope, Hayley Lanier, and Link Olson

Sunday, June 30th, 4:00 – 6:00 pm — Hyatt Regency, Regency BCD

Scientific collecting is a controversial topic, not just in mammalogy but in all vertebrate and, increasingly, many non-vertebrate disciplines. The collection of intact voucher specimens for permanent curation in natural history museums generally involves euthanizing wild-caught individuals and has become particularly contentious in recent years, with calls for its cessation in all but a few exceptional cases. Concerns among those opposed to collecting generally fall into one or more of four non-mutually exclusive categories: (1) ethical considerations, (2) the effects of collecting on the long-term viability of a population or species, (3) technological advances that purportedly render collecting obsolete, and (4) the belief that, in some regions and/or taxa, taxonomic diversity has been sufficiently described and delimited. Implicit in the latter two is the assumption that modern-day collecting is conducted primarily or solely for the purposes of taxonomic description, a misconception that has far-reaching consequences for a broad range of scientific inquiry. A plurality of these concerns is often advanced to argue that collecting is incompatible with conservation, yet many who collect argue just the opposite. The American Society of Mammalogists includes members who actively collect specimens; use curated specimens (and/or their associated data) archived in museums for research and/or teaching; curate or manage these collections; serve on their Institutional Animal Care and Use Committees (or this society's ACUC); review manuscripts and proposals that involve scientific collecting; and/or have concerns or unanswered questions about collecting. The topic should therefore appeal to a diverse range of our members, and the 2019 venue's proximity to the world's largest mammal collection makes this a timely opportunity. The overarching goal of the symposium is to educate our members about the role of scientific collecting in the context of conservation and to foster an open dialogue on this evolving debate. Organizers: Link Olson and Virginie Millien.

Symposium II: Mammal Diversity from GenBank to RedList

Presenters: Mariel Campbell, Rob Guralnick, Thomas E. Lacher, Jr., Richard Pyle, Conrad Schoch, John Sullivan, and Jane Widness

Monday, July 1st, 10:00 am – 12:00 pm — Hyatt Regency, Regency BCD

At the heart of mammalogy are two pillars of naturalistic study commonly overlooked in modern databases of global biodiversity: museum specimens and specimen-based taxonomy. Natural history specimens have been the foundation of zoological nomenclature since its inception, and continue their broad relevance today—not only for taxonomists working to delimit species, but for all biologists working to integrate our rapidly changing understanding of biodiversity and the tree of life to key conservation and sustainability challenges. Critically, current reliance upon taxonomic names rather than individual specimens for indexing biodiversity data poses major risks to data integrity, especially when species are divided or joined together. At best, taxonomic revisions lead to uncertainty about species-level traits; at worst, they impact global conservation action or inaction. For example, estimates of species' geographic range and population density form the basis for IUCN RedList decisions on species endangerment, yet there are no simple mechanisms for re-calculating geographic ranges to reflect the best science. Similarly, GenBank allows uploaders to link DNA sequences to museum specimens, but since few users use this field correctly most sequences are indexed by name only. Fortunately, digital tools are at the ready to fully integrate specimen-based taxonomy across fields of biodiversity science, promising broad rewards. Organizers: Nathan S. Upham and Luis Ruedas.

Symposium III: The Mammals of the Ecuadorean Andes

Presenters: Santiago F. Bumeo, John D. Hanson, Thomas E. Lee, Jr., Luis Ruedas, Sergio Solari, and Diego G. Tirira

Monday, July 1st, 1:30 – 3:30 pm — Hyatt Regency, Regency BCD

The Andes of Ecuador present some of the highest diversity of mammals in the world. To highlight this great mammalian diversity, we propose to have six speakers who have extensive experience with the mammals of the Ecuadorean Andes. All the speakers are experienced in field mammalogy of the Andes. They have worked on projects from the lower tropical forested slopes to the high páramo of the Andes. All of the speakers are authors of many journal articles and/or books on the mammalian fauna of the Andes. An effort was made to include speakers from diverse backgrounds and countries. The Ecuadorean Andes are a biodiversity hotspot because of its tropical location, strong zonation of ecosystems and proximity of the North America interchange of mammals. Recent contributions of work in the Ecuadorean Andes include many new species including newly described members of opossums, bats, and rodents, but also the first new carnivore in the Americas in thirty years, and new species in the little-known order of shrew-opossums, Paucituberculata. This is an exciting and fascinating region for the study of Mammalogy. Many other recent studies and analysis of phylogenetic data have strongly suggested that many new species have yet to be described. The wide array of new taxa and a region with over 430 species of mammals should make this symposium of interest to many mammalogists in many disciplines of our science. Organizers: Thomas E. Lee, Jr. and John D. Hanson.

Symposium IV: Murinae as a Model System

Presenters: Pierre-Henri Fabre, Cadhla Firth, Ricardo Mallarino, Kevin Rowe, and Emily Roycroft

Monday, July 1st, 3:30 – 5:30 pm — Hyatt Regency, Regency BCD

The Murinae comprises over 11% of mammalian species, and includes the two most important mammalian model species for genomic and biomedical research (lab mouse and rat), as well as some of the most ecologically and economically destructive invasive species (black rat and Norwegian rat). However, murines are much more than their famous model and invasive species suggest to the public and many biologists. In addition, to their taxonomic diversity, the Murinae spans an incredible breadth of ecological and phenotypic diversity representing a wide range of diets (omnivores, vermivores, folivores, etc.), locomotory modes (arboreal to semi-aquatic), reproductive strategies (r- and k-selected), body sizes (three orders of magnitude), pathogen loads, and many other dimensions. This incredible ecological diversity evolved rapidly over the last 14 million years as the group spread across the Old World. Much of this diversity (~70%) resides in the Indo- Australian region and arose through a process of repeated colonization of islands and subsequent diversification. This history of replicated radiations provides a natural experiment for understanding how lineages, genomes, and phenotypes diversify in an ecological context. Organizers: Jake Esselstyn and Kevin Rowe.

Symposium V: Ecology, Evolution, and Behavior of Urban Mammals

Presenters: Matthew Combs, Mariana Da Silva, Danielle N. Lee, Tim McSweeney, Christopher Schell, and Albrecht Schulte-Hostedde

Tuesday, July 2nd, 10:00 am – 12:00 pm — Hyatt Regency, Regency BCD

Urbanization is a pervasive cause of landscape change around the world. This phenomenon has resulted in a surge of interest in studying mammalian responses in and around cities. These new research programs on urban mammals address behavior, physiology, community composition, disease dynamics, gene flow, and adaptive evolution, as well as human dimensions of biodiversity conservation. This symposium explores mammalogy research across urban landscapes in North and South America, from city centers to urban sprawl, to understand the ways in which cities influence both native and non-native species. Speakers will highlight the unique stressors and selection pressures imposed by cities, as well as the effects of altered habitat and resource availability on mammal distributions, ecology, and evolution. This symposium is particularly suitable for the ASM 2019 meeting because it will showcase an important new area of research, urban mammalogy, at ASM's centennial meeting. Additionally, the symposium topic fits well with the meeting location in a major American city. Organizers: Matthew Combs, Carol Henger, and Jason Munshi-South.

UNDERGRADUATE HONORARIA AWARD RECIPIENTS

Robert Beers, Undergraduate Honoraria Award

Shifting small mammal community diversity due to wildfire succession in the Greater Yellowstone area

Saturday, June 29th, 1:30 – 3:00 pm – Hyatt Regency, Regency A

The recipient of the 2019 Undergraduate Honoraria Award is Robert Beers. Robert is an undergraduate student at the University of Oklahoma. He is currently studying to complete his bachelor's degree as a Biology major with a minor in Psychology. Drawn to nature since he was a child, he spent countless nights camping and backpacking, including at the Philmont Scout Ranch in the Boy Scouts of America on his path to reaching the rank of Eagle Scout. Through college, his interest in nature has continued and expanded into research. Robert got his start in fieldwork at the University of Oklahoma Biological Station, trapping multiple species of small mammals and collecting specimens with Dr. Brandi Coyner. In the summer of 2018, Robert joined a field project in Yellowstone, led by Dr. Hayley Lanier and Dr. R. Scott Seville, focused on understanding the impacts of fires on mammal community assembly. His work included trapping and prepping various species of small mammals, collecting invertebrate and vegetative data, and analyzing data for changes in species richness and abundance. Robert is currently an undergraduate researcher at the Sam Noble Museum of Natural History, where he is working on data analysis and specimen preparation. He has identified various vole and *Sorex* species caught in the field at Yellowstone to help better understand the small mammal community dynamics. In 2018, Robert presented his Yellowstone research at the Central Plains Society of Mammalogists Annual Meeting where he was awarded the best undergraduate student poster award. Robert is currently weighing opportunities for attending medical school against biology-focused graduate work and is excited to learn more about mammal research at this year's ASM annual meeting.

Maya Juman, Undergraduate Honoraria Award

Skeletal variation among island populations of large treeshrews (Scandentia, Tupaiidae)

Saturday, June 29th, 1:30 – 3:00 pm – Hyatt Regency, Regency A

The recipient of the 2019 Undergraduate Honoraria Award is Maya Juman. Maya is an undergraduate at Yale University, completing a Bachelor's degree in Ecology and Evolutionary Biology, as well as a certificate in Statistics and Data Science. She conducts research in the Mammalian Evolutionary Morphology Lab with Dr. Eric Sargis. Her current project involves exploring ecogeographic variation in the large treeshrew (Scandentia: Tupaiidae) using morphometric osteological data from the hands and skulls of museum specimens. Last summer, she collected and analyzed data for this research at the U.S. National Museum of Natural History under the guidance of Dr. Neal Woodman. She will be presenting her results at the 2019 American Society of Mammalogists meeting. Maya has previously worked on Permian reptile cranial evolution with Dr. Anjan Bhullar at Yale. She also analyzed pseudoxyrophiine snake speciation with Dr. Sara Ruane at the American Museum of Natural History and coauthored a paper describing a new cryptic species on Madagascar. Following her graduation in May 2020, she intends to pursue a Master's degree in biogeography and systematics. Alternatively, she is interested in taking a year off to work on scientific outreach and wildlife conservation, while gaining some field experience. Ultimately, she plans to apply to Ph.D. programs in evolutionary biology.

PLENARY I SPEAKERS

Marie Martin, Annie M. Alexander Award

Forest structure and snow depth alter the movement and subsequent expenditures of a forest carnivore

Saturday, June 29th, 8:15 – 8:35 am — Hyatt Regency, Regency BCD

The 2019 recipient of the Annie M. Alexander Award is Marie Martin. Marie is currently finishing her Master's degree in Wildlife Ecology at the University of Wisconsin-Madison where she is advised by Dr. Jonathan Pauli. She is broadly interested in the ecology of free-ranging animals with particular regards to movement, energetics, and responses to landscape change. In her current position, Marie is implementing a variety of techniques (e.g., doubly-labelled water, GPS collars) to understand how a forest carnivore of interest, the Pacific marten, moves through a heterogeneous landscape in northern California and how shifting abiotic and biotic landscape conditions alter marten movement and resource selection patterns and, consequently, energetic expenditures. After completing her Master's, Marie is excited to pursue further opportunities to better understand how landscape change affects the ecology of free-ranging species of interest. Though she currently spends most of her time writing and fiddling with R code, Marie also enjoys knitting, backpacking, biking, and hanging out with her dog, Sheila.

Katie Stanchak, Anna M. Jackson Award

An early burst of morphological diversification in a skeletal novelty in bats
Saturday, June 29th, 8:35 – 8:55 am — Hyatt Regency, Regency BCD

The 2019 recipient of the Anna M. Jackson Award is Katie Stanchak. Katie is currently finishing her PhD in the Department of Biology at the University of Washington and the Department of Mammalogy at the Burke Museum of Natural History and Culture under Dr. Sharlene Santana. Prior to embarking on a career as a mammalogist, Katie received her undergraduate degree from the Department of Mechanical Engineering at MIT. Her primary scientific interests are mammalian evolution and skeletal biology, and her dissertation research is focused on explaining the origin and diversification of a novel skeletal element in bats. This project is inherently integrative, drawing on methods from comparative anatomy, development, biomechanics, and macroevolution. Katie's long-term research goals are to use this interdisciplinary approach to reveal the sources of evolutionary novelty in the vertebrate skeleton (particularly in small mammals) and to understand the potential impacts of skeletal plasticity on skeletal evolution.

Dakota Rowsey, A. Brazier Howell Award

Dietary morphology of two island-endemic rodent clades is consistent with a persistent, incumbent-imposed biotic filter
Saturday, June 29th, 8:55 – 9:15 am — Hyatt Regency, Regency BCD

The 2019 recipient of the A. Brazier Howell Award is Dakota Rowsey. Dakota is an evolutionary biologist affiliated with the University of Minnesota's Bell Museum of Natural History and Ph.D. program in Ecology, Evolution, and Behavior, advised by Dr. Sharon Jansa. Dakota is interested in integrating molecular phylogenies and phenotypic data to infer historical macroevolutionary and biogeographic processes. His dissertation research focuses on the two clades of "Old Endemic" murine rodents of the Philippines to determine whether repeated colonization of spatially-limited island systems influences the tempo and mode of lineage diversification and ecomorphological evolution. Specifically, Dakota's research tests multiple hypotheses regarding potential competitive advantages presented to the incumbent, or primary-colonizing, murine lineage in the system. Following the anticipated defense of his dissertation in May 2019, Dakota will begin a postdoctoral research position at the Field Museum of Natural History, working with Dr. Lawrence Heaney to explore the role of island ontogeny in the diversification and biogeography of the endemic rodents of the Philippines.

Brian Tanis, Elmer C. Birney Award

Loosening the Macroevolutionary Ratchet: does dietary plasticity alter morphological insights into canid evolution?
Saturday, June 29th, 9:15 – 9:35 am — Hyatt Regency, Regency BCD

The 2019 recipient of the Elmer C. Birney Award is Brian Tanis. Brian is currently finishing a PhD in Zoology at Oregon State University, where he is advised by Dr. Rebecca Terry. Brian's research interests surround how interactions between and within species have shaped large scale ecological and evolutionary processes. Specifically, he leverages modern, historical, and paleontological museum specimens to reconstruct changing interactions within mammalian mesopredators. For his dissertation, Brian tested the spatial impacts of mesopredator release on diet shifts in Pacific Northwest canids over the last century following extirpation of wolves, coupled with a temporal analysis of the link between dietary specialization, clade-level competition, and species longevity spanning the last 33 million years of evolutionary history within the Canidae. Previously, Brian earned a master's degree from Fort Hays State University, studying occupancy dynamics of foxes and coyotes near wind. He earned his bachelor's degree from Susquehanna University, where he excavated and sorted small rodent fossils from a Pleistocene cave deposit. Brian's long-term goals are to integrate modern, historical, and paleoecology research to inform fundamental and applied questions at broader spatial and temporal scales than are typically considered in ecological and conservation research.

Kristoffer Everatt, William T. Hornaday Award

Ecology and conservation of African lions exposed to poaching and pastoralism
Saturday, June 29th, 10:00 – 10:30 am — Hyatt Regency, Regency BCD

The 2018 recipient of the William T. Hornaday Award is Kristoffer Everatt from Nelson Mandela University in Port Elizabeth South Africa. Kris has a long history of mammal conservation, beginning as a guide for photographic expeditions of wolves and grizzly bears throughout the Yukon Territory and the Arctic. This experience inspired him to pursue a career as a conservation biologist. He obtained a Bachelors of Science with distinction from Vancouver

Island University and went then went on to do a Masters at the University of Pretoria, South Africa on the status and ecology of lion, cheetah, wild dog, leopard and hyena existing in the human impacted Limpopo National Park. Some of this data provided the first evidence of these species current occurrence in Mozambique. He is now completing his PhD in Zoology at Nelson Mandela University on the influence of poaching on the landscape ecology and conservation biology of lions in the Greater Limpopo Transfrontier Conservation Area of South Africa, Mozambique and Zimbabwe. He has been actively engaged in creating policy, including contributing to the development of a National Action Plan for the Conservation of Lions in Mozambique and on-the-ground programs such as the Greater Limpopo Carnivore Program, the Limpopo Lion Guardians, and the Limpopo Elephant Program. Upon completion of his PhD he will be the director of Panthera's newly established African Lion and Poaching program.

