

**97TH ANNUAL MEETING  
OF THE  
AMERICAN SOCIETY OF MAMMALOGISTS  
20-24 JUNE 2017  
UNIVERSITY OF IDAHO  
-MOSCOW, IDAHO-**



**PROGRAM**



The 2017 American Society of Mammalogists Annual Meeting logo was designed by Audrey DiGirolamo (seated left), who is majoring in Studio Art and Design at the University of Idaho. Associate Professor Delphine Keim's (seated right) graphic design class developed logos with Idaho mammal themes as a class project. The best design was selected by the local committee for use at the meeting.

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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 who 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 6 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 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 97th annual meeting of the American Society of Mammalogists!

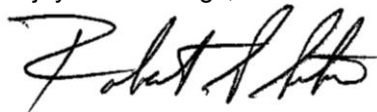
We are delighted to be meeting in Moscow, Idaho! Judging from the registration and abstract count, ASM members are excited about the venue and the opportunities this meeting brings. Whether you are a long-term member or have just joined, I can say without hesitation that you are part of a special organization. For those of you who are new members or are attending their first meeting, know that this is a wonderful opportunity to meet fellow mammalogists, share in the latest findings, and learn about upcoming opportunities. This is perhaps our very best opportunity to meet and welcome new colleagues, so please introduce yourself!

A quick look at our schedule will show you a program covering all aspects of mammalogy. We have contributed papers arranged in technical session and identified by topic; symposia on genomic approaches, climate change and small mammals, and the ecophysiology of large body size in changing climates; and workshops on programming applications in *R*, broadening impacts on K-12 education, and writing successful NSF dissertation improvement proposals. You will also find no fewer than five thematic sessions, including our first foray in "lightning talks". Of course we have our two plenary sessions in which we highlight work by recipients of our student awards and showcasing accomplishments of senior mammalogists; and we have a wonderful capstone presentation in store by an ASM Honorary Member. For even more opportunities, we offer two poster sessions to facilitate one-on-one interactions. Learning of advances in mammalogy brings us to the meeting, but I would remind all attendees that ours is a working society, and members are called on to make important decision regarding our governance at our two Members Meetings. Your vote matters and I urge you to attend these important decision-making events.

All work and no play is just no fun at all, so we have sprinkled in plenty of opportunities for socializing. These include the various socials and picnic, an auction, the Run for Research, and a student mixer and mammal crawl in downtown Moscow.

For many of us, the camaraderie at these meetings makes it as much a reunion of extended family as an opportunity to stay current on great science. I know I am just one of many who look forward to this week as a time to indulge my affinity for all things mammalogical, reconnect with old friends, and meet new colleagues. I thank you all for attending 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.

Enjoy the meetings,



Robert Sikes  
President, American Society of Mammalogists

## **ACKNOWLEDGEMENTS**

### ***PROGRAM COMMITTEE***

Cody W. Thompson (Chair)

Adam A. Ahlers (2018 Co-Host)

Kayce C. Bell

Brad R. Blood

Elmer J. Finck (2018 Co-Host)

Tom Giarla

John D. Hanson

Lauren E. Helgen

Andrew Hope (2018 Co-Host)

Sharon A. Jansa

Jessica E. Light

Ryan A. Long (2017 Co-Host)

Verity L. Mathis

R. Neal Platt

Janet L. Rachlow (2017 Co-Host)

Andrew Ricketts (2018 Co-Host)

Zachary P. Roehrs

Luis A. Ruedas

James M. Ryan

Steven R. Sheffield

Winston P. Smith

Kelly A. Speer

***KANSAS STATE UNIVERSITY CONFERENCE PLANNING SERVICES***

Tony Ballard & Dana Flynn

***2017 LOGO DESIGN***

Audrey DiGirolamo

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**University of Idaho  
Department of Biological Sciences**



**CONTRIBUTORS**



LITERATURE ONLY



LITERATURE ONLY (CONT.)



PRINCETON  
UNIVERSITY  
PRESS



## **GENERAL MEETING INFORMATION**

### ***REGISTRATION DESK***

The ASM Registration Desk, located on the 2nd floor of the Bruce Pitman Center (BPC), will be open for registration from 7:00 am – 5:00 pm throughout the entirety of the meeting.

### ***PARKING INFORMATION***

Free daytime parking on campus is available in all Red and Blue color-coded lots; however, vehicles can be parked overnight only in designated lots. The free parking lots closest to ASM conference venues are highlighted on the campus map. Lots with overnight parking also permit daytime parking.

### ***MEETING ROOM INFORMATION***

Auction & Social — BPC Vandal Ballroom  
Board of Directors Meeting I — Best Western-University Inn  
Board of Directors Meeting II — Idaho Commons, Panorama Room  
Capstone — BPC International Ballroom  
Closing Social & Awards Ceremony — Idaho Commons Plaza & Green  
Committee Meetings — Idaho Commons (Rooms – Aurora, Clearwater, Crest, Horizon, and Panorama)  
and BPC (Borah Theater and NW Ballroom)  
Exhibit Area — BPC 2nd Floor  
Field Trip I – Meet 15 Minutes Before in Lobby of BPC 2nd Floor  
Field Trip II – Meet 30 Minutes Before at Registration Desk on BPC 2nd Floor  
Mammal Crawl – Downtown Moscow  
Members Meetings — BPC International Ballroom  
Officers & Plenary I Speakers Lunch — BPC Vandal Ballroom Gold  
Opening Social — Integrated Research & Innovation Center  
Picnic — University Arboretum & Botanical Garden  
Plenary I — BPC International Ballroom  
Plenary II — BPC International Ballroom  
Poster Session I — BPC Vandal Ballroom  
Poster Session II & Social – BPC Vandal Ballroom  
Refreshment Breaks — BPC 2nd Floor  
Registration — BPC 2nd Floor  
Run for Research — University of Idaho campus  
Student Mixer — Downtown Moscow, Pritchard Art Gallery, 414 Main Street  
Symposia — BPC International Ballroom  
Technical Sessions — BPC International Ballroom, Borah Theater, NW Ballroom, and SW Ballroom  
Thematic Sessions — BPC International Ballroom  
Workshop I — BPC Vandal Ballroom  
Workshop II — Idaho Commons, Panorama Room  
Workshop III — BPC Borah Theater

### ***INTERNET ACCESS***

Internet access is free to all ASM participants at the University of Idaho. To access the complimentary WiFi, select “AirVandalGuest” on your device. The password is “GoVandals!”. If your institution participates in Eduroam, that is also an option on the U of I campus. Instructions for connecting using that method must be obtained from your home institution.

### ***BUSINESS CENTER***

A Business Center is available in the Chiefs Room on the second floor of the Bruce Pitman Center and will be open from 7:30 a.m. to 4:30 p.m. Tuesday through Saturday. A printer is available for small jobs like printing presentation notes, etc. Larger jobs, including poster printing, can be handled by the campus copy center, located in the Idaho Commons. The copy center is open weekdays 7:30 a.m. to 4:30 p.m.

### ***MESSAGES & JOB ANNOUNCEMENTS***

Message boards are located near the Registration Desk on the 2nd Floor of the Bruce Pitman Center (BPC). Participants may post messages or job announcements for friends and colleagues.

### ***FOOD & BEVERAGE***

Morning and afternoon refreshment breaks will be served on the 2nd Floor of the BPC. Breakfast and lunch is on your own each day. There are a number of restaurants, from casual to fine dining, on-site or nearby. In addition, breakfast and lunch will be served at in the Idaho Commons Food Court for meeting attendees. A list of local restaurants is listed on page 16.

Host and/or cash bars will be available during:

- Opening Social, 7:00 – 10:00 pm, Tuesday, June 20th
- Student Social, 7:00-8:30 pm, Wednesday, June 21st
- Mammal Crawl, 7:00-10:00 pm, Wednesday, June 21st
- Poster Session II & Social, 7:00 – 8:30 pm, Friday, June 23rd
- Auction & Social, 8:30 – 10:00 pm, Friday, June 23rd
- Closing Social & Awards Ceremony, 6:00 – 9:00 pm, Saturday, June 24th

### ***NAME BADGE COLOR SCHEME***

Award Recipient – White  
Board of Directors – Emerald Green  
Committee Chair – Royal Blue  
Editor – Turquoise  
Honorary Member – Emerald Green  
Membership Committee – Lavender  
Mentor – Red  
Past President – Black  
President – Emerald Green  
President-Elect – Emerald Green  
Program Committee – Red  
Recording Secretary – Emerald Green  
Secretary Treasurer – Emerald Green  
Sponsors – Turquoise  
Trustee – Emerald Green  
Vice President – Emerald Green

### ***19TH ANNUAL GORDON L. KIRKLAND MEMORIAL RUN/WALK FOR RESEARCH***

*All proceeds go to the ASM Future Mammalogists Fund!!!*

*Date and Race Start Time—Thursday, June 22nd, 6:00 am*

*Start Location—Meet at the Dan O'Brien Track and Field Complex.*

*Race Course*—The route makes a counter-clockwise loop around campus heading east from the starting location to Sweet Avenue, and then north to the Paradise Creek bike path. The route follows the bike path west to Perimeter Drive where it turns south towards the starting location, and finishes with a final lap around the track. Once around the loop is 5K. The 2K walk will start and end at the same location. See map on the meeting website for details.

*Sign-up*—Register on-line or during Registration hours at the Registration Desk on BPC 2nd Floor.

*Entry Fee*—\$20 (no t-shirt); \$35 (includes tech t-shirt)

## **PRESENTATION INFORMATION**

### ***ORAL PRESENTERS***

*Equipment*—The computers provided in the session rooms will be Windows-based PCs (Windows 10) with Microsoft Office 2016. Alternatively, all presentation rooms are “smart” rooms and capable of receiving any laptop. Laser pointers will be available.

*Length & Format*—Oral presentations will be allotted 12 minutes for the talk and 3 minutes for questions. If you use the provided computers, 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. Please bring your presentation either on a USB Flash “thumb” drive or on your computer to the assigned session at least 15 minutes prior to the start time.

*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: Friday, June 23rd, 10:00-11:30 am

Poster Session II: Friday, June 23rd, 7:00-8:30 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). Pushpins and display boards will be provided.