Jocelyn Colella, Albert R. & Alma Shadle Fellowship Award

Episodic gene flow repeatedly impacts the evolution of high-latitude mesocarnivores
Saturday, June 29th, 10:30 – 11:00 am — Hyatt Regency, Regency BCD

The 2018 recipient of the Albert R. and Alma Shadle award is Jocelyn Colella of University of New Mexico. Ms. Colella has received grants from the Joseph Gaudin Fellowship in Mammalogy and the Center for Evolutionary and Theoretical Immunology at the University of New Mexico and the American Society of Mammalogists, in addition to substantial state and federal agency support of her work. Ms. Colella has published in journals such as Nature Communications Biology, Journal of Mammalogy, Canadian Journal of Zoology, and Arctic Science. She is an active member of ASM, serving as the student board member and an active member on the Biodiversity Committee. Ms. Colella presented at ASM conferences 4 times since 2013. Ms. Colella's dissertation research focuses on understanding how dynamic episodes of climate change in the Late Quaternary have led to recurrent bouts of admixture that impacts the evolution of high-latitude meso-carnivores; specifically, marten (*Martes americana* and *Martes caurina*) and ermine (*Mustela erminea*). By synthesizing genomics and morphometrics, she strives to increase our understanding of the role of hybridization in mammals, and also to provide new information and tools to managers for use in conservation. Ms. Colella plans to use funds from the Albert R. and Alma Shadle Fellowship to complete genomic sequencing for *Martes*.

Anne-Marie Hodge, 2017 ASM Fellowship Award

Interactions between invasive Opuntia stricta and native mammals in Central Kenya
Saturday, June 29th, 11:00 – 11:30 am — Hyatt Regency, Regency BCD

The recipient of the 2017 American Society of Mammalogists Fellowship is Anne-Marie Hodge from the University of Wyoming. Ms. Hodge has received a NSF Graduate Research Fellowship and a NASA Space Grant Fellowship, in addition to numerous other grants and awards. She has published multiple papers from her dissertation, master's thesis, and an REU project. She also has an impressive record of writing for a general audience, with several pieces published in *Scientific American*, and has been the primary instructor for an undergraduate mammalogy class at the University of Wyoming. She has been a member of ASM since 2008, is a founding member of the African Graduate Student Field Research Fund committee, and has given multiple presentations at ASM meetings. She organized a crowd funding campaign to support the African Graduate Student Field Research Fund and has reviewed for *Journal of Mammalogy*. Ms. Hodge's research focuses on interactions between native small mammals and invasive plants in Kenya, and she plans to use ASM Fellowship funding to collect additional data on the effects of a biocontrol campaign on diet shifts in olive baboons.

Brooks Kohli, 2018 ASM Fellowship Award

Mammals on mountainsides revisited: functional diversity gradients and change in Great Basin small mammal communities
Saturday, June 29th, 11:30 am – 12:00 pm — Hyatt Regency, Regency BCD

The recipient of the 2018 American Society of Mammalogists Fellowship is Brooks Kohli from University of New Hampshire. Mr. Kohli was a NOAA Hollings Scholar, was the recipient of the ASM Annie M. Alexander Award, and has received numerous other grants, scholarships, and awards. He has published work from his dissertation, master's thesis, and undergraduate research in journals such as Ecography, Journal of Biogeography, and Molecular Phylogenetics and Evolution, and has presented at national and international meetings. He has also held several positions with wildlife management agencies and was a Curatorial Assistant at the Museum of Southwestern Biology. Mr. Kohli has been an active member of ASM since 2010, serving on the Biodiversity Committee and Informatics Committee, and presenting at the annual meeting multiple years. Mr. Kohli's dissertation integrates field work, museum records, and ecomorphology to investigate community assembly, diversity gradients, and change in small

mammal communities over the last century in the Great Basin. He applies a multi-dimensional perspective of diversity (functional, phylogenetic, taxonomic dimensions) to uncover drivers of community structure and dynamics. He plans to use ASM Fellowship funding as support during the final year of his dissertation and to attend meetings where he can share his work with regional stakeholders in the Great Basin.

PLENARY II SPEAKERS

Dr. M. Denise Dearing, Joseph Grinnell Award

Understanding dietary diversity takes a diversity of approaches and individuals
Sunday, June 30th, 8:15 – 9:00 am — Hyatt Regency, Regency BCD

The 2018 recipient of the Joseph Grinnell Award is Dr. M. Denise Dearing, Distinguished Professor and Chair of the Department of Biology, University of Utah. At the University of Utah, Denise has taught Mammalogy, Ecology Laboratory, Advanced Topics in Ecology and Evolution, and Bio-Boot Camp. For excellence in the classroom, she was recognized with the 2001 Student's Choice Award, and the 2008 Distinguished University teaching award at the University of Utah. Denise has sponsored 11 PhD students and 17 postdoctoral scholars, with whom she has published over 150 papers. Nearly 75% of these individuals are from traditionally under-represented groups, but they now fill the ranks of various academic institutions and continue to train the next generation of mammalogists. For her achievements in mentoring, Denise was recognized by the University of Utah with the 2009 Graduate Student and Postdoctoral Scholar Distinguished Mentor award. Denise's career has been exemplified by pushing the boundaries of mammalogy and functional ecology, for which she received the 2014 C. Hart Merriam Award, but she has also pushed the boundaries of what typically limits full inclusion in academia, especially for women. Denise was, herself, a first-generation college student who began her education at a 2-year community college. As a new Assistant professor, when she was faced with limited options for childcare at her institution, she spearheaded a campaign to create a campus childcare program eventually called Biokids. She conceived the idea, developed the resources, rallied the faculty, acquired space, and oversaw the establishment of this facility that has improved the educational and working environment for women and families.

Dr. Steve Goodman, Aldo Leopold Award

Mammal research and conservation on Madagascar: a review of the past 30 years
Sunday, June 30th, 9:00 – 9:45 am — Hyatt Regency, Regency BCD

The recipient of the 2018 Aldo Leopold award is Dr. Steve Goodman of the Field Museum of Natural History. Although the primary focus of Dr. Goodman's research has been on the mammals of Madagascar, he has conducted research in numerous other African countries. His principal research interests are: 1) inventories of unknown or poorly known forested areas, 2) describing new species and elucidating the evolutionary history of Malagasy mammals, 3) application of gathered data in the advancement of conservation programs, and 4) capacity building for Malagasy conservation biologists, particularly graduate students. Dr. Goodman is a founder of the Association Vahatra, a grass-roots organization that promotes conservation of Madagascar's native fauna while training the next generation of Malagasy scientists in ecology and conservation biology. Over the last three decades, Dr. Goodman has helped create a whole generation of biologist and conservationists by training dozens of Malagasy graduate students and hundreds of undergraduates in modern ecological techniques, including best practices for field surveys, museum collections, data acquisition, and analysis. He has actively applied their distribution and abundance data to various large-scale conservation projects and were vitally involved in the 2003 national plan to triple the size of the protected areas system. Every letter of support highlighted the profound and lasting impact he has had, not only on the understanding of mammalian taxonomy and conservation, but on the Malagasy people as well. To date, Dr. Goodman has received numerous awards from other organizations for his major contributions, including the Biodiversity Leadership Award (Bay and Paul Foundation, 2004), the Conservation Leadership Award (World Wildlife Fund, 2004), and was named a MacArthur Foundation Fellow in 2005 and an Alexander von Humboldt Foundation Fellow in 2013.

Dr. Stan Boutin, C. Hart Merriam Award

*A brief history of change in the mammals at Kluane Lake Yukon
Sunday, June 30th, 9:45 – 10:30 am — Hyatt Regency, Regency BCD*

Dr. Stan Boutin of the University of Alberta is the 2018 recipient of the C. Hart Merriam Award. He obtained his B.S. from the University of Alberta (Honors), and his M.S. (Zoology) and Ph.D. (Zoology) from the University of British Columbia. Dr. Boutin served as an Assistant Professor at the University of Guelph, and ultimately was promoted through the professorial ranks at the University of Alberta. He now holds the Alberta Biodiversity Conservation Chair in the Department of Biology. Dr. Boutin has an exceptional record of publications, including 266 peer-reviewed papers. He also has published 1 book and edited another—he has an additional 19 publications as book chapters and in symposia. He remains remarkably active with 57 papers published in the past 5 years, many with his numerous M.S. and Ph.D. students, and his Post-Doctoral Fellows. Dr. Boutin also has done an excellent job of funding his research and that of his graduate students and Post-Doctoral Fellows. Since 1984, he has received \$30 million from NSERC (the Canadian equivalent of NSF) and other sources. Dr. Boutin has made significant contributions to our understanding of mammalian behavioral ecology, population dynamics, and conservation biology. The body of research for which Dr. Boutin is most renowned is his ground-breaking research into the factors that drive the evolution and dynamics of wildlife populations. Using mammals as his primary focus, he has made major and fundamental contributions to our understanding of predator-prey dynamics, the role of food, habitat selection and spacing behavior as factors determining population size, and the contributions of the genotype and phenotype of organisms in facilitating their responses to changing environments. Using judicious field experiments and one of the longest population studies on any mammal (data on ~10,000 individual squirrels sampled over more than 25 years), allowed him to test hypotheses and extend theory in areas as diverse as the effects of personality on reproduction, senescence, energetics, maternal effects and other key components that underpin individual fitness. Dr. Boutin's contributions to science have not gone unnoticed. He is a Fellow of the Royal Society of Canada and has received the Society's Romanowski Medal for contributions to environmental sciences. He was honored with the J. Gordin Kaplin Award for excellence in research (the University of Alberta's highest research honor). He received the William Rowan Distinguished Service Award from the Alberta Chapter of The Wildlife Society, as well as 2 Outstanding Publication Awards from The Wildlife Society.

CAPSTONE SPEAKERS

Dr. Tom Lovejoy

*Twenty-first century conservation
Tuesday, July 2nd, 4:05 – 4:40 pm — Hyatt Regency, Regency BCD*

Dr. Thomas Lovejoy was elected University Professor at George Mason in March 2010. He previously held the Biodiversity Chair at the Heinz Center for Science, Economics and the Environment and was President from 2002-2008. An ecologist who has worked in the Brazilian Amazon since 1965, he works on the interface of science and environmental policy. Starting in the 1970's he helped bring attention to the issue of tropical deforestation and in 1980 published the first estimate of global extinction rates (in the Global 2000 Report to the President). He conceived the idea for the long-term study on forest fragmentation in the Amazon (started in 1978) which is the largest experiment in landscape ecology, the Minimum Critical Size of Ecosystems project (also known as the Biological Dynamics of Forest Fragments Project). He also coined the term "Biological diversity", originated the concept of debt-for-nature swaps and has worked on the interaction between climate change and biodiversity for more than 30 years. He is the founder of the public television series "Nature". In the past, he served as the Senior Advisor to the President of the United Nations Foundation, as the Chief Biodiversity Advisor to the World Bank as well as Lead Specialist for the Environment for the Latin American region, as the Assistant Secretary for Environmental and External Affairs for the Smithsonian Institution, and as Executive Vice President of World Wildlife Fund-US. In 2002, he was awarded the Tyler Prize, and in 2009 he was the winner of BBVA Foundation Frontiers of Knowledge Award in the Ecology and Conservation Biology Category. In 2012 he received the Blue Planet Prize. He has served on advisory councils in the Reagan, George H.W. Bush, and Clinton administrations. In 2009 he was appointed Conservation Fellow by the National Geographic Society. He chaired the Scientific and Technical Panel for the Global Environment Facility which provides funding related to the international environmental conventions from 2009-2013 and serves as Advisor to the current Chair. He received his B.S. and Ph.D. (Biology) from Yale University.

Dr. Kate Jones

Our planet, our health

Tuesday, July 2nd, 4:40 – 5:30 pm — Hyatt Regency, Regency BCD

Dr. Kate Jones is Professor of Ecology and Biodiversity, Director of the Biodiversity Modelling Research Group in the Centre for Biodiversity and Environmental Research (CBER), within the Research Department of Genetics, Evolution and Environment (GEE) at University College London. Dr. Jones is a world-leading biodiversity modeler known for her innovative, broad cross-disciplinary research in the linkages between global change, biodiversity and ecosystem services, winning the Philip Leverhulme Prize for outstanding contributions to Zoology in 2008. Dr. Jones holds scientific advisory positions for a number of national and international conservation charities and was the Chair of The Bat Conservation Trust from 2010-2015. She also directs several citizen science projects monitoring biodiversity globally. Dr. Jones is a passionate science communicator and regularly appears in the national and international media, including the Life Scientific on BBC Radio 4 in 2015. Allegedly*, Charles Darwin is her 8th cousin (6 times removed).

SOCIAL EVENTS

Friday, June 28th, 7:00 – 10:00 pm

Opening Social – Hyatt Regency, Regency A

Come kick off the conference with an opening night reception at the Regency A Ballroom located on the Ballroom Level of our Conference Hotel, the Hyatt Regency Washington on Capitol Hill. Enjoy the opportunity to socialize with friends, colleagues, and other conference attendees, as well as welcome new members and meeting attendees to the Society. Beer and wine, as well as heavy hors d'oeuvres, will be available. The Opening Social is hosted by the Membership Committee.

Saturday, June 29th, 7:00 – 10:00 pm

Student Social – Hyatt Regency, Thornton Room-11th Floor

All student attendees are welcome to come and socialize with your friends and colleagues, as well as meet new student members. Food, alcohol, and non-alcoholic drinks will be available. Enjoy the wrap around views of the city from the Thornton Room on the 11th Floor of the Hyatt! The Student Social is hosted by the Education and Graduate Students Committee.

Sunday, June 30th, 7:00 – 10:00 pm

Picnic – National Zoo

Join your friends and colleagues for food and drink, and live music at the Great Cats Exhibit at the National Zoo. Enjoy local beer and wine and multiple barbeque options just a few feet from the magnificent cats. Transportation will be provided to and from the hotel to the zoo. Must purchase tickets in advance!

Monday, July 1st, 7:00 – 10:00 pm

Poster Social II & Auction – Hyatt Regency, Regency A

The Monday night poster session will include presentations, a social, and auction. What a great opportunity to discuss research with poster presenters and socialize with your colleagues. Support the ASM's Future Mammalogists Fund through donating to and purchasing from the auction! The Auction will begin around 8:30 pm. Beer and wine, as well as heavy hors d'oeuvres; will be available during the poster social. A cash bar will be available during the auction.

Tuesday, July 2nd, 7:00 – 10:00 pm

Closing Social & Awards Ceremony – National Museum of Natural History

Join us at the Closing Social and Awards Ceremony at the National Museum of Natural History. Heavy hors d'oeuvres and drinks will be provided. Transportation will be provided to and from the hotel to the museum. Must purchase tickets in advance!

PROGRAM AT-A-GLANCE

-All locations are in the Hyatt Regency unless otherwise noted-

FRIDAY, JUNE 28TH, 2019		
TIME	EVENT	LOCATION
7:00 am	Registration	Regency Foyer Wall
8:00 am	Board of Directors Meeting I	Columbia B
8:00 am	Workshop I: Bat Acoustics	Thornton A-11th Floor
9:00 am	Gathering in Hotel Lobby for Workshop II	Hotel Lobby
10:00 am	Workshop II: De Novo Genome Assembly	National Museum of Natural History
12:30 pm	Gathering in Hotel Lobby for Field Trip I	Hotel Lobby
12:30 pm	Gathering in Hotel Lobby for Field Trip II	Hotel Lobby
1:00 pm	Fieldtrip I: Smithsonian Museum Support Center	Suitland, Maryland
1:00 pm	Fieldtrip II: Cullman Library of Natural History	National Museum of Natural History
1:00 pm	Workshop III: Wildlife Telemetry	Thornton A-11th Floor
1:00 pm	Workshop IV: Hackathon for Mammal Diversity	Thornton B-11th Floor
1:00 pm	Workshop V: Wildlife Acoustics	Thornton Lounge-11th Floor
2:00 pm	Gathering at Hotel Lobby for Field Trip III	Hotel Lobby
2:30 pm	Fieldtrip III: Smithsonian Mammal Collections	National Museum of Natural History
7:00 pm	Opening Social	Regency A
SATURDAY, JUNE 29TH, 2019		
TIME	EVENT	LOCATION
7:00 am	Registration	Regency Foyer Wall
8:00 am	Vendor Show	Regency Foyer
8:00 am	Welcome & Announcements	Regency BCD
8:15 am	Plenary Session I	Regency BCD
9:35 am	Break	Regency Foyer
10:00 am	Plenary Session I	Regency BCD
12:00 pm	Lunch	On Your Own
12:00 pm	Officers & Student Plenary Speakers Lunch	Article One
12:00 pm	Workshop VI: Scientific Communication	Hall of Battles
1:30 pm	Poster Session I	Regency A
3:00 pm	Break	Regency Foyer
3:30 pm	Members Meeting I	Regency BCD
5:00 pm	Workshop VII: Bias Awareness in Academia	Capitol A & Capitol B
5:00 pm	Workshop VIII: Student Mentoring	Hall of Battles
7:00 pm	Student Social	Thornton Room-11th floor
8:00 pm	Gathering in Hotel Lobby for Bat Walk	Hotel Lobby
8:00 pm	Bat Walk	National Mall
SUNDAY, JUNE 30TH, 2019		
TIME	EVENT	LOCATION
5:30 am	Gathering in Hotel Lobby for Kirkland Run	Hotel Lobby
6:00 am	Gordon L. Kirkland Memorial Run for Research	National Mall
7:00 am	Registration	Regency Foyer Wall
8:00 am	Vendor Show	Regency A
8:00 am	Welcome & Announcements	Regency BCD
8:15 am	Plenary Session II	Regency BCD
10:30 am	Break	Regency Foyer
11:00 am	Members Meeting II	Regency BCD

12:30 pm	Lunch	On Your Own
2:00 pm	Thematic Session I: Citizen Science	Regency BCD
2:00 pm	Technical Sessions 1, 2, 3, and 4	Capitol A, Capitol B, Congressional A, and Hall of Battles
3:30 pm	Break	Regency Foyer
4:00 pm	Symposium I: Collecting & Conservation	Regency BCD
4:00 pm	Technical Sessions 5 & 6	Capitol A & Capitol B
6:00 pm	Buses begin loading for the Picnic	Hotel Entrance, New Jersey Ave. NW
7:00 pm	Picnic	National Zoo
MONDAY, JULY 1ST, 2019		
TIME	EVENT	LOCATION
7:00 am	Registration	Regency Foyer Wall
8:00 am	Vendor Show	Regency A
8:00 am	Thematic Session II: Broadening Diversity	Regency BCD
8:00 am	Technical Sessions 7, 8, 9, and 10	Capitol A, Capitol B, Congressional A, and Hall of Battles
9:30 am	Break	Regency Foyer
10:00 am	Symposium II: GenBank to Redlist	Regency BCD
10:00 am	Technical Sessions 11 & 12	Capitol A & Capitol B
12:00 pm	Lunch	On Your Own
12:00 pm	Board of Directors Meeting II (no lunch provided)	Hall of Battles
1:30 pm	Symposium III: Ecuadorian Mammals	Regency BCD
1:30 pm	Technical Sessions 13 & 14	Capitol A & Capitol B
3:30 pm	Break	Regency Foyer
4:00 pm	Symposium IV: Murinae as a Model System	Regency BCD
4:00 pm	Technical Sessions 15 & 16	Capitol A & Capitol B
7:00 pm	Poster Session II & Social	Regency A
8:30 pm	Auction for Future Mammalogists Fund & Social	Regency A
TUESDAY, JULY 2ND, 2019		
TIME	EVENT	LOCATION
7:00 am	Registration	Regency Foyer Wall
8:00 am	Vendor Show	Regency A
8:00 am	Thematic Session III: Demographics	Regency BCD
8:00 am	Technical Sessions 17, 18, 19, and 20	Capitol A, Capitol B, Congressional A, and Hall of Battles
10:00 am	Break	Regency Foyer
10:30 am	Symposium V: Urban Mammals	Regency BCD
10:00 am	Technical Sessions 21 & 22	Capitol A & Capitol B
12:00 pm	Lunch	On Your Own
12:00 pm	DEI Townhall (no lunch provided)	Hall of Battles
1:30 pm	Thematic Session IV: -omics Approaches	Regency BCD
1:30 pm	Technical Sessions 23, 24, 25, and 26	Capitol A, Capitol B, Congressional A, and Hall of Battles
3:30 pm	Break	Regency Foyer
4:00 pm	Capstone Session	Regency BCD
6:00 pm	Buses begin loading for the Closing Social	Hotel Entrance, New Jersey Ave. NW
7:00 pm	Closing Social & Awards Ceremony	National Museum of Natural History

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FRIDAY, JUNE 28TH, OPENING DAY

7:00 AM	Registration – Regency Foyer Wall
8:00 AM	Board of Directors Meeting I – Columbia B
8:00 AM	Workshop I: Conducting a Bat Acoustics Research Project or Teaching A Class Module – Thornton A-11th Floor Instructors: K. Livengood and C. Corben
9:00 AM	Gathering in Hotel Lobby for Workshop II – Hotel Lobby
10:00 AM	Workshop II: A Roadmap to the De Novo Assembly of Mammalian Genomes – National Museum of Natural History, VZ Seminar Room WG 33 Instructor: A. Chavez & Z. Hanf
12:30 PM	Gathering in Hotel Lobby for Field Trip I
12:30 PM	Gathering in Hotel Lobby for Field Trip II
1:00 PM	Fieldtrip I: Smithsonian Museum Support Center Tour – Suitland Maryland
1:00 PM	Fieldtrip II: Cullman Library of Natural History Tour – National Museum of Natural History
1:00 PM	Workshop III: Wildlife Telemetry Technologies – Thornton A-11th Floor Instructor: A. Campos
1:00 PM	Workshop IV: Hackathon for the Mammal Diversity Database – Thornton B-11th Floor Instructors: C. Burgin, J. Colella, N.S. Upham, and Jane Widness
1:00 PM	Workshop V: Wildlife Acoustics Monitoring – Thornton Lounge-11th Floor Instructor: N. Wright
2:00 PM	Gathering in Hotel Lobby for Field Trip III
2:30 PM	Fieldtrip III: Smithsonian Mammal Collection Tour – National Museum of Natural History
7:00 PM	Opening Social – Regency A

**SATURDAY, JUNE 29TH, PLENARY SESSION I
-HYATT REGENCY WASHINGTON ON CAPITOL HILL, REGENCY BCD-**

7:00 AM	Registration – Regency Foyer Wall
8:00 AM	Vendor Show – Regency A
8:00 AM	Plenary Session I – Regency BCD
8:00 AM	Welcome & Announcements ASM President Douglas A. Kelt
8:15 AM	Annie M. Alexander Award 1^{HTA}: Forest structure and snow depth alter the movement and subsequent expenditures of a forest carnivore M. E. Martin*, K.M. Moriarty, and J.N. Pauli
8:35 AM	Anna M. Jackson Award 2^{HTA**}: An early burst of morphological diversification in a skeletal novelty in bats K.E. Stanchak*, J.H. Arbour, and S.E. Santana
8:55 AM	A. Brazier Howell Award 3^{E,HTA**}: Dietary morphology of two island-endemic rodent clades is consistent with a persistent, incumbent-imposed biotic filter D.M. Rowsey*, L.R. Heaney, and S.A. Jansa
9:15 AM	Elmer C. Birney Award 4^{HTA**}: Loosening the Macroevolutionary Ratchet: Does dietary plasticity alter morphological insights into canid evolution? B.P. Tanis*, L.R.G. DeSantis, and R.C. Terry
9:35 AM	Break – Regency Foyer
10:00 AM	William T. Hornaday Award 5^{**}: Ecology and conservation of African lions exposed to poaching and pastoralism K.T. Everatt*
10:30 AM	Albert R. & Alma Fellowship 6^{E**}: Episodic gene flow repeatedly impacts the evolution of high-latitude mesocarnivores J.P. Colella*
11:00 AM	2017 ASM Fellowship 7^{E**}: Interactions between invasive <i>Opuntia stricta</i> and native mammals in Central Kenya A.-M.C. Hodge* and M. Ben-David
11:30 AM	2018 ASM Fellowship 8^{**}: Mammals on mountainsides revisited: functional diversity gradients and change in Great Basin small mammal communities B.A. Kohli*
12:00 PM	Lunch – On Your Own
12:00 PM	Officers & Student Plenary Speakers Lunch – Article One
12:00 PM	Workshop VI: #SciComm: Developing Strategies for Effective and Trustworthy Communication – Hall of Battles Speakers: K. Hinde, R. Kays, D. Lee, and K. Mabry
1:30 PM	Poster Session I – Regency A

^EEvaluated Presentation ^{HTA}Honoraria or Travel Award ^{**}Grants-In-Aid or Fellowship *Presenter

**SATURDAY, JUNE 29TH, POSTER SESSION I
-HYATT REGENCY WASHINGTON ON CAPITOL HILL, REGENCY A-**

1:30 PM	Poster Session I – Regency A
9: Advantages of 3D microCT imaging for studying prenatal development in bats J.M. Ryan*	
10^E: Reassessing the taxonomy of Caucasian tur by means of cranial morphometry K.R. Caspar* and E.V. Bärmann	
11: Whale watching tours, conservation attitudes, and cetacean behavior in Kenai Fjords Alaska L.E. McCaslin and B.A. Schulte*	
12: The mammal collections at Instituto Politécnico Nacional, México C. López-González*, C. Elizalde-Arellano, M.A. Briones-Salas, and J.C. López-Vidal	
13^E: Species accumulation analysis for endoparasites of North American pocket gophers (Rodentia: Geomyidae) A.T. Dursahinhan*, S. Botero-Canola, and S.L. Gardner	
14: Melanocortin-1-receptor (MC1R) gene sequence variation in native and introduced populations of <i>Sciurus carolinensis</i> H.R. McRobie and N.D. Moncrief*	
15^E: Range dynamics of a high-elevation rodent (<i>Neotoma mexicana</i>) in the American Southwest K.M. Derieg*, S.C. Farr, K. Gutiérrez, and J.A. Cook	
16^E: Fecal microbial communities differ by intrinsic and extrinsic variables in <i>Urocyon littoralis</i> M. Becker*, N. Adams, and S. Edmands	
17: Evolutionary analyses unveil the molecular mechanism of fast inactivation in calcium-permeable TRP channels L. Flores-Aldama, M.W. Vandewege, K. Zavala, C.K. Colenso, D. Bustos, W. Gonzalez, S.E. Brauchi, and J.C. Opazo*	
18: Caching and building behaviors of woodrats in captivity during longer term studies C.S. Goodwin* and M.M. Skopec	
19^E: Genetic diversity of blue wildebeest (<i>Connochaetes taurinus</i>) in the Liuwa Plains of Zambia S.J. Szarmach*, K.C. Teeter, A.R. Lindsay, J. M'soka, E. Dröge, and M.S. Becker	
20^E: Estimating white-tailed deer population sizes using unmanned aerial vehicles (UAVs) J. Exum*, A.M. Foley, R.W. DeYoung, D.G. Hewitt, J. Baumgardt, and M.W. Hellickson	
21: Adaptive management to promote an imperiled native cottontail over a non-native competitor D.V. Eline*, A.E. Cheeseman, and J.B. Cohen	
22^{E,HTA}: Genetic data reveal paraphyletic taxa and cryptic species diversity in the greater galagos (<i>Otolemur garnettii</i>) A. Penna*, R. Dillon, and L. Pozzi	
23: Mammals behind bars: teaching marine mammalogy in a super-maximum security prison C.M. Callahan	
24^E: Temporal prevalence of ecto-parasites considering mammal community turnover and woody encroachment within the Great Plains K.R. Meacham*, M.E. Schmidt, and A.G. Hope	
25^E: What are the evolutionary origins of Kansas mammals? Community assembly dynamics through the Great Plains M.E. Schmidt*, K.R. Meacham, and A.G. Hope	
26^E: Analyzing the cortisol profile in wild vs. captive North American porcupines S.E. Muncil* and E.L. Barthelmeß	
27: oVert: a collaborative effort to produce 3D data for all vertebrate genera C.W. Thompson*, J.I. Bloch, D.M. Boyer, J.P. Dumbacher, J.A. Esselstyn, A.L. Hines, Z.-X. Luo, R.S. Nagesan, G.G. Pandelis, S.E. Santana, E.L. Stanley, P.K. Tucker, J.M. Winchester, and D.C. Blackburn	
28: Forestry and prescribed burns attract wildlife but may limit species diversity M.S. Vilgats, R. Ott, and S.S. Coster*	

^EEvaluated Presentation ^{HTA}Honoraria or Travel Award **Grants-In-Aid or Fellowship *Presenter

29: Microhabitat use by the Texas kangaroo rat along roadsides dominated by cropland I. Castro-Arellano*, M.T. Milholland, S.L. Ott, J.A. Veech, T.R. Simpson, and J. Evans
30: Snowshoe hares alter behavior in response to coyote and moose cues at diverse vegetation densities Z.K. Lankist and C.R. Maher*
31: Populations of small mammals, tallgrass prairie, and prescribed fire: a fire-reversal experiment G.A. Kaufman*, D.W. Kaufman, A.W. Reed, D.M. Kaufman, and R.L. Rehmeier
32: Communities of small mammals, tallgrass prairie, and prescribed fire: a fire-reversal experiment D.W. Kaufman*, G.A. Kaufman, D.M. Kaufman, A.W. Reed, and R.L. Rehmeier
33^{E,HTA**}: Reciprocity in restoration ecology: when might large carnivore reintroduction restore ecosystems? F.J. Molina*, J.M. Alston, B.M. Maitland, B.T. Brito, S. Esmaeili, A.T. Ford, B. Hays, B.R. Jesmer, and J.R. Goheen
34^E: Ocelot (<i>Leopardus pardalis</i>), bobcat (<i>Lynx rufus</i>), and coyote (<i>Canis latrans</i>) coexistence patterns in South Texas J.V. Lombardi*, D.I. MacKenzie, M.E. Tewes, H.L. Perotto-Baldivieso, J.M. Mata, and T.A. Campbell
35: Preliminary investigation of resident and transient margays at Wildsumaco Wildlife Sanctuary, Ecuador E.N. Vanderhoff, T. Knowles*, M. Warren, P. Zwiers, and B. Arbogast
36: Tunnel diameter as an alternative method to determine pocket gopher (<i>Thomomys</i>) occupancy B.T. Brito, J.F. Sanchez*, and J.R. Goheen
37^E: The future of museum mammalogy collections E.N. Rowland* and V.L. Mathis
38: Predicting new records for an endangered shrew in a poorly explored mountain range in Mexico L. Guevara* and V. Sánchez-Cordero
39^{E,HTA}: Pika glucocorticoid metabolites within latrines T. McFarland*, B.D. Waterhouse, and J. Varner
40^E: Exploratory behavior and response to novelty in two montane chipmunks of the Sierra Nevada K.C. Wrensford* and E.A. Lacey
41: Methods to manage woodchucks B. Evangelista*, C.R. Maher, C. Sponarski, and A. Lichtenwalner
42^E: Using camera traps to assess winter mammal diversity and porcupine occupancy in New York State K.E. Andy*, D.K. Spaulding*, E.L. Barthelmess
43^{E,HTA}: Modeling thermal properties of fisher reproductive dens: implications for artificial den boxes T.B. Velandar*, M.J. Joyce, and R.A. Moen
44^{E,HTA}: Role of nasal cavity morphology with diet and olfactory activity in bats D. Lee* and L. Yohe
45^{HTA}: Genomic footprints of postglacial colonization in the Patagonian olive mouse (<i>Abrothrix olivacea</i>) Facundo M. Giorello* and Enrique P. Lessa
46: Is the distribution of <i>Peromyscus leucopus</i> (and Lyme disease) shifting northward: a preliminary analysis? K. Picard, K. Fournier, V. Russell, R. Ste. Croix, S. Lemmon, and S. Pugh*
47^{E,HTA}: The role of fire succession in dietary competition among small mammal species A.G. Allen*, Z.P. Roehrs, R.S. Seville, and H.C. Lanier

^EEvaluated Presentation ^{HTA}Honoraria or Travel Award **Grants-In-Aid or Fellowship *Presenter