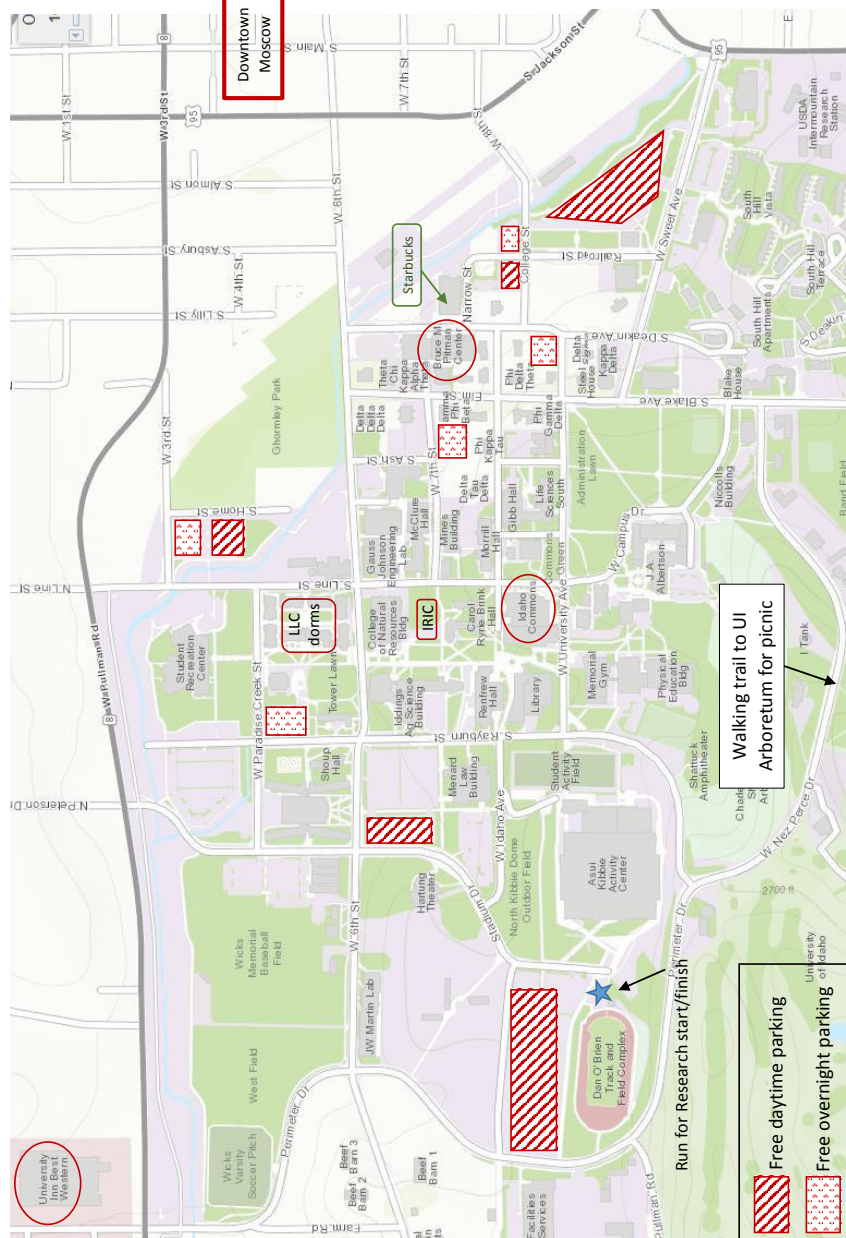
*Poster Board Assignments*—All poster boards will be numbered. Because some posters are being evaluated, please make sure that you place your poster in the correct location.

*Poster Board Set-up and Take-down*—All posters should be displayed beginning at 8:00 am on Friday, June 23rd and removed by 10:00 pm following the Auction & Social. If your poster is not removed or claimed by the end of Auction, it will be discarded.

## CONFERENCE VENUE & MAPS

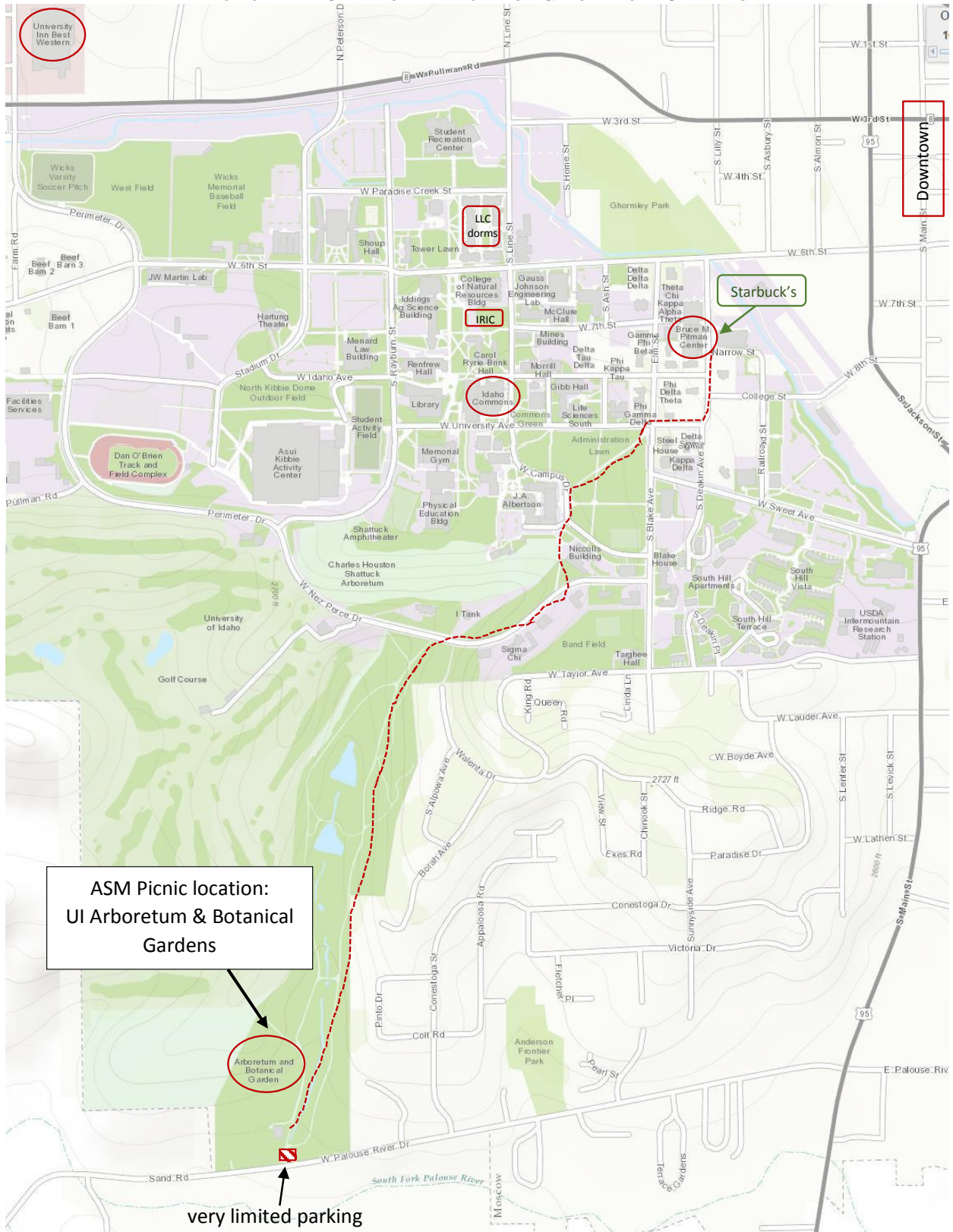
The University of Idaho campus is nestled in the rolling green hills of the Palouse Prairie, a distinctive region in the inland Northwest. Known as the “home of the arts,” Moscow boasts a vibrant arts and culture scene that features independent bookstores, over forty restaurants and coffee houses, a thriving local Co-op and farmer’s market (Saturdays 8:00am-1:00pm on Main Street), art galleries, lively bars and an independent movie theatre. The town lies within easy distance of a host of outdoor activities, including hiking, biking and running along miles of local paved paths and mountain trails, birding, fishing in the nearby Snake River, and whitewater rafting on the Salmon River. The University of Idaho was recently named one of the top 30 great universities for “hitting the books and the back country” by Outside Magazine. Pertinent conference maps are provided below and on the next page. An interactive campus map can be found at the following website (<https://facilities.dfm.uidaho.edu/A/Download/geolocation2.html>).

### DETAILED CAMPUS MAP WITH AVAILABLE PARKING LOTS





**PICNIC MAP – UNIVERSITY ARBORETUM & BOTANICAL GARDENS**



## LOCAL RESTAURANTS & BREWERIES

There is a diverse array of restaurants and breweries that are on and around the University of Idaho campus and Moscow. Here are a few suggestions.

### *CASUAL RESTAURANTS*

**Bloom, Independent Art House and Café**

**The Breakfast Club**

**D. Willy's Blues, Brew & BBQ**

**Einstein's Bagels**

**Gambino's**

**Humble Burger**

**Jimmy John's**

**Kitchen Counter**

**La Casa Lopez**

**Last Frontier Pizza**

**Martin's Smokehouse**

**Mikey's Gyros**

**Moscow Alehouse**

**Moscow Bagel & Deli**

**Moscow Food Co-op**

**Old Peking**

**Patty's Mexican Kitchen**

**Panda Express**

**Qdoba Mexican Grill**

**Red Bento**

**Smoky Mountain Pizza**

**Stax Sandwich Shop**

**Taco Time**

### *FINE DINING*

**Lodgepole**

**Maialina**

**Nectar Restaurant & Wine Bar**

**Sangria Grille**

**Seasons Public House**

**Tapped – Taphouse & Kitchen**

### *BARS AND BREWERIES*

**The Alehouse**

**Hunga Dunga Brewing Company**

**Rants and Raves**

**Garden Lounge**

**John's Alley Tavern**

### *COFFEE SHOPS*

**Bucer's Coffee House & Pub**

**One World Café**

**Thomas Hammer Coffee**

**Café Artista**

**Starbucks**

## VENDOR SHOW

Exhibitors are located on the 2nd floor of the Bruce Pitman Center during the following hours:

Wednesday, June 21st	8:00 am – 5:00 pm
Thursday, June 22nd	8:00 am – 5:00 pm
Friday, June 23rd	8:00 am – 5:00 pm
Saturday, June 24th	8:00 am – 12:00 pm

### *EXHIBITORS*

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

**Lane Science Equipment Corp.** are specialists in specimen cabinets that preserve and conserve your valuable natural history collections.

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

**RAPiD GENOMICS** offers DNA genotyping and data analysis solutions that suits your unique applications.

**Reel Impacts** is a science media production company designed to help researchers connect their work to the general public through documentary short films and photography.

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

**Skulls Unlimited International** provides natural bone osteological specimens, as well as the finest replica specimens to the educational, medical, and research communities.

**University of Idaho (UI)** is the state's land-grant and primary research university.

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

### *LITERATURE ONLY*

**Advanced Telemetry Systems** provides researchers and managers in ecology and biology with animal tracking and monitoring products of the highest quality and reliability.