48: Diet switching in mammalian herbivores: dietary specialization and toxin tolerance in two woodrat species T.J. Orr, M.D. Nelson*, K.Y.H. Yamada, M.D. Matocq, D.P. Nielsen, M.D. Shapiro, and M.D. Dearing
49^E: The effect of winter severity on reproductive timing in two species of congeneric mice J. Papuga* and S.M.G. Hoffman
50^E: The proof is in the poop: estimating population density of recovering Ohio bobcat (<i>Lynx rufus</i>) M.A. Dyck*, S. Spear, J. Golias, C. Hanson, and V.D. Popescu
51^{E,HTA}: Urban coyotes differ genetically from coyotes in natural habitats A.J. Adducci II*, J. Jasperse, S. Riley, J. Brown, R. Honeycutt, and J.D. Monzon
52^E: Investigating the range of <i>Peromyscus maniculatus</i> in south Texas E.G. Dohnalik, G. Vielleux*, L. Siciliano-Martina, I.F. Greenbaum, and J.E. Light
53^E: Maternal effects on birthweight, growth, and survival of mule deer fawns S. Lamb*, B.R. McMillan, K.R. Hersey, and R.T. Larsen
54^E: GIS analysis of the range shift in <i>Cynomys</i> from the Quaternary to the present S.G. Talbot* and C.O. George
55: Modeling the behavior of escape, should a heard school or swarm? K.K. Thorington* and S.V. Viscido
56^{E,HTA}: Movement and microhabitat selection in southern flying squirrels (<i>Glaucomys volans</i>) J.M. Howard*, R.L. Essner Jr., and J.E. Loos
57^{E,HTA}: Shifting small mammal community diversity due to wildfire succession in the Greater Yellowstone area R.A. Beers*, A.G. Allen, Z.P. Roehrs, R.S. Seville, and H.C. Lanier
58^E: Establishing a historical baseline for the presence of white-nose fungus in <i>Perimyotis subflavus</i> in Oklahoma L.M. Ratliff*, K.M. Jones, B.S. Coyner, J.K. Braun, and H.C. Lanier
59^E: Differences in reproductive bet-hedging within a family of long-lived mammals D.W. Sallee*, B.R. McMillan, K.R. Hersey, A. Roug, and R.T. Larsen
60: Seasonal changes in mass of three species of bats suggest differential energy allocation strategies T.J. Weller*
61: Functional skeletal morphology of pencil-tailed tree mice (Rodentia: Muridae: <i>Chiropodomys</i>) K.R. Weiss, S.G. B. Chester, L.E. Olson, and E.J. Sargis*
62^E: Testing range limits of two cryptic species of <i>Neotoma</i>: Is the Rio Grande a barrier? S.C. Farr*, K. Gutiérrez, K.M. Derieg, and J.A. Cook
63^{E,HTA}: Upward to heaven? Climate change risks and the future for collared pikas G. Tolentino Ramos*, K.A. Marske, and H.C. Lanier
64: Systematic characterization of the species of the genus <i>Ctenomys</i> (Rodentia: Ctenomyidae) of northern Argentina R.T. Sánchez, I.H. Tomasco*, and R.M. Barquez
65^{E**}: Metabarcoding illuminates dietary diversity in a neotropical bat community M.R. Ingala*, S.L. Perkins, M. Dunbar, C. Wultsch, K. Krampis, and N.B. Simmons
66: Highly disparate life history patterns among rodents of Luzon Island, Philippines; implications for conservation E.A. Rickart* and L.R. Heaney
67^E: Linking the gut microbiome and inflammatory bowel disease in captive adult red wolves (<i>Canis rufus</i>) M. Bragg*, C. Muletz-Wolz, H. Chaun Lim, E. Freeman, and N. Songsasen
68: Examining shifts in mammal diversity in a semi-natural ecosystem during the rise of suburbia S. Nasrallah* and M. Leslie

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69^E: Systematics and ecology of the brush-tailed mice, <i>Calomyscus</i>, based on <i>Cytb</i> and <i>Rbp3</i> A.K. Weller*, C.W. Kilpatrick, C.A. Woods, and R.W. Norris	
70: Improving species range estimates for an arboreal species group with a parapatric distribution C. Babich Morrow*, P. Galante, J. Kass, and M. Blair	
71: Across time and space: social structure of the highland tuco-tuco in multiple ecological contexts S.L. O'Brien* and E.A. Lacey	
72^E: Ecogeographic patterns of craniodental morphology within <i>Zapus luteus</i>: primary productivity vs climate C.C. Blumbergs* and J.L. Malaney	
73: Reproductively viable population of American Black Bears (<i>Ursus americanus</i>) in desert lowlands of Trans-Pecos Texas F.D. Yancey, II* and S. Kasper	
74: Cave-exiting behavior of hibernating bats in 12 Idaho caves J.C. Whiting*, B. Doering, D. K. Englestead, and J.A. Frye	
75: Hand it to the red panda L.M. Lyon*, S.C. Wallace, and T.M. Gaetano	
76^E: Habitat associations of key deer fawns: pairing spots as unique identifiers with N-mixture models J.G. Jacobs* and M.V. Cove	
77^{HTA}: Skeletal variation among island populations of large treeshrews (Scandentia, Tupaiidae) M.M. Juman*, N. Woodman, L.E. Olson, and E.J. Sargis	
78: Activity patterns of American pikas (<i>Ochotona princeps</i>) on camera traps in low-elevation lava flows B.D. Waterhouse*, M. Camp, L. Shipley, and J. Varner	
79^{**}: Molecular identification of nonvolant mammals along an elevation gradient in the Western Andes of Colombia J.M. Martínez-Cerón*, M. Serna, V. Grisales, and J.F. Díaz-Nieto	
80: Effects of transfer on fecal glucocorticoid metabolites in red pandas (<i>Ailurus fulgens</i>) M.E. Conrad *, E.W. Freeman, E. Bauer, and K.L. Edwards	
3:00 PM	Break – Regency A
3:30 PM	Members Meeting I – Regency BCD
5:00 PM	Workshop VII: Increasing Inclusivity – Bias Awareness in Academia – Capitol A & Capitol B Instructors: Powerplay Interactive Development, University of New Hampshire
5:00 PM	Workshop VIII: 1-on-1 Mentoring – Networking for Success in Mammalogy – Hall of Battles Instructors: K. Bell and C. Welch
7:00 PM	Student Social – Thornton Room-11th Floor

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**SUNDAY, JUNE 30TH, PLENARY SESSION II
-HYATT REGENCY WASHINGTON ON CAPITOL HILL, REGENCY BCD-**

5:30 AM	Gathering in Hotel Lobby for Kirkland Run/Walk for Research
6:00 AM	21st Annual Gordon L. Kirkland Run/Walk for Research – Start at the Hyatt Regency
7:00 AM	Registration – Regency Foyer Wall
8:00 AM	Vendor Show – Regency A
8:00 AM	Plenary Session II – Regency BCD
8:00 AM	Welcome & Announcements President-Elect Enrique Lessa
8:15 AM	Joseph Grinnell Award 81: Understanding dietary diversity takes a diversity of approaches and individuals M.D. Dearing*
9:00 AM	Aldo Leopold Award 82: Mammal research and conservation on Madagascar: A review of the past 30 years S.M. Goodman*
9:45 AM	C. Hart Merriam Award 83: A brief history of change in the mammals at Kluane Lake, Yukon S. Boutin*
10:30 AM	Break – Regency Foyer
11:00 AM	Members Meeting II – Regency BCD
12:30 PM	Lunch – On Your Own
2:00 PM	Thematic Session I: Community (Citizen) Science in Mammalogy – Regency BCD
2:00 PM	Technical Sessions I, 2, 3, and 4 – Capitol A, Capitol B, Congressional A, and Hall of Battles

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**SUNDAY, JUNE 30TH, EARLY AFTERNOON SESSIONS
-HYATT REGENCY WASHINGTON ON CAPITOL HILL-**

Session	Thematic Session I: Citizen (Community) Science in Mammalogy	Technical Session 1: Behavior	Technical Session 2: Community Ecology	Technical Session 3: Conservation	Technical Session 4: Population Ecology
Room	Regency BCD	Capitol Room A	Capitol Room B	Congressional A	Hall of Battles
Moderator	Roland O. Kays	Amanda E. Cheeseman	Burton K. Lim	Marjorie D. Matocq	John Scheibe
2:00 PM	84: Potential for citizen photography to help evaluate molt phenology in a high-elevation, high-latitude mammal K. Nowak*, S. Richards, Amy Panikowski, G. Newman, N. Young, A. Jacob, J. Beckmann, J. Berger, and D. Reid	90: Extreme drought and adaptive resource selection by a desert ungulate J.V. Gedir, J.W. Cain III*, T.L. Swetnam, P.R. Krausman, and J.R. Morgart	96^{E,HTA**}: Arctic fox winter diet revealed by next-generation sequencing of fecal DNA M. Dudenhoeffer*, J.D. Roth, S.D. Petersen, and L.K. Johnson	102^{HTA}: Museum specimens offer historical perspectives on a declining kit fox population R.C. Lonsinger*, J.R. Adams, and L.P. Waits	108^{E,HTA}: Invasive predator activity does not influence native mammal population demography K.R. Hooker*, A.K. Darracq, L.L. Smith, L.M. Conner, and R.A. McCleery
2:15 PM	85^{HTA}: Engaging citizen scientists in post-fire monitoring of Columbia River Gorge pikas J. Varner*, E. Beaver, C. Abbruzzese, B. Carré, S. Clark, A. Greenvoss, D. Shepherdson, and S. Shivappa	91^E: Into the light: atypical diurnal foraging of Blyth's horseshoe bat on Tioman Island, Malaysia M. Chua* and S. Aziz	97^{HTA}: Isotopic niche partitioning among antagonistic pocket mice: how persistent is the ghost of competition past? D.S. Taylor*, B.A. Kohli, R.J. Rowe, and R.C. Terry	103^E: Evolutionary potential of endangered Ganges River dolphin in human-modified South Asian waterways: an integrative review S. Paudel* and J.L. Koprowski	109: Impacts of trespass <i>Cannabis</i> cultivation on public lands to small mammal populations L.P. Smith*, G.M. Wengert, M.W. Gabriel, D.L. Clifford, J. M. Higley, and C.R. Kamoroff
2:30 PM	86^E: A black-tailed prairie dog translocation in the Trans-Pecos ecoregion of Texas B.J. Sugarman*, B.J. Warnock, P.M. Harveson, S.P. Graham, and R.L. Martin	92: A walk in the woods: Mammalian responses to trails in urbanized forest fragments L.L. Kanda* and C. Gallego Lazo	98: Specialist and generalist herbivore strategies across scales in the fossil record M.I. Pardi* and L.R.G. DeSantis	104^E: Determining habitat requirement at multiple scales for the southeastern pocket gopher (<i>Geomys pinetis</i>) E.I. Parsons*, J.T. Pynne, S.I. Duncan, R.A. Gitzen, L.M. Conner, J.D. Austin, S.B. Castleberry, and R.A. McCleery	110^E: Use of camera traps to detect southern flying squirrels, <i>Glaucomys volans</i> R. Prasai* and J.S. Scheibe

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2:45 PM	87: Mammals, lyssaviruses and the rabies paradigm revisited C.E. Rupprecht*	93: Foraging decisions: patterns of interspecific and sexual variation in three frugivorous neotropical phyllostomid bats D. Villalobos-Chaves*	99^{E,HTA}: Using micromammal teeth to evaluate megafaunal extinction ecology J.S. Keller*, T.W. Stafford, Jr., S.K. Lyons, S.D. Newsome, and F.A. Smith	105^{E,HTA}: Estimating densities of a patchily distributed, sagebrush specialist across the Great Basin M.M. Crowell*, M.D. Matocq, and K.T. Shoemaker	111: Effects of net-gun capture on survival of mule deer M. van de Kerk*, B.R. McMillan, A. Roug, K.R. Hersey and R.T. Larsen
3:00 PM	88: Integrating residents' perceptions and ecoepidemiological measures of zoonotic disease risk: <i>Leptospirosis</i> in Argentina A. Previtali*, D.A. Mendicino, C. Medrano, M.A. Cristaldi, J.D. Martinez, A.J. Borotto, M. Maglianese, E.C. Rueda, T. Ricardo, E.P. Bulgarella, and M. Sanmartino	94: Reliance on visual, olfactory, and acoustic cues in flower choice by nectar bats (<i>Lonchophylla robusta</i>) M. Novillo* and B.S. Arbogast	100^E: Tracking trace minerals across trophic levels for mammal populations K.A. Hollingsworth*, R.D. Shively, and P.S. Barboza	106^{HTA}: Heard but not seen: bioacoustic analysis of Bengal tiger vocalizations D.M. Green* and C. Dunn	112^{E,HTA}: Space use and movement based interactions of two sympatric mesopredators in the low Arctic C. Warret Rodrigues* and J.D. Roth
3:15 PM	89: State-wide citizen science mammal survey as science, conservation, and engagement: North Carolina's Candid Critters R. Kays*, H. Boone, M. Lasky, K. Pacifici, A. Parsons, B. Pease, J. Shaw, C. Smith, and A.M. May	95^{E**}: On using a non-hibernating squirrel (<i>Ammospermophilus harrisi</i>) to inform models of communication complexity A.D. Burnett* and J.L. Koprowski	101: Islands in the sky: diversity and endemism of mammals on tepuis in Guyana B.K. Lim*	107: Novel approaches to improve modeling of species distributions for climate-sensitive mammals E.A. Beaver*, A.B. Smith, A.N. Johnston, and A. Kessler	113^{**}: Genetic diversity and connectedness among <i>Peromyscus</i> populations in the Great Lakes Region S.M.G. Hoffman*, J.M. Baumgartner, and J.S. Papuga
3:30 PM	Break – Regency Foyer				
4:00 PM	Symposium I: Reconciling Scientific Collecting with Conservation – Regency BCD				
4:00 PM	Technical Sessions 5 & 6 – Capitol A & Capitol B				

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**SUNDAY, JUNE 30TH, SYMPOSIUM I
-HYATT REGENCY WASHINGTON ON CAPITOL HILL, REGENCY BCD-**

4:00 PM	Symposium I: Reconciling Collecting with Conservation – Regency BCD
4:00 PM	Welcome & Introduction Link E. Olson
4:10 PM	114: Collect to protect: how past and present collecting promotes conservation H.C. Lanier*
4:30 PM	115: Integrating mammalian specimen archives, long-term research initiatives, and natural resource conservation A.G. Hope*
4:50 PM	116: Madagascar’s tenrecs exemplify the necessity of continued scientific collecting for the conservation of biodiversity L.E. Olson*, K.M. Everson, V. Soarimalala, and S.M. Goodman
5:10 PM	117: The role of collection-based research in promoting the conservation of mammalian diversity in the Philippines L.R. Heaney*, E.A. Rickart, and D.S. Balete
5:30 PM	Panel Discussion L.R. Heaney, A.G. Hope, H.C. Lanier, and L.E. Olson
6:00 PM	Buses Begin Loading for Picnic – Hotel Entrance, New Jersey Ave. NW
7:00 PM	Picnic – National Zoo

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**SUNDAY, JUNE 30TH, LATE AFTERNOON SESSIONS
-HYATT REGENCY WASHINGTON ON CAPITOL HILL-**

Session	Technical Session 5: Physiology	Technical Session 6: Lightning Talks
Room	Capitol Room A	Capitol Room B
Moderator	Jacob R. Goheen	Steven R. Sheffield
4:00 PM	118^E: Polyestry in Mt. Graham red squirrels (<i>Tamiasciurus fremonti grahamensis</i>) provides clues to <i>ex situ</i> propagation	126^E: Small mammal responses to local and landscape variables in a forest/agriculture mosaic E.M. Beasley*
4:05 PM	S.A. Wells* and J. Koprowski	127: Mammals of the Sierra Madre Occidental, Mexico C. López-González* and D.F. García-Mendoza
4:10 PM		128: Genetic variation of the long-haired mouse <i>Abrothrix longipilis</i> (Sigmodontinae), a SNP based assessment L. Valdez and G. D'Elía*
4:15 PM	119^{HTA}: A natural diet promotes retention of the native gut microbiota of <i>Neotoma albigula</i> in captivity R. Martínez-Mota*, K.D. Kohl, T.J. Orr, and M.D. Dearing	129: Stomach nematodes in cotton rats: parasites, commensals, or mutualists? B.J. Bergstrom*, R.K. Rose, and A.S. Bellows
4:20 PM		130^E: How pathogen species limits correspond with mammal taxonomy: predicting species boundaries in <i>Pneumocystis</i> S.J. Babb-Biernacki*, V.P. Doyle, and J.A. Esselstyn
4:25 PM		131^E: Migratory bats: stable population or compensatory immigration? D.M. Green, E.N. Green*, L.P. McGuire, M.J. Noakes, S.J. Bohn, C.K.R. Willis, and R.M. Brigham
4:30 PM	120: How much energy and protein do female barren-ground caribou (<i>Rangifer tarandus granti</i>) require in summer? P.S. Barboza*, R.D. Shively, and D.P. Thompson	132^{HTA}: Morphological variation of epipubic bones in didelphid marsupials: sexual dimorphism and locomotion G.N. Guilhon*, C.C. Braga, and R. Cerqueira
4:35 PM		133: Energy expenditure of captive adult non-reproductive common marmosets (<i>Callithrix jacchus</i>) is below anthropoid primate norm J. Adams, C.N. Ross, S.D. Tardif, R.J. Colman, and M.L. Power*
4:40 PM		134: Road crossing patterns of ocelots in South Texas C.J. Anderson*, S. Carter, A. Blackburn, M.E. Tewes, A.M. Veals, H. Perotto-Baldivieso, V. Cavazos, and J.H. Young, Jr.