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

### **Bone Clones**

**Delta Designs Ltd.** specializes in the design and professional manufacture of quality museum storage equipment.

**Forestry Suppliers** carries thousands of quality products for the forestry, environmental science, surveying/engineering, horticulture, grounds maintenance, educational professionals and more.

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

**The School for Field Studies** creates transformative study abroad experiences through field-based learning and research.

**Tomahawk Live Trap** offers hundreds of animal and pest control products used by professionals.

**University of Michigan Press** publishes academic and general books about contemporary political, social, and cultural issues.

## MEETING FIELD TRIPS

### ***Kamiak Butte Hike***

*Group Meeting Location: Registration Desk on Bruce Pitman Center (BPC) 2nd Floor at 12:30 pm  
Tuesday, June 20th, 1:00 – 5:00 pm*

Kamiak Butte is a registered National Natural Landmark in Whitman County, Washington. The butte is a forested ridge that rises out of the Palouse Prairie and offers superb views of the surrounding Palouse landscape. With 5 miles of gentle hiking trails, it is a great way to unwind after a long flight or drive to Idaho before the opening social. No minimum age for participation.

### ***Moscow-Area Birding Trip***

*Group Meeting Location: Lobby of BPC 1st Floor at 7:45 am  
Tuesday, June 20th, 8:00 am – 12:00 pm*

Bring your binoculars and have a look at some of the local bird life breeding on the Palouse during spring. The trip will be led by an experienced local birder. Details to will be updated. No minimum age for participation.

## OTHER FIELD TRIPS

### ***Bike Trip – Moscow Mountain Single Track (PRE-MEETING)***

*Group Meeting Location: Paradise Creek Bike Shop 515 S. Main St., Moscow at 9:00 am  
Monday, June 19th, 9:00 am – 1:00 pm*

Moscow Mountain, located ~5 miles north of the University of Idaho, has over 40 miles of mountain biking trails that offer moderate to challenging single track rides. Plan for 3-4 hour ride with an optional lunch/rehydration at the Ale House in Moscow following ride. Participants should have some experience with single track riding. Please note that the minimum age for participation is 18 years.

### ***Bike Trip – Moscow to Troy Historic Railway Trail (PRE-MEETING)***

*Group Meeting Location: Paradise Creek Bike Shop 515 S. Main St., Moscow at 9:00 am  
Monday, June 19th, 9:00 am – 1:00 pm*

Join us for a 20-mile round-trip ride along the paved Latah Trail, which runs for about 10 miles between Moscow and Troy (a small town of ~800 residents). The trail is part of the regional rails-to-trails system that runs along the historic railway lines. Lunch will be had at The Filling Station in Troy before the return ride Moscow. Please note that the minimum age for participation is 12 years.

### ***Raft Trip – Lower Salmon River (POST-MEETING)***

*Group Meeting Location: Univ. of Idaho Outdoor Program (east side of Student Rec Center) at 7:00 am  
Sunday, June 25th, 7:00 am – 6:00 pm*

The University of Idaho Outdoor Program runs a first-rate outdoor adventure and instruction program, as well as extensive equipment rentals. This 1-day raft trip on the Lower Salmon River travels through beautiful canyon country and includes several class III rapids, as well as calmer stretches. Please note that the minimum age for participation is 18 years.

**BOARD OF DIRECTORS, MEMBERS, AND COMMITTEE MEETINGS**  
**-All committee meetings will occur in the Idaho Commons unless otherwise noted-**

**TUESDAY, JUNE 20TH**

8:00 am – 5:00 pm Board of Directors Meeting I – Best Western-University Inn (refreshments & lunch provided)

**WEDNESDAY, JUNE 21ST**

12:30 – 1:30 pm African Graduate Student Research Fund – Aurora Room  
12:30 – 1:30 pm Animal Care & Use Committee – Panorama Room  
12:30 – 1:30 pm Honoraria & Travel Awards Committee – Horizon Room  
12:30 – 1:30 pm Mammal Images Library – Crest Room  
12:30 – 1:30 pm Membership Committee – Clearwater Room  
12:30 – 2:00 pm Conservation Committee – Bruce Pitman Center (BPC) Borah Theater  
1:30 – 3:30 pm Publications Advisory Board – Clearwater Room  
3:30 – 4:30 pm International Relations Committee – Clearwater Room  
4:00 – 5:30 pm Members Meeting I – BPC International Ballroom  
5:00 – 6:00 pm Mammal Biodiversity Committee – Crest Room

**THURSDAY, JUNE 22ND**

10:45 am – 12:15 pm Members Meeting II – BPC International Ballroom  
12:30 – 1:30 pm Development Committee – Aurora Room  
12:30 – 1:30 pm Education & Graduate Students Committee – Clearwater Room  
12:30 – 1:30 pm Informatics Committee – BPC NW Ballroom  
12:30 – 1:30 pm Systematic Collections Committee – Crest Room  
12:30 – 2:00 pm Conservation Committee – BPC Borah Theater  
12:30 – 2:00 pm Human Diversity Committee – Horizon Room  
12:30 – 2:00 pm Public Education Committee – Panorama Room  
1:30 – 3:00 pm Publications Advisory Board – Clearwater Room  
2:00 – 3:00 pm Jackson Award Committee – Crest Room  
3:00 – 4:00 pm Grants-in-Aid Committee – Clearwater Room

**FRIDAY, JUNE 23RD**

9:30 – 10:30 am Nomenclature Committee – Crest Room  
11:30 am – 1:00 pm Program Committee – Clearwater Room  
12:00 – 1:00 pm Merriam Award Committee – Crest Room  
11:30 am – 1:30 pm Board of Directors Meeting II – Panorama Room (lunch not provided)

**COMMITTEE MEETINGS NOT SCHEDULED**

Archives Committee  
Checklist Committee  
Conservation Awards Committee  
Coordination Committee  
Grinnell Award Committee  
Honorary Membership Committee  
Latin American Fellowship Committee  
Legislation & Regulations Committee  
Marine Mammals Committee  
Office of Ombudsperson  
Resolutions Committee  
Student Science Policy Award Committee

## WORKSHOPS

### ***Applications in Program R***

*Instructor: Robert C. Lonsinger*

*Tuesday, June 20th, 10:00 am – 4:30 pm — Bruce Pitman Center, Vandal Ballroom*

This workshop will consist of 2 sessions. The morning session (10:00 a.m. – 12:00 p.m.) will be an Introduction to R Workshop and will include the following topics: R syntax (e.g., how to read and write R code, understanding types of variables and their uses, and how to reference data for analyses from complex data sets), data management (e.g., how to manipulate, merge, sort, and subset datasets), basic descriptive statistics (e.g., generated with key functions such as `tapply` and `sapply`), and R packages (e.g., finding, loading, and understanding the supporting documentation). The afternoon session (1:00 – 4:30 p.m.) will be an Intermediate R Workshop that will focus on the following topics: simulations and looping functions, using defined functions, and graphing. Those less familiar with R should plan on attending both sessions, but those who have some experience using R could consider skipping the morning session and join during lunch. Laptop computers are required for both sessions. Organizer: Janet Rachlow.

### ***Expanding Your Broader Impacts to the PreK-12 Classroom: The Do's and Don'ts for Professional Mammalogists***

*Instructors: Bruce J. MacFadden, Pamela R. Owen, Laurie Schlitler, and Barbara Shaw*

*Tuesday, June 20th, 1:00 – 5:00 pm — Idaho Commons, Panorama Room*

This workshop will focus on ideas and the underlying PreK-12th grade research to support incorporating “Broader Impacts” into these classrooms with relevant, tangible ways to engage youth and their educators in your grant-supported work. In addition, we will examine the best delivery methods for the PreK-12th grade educators to support and enrich their classrooms with your cutting-edge research. We will address how to meet and exceed the academic standards-driven focus currently forced on our public educators as their students face the ineffective but demanded high-stakes standardized testing. Throughout the workshop, we will keep an eye on how to budget for the Broader Impacts in a climate of diminished funding for the necessary future and security of individual students as well as the world. Organizer: Barbara Shaw.

### ***How to Write a Successful NSF Doctoral Dissertation Improvement Grant***

*Instructors: Kayce D. Bell and Brett Pasch*

*Wednesday, June 21st, 5:30 – 7:00 pm — Bruce Pitman Center, Borah Theater*

The National Science Foundation (NSF)'s Division of Environmental Biology (DEB) and Integrative Organismal Systems (IOS) offer Ph.D. candidates a great opportunity to apply for research money. Through its Doctoral Dissertation Improvement Grant (DDIG) program, NSF awards up to \$15K (direct costs) for 24 months to students meeting eligibility requirements. Given the high rate of funding of DDIG's by NSF standards (20-35% of proposals are funded) this is an excellent way for young researchers to begin a relationship with the NSF and ensure continued grant proposal success as well as excellent mammalian based research throughout their career. These grants provide partial support of doctoral dissertation research to improve the overall quality of the research project. Monies may be used to travel to specialized facilities or field research locations, use of specialized research equipment, purchase of supplies and services not otherwise available, the hiring of field or laboratory assistants, fees for computerized or other forms of data, and rental of environmental chambers or other research facilities. This workshop will emphasize what makes a successful proposal citing specific examples that have led to success. While the workshop will focus on the DDIG, a student could pick up useful tips for writing any scientific grant proposal. Presentations will address topics such as the purpose of the DDIGs, tips for writing successful proposals, the review process for submitted proposals. Presentation will be followed by an extensive question and answer period. Organizer: Melissa Merrick and Karen Munroe.

## SYMPOSIA

### **Genomics Approaches to Consequential Questions in Mammalogy**

*Presenters: Zachary A. Cheviron, Jeffrey M. Good, Andrew G. Hope, Jay F. Storz, and Taichi A. Suzuki  
Thursday, June 22nd, 4:00 – 6:00 pm — Bruce Pitman Center, International Ballroom*

All aspects of organismal ecology, evolution and diversity are based on genomic variation. The scientific community toolkit for understanding complex relationships is rapidly expanding as genomic data is more easily collected and bioinformatic and biostatistical approaches are developed to make biological inference. For example, recent studies in mammalian lineages are providing new insights about how genome evolution provides variation important for seasonal, energetic, and morphological adaptations. We are now able to characterize the speciation process and hybridization with detailed information about how genomic regions and genes are differentially influential. It is now possible, with ever-increasing resolution, to assess relationships between mammals and microbial communities, and how these relationships have co-evolved and are important for health and fitness. Seminars in this symposium highlight some of these exciting new discoveries. Organizers: John D. Hanson and Caleb D. Phillips.

### **Climate Change and Small Mammals: A Global Perspective**

*Presenters: Chris R. Dickman, Jacob R. Goheen, Charlie J. Krebs, and Christy M. McCain  
Friday, June 23rd, 3:30 – 5:30 pm — Bruce Pitman Center, International Ballroom*

Global climate change (GCC) is now widely recognized as a major force influencing mammal populations worldwide. Many recent studies have shown significant changes in mammal distributions, ecology and migration patterns as a result of various stressors associated with GCC including increased temperatures, changes in precipitation patterns, an intensification of extreme events, and altered plant phenology and seasonality. Small mammals are particularly sensitive to these stressors perhaps because they are typically less mobile than larger mammals, more philopatric, and more closely tied to the plant communities they inhabit. Such responses may be manifested in changes in their demography, habitat associations, and geographic ranges. The responses are not limited to those small mammals in more benign tropical/temperate or mesic communities; in fact, in many cases, they involve small mammals living in extreme conditions such as in semiarid/arid communities and at higher elevations. This symposium will provide a panoramic view of the consequences of GCC for small mammals on different continents, and bring together international experts working at different temporal and spatial scales in order to understand its impact. Organizers: Chris R. Dickman and Peter L. Meserve.

### **Ecophysiology of Large Body Size in a Changing Climate**

*Presenters: Dan P. Costa, Elzbieta Krol, Ryan A. Long, and Karyn D. Rode  
Saturday, June 24th, 10:00 – 12:00 pm — Bruce Pitman Center, International Ballroom*

The earth is currently in the midst of a pronounced warming trend that represents one of the greatest ecological challenges of our time. As a result, considerable effort has been devoted to determining how the distribution, population dynamics, and timing of life-history events of various species of mammals are affected by climate. Ecophysiological approaches have helped to shed light on the mechanisms underpinning many of the effects of climate change on mammals, both direct and indirect. Body size has a pervasive influence on numerous physiological, morphological, and behavior traits that set the limits of animal performance. Although large-bodied endotherms are more mobile and are typically able to utilize a broader range of resources than their smaller-bodied counterparts, lower surface-to-volume ratios and thicker boundary layers pose significant problems for the efficient dissipation of body heat, which can impose important limitations on the allocation of energy to reproduction. This fact forms the central tenet of the Heat Dissipation Limit theory, which suggests that the “slower” life history of larger endotherms results from their reduced ability to dissipate the body heat associated with reproductive effort. The mechanistic insights provided by ecophysiological research suggest that direct effects of climate change on animal performance, and thus population and community dynamics, may be manifested most strongly among large-bodied mammals. This symposium will highlight the unique implications of large body size in a changing climate in the context of ecophysiology and will showcase the cutting-edge work of four individuals who use ecophysiological approaches to understand the effects of climate change on large mammals in both terrestrial and aquatic environments. Organizers: Ryan A. Long and Charlotte R. Milling.

## UNDERGRADUATE HONORARIA AWARD RECIPIENT

### ***Tara R. Preuett, Undergraduate Honoraria Award***

*Comparison of trapping techniques for *Glaucomys volans* in a bottomland hardwood forest in central Louisiana*

*Friday, June 23rd, 1:15 – 1:30 pm – Bruce Pitman Center, SW Ballroom*

The recipient of the 2017 Undergraduate Honoraria Award is Tara R. Preuett, Barry from Louisiana State University at Alexandria. Tara is a Spring 2017 graduate from Louisiana State University at Alexandria. She grew up in a small rural town in central Louisiana, and because of her rural upbringing, she knew she wanted to do have a career with wildlife at a young age. Tara discovered the great world of fieldwork as a sophomore in college and has focused most of her undergraduate research on small mammals of Louisiana, specifically the eastern woodrat and the southern flying squirrel. She hopes to continue her career in wildlife research.

## PLENARY I SPEAKERS

### ***Joshua M. Barry, Annie M. Alexander Award***

*Mountain lions support beetle biodiversity through predation*

*Wednesday, June 21st, 8:10 – 8:30 am — Bruce Pitman Center, International Ballroom*

The recipient of the 2017 Annie M. Alexander Award is Joshua M. Barry from Pace University. Josh grew up in a rural area located in SW Pennsylvania. By age 9, Josh was fascinated with the wilderness, frequently escaping into the forests surrounding his home. He received a B.S. in Biology at Pennsylvania State University while studying abroad in Costa Rica and working full-time in a University Entomology Laboratory. Thereafter, he completed two big cat internships; one working with previously neglected and abused large carnivores. For his graduate thesis, Josh spent five months living in a tent outside of the Bridger-Teton National Forest, south of Yellowstone National Park. Touching on his previous invertebrate experience, he wanted to incorporate cross disciplines into his project, combining Entomology with Carnivore Ecology.

### ***Andrea Dechner-Sierra, Anna M. Jackson Award***

*Determining carnivore habitat use in a rubber/forest landscape in Brazil using multispecies occupancy models*

*Wednesday, June 21st, 8:30 – 8:50 am — Bruce Pitman Center, International Ballroom*

The recipient of the 2017 Anna M. Jackson Award is Andrea Dechner-Sierra from Michigan State University. Andrea is a wildlife ecologist interested in the ecology and conservation of mammals and ecological modeling of populations and communities. She completed her undergraduate degree in ecology at Universidad Javeriana (Colombia), and recently received her PhD in fisheries and wildlife, and in ecology, evolutionary Biology and Behavior from Michigan State University (USA). Andrea's current research focuses on the ecology of mammal communities in agricultural landscapes. She has five years of field work experience in Latin America while working with/for public and private organizations in Brazil, Colombia and United states.

### ***Talisin T. Hammond, A. Brazier Howell Award***

*Contrasting behavioral and physiological responses to environmental change in two partially sympatric*

*Wednesday, June 21st, 8:50 – 9:10 am — Bruce Pitman Center, International Ballroom*

The recipient of the 2017 A. Brazier Howell Award is Talisin T. Hammond from the University of California at Berkeley. Talisin is finishing her Ph.D. in Integrative Biology at the University of California Berkeley, working in the Museum of Vertebrate Zoology under advisor Eileen Lacey. Her dissertation research uses fecal glucocorticoid metabolites and accelerometers to explore interspecific differences in the behavior and physiology of two partially co-occurring California chipmunks that have exhibited divergent responses to the past century of climate change. Talisin has always been interested in using comparative studies



and placing behavioral ecology and physiology into a conservation context. Though she will always love small mammals, next she will be moving on to a new system and sub-field, exploring disease ecology and reproductive behavior and physiology in frogs as an NSF Post-doctoral fellow with Dr. Cori Richards-Zawacki at the University of Pittsburgh.

**Brett R. Jesmer, Elmer C. Birney Award**

*Ungulate migration is a cultural phenomenon*

Wednesday, June 21st, 9:10 – 9:30 am — Bruce Pitman Center, International Ballroom

The recipient of the 2017 Elmer C. Birney Award is Brett R. Jesmer from the University of Wyoming. Brett is broadly interested in the foraging ecology, nutritional physiology, space use, life history, natural history, and conservation of mammals. His dissertation work at the University of Wyoming aims to synthesize this diversity of disciplines to understand how behavioral and physiological plasticity is used to cope with resource limitation. By understanding how behavioral and physiological plasticity mediates the impacts of resource limitation on demography, Brett is creating new tools and approaches for monitoring resource limitation and assessing proximity to carrying capacity. Although his dissertation addresses these questions using ungulate systems (moose, mule-deer, and bighorn sheep), he plans to incorporate his experience with rodents and mesocarnivores into future research. Prior to starting his dissertation, Brett worked as a mammalogist at the University of Wyoming, University of California, New York State Department of Environmental Conservation, and the State University of New York.

**Hector E. Ramirez-Chaves, William T. Hornaday Award**

*Endemic mammals of Colombia: what do we know about them?*

Wednesday, June 21st, 10:00 – 10:30 am — Bruce Pitman Center, International Ballroom

The American Society of Mammalogists Conservation Awards Committee selected Héctor Ramirez-Chaves for the 2016 William T. Hornaday Award from the American Society of Mammalogists. Héctor is now a doctoral student at the University of Queensland in Australia and he has already made a strong impact on mammalian conservation in his homeland in northern South America and more recently with his fieldwork in Central Asia. Héctor has authored over 45 peer-reviewed papers (and many more technical reports), three books and four book chapters on various aspects of mammalogy. His published works include studies in conservation biology, natural history, and distribution studies of rodents, bats, shrews, anteaters, and especially small carnivores. He has also produced synthetic investigations of patterns of species richness and endemism in Neotropical mammals.

**Silvia E. Pavan, 2015 Albert R. & Alma Shadle Fellowship Award**

*Untangling the taxonomy of short-tailed opossums (Monodelphis): an integrative approach using molecular and phenotypic data*

Wednesday, June 21st, 10:30 – 11:00 am — Bruce Pitman Center, International Ballroom

The 2015 recipient of the Albert R. and Alma Shadle award is Silvia Pavan from the City University of New York and the American Museum of Natural History. Ms. Pavan's research focuses on the phylogeny, biogeography, and systematics of the genus *Monodelphis* (short-tailed opossums), the most species-rich genus of New World marsupials. Ms. Pavan has published 8 scientific papers in such journals as *American Museum Novitates*, *Journal of Evolutionary Biology*, *Molecular Phylogenetics and Evolution*, and *Zoological Journal of the Linnean Society*. She has presented her research at multiple conferences across North and South America, including the annual meeting of the American Society of Mammalogists. Ms. Pavan has received numerous fellowships, the award for the best oral presentation at the 2010 Brazilian Congress of Mammalogy, and research grants totaling approximately \$18,000. She is a member of the Brazilian Society of Mammalogy and the American Society of Mammalogists.

**Angela D. Hornsby, 2016 Albert R. & Alma Shadle Fellowship Award**

*Growth patterns and morphometric consequences of adherence to ecogeographic rules in a widespread rodent*

Wednesday, June 21st, 11:00 – 11:30 am — Bruce Pitman Center, International Ballroom

The 2016 recipient of the Albert R. and Alma Shadle award is Angela Hornsby from the University of Nevada, Reno. Ms. Hornsby has published papers in *Journal of Mammalogy*, *Journal of Mammalian Evolution*, and *Journal of*

*Biogeography*, and has presented her research at the annual meeting of the American Society of Mammalogists on 6 occasions. Ms. Hornsby has received numerous fellowships, including a 4-year NSF EPSCoR Nevada Climate Change Program fellowship, and research grants totaling approximately \$17,000. She has also been very active in service and outreach, including as a manuscript reviewer for several journals, as a volunteer at UNR's Museum of Natural History, in teaching high school students about genetics, and as the founder and coordinator of the Big Brothers Big Sisters Science Day at UNR. Ms. Hornsby's research focuses on how mammals (particularly *Neotoma*) react and adapt to changing environments, and utilizes field collections, museum specimens, and ancient DNA.