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4:45 PM	121^{E,HTA**}: Behavioral thermoregulation via roost selection by bats J.M. Alston*, I.M. Abernethy, M.E. Dillon, D.A. Keinath, and J.R. Goheen	135: Genomic tools to inform white-tailed deer management in Rhode Island T.J. McGreevy, Jr.* and Thomas P. Husband
4:50 PM		136: Chill out: microclimate use by small herbivores challenged with plant toxins and warmer temperatures P.K. Connors*, M. Giles, and M.D. Dearing
4:55 PM		137: Lion-porcupine interactions in Africa, including impacts on lion predatory behavior J.C. Kerbis Peterhans*, G.G. Celesia and T.P. Gnoske
5:00 PM	122^E: Amino acid isotope analysis reveals gut microbial contribution to protein metabolism in wild small mammals A.C. Besser*, C.M. Blevins, E.A. Elliott Smith, and S.D. Newsome	138: Systematic revision of Peruvian forms of <i>Caenolestes caniventer</i> (Paucituberculata: Caenolestidae) D. Ruelas and V. Pacheco*
5:05 PM		139^{HTA}: Phylogenomic systematics of rorqual whales: ultra-conserved elements support a novel Gulf of Mexico lineage M.S. Leslie*, L.D. Parker, F.I. Archer, P.E. Rosel, S. Cerchio, R. Mowgli Mansur, R.L. Brownell Jr., N.D. Pyenson, and J.E. Maldonado
5:10 PM		140^E: Ecogeographic skull variation across southwestern red squirrels (Genus <i>Tamiasciurus</i>) J. Woods* and J. Malaney
5:15 PM	123^E: Ultraviolet fluorescence discovered in New World flying squirrels (<i>Glaucomys</i>) A.M. Kohler*, E.R. Olson, J.G. Martin, and P. Spaeth Anich	141: Black bears (<i>Ursus americanus</i>) recolonizing historic ranges: Indiana human-bear interactions B.J. Westrich*, E.B. McCallen, and G. Albers
5:20 PM		142^E: Characterizing diet of an endangered salt marsh endemic rodent with DNA metabarcoding C.M. Aylward*, M. Statham, B.N. Sacks, and D.A. Kelt
5:25 PM		143: Lek of the wrinkle-faced bat, <i>Centurio senex</i> B. Rodríguez-Herrera*, R. Sánchez-Calderón, V. Madrigal, P. Rodríguez, J. Villalobos, E. Hernández, D. Zamora, G. Gessinger, and M. Tschapka

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5:30 PM	124: Estimating energy expenditure by fishers using GPS telemetry data R.A. Powell* and A.N. Facka	144: A re-examination of the distributional range of the least weasel, <i>Mustela nivalis</i>, in the Nearctic S.R. Sheffield*
5:35 PM		Open
5:40 PM		
5:45 PM	125^E: Lord of the fleas: shedding light on nocturnal hosts and stress hormones J. Veitch*, J. Bowman, and A.I. Schulte-Hostedde	Open
5:50 PM		
5:55 PM		
6:00 PM	Buses Begin Loading for Picnic – Hotel Entrance, New Jersey Ave. NW	
7:00 PM	Picnic – National Zoo	

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**MONDAY, JULY 1ST, EARLY MORNING SESSIONS
-HYATT REGENCY WASHINGTON ON CAPITOL HILL-**

7:00 AM	Registration – Regency Foyer Wall				
8:00 AM	Vendor Show – Regency A				
8:00 AM	Thematic Session II: Broadening Diversity in Mammalogy – Regency BCD				
8:00 AM	Technical Sessions 7, 8, 9, and 10 – Capitol A, Capitol B, Congressional A, and Hall of Battles				
Session	Thematic Session II: Broadening Diversity in Mammalogy	Technical Session 7: Behavior	Technical Session 8: Community Ecology	Technical Session 9: Conservation	Technical Session 10: Genetics
Room	Regency BCD	Capitol Room A	Capitol Room B	Congressional A	Hall of Battles
Moderator	Molly Phillips	Andrew McAdam	Paul Stapp	Erin F. Baerwald	Molly D. McDonough
8:00 AM	145: Diversifying mammalogy by intentional interventions for undergraduates and beyond C. Welch*	150^E: Effects of land-use on the spatio-temporal ecology of two mongoose species in KwaZulu-Natal, South Africa J.P. Streicher*, T. Ramesh, and C.T. Downs	156^{HTA}: Bait-station use by non-target wildlife as a route of exposure of urban carnivores to rodenticides C.B. Burke*, N.M. Quinn, and P. Stapp	162^{HTA}: Precipitation and prey abundance influence food habits of an invasive carnivore M.A. Parsons*, A.S. Bridges, D.S. Biteman, D.K. Garcelon	167: Forest habitat fragmentation and landscape barriers reduce genetic diversity in a small mammal F.J. Combe*, J.S. Ellis, F. Preston, P.C. Wheeler, and W.E. Harris
8:15 AM	146: Mentoring and learning strategies to increase URM retention in STEM B.C. Woods*	151: Risk, resources and information; how environmental cues impact small mammals' behavioral strategies S.S. Bleicher*	157: Ecological impacts of a population outbreak of the long-haired rat (<i>Rattus villosissimus</i>) in arid Australia C.R. Pavey* and C.E.M. Nano	163: Resource availability and defense drive divergent home range dynamics in two ecologically similar tree squirrels M. Vittoria Mazzamuto, M.J. Merrick*, F. Bisi, A. Martinoli, J.L. Koprowski, and L.A. Wauters	168: Phylogenomic resolution of the cetacean tree of life using target sequence capture M.R. McGowen*, G. Tsagkogeorga, S. Álvarez-Carretero, M. dos Reis, M. Struebig, R. Deaville, P.D. Jepson, S. Jarman, A. Polanowski, P.A. Morin, and S.J. Rossiter

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8:30 AM	147: Testing the “cherry-on-top” hypothesis: is evidence important in convincing TAs to use evidence-based teaching practices? L. Patrick*, H. Barron, and S. Cotner	152^E: Variation in play behavior among early- and late-born juvenile squirrels M.P. Monroy*, M.I. Shehan, and S.L. Nunes	158^{HTA}: Signaling from below: rodents select for deeper fruiting truffles with stronger volatile emissions R.B. Stephens*, A.M. Trowbridge, A.P. Ouimette, W.B. Knighton, E. A. Hobbie, P.C. Stoy, and R.J. Rowe	164: Developing genomic tools for elephant health and conservation N.A. Prado*, J.L. Brown, J.E. Maldonado, and M.G. Campana	169^{E,HTA}: Bobcat gene flow in western Texas is influenced by land use at varying spatial scales I.A. Cancellare*, E.M. Kierepka, R.T. Kazmaier, Jan E. Janecka, and R. Ward
8:45 AM	148: Building personal bridges: connecting your science to your communities D.N. Lee*	153^E: Play behavior and the development of boldness and caution in juvenile ground squirrels M.I. Shehan* and S.L. Nunes	159^{E,HTA}: Comparing ecosystem effects of native and non-native grazers in a North American shortgrass prairie C.R. Wilford* and J.L. Malaney	165: Connectivity in highly fragmented Atlantic Forest remnants of eastern Paraguay using graph theory N.U. de la Sancha*, N.E. McIntyre, and S.A. Boyle	170: Non-invasive genotyping and sex determination of canid scat through improved hybridization capture M.G. Campana*, L.D. Parker, J.D. Quinta, T.R. Wilbert, R.C. Fleischer, K. Ralls, W. I. Boarman, and J.E. Maldonado
9:00 AM	149: A history of diversity, inclusion, and safety in the American Society of Mammalogists J.E. Light*	154^E: Space use patterns of the burrowing echimyid rodent, <i>Clyomys laticeps</i> C.P.R. Ferrando*, J.M. Lamberto, and N.O. Leiner	160: Virginia opossums are dominant scavengers of mammal carcasses and potential competitors with American burying beetles T.E. Nupp*, K.A. Fenton, and J.H. Noble	166: Landscape features associated with bat fatalities at wind energy facilities E.F. Baerwald*	171: Urbanization decreases genetic diversity of coyotes in Southern California J. Jasperse, A.J. Adducci II, S. Riley, J. Brown, R. Honeycutt, J.D. Monzon*
9:15 AM	Panel Discussion	155^{E,HTA**}: The vocal repertoire of a highly social carnivore K.D.S. Lehmann* and K.E. Holekamp	161: Conceptual reconstruction of large mammal communities on the Palaeo-Agulhas Plain J.A. Venter*, C. Brooke, C.W. Marean, H. Fritz, and C.W. Helm	Open	172^E: Ecology differentially influences genetic divergence of sympatric species W.W. Boone IV*, R.A. McCleery, and J.D. Austin
9:30 AM	Break – Regency Foyer				
10:00 AM	Symposium II: Mammal Diversity from GenBank to RedList – Regency BCD				
10:00 AM	Technical Sessions 11 & 12 – Capitol A & Capitol B				

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**MONDAY, JULY 1ST, SYMPOSIUM II
-HYATT REGENCY WASHINGTON ON CAPITOL HILL, REGENCY BCD-**

10:00 AM	Symposium II: Mammal Diversity from GenBank to RedList – Regency BCD
10:00 AM	Welcome & Introduction Nathan S. Upham
10:10 AM	173: Mapping species, splits, and synonyms in the Mammal Diversity Database and iNaturalist J. Widness* and N.S. Upham
10:20 AM	174: Taxonomy, nomenclature, and ZooBank R.L. Pyle* and E. Michel
10:35 AM	175: Cross-linking sequence records and specimens at NCBI J.P. Sullivan* and C.L. Schoch*
10:50 AM	176: Linking specimens to their data: a collaborative solution to integration and attribution M.L. Campbell*, C. Cicero, J.A. Cook, J.R. Demboski, D.L. McDonald, and C.C. Witt
11:05 AM	177: Taxonomic clarity and accurate spatial data are cornerstones of the IUCN Red List process T.E. Lacher, Jr*, R. Kennerley, S. McCay, N.S. Roach, and R.P. Young
11:20 AM	178: Double trouble building the Hitchhiker's Guide to Mammals R.P. Guralnick*
11:35 AM	Panel Discussion M.L. Campbell, R.P. Guralnick, T.E. Lacher, R.L. Pyle, J.P. Sullivan, N.S. Upham, J. Widness
12:00 pm	Lunch – On Your Own
12:00 pm	Board of Directors Meeting II (no lunch provided) – Hall of Battles
1:30 pm	Symposium III: Ecuadorian Mammals – Regency BCD
1:30 pm	Technical Sessions 13 & 14 – Capitol A & Capital B

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**MONDAY, JULY 1ST, LATE MORNING SESSIONS
-HYATT REGENCY WASHINGTON ON CAPITOL HILL-**

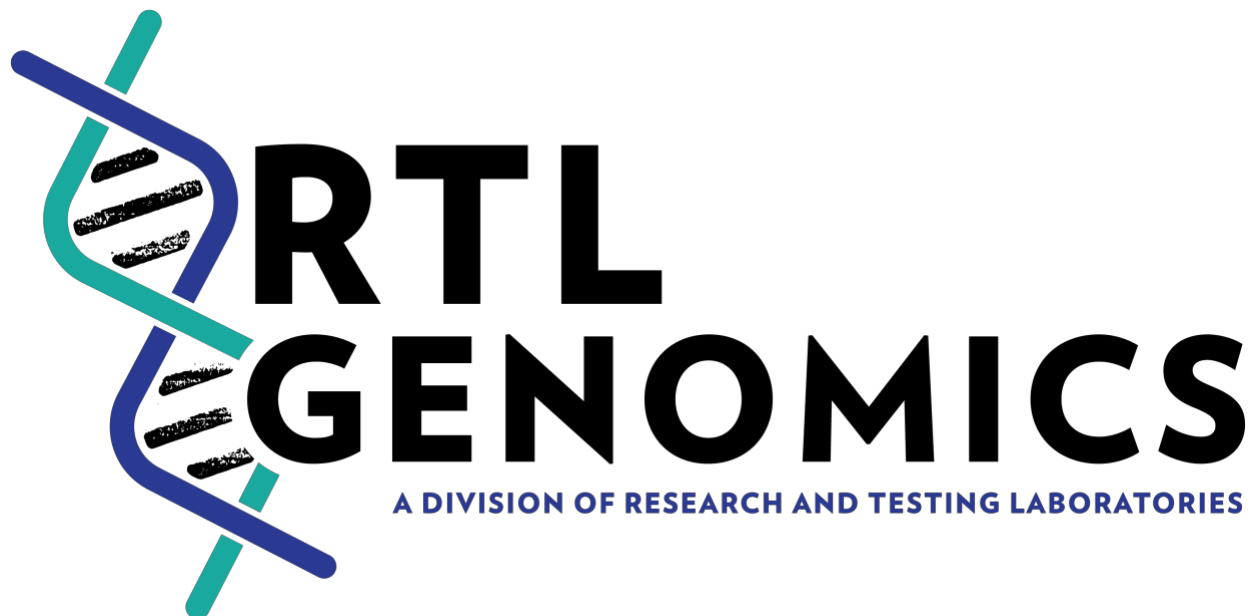
Session	Technical Session 11: Biogeography	Technical Session 12: Population Ecology
Room	Capitol Room A	Capitol Room B
Moderator	Tereza Jezkova	Elizabeth Flaherty
10:00 AM	179^{HTA**}: Living on the (trailing) edge: The importance of climate to pika occupancy M. Westover*, E. Beever, L. Thurman, and F. Smith	187: Delineating population structure and isolation among Allegheny woodrat metapopulations in Pennsylvania J.E. Duchamp*, T.J. Smyser, and J.L. Larkin
10:15 AM	180^E: Habitat use by montane ground-dwelling squirrels over space and time A.J. Rossi*, R.C. Klinger, and D.H. Van Vuren	188: The use, characteristics and distribution of the drought refuges of a threatened desert rodent L.I. Young*, C.R. Dickman, and C.R. Pavey
10:30 AM	181^E: Identifying genomic adaptations to diverse environments in the chisel-toothed kangaroo rat (<i>Dipodomys microps</i>) K. Farleigh* and T. Jezkova	189^{E**}: Investigating the impacts of contemporary climate change using a space-for-time approach in montane systems P.D. Billman*, E.A. Beever, and D.B. McWethy
10:45 AM	182^{E,HTA}: Natural population variation may be masking the more-individuals hypothesis G.L. Vagle* and C.M. McCain	190: Resource selection at den and rendezvous sites by canids in a wolf-coyote hybrid zone J.F. Benson*, T.Oliveira, C. Thompson, and B.R. Patterson
11:00 AM	183: Elevational structuring of medium-large species of terrestrial mammals on Sumaco Volcano, Ecuador B.S. Arbogast*, T.W. Knowles, A-M.C. Hodge, K. Curry-Lindahl, S.F. Burneo, and R. Kays	191^E: Carnivore richness and diversity is driven by landscape change in shortgrass prairie ecosystems T.J. Werdel*, A.M. Ricketts, and A.A. Ahlers
11:15 AM	184^E: Unearthing proxy determinants of the subterranean niche for species distribution models M.K. Halsey*, R.D. Bradley, R.D. Stevens, and D.A. Ray	192: Comparing the microbial communities of natural and supplemental nests of an endangered ecosystem engineer M.V. Cove* and M.S. Thoenmes
11:30 AM	185^{E,HTA}: Area, isolation, and predators drive gigantism in island-inhabiting meadow voles M.C. Schlis-Elias* and J.L. Malaney	193^E: Seasonal effects on predator-prey spatial overlap N.L. Madden* and N.C. Harris
11:45 AM	186^E: In situ diversification of <i>Bunomys</i> (Muridae) on the isolated, topographically complex island of Sulawesi, Indonesia H. Handika*, A.S. Achmadi, J.A. Esselstyn, and K.C. Rowe	194^E: Population performance of a large herbivore: effects of enhanced winter nutrition and climatic variation N.J. Jackson*, K.M. Stewart, M.J. Wisdom, M.M. Rowland, and D.A. Clark
12:00 pm	Lunch – On Your Own	
12:00 pm	Board of Directors Meeting II (no lunch provided) – Hall of Battles	
1:30 pm	Symposium III: Ecuadorian Mammals – Regency BCD	
1:30 pm	Technical Sessions 13 & 14 – Capitol A & Capital B	

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**MONDAY, JULY 1ST, SYMPOSIUM III
-HYATT REGENCY WASHINGTON ON CAPITOL HILL, REGENCY BCD-**

1:30 PM	Symposium III: The Mamals of the Ecuadorean Andes – Regency BCD
1:30 PM	Welcome & Introduction Thomas E. Lee, Jr.
1:35 PM	195: An overview to the mammals of the Ecuadorean Andes: diversity and history of their knowledgement D.G. Tirira*
2:00 PM	196: Geographic, geologic and phylogenetic analysis of the Andean cricetid rodents of Ecuador T.E. Lee, Jr* and J.D. Hanson
2:18 PM	197: Origin and development of the South American montane mammal fauna by the Andean speciation engine S.L. Gardner* and L.A. Ruedas*
2:36 PM	198: Exploring biodiversity with long-read barcodes and next generation sequencing. J.D Hanson*, T.E Lee, and S.F. Burneo
2:54 PM	199: Andean diversification in Phyllostomid bats S. Solari*
3:12 PM	200: Current knowledge on Ecuadorian Andes mammals S.F. Burneo* and M.A. Camacho
3:30 PM	Break – Regency Foyer
4:00 PM	Symposium IV: Murinae as a Model System – Regency BCD
4:00 PM	Technical Sessions 15 & 16 – Capitol A & Capitol B