***Bryan S. McLean, ASM Fellowship Award***

*Pattern and process in the radiation of ground-dwelling squirrels*

*Wednesday, June 21st, 11:30 – 12:00 pm — Bruce Pitman Center, International Ballroom*

The recipient of the 2016 American Society of Mammalogists Award is Bryan McLean from the University of New Mexico. Mr. McLean is the author of 6 publications in journals including *Journal of Mammalogy*, *Molecular Phylogenetics and Evolution*, and *Oecologia*. He has presented at numerous scientific conferences, including 6 presentations at meetings of the American Society of Mammalogists. Mr. McLean is also a recent recipient of the Peter Buck Fellowship from the Smithsonian, and the Horner Award for the highest-ranked ASM Grant-in-Aid of Research proposal. Mr. McLean has served on the ASM Systematic Collections Committee for 4 years. Mr. McLean's research focuses on the evolutionary diversification of ground squirrels, and uses approaches from molecular biology, genomics, paleontology, and morphometrics.

## PLENARY II SPEAKERS

***Dr. Joseph A. Cook, Joseph Grinnell Award***

*The future of natural history collections: investing in infrastructure for future mammalian education and research*

*Thursday, June 22nd, 8:00 – 8:45 am — Bruce Pitman Center, International Ballroom*

The 2016 recipient of the Joseph Grinnell Award is Dr. Joseph A. Cook, Professor of Biology, Director of the Museum of Southwestern Biology, and Curator of the Divisions Mammals and Division of Genomic Resources at the University of New Mexico, Albuquerque. Joe's career exemplifies the integration of teaching and research; he has mentored nearly 40 graduate students and 10 postdoctoral fellows, supervised more than 50 undergraduate research projects, and mentored over 85 high school students. With these students, he has published over 180 scholarly works. Joe regularly teaches Mammalogy and Tropical Biology courses and many students note that these are the best classes they have ever taken. He has remained committed to maintaining a rigorous field component in these courses providing students unique hands on learning opportunities "in the environments where organisms exist and the threats to them are observable." Students note his commitment to training "broadly educated students who are thoughtful, aware and engaged." And that he "gives people the tools they need, puts them in situations where they can succeed and challenges them to do so." Joe is widely recognized for his career-long commitment to broadening diversity in the STEM disciplines and to stimulating academic development of local, minority, and native students across South, Central, and North America. The intellectual nexus for this geographically and culturally diverse community has been: fundamental ecological and evolutionary research firmly rooted with natural history collections. Joe has led initiatives like the UNO program to immerse student scholars in ecological and evolutionary research, the AIM-UP program that integrates natural history collections into undergraduate education, and the ISLES program that links university researchers, public school teachers and natural resource agencies to stimulate museum-based learning.

***Dr. Marco Festa-Bianchet, Aldo Leopold Award***

*Evolutionary sustainable ungulate management*

*Thursday, June 22nd, 8:45 – 9:30 am — Bruce Pitman Center, International Ballroom*

The recipient of the 2016 Aldo Leopold Award is Dr. Marco Festa-Bianchet, Professor of Biology, Université de Sherbrooke, Québec, Canada. Dr. Festa-Bianchet has focused on understanding how ecological change and selective pressures may affect the population biology and reproductive strategies of mammals. He and his more

than 40 graduate students have used critical tests of ecological and evolutionary theory as a basis for pressing conservation and management issues in Canada, Europe, Australia, and elsewhere. Much of his work has emphasized the importance of individual responses of wildlife, especially ungulates, through long-term monitoring of marked individuals. Dr. Festa-Bianchet's studies of the evolutionary impact of trophy hunting are well known and have demonstrated how hunters can affect morphology and life history and ultimately may be detrimental to local populations. His highly influential contributions have caused wildlife managers to re-examine the potential ecological and evolutionary impacts of harvest management strategies. Dr. Festa-Bianchet's efforts to translate research into conservation policy have been critical in Canada and globally. In Canada, he was elected Chair of the Committee on the Status of Endangered Wildlife in Canada for two terms (2002-2006) and co-Chair Terrestrial Mammals Species Subcommittee. While leading these committees, Dr. Festa-Bianchet carefully assembled expertise on threatened species and then guided his committee's efforts to develop thoughtful and effective conservation plans for Canada's terrestrial mammals throughout the first decade of the 21st Century. For more than 15 years, he also has served as Chair of the IUCN\SSC Caprinae Specialist Group and he is on the Scientific Advisory Committee of the World Wildlife Fund. His many students have moved into prominent roles in academia, government, and private industry, where they continue to contribute to the conservation of mammalian biodiversity. In total, Dr. Festa-Bianchet's research, mentoring, and public service activities over the past three decades have significantly impacted the conservation of mammals (and other organisms).

***Dr. Joel S. Brown, C. Hart Merriam Award***

*The GUD, the bad and the ugly: revealing the inner selves of animals*

*Thursday, June 22nd, 9:30 – 10:15 am — Bruce Pitman Center, International Ballroom*

The 2016 recipient of the Merriam Award is Dr. Joel Brown from the University of Illinois at Chicago. Dr. Brown is an evolutionary ecologist who explores how does natural selection acting as an optimization process determines feeding behaviors, population characteristics, and the properties of communities. His research includes the mathematical formulation and field tests of models and hypotheses based on foraging theory, consumer-resource models of species coexistence, and evolutionary game theory using the concept of evolutionary stable strategies (ESS). At present, he is using the giving-up density approach to examine the ecology of fear in fox squirrels, the community organization of desert granivores in the Negev Desert, Israel, the effects of granivory, herbivory, and fire on prairie restorations, and applications to the ecology of black rhinoceros, show leopards preying upon blues sheep, and mountain lions preying upon mule deer.

**CAPSTONE SPEAKER**

***Dr. Kay E. Holekamp***

*The evolution of intelligence in mammalian carnivores*

*Saturday, June 24th, 4:00 – 5:00 pm — Bruce Pitman Center, International Room*

The capstone speaker for the 2017 meeting will be Dr. Kay Holekamp. Dr. Holekamp's research focuses on mammalian behavioral development and its physiological substrates. In particular, her research focuses on the ontogenetic development, physiological substrates, and evolution of mammalian behavior. Kay and her students are currently pursuing various lines of research investigating how social, ecological, and physiological variables interact during an individual's early development to influence its subsequent behavior and its reproductive success as an adult.

## SOCIAL EVENTS

**Tuesday, June 20th, 7:00 – 10:00 pm**

**Opening Social – Integrated Research and Innovation Center**

Come kick off the conference with an opening night reception at the brand new Integrated Research and Innovation Center (IRIC). Enjoy the opportunity to socialize with friends, colleagues, and other conference attendees, as well as welcome new members and meeting attendees to the Society. The IRIC has an open design with 3 levels of indoor-outdoor spaces that will facilitate viewing interdisciplinary labs as well as a Palouse summer sunset. Beer and wine, as well as heavy hors d'oeuvres, will be available.

**Wednesday, June 21st, 7:00 – 8:30 pm**

**Student Social – Prichard Gallery, Downtown Moscow**

All student attendees are welcome to come and socialize with your friends and colleagues, as well as meet new student members. The Student Social will immediately follow the *How to Write a Successful NSF Doctoral Dissertation Improvement Grant Workshop* and is hosted by the Education and Graduate Students Committee. Pizza, beer, and non-alcoholic drinks will be available. The University of Idaho's Prichard Art Gallery hosts regional and national displays of contemporary visual arts. The Gallery is located on Main Street in downtown Moscow, about a 5-min walk from campus, which will facilitate transition to the downtown Mammal Crawl.

**Wednesday, June 21st, 7:00 – 10:00 pm**

**Mammal Crawl – Downtown Moscow**

The Moscow Chamber of Commerce and the town of Moscow invite all mammalogists out to enjoy a summer evening in our pedestrian friendly downtown, located next to the University of Idaho campus. Come socialize with your friends and colleagues, as well as meet new student members. Local businesses including art galleries, book stores, coffee houses, and micro-breweries will be hosting activities and specials for ASM meeting attendees. In addition, mammal-themed films of dubious quality will be playing at the 1920s restored Kenworthy Performing Arts Center on Main Street.

**Thursday, June 22nd, 6:30 – 9:00 pm**

**Picnic – University Arboretum & Botanical Garden**

Join your friends and colleagues for food, drink, and live music at the University of Idaho Arboretum and Botanical Garden. Located on campus, the 63-acre Arboretum has displays of native and global gardens, ponds, and numerous walking trails where you can stroll, relax, and enjoy an evening with colleagues out on the Palouse. Must purchase tickets in advance!

**Friday, June 23rd, 7:00 – 10:00 pm**

**Poster Social II & Auction – Bruce Pitman Center, Vandal Ballroom**

The Friday night poster session will include poster 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.

**Saturday, June 24th, 6:00 – 9:00 pm**

**Closing Social & Awards Ceremony – Idaho Commons Plaza & Green**

Join us at the Closing Social and Awards Ceremony on the Idaho Commons Plaza and Green. Nestled between both classic and modern architecture, this space offers the perfect setting for unwinding, socializing, saying good-byes, and congratulating the 2017 ASM award winners. Must purchase tickets in advance!

## PROGRAM AT-A-GLANCE

<b>TUESDAY, JUNE 20TH, 2017</b>		
<b>TIME</b>	<b>EVENT</b>	<b>LOCATION</b>
7:00 am	Registration	Bruce Pitman Center (BPC), 2nd Floor
7:45 am	Gathering in Lobby for Fieldtrip II	BPC 1st Floor
8:00 am	Board of Directors Meeting I	Best Western-University Inn
8:00 am	Fieldtrip II: Moscow-Area Birding Trip	Moscow, Idaho
10:00 am	Workshop I: Applications in Program R	BPC Vandal Ballroom
1:00 pm	Workshop II: Expanding your Broader Impacts to K-12	Idaho Commons, Panorama Room
12:30 PM	Gathering at Registration Desk for Fieldtrip I	BPC 2nd Floor
1:00 pm	Fieldtrip I: Kamiak Butte Hike	Whitman County, Washington
7:00 pm	Opening Social	Integrated Research & Innovation Center
<b>WEDNESDAY, JUNE 21ST, 2017</b>		
<b>TIME</b>	<b>EVENT</b>	<b>LOCATION</b>
7:00 am	Registration	BPC 2nd Floor
8:00 am	Plenary Session I	BPC International Ballroom
9:30 am	Break	BPC 2nd Floor
10:00 am	Plenary Session I	BPC International Ballroom
12:00 pm	Lunch	On Your Own
12:00 pm	Officers & Student Plenary Speakers Lunch	BPC Vandal Ballroom Gold
1:30 pm	Thematic Session I: Human-Altered Systems	BPC International Ballroom
1:30 pm	Technical Sessions 1, 2, and 3	BPC Borah Theater, NW Ballroom, and SW Ballroom
3:30 pm	Break	BPC 2nd Floor
4:00 pm	Members Meeting I	BPC International Ballroom
5:30 pm	Workshop III: How to Write a Successful NSF-DDIG	BPC Borah Theater
7:00 pm	Student Social	Downtown Moscow, Pritchard Art Gallery, 414 S. Main Street
7:00 pm	Mammal Crawl	Downtown Moscow
<b>THURSDAY, JUNE 22ND, 2017</b>		
<b>TIME</b>	<b>EVENT</b>	<b>LOCATION</b>
6:00 am	Gordon L. Kirkland Memorial Run for Research	University of Idaho campus
7:00 am	Registration	BPC 2nd Floor
8:00 am	Plenary Session II	BPC International Ballroom
10:15 am	Break	BPC 2nd Floor
10:45 am	Members Meeting II	BPC International Ballroom
12:15 pm	Group Photo	Outside of BPC
12:30 pm	Lunch	On Your Own
2:00 pm	Thematic Session II: Mammal Tree of Life	BPC International Ballroom

2:00 pm	Technical Sessions 4, 5, and 6	BPC Borah Theater, NW Ballroom, and SW Ballroom
3:30 pm	Break	BPC 2nd Floor
4:00 pm	Symposium I: Genomic Approaches in Mammalogy	BPC International Ballroom
6:30 pm	Picnic	University Arboretum & Botanical Garden
<b>FRIDAY, JUNE 23RD, 2017</b>		
<b>TIME</b>	<b>EVENT</b>	<b>LOCATION</b>
7:00 am	Registration	BPC 2nd Floor
8:00 am	Thematic Session III: Lightning Talks	BPC International Ballroom
8:00 am	Technical Sessions 7, 8, and 9	BPC Borah Theater, NW Ballroom, and SW Ballroom
9:30 am	Break	BPC 2nd Floor
10:00 am	Poster Session I	BPC Vandal Ballroom
11:30 am	Lunch	On Your Own
11:30 am	Board of Directors Meeting II	Idaho Commons, Panorama Room
12:00 pm	Gather at Registration Desk for Charter Bus to Evolution 2017	BPC 2nd Floor
12:30 pm	Evolution 2017 Charter Departs	Portland, Oregon
1:00 pm	Thematic Session IV: Conservation of Threatened Taxa	BPC International Ballroom
1:00 pm	Technical Sessions 10, 11, and 12	BPC Borah Theater, NW Ballroom, and SW Ballroom
3:00 pm	Break	BPC 2nd Floor
3:30 pm	Symposium II: Climate Change and Small Mammals	BPC International Ballroom
7:00 pm	Poster Session II & Social	BPC Vandal Ballroom
8:30 pm	Auction & Social	BPC Vandal Ballroom
<b>SATURDAY, JUNE 24TH, 2017</b>		
<b>TIME</b>	<b>EVENT</b>	<b>LOCATION</b>
7:00 am	Registration	BPC 2nd Floor
8:00 am	Thematic Session V: "Mammal Selfies"	BPC International Ballroom
8:00 am	Technical Sessions 13, 14, and 15	BPC Borah Theater, NW Ballroom, and SW Ballroom
9:30 am	Break	BPC 2nd Floor
10:00 am	Symposium III: Ecophysiology of Large Mammals	BPC International Ballroom
12:00 pm	Lunch	On Your Own
12:00 pm	Wildlife Acoustics Hands-On Lunch & Learn	BPC Borah Theater
1:30 pm	Technical Sessions 16, 17, 18, and 19	BPC International Ballroom, Borah Theater, NW Ballroom, and SW Ballroom
3:30 pm	Break	BPC 2nd Floor
4:00 pm	Capstone Session: Kay Holekamp	BPC International Ballroom
6:00 pm	Closing Social & Awards Ceremony	Idaho Commons

## TUESDAY, JUNE 20TH, OPENING DAY

7:00 AM	<b>Registration – Bruce Pitman Center (BPC), 2nd Floor</b>
7:45 AM	<b>Gathering in Lobby for Fieldtrip II – BPC 1st Floor</b>
8:00 AM	<b>Board of Directors Meeting I – Best Western-University Inn</b>
8:00 AM	<b>Fieldtrip II – Moscow-Area Birding Trip</b>
10:00 AM	<b>Workshop I: Applications in Program R – BPC Vandal Ballroom</b> Instructor: R.C. Lonsinger
1:00 PM	<b>Workshop II: Expanding Your Broader Impacts to the PreK-12 Classroom: The Do's and Don'ts for Professional Mammalogists – Idaho Commons, Panorama Room</b> Instructors: B.J. MacFadden, P.R. Owen, L. Schlitter, and B. Shaw
12:30 PM	<b>Gathering at Registration Desk for Fieldtrip I – BPC 2nd Floor</b>
1:00 PM	<b>Fieldtrip I – Kamiak Butte Hike</b>
5:00 PM	<b>Open</b>
7:00 PM	<b>Opening Social – Integrated Research &amp; Innovation Center</b>










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Biology, Behavior, and Conservation  
*John E. Reynolds III*  
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———— FORTHCOMING ————

**The Rise of Marine Mammals**  
50 Million Years of Evolution  
*Annalisa Berta*  
graphics editor *James L. Sumich*  
**\$75.00 hc / ebook**

**Reproduction in Mammals**  
The Female Perspective  
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**WEDNESDAY, JUNE 21ST, PLENARY SESSION I  
-BRUCE PITMAN CENTER (BPC), INTERNATIONAL BALLROOM-**

7:00 AM	<b>Registration – BPC 2nd Floor</b>
8:00 AM	<b>Plenary Session I – BPC International Ballroom</b>
8:00 AM	<b>Welcome &amp; Announcements</b> President Robert S. Sikes
8:10 AM	<b>Annie M. Alexander Award</b> <b>1<sup>E,HTA</sup>: Mountain lions support beetle biodiversity through predation</b> J.M. Barry*, M.L. Elbroch, H.L. Quigley, and M.M. Grigione
8:30 AM	<b>Anna M. Jackson Award</b> <b>2<sup>HTA</sup>: Determining carnivore habitat use in a rubber/forest landscape in Brazil using multispecies occupancy models</b> A. Dechner*, K.M. Flesher, C. Lindell, T.V.D. Oliveira, and B.A. Maurer
8:50 AM	<b>A. Brazier Howell Award</b> <b>3<sup>HTA</sup>: Contrasting behavioral and physiological responses to environmental change in two partially sympatric</b> T.T. Hammond*, R. Palme, and E.A. Lacey
9:10 AM	<b>Elmer C. Birney Award</b> <b>4<sup>E,HTA</sup>: Ungulate migration is a cultural phenomenon</b> B.R. Jesmer
9:30 AM	<b>Break – BPC 2nd Floor</b>
10:00 AM	<b>William T. Hornaday Award</b> <b>5<sup>**</sup>: Endemic mammals of Colombia: what do we know about them?</b> H.E. Ramírez-Chaves* and K.A. Gómez B.
10:30 AM	<b>2015 Albert R. &amp; Alma Fellowship</b> <b>6<sup>HTA**</sup>: Untangling the taxonomy of short-tailed opossums (<i>Monodelphis</i>): an integrative approach using molecular and phenotypic data</b> S.E. Pavan
11:00 AM	<b>2016 Albert R. &amp; Alma Fellowship</b> <b>7<sup>HTA**</sup>: Growth patterns and morphometric consequences of adherence to ecogeographic rules in a widespread rodent</b> A.D. Hornsby*, M.L. Zelditch, and M.D. Matocq
11:30 AM	<b>ASM Fellowship</b> <b>8<sup>E**</sup>: Pattern and process in the radiation of ground-dwelling squirrels</b> B.S. McLean
12:00 PM	<b>Lunch – On Your Own</b>
12:00 PM	<b>Officers &amp; Student Plenary Speakers Lunch – BPC Vandal Ballroom Gold</b>
1:30 PM	<b>Thematic Session I: Conservation in Human-Altered Systems – BPC International Ballroom</b>
1:30 PM	<b>Technical Sessions 1, 2, and 3 – BPC Borah Theater, NW Ballroom, and SW Ballroom</b>

<sup>E</sup>Evaluated Presentation    <sup>HTA</sup>Honoraria or Travel Award    <sup>\*\*</sup>Grants-In-Aid or Fellowship    <sup>\*</sup>Presenter