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**MONDAY, JULY 1ST, EARLY AFTERNOON SESSIONS
-HYATT REGENCY WASHINGTON ON CAPITOL HILL-**

Session	Technical Session 13: Conservation	Technical Session 14: Phylogeography
Room	Capitol Room A	Capitol Room B
Moderator	Susan C. Loeb	Ryan W. Norris
1:30 PM	201^E: Seasonal changes in C3 and C4 plant consumption of ungulates in contrasting arid systems M.M. Vermeulen*, T. Kraaij, and J.A. Venter	209^E: Comparative phylogeography of <i>Sorex monticola</i> and relatives and Jemez Springs virus S. Liphardt*, H. Kang, L. Dizney, L. Ruedas, J. Cook, and R. Yanagihara
1:45 PM	202^{HTA}: Fisher response to tree mortality in the southern Sierra Nevada R.E. Green*, K.L. Purcell, E.L. McGregor, and N.M. Hebert	210: From RADSeq to whole genomes: phylogeographic history of the North American water vole (<i>Microtus richardsoni</i>) D.J. Duckett*, K. Calder, J. Sullivan, D.C. Tank, and B.C. Carstens
2:00 PM	203^E: Bat box design affects microclimate and suitability as bat habitat F.E. Tillman*, G.S. Bakken, and J.M. O'Keefe	211: Mighty Mouse: a high-elevation record for mammals (6,200 m) on Llullaillaco Volcano in the Andes S.J. Steppan*, M.R. Bangs, C.J. Saltzberg, S.K. Schmidt, M. Farson, L. Vimercati, E. Gendron, and T. Bowen
2:15 PM	204^{HTA}: On the ground and in the trees: A comparison of camera trap and line-transect surveys J.F. Moore*, W.E. Pine, F. Mulindahabi, P. Niyigaba, G. Gatorano, M.K. Masozera, and L. Beaudrot	212: Phylogeography and taxonomy of the semi-aquatic African murine genera <i>Colomys</i> and <i>Nilopegamys</i> T.C. Giarla*, T.C. Demos, and J.C. Kerbis Peterhans
2:30 PM	205^{E,HTA}: Ambient temperature influences winter torpor patterns of non-cave roosting tri-colored bats B.A. Newman*, S.C. Loeb, and D.S. Jachowski	213: Unraveling the evolutionary history of gray foxes with mitogenomes and UCEs derived from museum specimens S.Castañeda-Rico*, M.T.N. Tsuchiya, C.A. Hofman, S. Shirazi, D. Reding, T.C. Rick, C.W. Edwards, and J.E. Maldonado
2:45 PM	206^E: Ocelot resource selection in a highly fragmented landscape A.M. Veals*, A. Blackburn, C.J. Anderson, M.E. Tewes, J.D. Holbrook, H.L. Perotto-Baldivieso, R.W. DeYoung, and J.H. Young, Jr.	214^{**}: Phylogeographic analysis of the Virginia opossum, a marsupial on the move L.L. Walsh* and P.K. Tucker
3:00 PM	207^{E,HTA}: Ultrasonic acoustic deterrents reduce bat fatalities at wind turbines in south Texas S.P. Weaver*, C.D. Hein, I. Castro-Arellano, T.R. Simpson, and J.W. Evans	215: Using museum specimens to investigate patterns & processes of phalangerid evolution in an emblematic biodiversity hotspot L.D. Parker*, K.M. Helgen, E. Grace Veatch, and J.E. Maldonado
3:15 PM	208: A habitat suitability analysis for the red wolf (<i>Canis rufus</i>) across its historic range L. Toivonen, H. He, R. Mossotti, and M. Gompfer*	216^E: Modeling <i>Berylmys</i> (Rodentia: Muridae): species distributions past and present in Indochina K.L. Tuttle*
3:30 PM	Break – Regency Foyer	
4:00 PM	Symposium IV: Murinae as a Model System – Regency BCD	
4:00 PM	Technical Sessions 15 & 16 – Capitol A & Capitol B	

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**MONDAY, JULY 1ST, SYMPOSIUM IV
-HYATT REGENCY WASHINGTON ON CAPITOL HILL, REGENCY BCD-**

4:00 PM	Symposium IV: Murinae as a Model System – Regency BCD
4:00 PM	Welcome & Introduction Jacob A. Esselstyn
4:05 PM	217: Systematics of Murinae and biogeography of an adaptive radiation K.C. Rowe*, E.J. Roycroft, P.-H. Fabre, J.A. Nations, and J.A. Esselstyn
4:28 PM	218: Convergences in the jaw muscle system among the independently derived worm-eating specialist murines P.-H. Fabre*, L. Hautier, A. Herrel, A. Achmadi, L. Heaney, K. Rowe, and J. Esselstyn
4:51 PM	219^{E,HTA**}: Adaptive evolution during the diversification of murine rodents revealed by whole exomes E.J. Roycroft*, A. Achmadi, J.A. Esselstyn, J.M. Good, A. Moussalli, and K.C. Rowe
5:14 PM	220: The developmental basis of pigment pattern evolution in rodents R. Mallarino*
5:37 PM	221: Rats get dirty in the city: the impact of urbanization on rodents and rodent-borne diseases C. Firth*
7:00 PM	Poster Session II & Social – Regency A
8:30 PM	Auction for Future Mammalogists Fund & Social – Regency A

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**MONDAY, JULY 1ST, LATE AFTERNOON SESSIONS
-HYATT REGENCY WASHINGTON ON CAPITOL HILL-**

Session	Technical Session 15: Behavior	Technical Session 16: Evolutionary Biology
Room	Capitol Room A	Capitol Room B
Moderator	Melissa Merrick	Kayce C. Bell
4:00 PM	222: Dietary and habitat specialization in woodrats (genus <i>Neotoma</i>) is associated with differences in caching behavior M.M. Skopec*, L. Backus, R. Smith, and A.N. Anderton	230: Pathogens, colonization of new environments and migration: molecular evolution of immunity genes in cetaceans M.F. Nery*, B.C. Dias, M.L. Andreani, and L.A. Freitas
4:15 PM	223^{E,HTA**}: Social thermoregulation in <i>Marmota caligata</i>: how group structure impacts thermoregulatory efficiency C.E. Rubin*, M. McAdie, G.A. Breed, and L.E. Olson	231^E: Pigmentation changes are (sort of) related to aging in chimpanzees E. Tapanes*, J.M. Kamilar, and B.J. Bradley
4:30 PM	224^E: Pumas (<i>Puma concolor</i>) stabilize a community of competing meso-carnivores M. Rodriguez Curras* and J.N. Pauli	232: Small but spiny: the evolution of antipredator defenses in Madagascar tenrecs T. Stankowich* and C. Stensrud
4:45 PM	225^E: The mystery of movement and memory in mule deer R.P. Jakopak *, T.N. LaSharr, S.P. Dwinell, G. Fralick, and K.L. Monteith	233: Evolutionary implications of the high-protein milk of captive <i>Xenarthrans</i> M.L. Power*
5:00 PM	226^{E**}: Foraging site selection from GPS telemetry in a marine foraging bat E. Hurme*, S. Greif, A. Valdés, G. Herrera, J.J. Flores Martinez, D. Johnston, Y. Yovel, and G.S. Wilkinson	234^{E,HTA}: Identifying environmental factors driving regional differences in patterns of distribution and diversification in <i>Peromyscus</i> mice V.L. Russell*, A.A. Zeisler, and T. Jezkova
5:15 PM	227: Hierarchical habitat use by raccoons <i>Procyon lotor</i> in the Prairie Potholes Region of Manitoba C.R. Milling*, S.D. Gehrt, F.C. Rohwer, and J.D. Bushaw	235^{E,HTA**}: Opossums vs. vipers: molecular and functional characterization of a coevolving trait D.H. Drabek*, A.M. Dean, and S.A. Jansa
5:30 PM	228: Fire and fawning in white-tailed deer M.J. Cherry*, D.A. Crawford, and L.M. Conner	236^{E,HTA}: The genetics and persistence of a seemingly maladaptive trait in the hoary marmot species complex K.K. Mills*, B.M. Bowling, A.M. Gunderson, and L.E. Olson
5:45 PM	229^E: Behavioral plasticity in a short distance mule deer migration. To go or not to go? J.L. Merrell*, K.M. Stewart, and S.D. Blair	237^{HTA**}: Genomic perspectives on chipmunk and pinworm codiversification K.C. Bell*, J.M. Allen, and A.J. Phillips
7:00 PM	Poster Session II & Social – Regency A	
8:30 PM	Auction for Future Mammalogists Fund & Social – Regency A	

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**MONDAY, JULY 1ST, POSTER SESSION II & SOCIAL
-HYATT REGENCY WASHINGTON ON CAPITOL HILL-**

7:00 PM	Poster Session II & Social – Regency A
238^E: The evolution of locomotory modes in North American shrews	A. Wilken* and N. Woodman
239^E: A new species of <i>Cynomops</i> (Chiroptera: Molossidae) from the northwestern slope of the Andes	D. Arenas-Viveros*, A. Giraldo, and J. Salazar-Bravo
240^{E,HTA}: Impacts of beaver activity on small mammal communities in the central Adirondack Mountains, NY	M.R. Rosenthal*, S. Farrell, and J. Stella
241: The rise and fall of small mammals: what's affecting communities at Hawk Mountain (PA)?	D.M. Kaufman*, S. Marino, D.A. Zegers, G.M. Darbenzio, G. Cadigan, K. Eller, R. Giberson, B. Kelly, T. Lavoie, M. McIntyre, K. Mejia, M. Novakovich, M. Tarnalicki, S. Verespy, and M.A. Steele
242: Between-island divergence in the Philippine murine rodent <i>Rattus everetti</i>	G.T. Ilarde*, C.C. Kyriazis, D.M. Rowsey, L.R. Heaney, and S.A. Jansa
243^E: Walking over wildlife: the effect of hiking trails on small and meso-mammals	S. Guenin*, C.J. Pakula, and B.J. Swanson
244^{HTA}: Geometric morphometric variation in <i>Abrothrix olivacea</i> (Waterhouse, 1837) (Rodentia, Sigmodontinae) in the Patagonian-Fuegian region	A. D'Anatro*, U.F.J. Pardiñas and E. P. Lessa
245: Dog activity in protected area: behavioral affects on mesocarnivores and impacts of a top predator	R. de Cassia Bianchi*, C. Silva Cesário, J. Abonízio Gouvea, K. Rodrigues, L. Fornitano, L. Lutke Riski, M. Yan, N. Olifiers and M.E. Gompper
246: Winter torpor patterns of tree-roosting southeastern myotis: implications for white-nose syndrome susceptibility	S.C. Loeb* and S.P. Kimpel
247: Evaluation of introgression and incomplete lineages sorting among tuco-tucos (genus <i>Ctenomys</i>) using transcriptomes	I.H. Tomasco, N. Boullosa, M. Feijóo and E.P. Lessa*
248^E: Using electrophoresis to differentiate between white-footed and deer mice in Minnesota prairie and woodland habitats	A.J. Guttormson*, E.J. Strand*, R.A. Dahl, R. Kronenberg, G. Ben-Bernard, A.M. O'Connell, S. Leipus, H. Schradick, and J.C. Whittaker
249^{HTA}: The National Museum of Natural History's Division of Mammals: genetics-driven change in transaction management	M.L. Walicek* and I.G. Rochon
250: Melanism in hoary marmots and the critically endangered Vancouver Island marmot	B.C. Bowling*, K.K. Mills, A.M. Gunderson, and L.E. Olson
251: Dentary shape of North American bears: Are polar bears (<i>Ursus maritimus</i>) in an evolutionary cul-de-sac?	L.A. Dolan* and J.S. Scheibe
252^E: Diversity and demography of hard ticks in the small mammal community of Michigan's Upper Peninsula	N.H. Sexton* and K.E. Galbreath
253: Stable isotopes reveal dietary differences of urban and wild raccoons in the Florida Keys	M.H. Nicholson* and M.V. Cove
254^E: Paternity analysis of a genetically-depauperate endangered species	P.M. Phillips*, K.P. Koepfli, S. Kliver, P.E. Marinari, T.M. Livieri, and B.J. Swanson

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255^E: Characterizing Texas desert bighorn sheep: population structure, connectivity, genetic variation, and health using genomics E.A. Wright*, R.C. Wiedmeier, F. Hernandez, C.D. Phillips, R.D. Bradley, and W.C. Conway
256^E: Influence of moon-phase on daily movement and habitat use of ocelots and bobcats M. Sergejev*, J.V. Lombardi, M.E. Tewes, and T.A. Campbell
257^E: Patterns in the ontogeny of salivary hormones in juvenile spotted hyenas (<i>Crocuta crocuta</i>) E.S. Person*, T.M. Montgomery, J.C. Beehner, and K.E. Holekamp
258^E: Linking foraging strategies and ear morphology in bat species of the Northern Great Plains H. Karevold*, J. Alston, and E. Gillam
259: San Diego County Mammal Atlas S. Tremor, D. Stokes, W. Spencer, J. Diffendorfer, H. Thomas*, S. Chivers, and P. Unitt
260: A comparison of progesterone concentrations and pregnancies in Steller sea lions and northern fur seals S.P. Engster* and B.J. Swanson
261^{E,HTA}: How competitive are iconic competitors? Testing resource partitioning in Great Basin chipmunks E.J. Ormand*, D.S. Taylor, R.J. Rowe, and R.C. Terry
262: Squirt-gun surveys: a novel mark-resight example for campus cottontails M.S. Rentz*
263: Small mammal survey in the Napo river basin, Ecuador N. Ordonez-Garza*, J. Guerra, J.M. Guayasamin, and E. Bonaccorso
264: Population estimate and herd demographics of Luangwa valley giraffe (<i>Giraffa tippelskirchi</i>) S. Phillips*, M. Becker, J. Fennesy, D. Lafferty, J. Bruggink, and A. Lindsay
265: Assessing environmental covariates associated with fisher (<i>Pekania pennanti</i>) occupancy in Southeast Alaska C. Kupferman*, S. Gilbert, A. Crupi, and L. Waits
266: New records of <i>Promops</i> from a high Andean urban landscape I. De la Cruz, P. Rivera-Parra, and J.P. Carrera-E*
267: Four new species of the <i>Hylomyscus anselli</i> group (Rodentia) from DR Congo and Tanzania J.C. Kerbis Peterhans*, R. Hutterer, J.B. Doty, and T.C. Demos
268^E: Increased prescribed fire reduces landscape-level prevalence of rodent-associated ticks in pine-oak woodlands J.R. Parks*, B.C. Rapiet, and J.L. Malaney
269: Wild lemurs in America: feeding behaviors in free-ranging <i>Lemur catta</i> (St. Catherines Island, GA) S.L. Canington*
270: Climate vulnerability assessments of mammals within Sierra Nevada forests, San Joaquin Desert, and rangelands E.E. Graves, A.C. Collins, A. Karasov-Olson*, K. O'Hearn, A. Ramirez-Bautista, J.A. Shaw, A.K. Smith, E.F. Tymstra, H. Choe, R. Kelsey, E. Smith, M.W. Schwartz, and J.H. Thorne
271: Filling gaps in the range of two free-tailed bats in Costa Rica R.R. Palmer*, D. Solick, B. Tolson, C. Baltodano, I. Regidor, and B. Rodriguez-Herrera
272: Morphometrics of Chilean blue whales, <i>Balaenoptera musculus</i>, collected via UAS (drones) indicate possible unique subspecies C. M. Perkins-Taylor*, P. Chanarat, C.A. Miller, P. Bahamonde, G. Chiang, M.J. Moore, J.W. Durban, A. Apprill, and M. S. Leslie
273^E: Removal of pinyon-juniper woodlands in the Toiyabe Range: population-level effects on mule deer J.J. Gundlach* and K.M. Stewart
274: Simulating the <i>Journal of Mammalogy</i> experience in the classroom: southern red-backed vole (<i>Myodes gapperi</i>) phylogeography R.W. Norris*