**WEDNESDAY, JUNE 21ST, AFTERNOON SESSIONS  
-BRUCE PITMAN CENTER (BPC)-**

Session	Thematic Session I: Conservation in Human-Altered Systems	Technical Session 1: Behavior	Technical Session 2: Evolutionary Biology	Technical Session 3: Morphology
Room	International Ballroom	Borah Theater	NW Ballroom	SW Ballroom
Moderator	Roger A. Powell	Casey C. Day	Marie L. Westover	Noe U. de la Sancha
1:30 PM	<b>9: Adaptive use of nonlethal strategies for minimizing wolf–sheep conflict in Idaho</b> S.A. Stone*, S.W. Breck, J. Timberlake, P.M. Haswell, F. Najera, B.S. Bean, and D.J. Thornhill	<b>17<sup>E,HTA</sup>: Seasonal temperature acclimatization in pygmy rabbits and the role of burrows as thermal refugia</b> C.R. Milling*, J.L. Rachlow, M.A. Chappell, M.J. Camp, T.R. Johnson, L.A. Shipley, D.R. Paul, and J.S. Forbey	<b>25<sup>HTA</sup>: A temperate armadillo: a genomic portrait of the nine-banded armadillo's northward migration</b> L.A.P. Tran* and L.L. Smith	<b>33<sup>E,HTA</sup>: Morphological comparisons of the meadow jumping mice (<i>Zapus hudsonius</i>) subspecies show few statistical differences</b> L.P. Smith* and J.L. Malaney
1:45 PM	<b>10<sup>E</sup>: Forecasting cattle depredation risk by wolves within grazing allotments in Washington: a preliminary analysis</b> Z.L. Hanley* and R.B. Wielgus	<b>18: A warming umbrella to gauge change and emergent predator-prey systems in the Beringia Arctic</b> J. Berger* and C. Hartway	<b>26<sup>E,HTA**</sup>: Phylogeny, not ecology, shapes the mammalian vomeronasal system: evidence from V1Rs and morphology</b> L.R. Yohe*, H. Rosenthal, S. Hoffmann, and L.M. Dávalos	<b>34<sup>E</sup>: Character displacement using geometric morphometrics for two sympatric Atlantic forest rodent species</b> D. Gonzalez*; G. Hernandez; and N.U. de la Sancha
2:00 PM	<b>11<sup>E,HTA</sup>: Determinants of activity patterns in urban striped skunks (<i>Mephitis mephitis</i>)</b> V.Y Zhang*, T.C. Theimer, C.T. Williams, and C.L. Buck	<b>19: Bat behavior in response to ultrasonic signals: implications for reducing mortality at wind turbines</b> V.J. Bennett*, C.T. Lindsey, B.C. Cooper, C. Granthon, and A.M. Hale	<b>27<sup>E,HTA</sup>: Finding hidden diversity: genomic resolution of a cryptic chipmunk species</b> N.D. Herrera*, K.C. Bell, B.A.J. Sarver, C. Callahan, J. Sullivan, J.R. Demboski, and J.M. Good	<b>35: Morphological variation in <i>Peromyscus maniculatus</i></b> B. Buttler and D. George
2:15 PM	<b>12<sup>E</sup>: Resource-based conflicts between onagers and livestock in central Iran</b> S. Esmaeili*, M.R. Hemami, P. Kaczensky, C. Walzer, and J.R. Goheen	<b>20: Aposematic variation and the evolution of warning coloration in mammals</b> C. Fay and T. Stankowich*	<b>28<sup>E,HTA**</sup>: Adiposity signals and body size predict song effort in Central American singing mice</b> T.T. Burkhard*, R.R. Westwick, and S.M. Phelps	<b>36: Fossil Bison and past climates: a long-term trend of body size into the future</b> J.M. Martin*, J.I. Mead, and P.S. Barboza

<sup>E</sup>Evaluated Presentation

<sup>HTA</sup>Honoraria or Travel Award

<sup>\*\*</sup>Grants-In-Aid or Fellowship

\*Presenter

**WEDNESDAY, JUNE 21ST, AFTERNOON SESSIONS  
-BRUCE PITMAN CENTER (BPC)-**

<b>2:30 PM</b>	<b>13: Revisiting dental disease as a trigger for lions to become man-eaters</b> B.D. Patterson* and L.R.G. DeSantis	<b>21<sup>E,HTA</sup></b> : A matched filter between call frequency and auditory sensitivity in northern grasshopper mice ( <i>Onychomys leucogaster</i> ) D.M. Green*, T. Scolman, S. Nichols, and B. Pasch	<b>29<sup>E,HTA**</sup></b> : The evolution of seasonal camouflage M.R. Jones*, J. Melo-Ferreira, P.C. Alves, C.M. Callahan, D.J.R. Lafferty, J.D. Jensen, L.S. Mills, and J.M. Good	<b>37<sup>E</sup></b> : Muscle dynamics during vertical jumping by kangaroo rats ( <i>D. deserti</i> ) M.J. Schwaner*, D.C. Lin, and C.P. McGowan
<b>2:45 PM</b>	<b>14: Changes in ecological interactions within mammal communities after the terminal Pleistocene megafauna extinction</b> F.A. Smith*, R.E. Elliott Smith, S.K. Lyons, E.A. Elliott Smith, S.D. Newsome, and C.P. Tomé	<b>22<sup>E,HTA**</sup></b> : Neighbor familiarity affects intrusion risk and behavioral plasticity in a territorial squirrel ( <i>Tamiasciurus hudsonicus</i> ) E. Siracusa*, D.R. Wilson, S. Boutin, M.M. Humphries, J.C. Gorrell, D.W. Coltman, B. Dantzer, J.E. Lane, and A.G. McAdam	<b>30<sup>HTA</sup></b> : Why is the giant panda <i>Ailuropoda melanoleuca</i> black and white? T. Caro, H. Walker*, Z. Rossman, M. Hendrix, and T. Stankowich	<b>38<sup>E</sup></b> : Anatomical and functional diversification of the bat calcar K.E. Stanchak and S.E. Santana
<b>3:00 PM</b>	<b>15<sup>E</sup></b> : Spatiotemporal determinants of home range size of imperiled New England and invasive eastern cottontails A.E. Cheeseman*, J.B. Cohen, S.J. Ryan, and C.M. Whipps	<b>23<sup>E</sup></b> : Invasive shrub alters patterns of seed predation by modifying small mammal use of woody debris P.W. Guiden*, and J.L. Orrock	<b>31: An ice-age legacy in modern DNA: climate drives cyclic hybridization in high-latitude ermine (<i>Mustela erminea</i>)</b> J.P. Colella, T. Lan, S.L. Talbot, J.A. Cook, and C. Lindqvist	<b>39: Morphological specialization of proximal vs distal muscles of kangaroo rats</b> C.P. McGowan* and D.C. Lin
<b>3:15 PM</b>	<b>16<sup>E</sup></b> : Are tree bats foraging at wind turbines in the southern Great Plains? C.F. Foo*, V.J. Bennett, D.A. Williams, and A.M. Hale	<b>24<sup>E</sup></b> : Bats are not rats: new method for testing olfactory discrimination in bats A.F. Brokaw* and M. Smotherman	<b>32: Adventures in Texas mammalogy: updates from the Light Lab at Texas A&amp;M University</b> J.E. Light	<b>40: Morphological variation in <i>Cryptonanus chacoensis</i> (Tate 1931) (Didelphidae) along a precipitation and temperature cline</b> N.U. de la Sancha
<b>3:30 PM</b>	<b>Break – BPC 2nd Floor</b>			
<b>4:00 PM</b>	<b>Members Meeting I – BPC International Ballroom</b>			
<b>5:30 PM</b>	<b>Workshop III: How to Write a Successful NSF Doctoral Dissertation Improvement Grant – BPC Borah Theater</b> Presenters: Kayce D. Bell and Bret Pasch			
<b>7:00 PM</b>	<b>Student Social – Pritchard Art Gallery, Downtown Moscow</b>			
<b>7:00 PM</b>	<b>Mammal Crawl – Downtown Moscow</b>			

<sup>E</sup>Evaluated Presentation    <sup>HTA</sup>Honoraria or Travel Award    <sup>\*\*</sup>Grants-In-Aid or Fellowship    <sup>\*</sup>Presenter

**THURSDAY, JUNE 22ND, PLENARY SESSION II  
-BRUCE PITMAN CENTER (BPC), INTERNATIONAL BALLROOM-**

6:00 AM	19th Annual Gordon L. Kirkland Memorial Run/Walk for Research -Start at Dan O'Brien Track & Field Complex-
7:00 AM	Registration – BPC 2nd Floor
8:00 AM	Plenary Session II – BPC International Ballroom
8:00 AM	Welcome & Announcements President-Elect Doug A. Kelt
8:00 AM	Joseph Grinnell Award 41: The future of natural history collections: Investing in infrastructure for future mammalian education and research J. A. Cook
8:45 AM	Aldo Leopold Award 42: Evolutionary sustainable ungulate management M. Festa-Bianchet
9:30 AM	C. Hart Merriam Award 43: The GUD, the bad and the ugly: revealing the inner selves of animals J.S. Brown
10:15 AM	Break – BPC 2nd Floor
10:45 AM	Members Meeting II – BPC International Ballroom
12:15 PM	Group Photo – Outside of BPC
12:30 PM	Lunch – On Your Own
2:00 PM	Thematic Session II: Problematic Nodes in the Mammal Tree of Life – BPC International Ballroom
2:00 PM	Technical Sessions 4, 5, and 6 – BPC Borah Theater, NW Ballroom, and SW Ballroom

<sup>E</sup>Evaluated Presentation    
 <sup>HTA</sup>Honoraria or Travel Award    
 \*\*Grants-In-Aid or Fellowship    
 \*Presenter

# University of Idaho

**THURSDAY, JUNE 22ND, AFTERNOON SESSIONS  
-BRUCE PITMAN CENTER (BPC)-**

Session	Thematic Session II: Problematic Nodes in the Mammal Tree of Life	Technical Session 4: Community Ecology	Technical Session 5: Disease Ecology	Technical Session 6: Population Ecology
Room	International Ballroom	Borah Theater	NW Ballroom	SW Ballroom
Moderator	Bryan S. McLean	Jacob R. Goheen	Giezelle Hurtado	Damon B. Lesmeister
2:00 PM	<b>44<sup>HTA</sup>: Repeated radiations: caviomorph rodents and other Neotropical lineages as evolutionary replicates to study species diversification</b> N.S. Upham* and W. Jetz	<b>50<sup>E,HTA**</sup>: Does a native mammal facilitate the success of invasive prickly pear cactus (<i>Opuntia stricta</i>)?</b> A.M.C. Hodge* and J.R. Goheen	<b>56: Identity of mammalian hosts and performance of flea parasites: evolutionary and conservation implications</b> B.R. Krasnov*, I.S. Khokhlova, and L.J. Fielden	<b>62: Home range use of southern flying squirrels in fragmented forest landscapes</b> C.N. Jacques*, J.S. Zweep, W.T. Rechkemmer, M.E. Scheihing, S.E. Jenkins, and R.W. Klaver
2:15 PM	<b>45<sup>E,HTA</sup>: All together now: a phylogeny of all extant rodent families inferred from ultraconserved elements</b> M.T. Swanson*, C.H. Oliveros, and J.A. Esselstyn	<b>51: Body size affects microhabitat and diet use in a marsupial herbivore community</b> S. Garnick*, J. Di Stefano, B.D. Moore, N.E. Davis, M.A. Elgar, and G. Coulson	<b>57: Exploring the role of <i>Blarina</i> in the Lyme disease cycle in North America</b> R.K. Rose, W. Hynes, R. Matrevec, H.D. Gaff, and R.J. Brinkerhoff	<b>63<sup>E</sup>: I'd trap that! Trap success and densities of pygmy rabbits across the Great Basin</b> M.M. Crowell*, K.T. Shoemaker, and M.D. Matocq
2:30 PM	<b>46<sup>E,HTA</sup>: Evolutionary history of the <i>Hybomys</i> division (Muridae, Rodentia) and systematic revision of the genus <i>Hybomys</i></b> N. Pradhan*, R.W. Norris, J. Decher, C.R. Gray, M.D. Carleton, and C.W. Kilpatrick	<b>52: Isotopic niche partitioning from the Holocene to today: a case study of desert mice</b> R.C. Terry*	<b>58<sup>E</sup>: Coyotes (<i>Canis latrans</i>) exhibit an immune response to <i>Rickettsia</i> spp. in Arizona</b> E.N. Green*, R. Benford, J.D. Busch, and N.C. Nieto	<b>64: Using the Internet-of-Things to monitor bat roosts</b> J.M. Ryan