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275: Animal sightings in Glacier National Park in comparison to park attendance C.D. Damer* and B.J. Swanson
276: Behavioral implications of relative brain size in the extinct dwarf Tapir, <i>Tapirus polkensis</i> T.M. Gaetano* and S.C. Wallace
277^E: Influence of human presence on feeding behavior of small mammals C.J. Pakula*, S. Guenin, and B.J. Swanson
278: Differentiating tracks of sympatric rodents in coastal dunes: implications for threatened and endangered beach mice D.U. Greene, D.M. Oddy*, J.A. Gore, M.N. Gillikin, E. Evans, S.L. Gann, and E.H. Leone
279^E: Comparing five analytical approaches to quantify habitat preferences of fawns from camera trap data H.M. Boone*, K. Pacifici, and R. Kays
280: Morphometric analysis of craniodental variation between <i>Neotoma macrotis</i> and <i>N. fuscipes</i> in the Sierra Nevada J.A. Wurtz* and M.D. Matocq
281^E: Coyote and deer interactions in South Carolina using concurrent GPS collars A.J. Jensen*, M. Muthersbaugh, J. Butfiloski, C. Ruth, J.C. Kilgo, and D.S. Jachowski
282^E: Acoustic activity of <i>Tadarida brasiliensis</i> during fall at wind turbines in South Texas D.A. Cordani*, S.P. Weaver, I. Castro-Arellano, and N.D. Durish
283^E: Microbiological survey of <i>Procyon lotor</i> intestines in South Texas for identification of pathogens M.C. McClurg*, J. Wu, S. Garza, S.D. Lawhon, S.E. Henke, and R.C. Laughlin
284: Alignment of selection, plasticity, and among-individual covariances: a test of theoretical predictions with <i>Peromyscus maniculatus</i> M. Berdal and N.A. Dochtermann*
285: Estimating levels of cryptic diversity within class Mammalia D.J. Parsons*, T.A. Pelletier, D.J. Duckett, J.G. Wieringa, and B.C. Carstens
286^E: Genetic diversity of Central American brocket deer (<i>Mazama temama</i>). Are we dealing with cryptic species? L.A. Escobedo-Morales*, S. Mandujano, L. León-Paniagua, S. Castañeda-Rico, and J.E. Maldonado
287: Bat diversity in the Colombian Orinoquía is high, but heterogeneously distributed in composition and diversity M.E. Rodríguez-Posada*, D. Morales-Martínez, D. Gutiérrez-Sanabria, and J. Pérez-Torres
288: How mice sing & why it matters: the ecology & evolution of sound production in vocal rodents B. Pasch*, S. Arrington, B. Tafoya, N. Mull, and T. Riede
289^E: Distribution of parasitic tissue-dwelling nematodes in white-tailed deer of the Great Lakes Region A.O. Kraushaar* and K.E. Galbreath
290: Cross-scale interactions shape the spatial distribution of a wetland-obligate species M. Larreur, S.K. Windels, B.T. Olson, and A.A. Ahlers*
291^E: Changes along the trail: Shifting mammal communities along an elevational gradient on Mt. Kenya M.H. Snider*, S.G. Schuttler, H.S. Young, G.C. Titcomb, K.M. Helgen, and R.W. Kays
292: Comparative genomics of mustelid species to investigate the evolution of embryonic diapause N.M. Belfiore* and J. Oberstaller
293: Mitochondrial DNA sequences support recognition of several cryptic species within <i>Reithrodontomys fulvescens</i> D.S. Rogers*, A.L. Almendra, F. González-Cózatl, E. Arellano Arenas, and R.D. Bradley

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294^E: Determining vertebrate host communities of a Relapsing Fever vector (<i>Ornithodorosturicata</i>) in Central TX R.E. Ramirez*, I. Castro-Arellano, B. Schwartz, M.T. Milholland, J.E. Lopez, I. Mali, and P. Teel
295: Mammals of five protected areas from the Colombian Eastern Cordillera M.E. Rodríguez-Posada, D. Morales-Martínez, D. Martínez-Medina*, C. Cárdenas-González, and N. Moreno-Niño
296: Using stable isotopes to assess range of the Brazilian free-tailed bat (<i>Tadarida brasiliensis</i>) C.W. Novak*, S.P. Weaver, I. Castro-Arellano, W.H. Nowlin, and D.M. Donner
297^E: Evaluating allometric variation in sea otter (<i>Enhydra lutris</i>) bacula K. Smith* and A. Eller
298^E: Gut microbial variation of howler monkeys (<i>Alouatta palliata</i>) on a small island in Panamá K.M. Benavidez*, B.J. Westrich, K. Milton, and M.D. Wasserman
299^E: Variation in collared peccary (<i>Pecari tajacu</i>) vigilance and group size across La Selva, Costa Rica A. Figueroa* and M.V. Cove
300^E: Mammal activity patterns along an urban to wild gradient J.E. Jenkins*, M.V. Cove, and W. McShea
301^E: Collaborations with citizen science to update species distributions: case study with <i>Ursus americanus</i> in Texas A.S. Keane*, J.E. Light, and J. W. Evans
302^E: Niche-based distribution modeling of the grey wolf (<i>Canis lupus</i>) in North America: a subspecies approach A. González Bernal*, O.R. Rojas-Soto and E.M. Meyer
303^E: Comments about <i>Anoura fistulata</i> (Phyllostomidae: Glossophaginae) from Peru and remarks in Bolivian specimen P. Sánchez-Vendizú*, J. Pellón, C. Medina, and V. Pacheco
304: Challenging ecogeographical rules: changes in size and shape along tropical elevational gradients and through time A. Hinckley*, I. Sanchez-Donoso, M. Comas, M. Camacho-Sanchez, and J. Leonard
305^{E**}: Managing the demands of viral immunity and reproduction in Madagascar fruit bats M.M. Alonge*, H.C. Ranaivoson, A. Andrianiaina, G.E. Bentley, and C.E. Brook
306^E: Preliminary assessment: spatial ecology of the plains spotted skunk (<i>Spilogale putorius interrupta</i>) in southeastern Texas J.C. Perkins*, K.P. Jefferson, M.H. Hamilton, R.C. Dowler, and R.D. Stevens
307: Immense, dense, and intense: challenges to monitoring mammal populations across large areas with citizen scientists M. Lasky*, A. Parsons, S. Schuttler, A. Mash, A. May, L. Larson, L. Gatens, C. Pedrozo, and R. Kays
308^{E,HTA}: Microhabitat adaptation in generalist species: the case of <i>Praomys rostratus</i> in a cacao dominated landscape R.A. Crites*, D. Gonzalez, R.W. Norris, and N.U. de la Sancha
309: Meso- and large mammals of non-protected areas in the Planas River Basin floodplains, Colombia C. Aya-Cuero, F. Mosquera-Guerra, D.A. Esquivel, F. Trujillo and D.M. Brooks*
8:30 PM Auction for Future Mammalogists' Fund & Social – Regency A

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**TUESDAY, JULY 2ND, EARLY MORNING SESSIONS
-HYATT REGENCY WASHINGTON ON CAPITOL HILL-**

7:00 AM	Registration – Regency Foyer Wall				
8:00 AM	Vendor Show – Regency A				
8:00 AM	Thematic Session III: Long-Term Demographic Studies – Regency BCD				
8:00 AM	Technical Sessions 17, 18, 19, and 20 – Capitol A, Capitol B, Congressional A, and Hall of Battles				
Session	Thematic Session III: Long-Term Demographic Studies	Technical Session 17: Biogeography	Technical Session 18: Evolutionary Biology	Technical Session 19: Morphology	Technical Session 20: Wildlife Management
Room	Regency BCD	Capitol Room A	Capitol Room B	Congressional A	Hall of Battles
Moderator	Perry S. Barboza	Sean P. Maher	Guillermo D’Elia	Noe U. de la Sancha	Janet L. Rachlow
8:00 AM	310^E: Drought and temperature influence spatial and temporal variation in growth of North American bison J.M. Martin* and P.S. Barboza	318: Small mammal species richness is predicted by mountain peak elevation in Mindanao, Philippines L.R. Heaney*, D.S. Balet†, M.R.M. Duya, M.V. Duya, and E.A. Rickart	326: Identifying convergent evolution in New World rodents L.D. Verde Arregoitia* and G. D’Elia	334^{E,HTA}: Morphological consequences of captivity: a meta-analysis L. Siciliano-Martina*, J.E. Light, and A.M. Lawing	342: The importance of apex predators for forest ecosystem – an example of the wolf Z. Borowski* and A. Wójcicki
8:15 AM	311: Demography of snowshoe hare population cycles M. Oli*, C. Krebs, A. Kenney, R. Boonstra, S. Boutin, and J. Hines	319: Geographic variation in diets of Eurasian pine martens and sables M.J. Joyce*, R.A. Powell, and A.Zalewski	327: Phylogenomics and intraspecific variation in the sifakas (Genus <i>Propithecus</i>) M.T.R. Hawkins *, R.A. Hagenson, C. Frasier, R.R. Culligan, A.G. Barela, C.A. Bailey, and E.E. Louis Jr.	335: Vertebral trabecular bone architecture in the hero shrew <i>Scutisorex</i>: evolution of an extraordinary morphology S. Smith*, K. Angielczyk, L. Heaney, J. Kerbis-Peterhans, and Z.-X. Luo	343^E: Resource selection in female desert bighorn sheep: tradeoffs associated with reproduction M.E. Blum*, K.M. Stewart, K.T. Shoemaker, and M. Cox
8:30 AM	312^E: Climate-mediated rewiring of small mammal trophic networks in response to defaunation on a Kenyan savanna C.G. Reed*, J.R. Goheen, B.R. Palmer-Brown, R.M. Pringle, T.M. Palmer, and T.R. Kartzinel	320: Morphological variation in <i>Peromyscus maniculatus</i> and Allen’s rule B. Buttler*, R.M. Bingham, and D. George	328^E: Looking gift horses in the mouth: an examination of the Inhibitory Cascade in equid evolution H.K. Orłowski*, D.M. Birlenbach, and D.L. Fox	336^E: Convergent evolution of olfactory and thermoregulatory capacities in small amphibious mammals Q. Martinez* and P.H. Fabre	344^{E,HTA}: Understanding spatiotemporal patterns of bat assemblages in highly-altered agricultural riparian systems J. Lin*, L.S. Harris, D.A. Kelt, M.L. Truan, and A. Engilis, Jr

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8:45 AM	313: Seed masting causes fluctuations in optimum litter size and lag load in red squirrels A.G. McAdam*, S. Boutin, B. Dantzer, and J.E. Lane	321^{HTA}: Drivers of Central American mammal biodiversity A.A. Castellanos*, A.M. Lawing, and J.E. Light	329: Ecological and genetic interactions between species of woodrats: how environmental variation mediates species interactions M.D. Matocq*, P.J. Murphy, E.A. Hunter, and K.T. Shoemaker	337^{E,HTA}: Age matters: the hidden role of demography in mammal body size trends M.K. Theriot* and L.E. Olson	345^{E,HTA}: Determining palatability of common cover crops and variation in choice by voles (<i>Microtus</i>) A.-G. A. Prieur* and R. K. Swihart
9:00 AM	314: Retrospective population analyses for marine mammal conservation J.A. Hostetler*, J. Martin, M. Kosempa, M.C. Runge, C.A. Langtimm, and H.H. Edwards	322^{E,HTA}: Does the Forage Maturation Hypothesis predict seasonal movements of wild equids? S. Esmaili*, J.A. Merkle, B.R. Jesmer, S.E. Albeke, B. Abrahms, J.L. Beck, S. Chamaille-Jammes, I.R. Fischhoff, A.T. Ford, M.R. Hemami, J.D. Hennig, P. Kaczensky, D. Rubenstein, J.D. Scasta, S.R. Sundaresan, and J.R. Goheen	330^E: Plasticity and evolutionary divergence in tail length between tropical and temperate house mice M.A. Ballinger*, N. Hoang, and M.W. Nachman	338: Functional anatomy and 3-D morphometric analysis of the occiput in the giraffe-necked gazelle (<i>Litocranius walleri</i>) A.N. Klappert* and E.V. Bärmann	346^{HTA}: Investigating the utility of spatially-explicit capture-recapture for black bears in Wisconsin L.A. McMahon*, N.M. Roberts, and D.M. MacFarland
9:15 AM	315^{**}: Demographic drivers of a refugee species: large-scale experiments guide strategies for reintroductions of hirola A.H. Ali*, M.J. Kauffman and J.R. Goheen	323^{E,HTA}: Niche dynamics of the felid guild following the Pleistocene megafaunal extinction N.A. Freymueller*, C.E. Myers, and F.A. Smith	331: Molecular phylogenetics and species delimitation of the bat families Miniopteridae and Nycteridae T.C. Demos*, P.W. Webala, H.L. Lutz, J.C. Kerbis Peterhans, S.M. Goodman, N. Cortés-Delgado, M. Bartonjo, and B.D. Patterson	339: Using geometric morphometrics to test resource partitioning in sympatric species in forest remnants D. Gonzalez*, G. Hernandez, Aide Balcazar, and N.U. de la Sancha	347: Altered ecosystems and narrowed niches: habitat mediates survival of a threatened habitat specialist A.E. Cheeseman*, J.B. Cohen, and C.M. Whipps

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9:30 AM	316^{E**}: Little brown bat population dynamics in relation to white-nose syndrome K.M. Ineson* and J.T. Foster	324^{**}: The disparate evolutionary histories of Great Basin ground squirrels (<i>Urocitellus</i>) B.S. McLean*, J.A. Cook, and R.P. Guralnick	332: Extinction susceptibility in Caribbean bats J.A. Soto-Centeno*	340: Testing competing molecular phylogenies of the Chiroptera with features of the inner ear cochlea R.B. Sulser*, D.J. Urban, B.D. Patterson, and Z.-X. Luo	348^E: Settlement of adult American red squirrels after translocation M. Morandini* and J.L. Koprowski
9:45 AM	317: Untangling competing restoration needs of mammals and other taxa in a space-limited estuary K.R. Smith*	325^E: Reconstructing an unexpected carnivore recolonization: American martens on the Apostle Islands of Lake Superior M.M. Smith*, J.E. Woodford, J.H. Gilbert, J.F. Van Stappen, and J.N. Pauli	333: Did paleoenvironmental change drive the loss of genetic diversity in colonial tuco-tucos? M.N. Tammone, R. Takenaka, and E.A. Lacey*	341^E: Oreodonts adapt to expanding grasslands in Miocene North America and then go extinct C. Cleveland*, M.E. Patzkowsky, and R.W. Graham	349^E: Fawning site selection by female white-tailed deer in the presence of a large stalking carnivore H.N. Abernathy-Conners*, E.P. Garrison, R.B. Chandler, L.M. Conner, K.V. Miller, and M.J. Cherry
10:00 AM	Break – Regency Foyer				
10:30 AM	Symposium V: Ecology, Evolution, and Behavior of Urban Mammals – Regency BCD				
10:30 AM	Technical Sessions 21 & 22 – Capitol A & Capitol B				

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**TUESDAY, JULY 2ND, SYMPOSIUM V
-HYATT REGENCY WASHINGTON ON CAPITOL HILL, REGENCY BCD-**

10:30 AM	Symposium V: Ecology, Evolution, and Behavior of Urban Mammals – Regency BCD
10:30 AM	350: Landscape genetics across multiple cities reveals influence of the built environment on commensal brown rats M. Combs* and J. Munshi-South
10:45 AM	351: Microhabitat selection and behavior of field mice along an urban gradient D.N. Lee* and H.-B. Griffis
11:00 AM	352: Studies at a large urban population of Mexican free-tailed bats (<i>Tadarida brasiliensis</i>) in downtown Houston T. McSweeney*, K.M. Winston, and D.M. Brooks
11:15 AM	353: Effects of urbanization on the ecophysiology of raccoons A.I. Schulte-Hostedde*
11:30 AM	354: Integrating research and behaviour change strategies to conserve urban mammals in La Paz, Bolivia M. Da Silva Loayza*
11:45 AM	355: Making movement personal: inferring personality traits from GPS tracking data of urban coyotes C.J. Schell*, M.H. Murray, C. Cassady St. Clair, S.A. Poessel, L.M. Angeloni, and S.W. Breck
12:00 PM	Lunch – On Your Own
12:00 PM	DEI Townhall (no lunch provided) – Hall of Battles Hosted by Human Diversity Committee
1:30 PM	Thematic Session IV: “-omics” Approaches in Mammalogy – Regency BCD
1:30 PM	Technical Sessions 23, 24, 25, and 26 – Capitol A, Capitol B, Congressional A, and Hall of Battles

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**TUESDAY, JULY 2ND, LATE MORNING SESSIONS
-HYATT REGENCY WASHINGTON ON CAPITOL HILL-**

Session	Technical Session 21: Behavior	Technical Session 22: Community Ecology
Room	Capitol Room A	Capitol Room B
Moderator	Bret Pasch	Richard D. Stevens
10:30 AM	356^E: Mortality costs of reproduction to females in a system of allied sexual coercion M.H.F. McEntee*, E. Krzyszczyk, V. Foroughirad, C. Frere, and J. Mann	362: Diets of omnivorous prey are driven by habitat selection but not moonlight in an agroecosystem I.V. Widick*, J.L. Berl, P.A. Zollner, I. Kaplan, and C.K. Blubaugh
10:45 AM	357^{E**}: Social assortment and the role of personality in <i>Octodon degus</i> N. Johnson*, S. Grillo, L. Ebensperger, R. Vásquez, E. Gillam, and L. Hayes	363^{E,HTA}: Ecosystem impacts of an Amazonian megadam: mammalian and dung beetle distributions across an artificial archipelago J. Eisinger*, M. Benchimol, R. da Silva, D. Storck-Tonon, and C. Peres
11:00 AM	358: Seasonal variation in space use and territoriality in an invasive large mammal (<i>Sus scrofa</i>) P.E. Schlichting*, R.K. Boughton, K.C. VerCauteren, R.S. Miller, and J.S. Lewis	364^{E,HTA}: Correlates of declining bat activity and night-flying arthropod communities A.K. Wray*, J.M. Kochanski, J.P. White, H. Kaarakka, C. Gratton, and M.Z. Peery
11:15 AM	359^E: Mesopredator omnivory generates both direct and indirect effects on seed fate S.L. Bartel* and J.L. Orrock	365^E: Synergistic effects of land-use and climate change on rodent communities: a half-century of anthropogenic change J.D. Stuhler*, M.K. Halsey, R.D. Bradley, and R.D. Stevens
11:30 AM	360^E: Spatiotemporal responses of wildlife to tourism in a low-visitation national park M.L.T. Sytsma*, L.R. Prugh, and T. Lewis	366^E: Amino acid $\delta^{15}N$ tracks ecosystem and dietary changes within a mammalian community across the Holocene E.A. Elliott Smith*, C.P. Tome, T.W. Stafford Jr., S.K. Lyons, A. Villaseñor, F.A. Smith, and S.D. Newsome
11:45 AM	361: Evolution of precociality in caviomorph rodents: a synthesis and review Z. Tang-Martinez* and E.R. Congdon	367^E: Sex differences in roost selection of Northern long-eared bat in the Kisatchie National Forest C. Garcia*, R. Perry, D. Ray, and R. Stevens
12:00 PM	Lunch – On Your Own	
12:00 PM	DEI Townhall (no lunch provided) – Hall of Battles Hosted by Human Diversity Committee	
1:30 PM	Thematic Session IV: “-omics” Approaches in Mammalogy – Regency BCD	

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**TUESDAY, JULY 2ND, EARLY AFTERNOON SESSIONS
-HYATT REGENCY WASHINGTON ON CAPITOL HILL-**

Session	Thematic Session IV: “-omics” Approaches in Mammalogy	Technical Session 23: Biogeography	Technical Session 24: Conservation	Technical Session 25: Systematics	Technical Session 26: Disease Ecology
Room	Regency BCD	Capitol Room A	Capitol Room B	Congressional A	Hall of Battles
Moderator	Melissa T. Hawkins	Lois F. Alexander	Matthew S. Leslie	Celia López-González	Scott L. Gardner
1:30 PM	368^{E,HTA}: Microbial diversity and its implications for disease in an endemic fox population A.L. DeCandia*, J.L. King, and B.M. vonHoldt	376: Extirpations of mammals at their southern range limits in California S. Tremor*, P. Unitt, H. Thomas, and L. Hargrove	384^{E**}: Occupancy dynamics of a climate sensitive mammal along a southern range boundary E.C. Wilson* and J.N. Pauli	392: Molecular phylogenetics and species limits of the African horseshoe bats (Chiroptera: Rhinolophidae) B.D. Patterson*, P.W. Webala, J.C. Kerbis Peterhans, S.M. Goodman, M. Bartonjo, and T.C. Demos	400^E: Latitudinal diversity gradients of parasites of cricetid rodents: importance of climate and host-associated factors W. Preisser*
1:45 PM	369^E: Seasonal variation in diet, microbiome, and metabolome of two species of woodrat (genus <i>Neotoma</i>) D.P. Nielsen*, K.M. Ochsenrider, L.A. Richards, C.S. Jeffrey, and M.D. Matocq	377^{**}: Global conservation priorities for carnivores: patterns, regions and challenges J.F. González-Maya*, D.A. Gómez-Hoyos, and G. Ceballos	385^E: Patterns in landscape characteristics surrounding ocelot-vehicle collision sites A. Blackburn*, A.M. Veals, C.J. Anderson, M.E. Tewes, R.W. DeYoung, J.H. Young Jr., and H.L. Perotto-Baldivieso	393: An exploratory expedition to Peru: searching for one and revealing several new species of mammals S.E. Pavan*, E.F. de Abreu-Júnior, P. Sánchez-Vendizú, A.R. Percequillo, V. Pacheco, and J.E. Maldonado	401^E: An itch to know: the relationship between a rodent community and ectoparasite abundance S.N. Trombley*, D.A. Kelt, J. Foley, and P. Foley
2:00 PM	370: Comparative genomics of desert adaptation in <i>Peromyscus</i> rodents A. Tigano and M. MacManes*	378: Testing the Island Rule in sigmodontine rodents <i>Abrothrix olivacea</i> and <i>Oligoryzomys longicaudatus</i> in Chilean Patagonia A. Valladares-Gómez, E. Rodríguez-Serrano, and R.E. Palma*	386^E: Defaunation in South American Gran Chaco: richness and distribution of mammals across different land uses L.B. Castro*, F. Barri, G. Boaglio, R. Ojeda, and M.V. Lassaga	394^{E,HTA}: Detailing tail-less bats, species limits and phylogenetic relationships in <i>Anoura Gray 1838</i> C.A. Calderón-Acevedo*, J.C. Bagley, M.E. Rodríguez-Posada, and N. Muchhala	402^E: Population abundance of <i>Cryptosporidium spp.</i> and <i>Peromyscus leucopus</i> along a 70-km urban-rural gradient S.K. Chavda* and J.A. Yunger

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2:15 PM	371: Ecology outweighs evolutionary history in shaping the bat microbiome H.L. Lutz*, E.W. Jackson, P.W. Webala, W.S. Babyesiza, J.C. Kerbis Peterhans, T.C. Demos, B.D. Patterson, and J.A. Gilbert	379**: Environment predicts body size shifts in a young radiation of Australian mammals E.J. Roycroft, J.A. Nations*, and K.C. Rowe	387: Framing the post-2020 global biodiversity agenda: improving mammalian conservation through restorative actions J.G. Hallett* and M.A. O'Connell	395^E: The current understanding of eulipotyphlan taxonomy and biogeography C.J. Burgin*	403^E: Infection prevalence and severity of skunk cranial worm (<i>Skrjabinogylus chitwoodorum</i>) in spotted skunks (<i>Spilogale spp.</i>) S.D. Higdon* and M.E. Gompper
2:30 PM	372: Comparative analysis of bat longevity using epigenetic clocks G.S. Wilkinson*, D.M. Adams, and S. Horvath	380: Systematic revision of <i>Thomasomys cinereus</i> (Rodentia: Cricetidae) with the description of a new species V. Pacheco* and D. Ruelas	388: Estimating bat fatalities at a Texas wind energy facility: implications transcending the U.S.-Mexico border S.P. Weaver, A.K. Jones*, C.D. Hein, and I. Castro-Arellano	396**: Further assessment of the Genus <i>Neodon</i> and the description of a new species from Nepal N. Pradhan*, A.N. Sharma, A.M. Sherchan, S. Chhetri, P. Shrestha and C.W. Kilpatrick	404^{E**}: Temporal variation in arthropod-vectored pathogen prevalence in bats K.A. Speer*, D.J. Becker, A. Brown, S. Perkins, and Nancy Simmons
2:45 PM	373: Genomic impact of founder history on populations of the critically endangered dama gazelle (<i>Nanger dama</i>) K.-P. Koepfli*, P. Dobrynin, G. Tamazian, K. Krashenninnikova, A. Pang, A. Hastie, O. Dudchenko, E. Aiden, D. Wildt, P. Comizzoli, and B. Pukazhenth	381: Possibilities and pitfalls in documenting range shifts in mammals from the Quaternary to the present C.O. George* and S. Talbot	389^{E**}: No impact of hunting concession management on occupancy of critically endangered lions in West Africa K.L. Mills*, B. Doamba, Y. Harissou, E.M. Hema, I. Gnoumou, Y.I. Abdel-Nasseer, and N.C. Harris	397: Global arvicoline rodent phylogenetics: insights into diversification and biogeography C.B. Withnell *, S.G. Scarpetta, and C. J. Bell	405^E: The fox tapeworm in North America S. Botero-Cañola*, A.T. Dursahinhan, J.E. Ubelaker, and S.L. Gardner

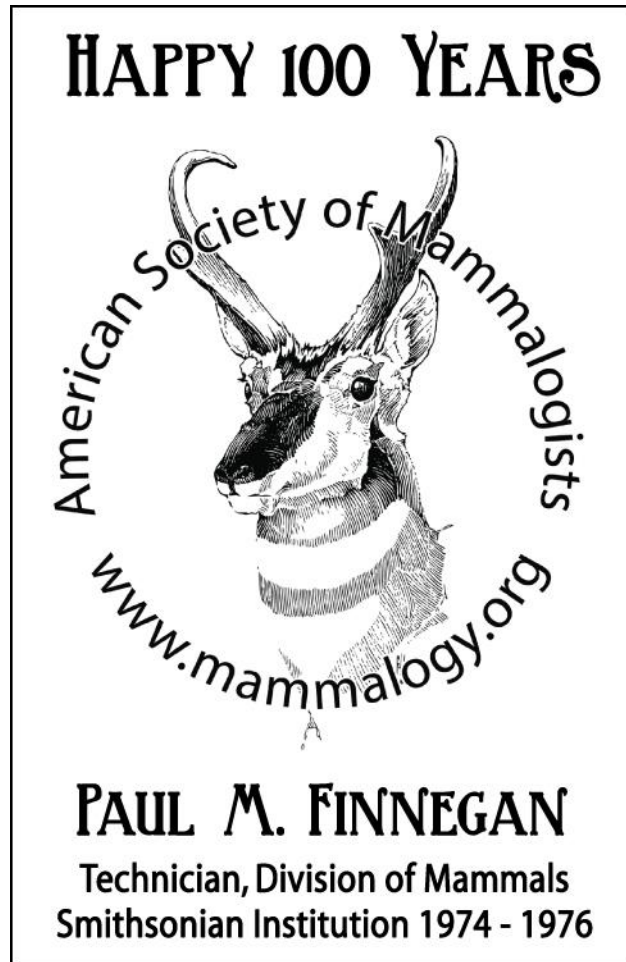
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3:00 PM	374^{E**}: Host taxonomic and dietary signal in microbial communities varies across the gastrointestinal tract in Sulawesi rodents M.T. Swanson*, A.S. Achmadi, H. Handika, S. Anita, M.W. Henson, J.A. Nations, K.C. Rowe, M.J. Polito, J.C. Thrash, and J.A. Esselstyn	382: Latitudinal diversity and diversification in mammals N.S. Upham*, D. Caetano, and W. Jetz	390: Inbreeding levels and bottlenecks of Stellar sea lions (<i>Eumetopias jubatus</i>) in the Gulf of Alaska P. Han, J.M. Maniscalco, and B.J. Swanson*	398: Mitochondrial DNA and UCEs illuminate the diversity of southern African gerbils M. McDonough*, R. Baker, D. Schlitter, and J. Bryja	Open
3:15 PM	375: Tracking animal biographies through ancient DNA in Classic Mesoamerica C.A. Hofman *, R. Singleton, N. Dagtas, K. Hughes, and N. Sugiyama	383^E: Agree to disagree; varying estimates and model development with Maxent and different circulation models C.L. Adkins*, P. Harman, A. Smith, V. Starnes, K. Beckham, B. Spitz, and S.P. Maher	391^{**}: Landscape connectivity for large carnivores in northwest México and southern United States Z.Y. González Saucedo*, A.G. Bernal, and E.M. Meyer	399: Phylogenomic estimation of species boundaries in the spotted skunks (<i>Carnivora, Mephitidae, Spilogale</i>) A. Ferguson*, M. McDonough, R. Dowler, M. Gompper, and J. Maldonado	
3:30 PM	Break – Regency Foyer				
4:00 PM	Capstone Session – Regency BCD				

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**TUESDAY, JULY 2ND, CAPSTONE SESSION
-HYATT REGENCY WASHINGTON ON CAPITOL HILL, REGENCY BCD-**

4:00 PM	Capstone Session – Regency BCD
4:00 PM	Welcome & Announcements Vice President Felisa A. Smith
4:10 PM	406: Twenty-first century conservation T.E. Lovejoy*
5:00 PM	407: Our planet, our health K.E. Jones*
6:00 PM	Buses Begin Loading for Closing Social – Hotel Entrance, New Jersey Ave. NW
7:00 PM	Closing Social & Awards Ceremony – National Museum of Natural History



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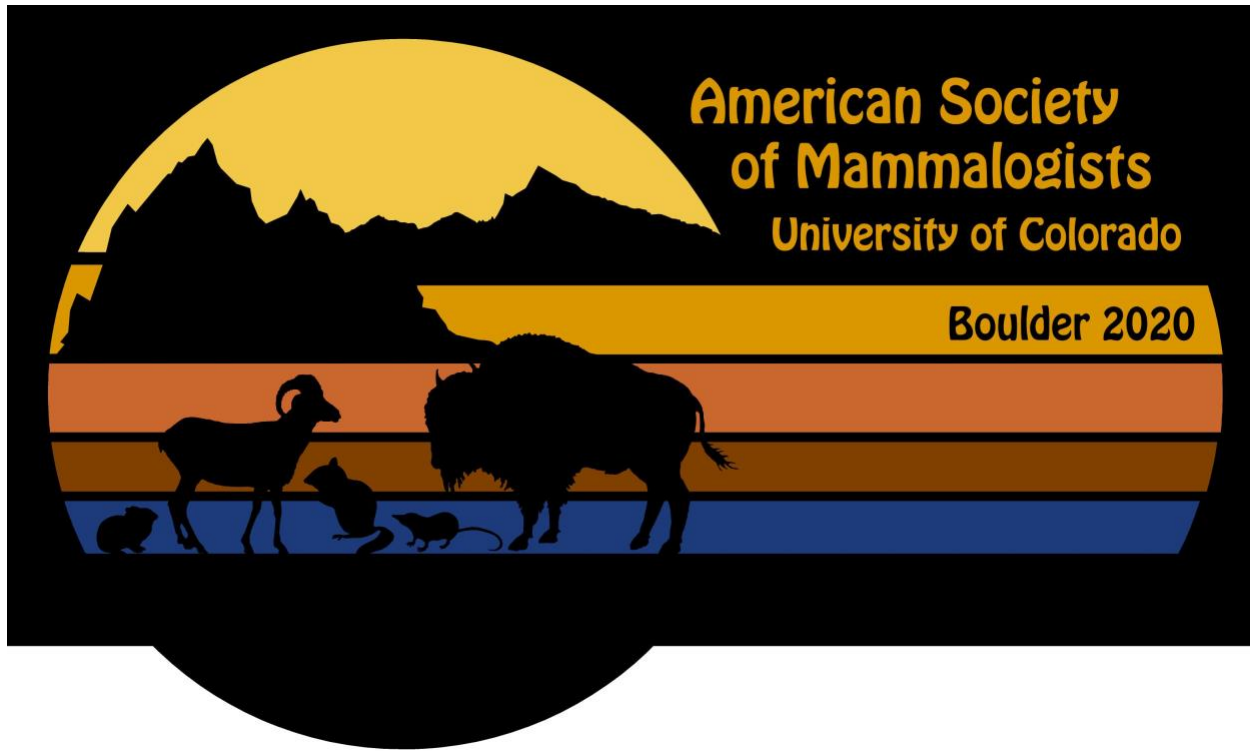
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SAVE THE DATE!!!

**100TH ANNUAL MEETING OF THE
AMERICAN SOCIETY OF MAMMALOGISTS**



Please join us 5 to 9 June 2020 in Boulder, Colorado for the 100th Annual Meeting of the American Society of Mammalogists. The conference will be held on the campus of the University of Colorado, located at the foothills of the Rocky Mountains. Learn about the latest advances in the study of mammals and interact with researchers and educators specializing in these fascinating animals. Come celebrate this important milestone in modern mammalogy and enjoy the picturesque views of the Flatirons from the CU campus!

The scientific program will include contributed oral and poster presentations as well as symposia, plenary speakers, and workshops. In addition, the program will include contributions from the Society for the Study of Mammalian Evolution and the North American Pika Consortium. A full social agenda also is planned including fieldtrips to local attractions, the opening social at the UC-Boulder campus, the annual Run-for-Research, the picnic on the Norlin Quad Lawn, and closing social and awards ceremony at Folsom Field. On-campus housing and hotel blocks will be made available for meeting attendees. Detailed conference and registration information will be made available on the conference website (www.mammalmeetings.org).

For more information about the 2020 meeting, contact the program director, Cody Thompson (mammal.meetings@gmail.com); local host, Christy McCain (christy.mccain@colorado.edu); or meeting planner, Kerrell Dunsmore (kerrell@thenextgreatevent.com).

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