<sup>E</sup>Evaluated Presentation

<sup>HTA</sup>Honoraria or Travel Award

\*\*Grants-In-Aid or Fellowship

\*Presenter

**THURSDAY, JUNE 22ND, AFTERNOON SESSIONS  
-BRUCE PITMAN CENTER (BPC)-**

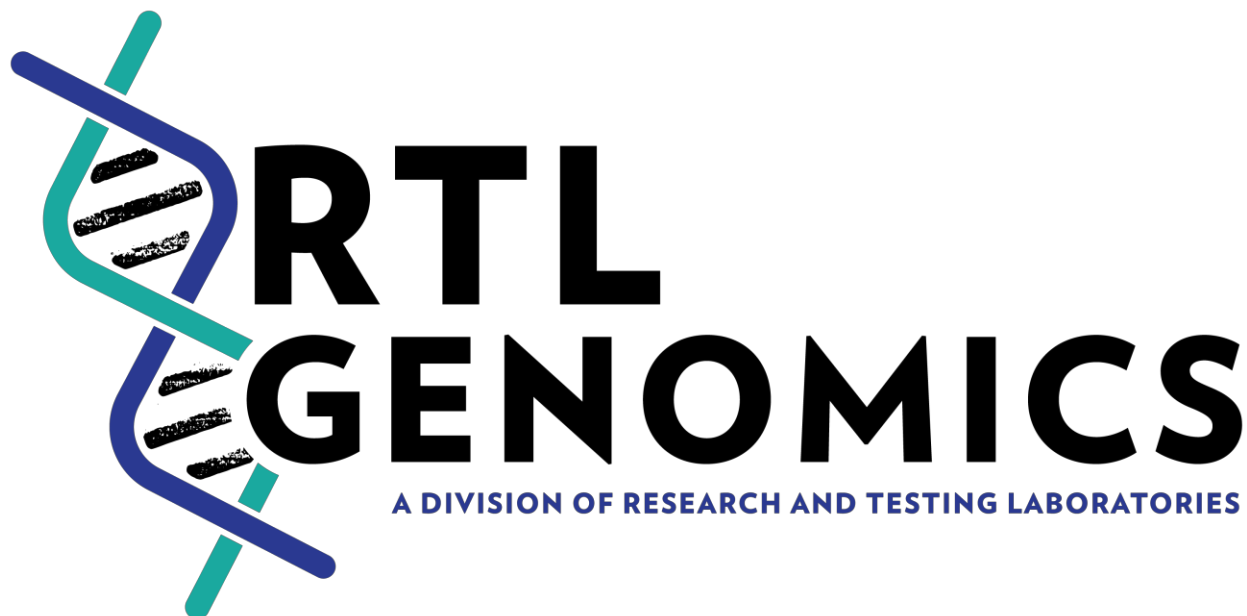
<b>2:45 PM</b>	<p><b>47<sup>HTA</sup>: Conflicting evolutionary histories of the mitochondrial and nuclear genomes in New World <i>Myotis</i></b> R.N. Platt II*, B.C. Faircloth, K.A.M. Sullivan, T. Kieran, T.C. Glenn, M.W. Vandewege, T.E. Lee, R.J. Baker, R.D. Stevens, and D.A. Ray</p>	<p><b>53: A comparison of nutrition and foraging behavior between sympatric mule and white-tailed deer in Washington</b> S.L. Berry, L.A. Shipley*, R.A. Long, M.E. Swanson, and C.O. Loggers</p>	<p><b>59<sup>E,HTA</sup>: Lyme disease prevalence and small mammal abundances on Fort Drum Military Installation, New York</b> S.R. Fino*, J.W. Edwards, S.F. Owen, J. Wimsatt, and R.E. Rainbolt</p>	<p><b>65<sup>E</sup>: Macro- and micro-habitat effects of ocelot occupancy</b> J.V. Lombardi*, M.E. Tewes, H.L. Perotto, T.A. Campbell, J.P. Wied, J.P. Leonard, D. Kunz, and J. Mata</p>
<b>3:00 PM</b>	<p><b>48<sup>E</sup>: Mammals escaped the nocturnal bottleneck concurrently with the extinction of non-avian dinosaurs</b> R. Maor*, T. Dayan, H. Ferguson-Gow, and K.E. Jones</p>	<p><b>54: The long-haired rat (<i>Rattus villosissimus</i>): an ecosystem disrupter in arid Australia</b> C.R. Pavey* and C.E.M. Nano</p>	<p><b>60<sup>E,HTA</sup>: Effects of mammalian community composition on ectoparasites in the Chihuahuan desert</b> J.T. Martin*, E. Bledsoe, E. Christensen, G. Yenni, and S.K.M. Ernest</p>	<p><b>66<sup>E**</sup>: What does a prudent pika pick? Spatial and temporal dietary trends of an alpine mammal</b> M.L. Westover* and F.A. Smith</p>
<b>3:15 PM</b>	<p><b>49: Interrogating difficult nodes in the phylogeny of placental mammals</b> J.A. Esselstyn*, M.T. Swanson, C.H. Oliveros, and B.C. Faircloth</p>	<p><b>55<sup>E</sup>: Pulsed resource availability changes dietary niche breadth and partitioning between generalist rodent consumers</b> R.B. Stephens*, E.A. Hobbie, and R.J. Rowe</p>	<p><b>61<sup>E</sup>: Effects of sylvatic plague on northern Idaho ground squirrels</b> A.R. Goldberg*, C.J. Conway, D.E. Mack, G. Burak, and D.E. Biggins</p>	<p><b>67<sup>E**</sup>: Abiotic and biotic habitat characteristics shape the current distribution of a rare kangaroo rat</b> J.D. Stuhler*, M.K. Halsey, R.D. Bradley, R.N. Platt, D.A. Ray, and R.D. Stevens</p>
<b>3:30 PM</b>	<b>Break – BPC 2nd Floor</b>			
<b>4:00 PM</b>	<b>Symposium I: Genomic Approaches to Consequential Questions in Mammalogy – BPC International Ballroom</b>			

<sup>E</sup>Evaluated Presentation    <sup>HTA</sup>Honoraria or Travel Award    <sup>\*\*</sup>Grants-In-Aid or Fellowship    <sup>\*</sup>Presenter

**THURSDAY, JUNE 22ND, SYMPOSIUM I  
-BRUCE PITMAN CENTER (BPC), INTERNATIONAL BALLROOM-**

4:00 PM	<b>Symposium I: Genomic Approaches to Consequential Questions in Mammalogy – BPC International Ballroom</b>
4:00 PM	<b>Welcome &amp; Introduction</b> Caleb D. Phillips
4:00 PM	<b>68: Genetic mechanisms of hypoxia adaptation in high-altitude mammals</b> J.F. Storz
4:20 PM	<b>69: Evolutionary cascades across multiple mammalian contact zones: methods for genomic investigations within complex host-parasite systems</b> A.G. Hope*, S.E. Greiman, S.A. Sonsthagen, S.L. Talbot, J.A. Cook, and V.V. Tkach
4:40 PM	<b>70: Evolutionary systems biology of high altitude adaptation in deer mice</b> Z.A. Cheviron
5:00 PM	<b>71: Using temporal genomic contrasts to detect rapid evolutionary responses to climate change</b> J.M. Good
5:20 PM	<b>72<sup>E</sup>: Associating host genomic variation with gut microbiota in wild house mice</b> T.A. Suzuki*, M. Phifer-Rixey, K.G. Ferris, A.S. Chavez, and M.W. Nachman
5:40 PM	<b>Panel Discussion</b> Z.A. Cheviron, J.M. Good, A.G. Hope, J.F. Storz, and T.A. Suzuki
6:00 PM	<b>Open</b>
6:30 PM	<b>Picnic – University Arboretum &amp; Botanical Garden</b>

<sup>E</sup>Evaluated Presentation    <sup>HTA</sup>Honoraria or Travel Award    <sup>\*\*</sup>Grants-In-Aid or Fellowship    <sup>\*</sup>Presenter



**FRIDAY, JUNE 23RD, MORNING SESSIONS  
-BRUCE PITMAN CENTER (BPC)-**

7:00 AM	Registration – BPC 2nd Floor			
8:00 AM	Thematic Session III: Lightning Talks – BPC International Ballroom			
8:00 AM	Technical Sessions 7, 8, and 9 – BPC Borah Theater, NW Ballroom, and SW Ballroom			
Session	Thematic Session III: Lightning Talks	Technical Session 7: Community Ecology	Technical Session 8: Evolutionary Biology	Technical Session 9: Genetics
Room	International Ballroom	Borah Theater	NW Ballroom	SW Ballroom
Moderator	Kayce C. Bell	Sean P. Maher	Lucy A.P. Tran	Marjorie D. Matocq
8:00 AM	<b>73: Lightning talks at the ASM meeting</b> K.C. Bell*	<b>88: Spatiotemporal heterogeneity in prey abundance and vulnerability shapes the foraging decisions of an omnivore</b> N.D. Rayl*, G. Bastille-Rousseau, J.F. Organ, M.A. Mumma, S.P. Mahoney, C.E. Soulliere, K.P. Lewis, R.D. Otto, D.L. Murray, L.P. Waits, and T.K. Fuller	<b>94: Age and spatial genetic structure affect black bear effective population and neighborhood size</b> K.T. Scribner*, R.S. Waples, J.A. Moore, and H.M. Draheim	<b>100<sup>E,HTA</sup>: Unexpected genetic composition of a reintroduced carnivore population</b> J.A. Grauer* and J.N. Pauli
8:05 AM	<b>74<sup>E</sup>: Building a silent desert for behavioral studies of vocal rodents</b> N.G. Mull*, B. Copp, and B. Pasch			
8:10 AM	<b>75<sup>E**</sup>: Linking microwear across the dental arcade: do canid m1 and m2s record comparable signals?</b> B.P. Tanis*, L.R.G. DeSantis, and R.C. Terry			
8:15 AM	<b>76: Diversification rate in mammals and association with genome size and life history</b> K.A. Speer* and N.B. Simmons	<b>89: Folivory by desert granivores may regulate post-fire recovery of plant communities</b> T.R. Sharp-Bowman, B.R. McMillan*, and S.B. St. Clair	<b>95<sup>E**</sup>: The source and colonization history of Isle Royale's rediscovered martens (<i>Martes americana</i>)</b> P.J. Manlick*, M.C. Romanski, and J.N. Pauli	<b>101<sup>E,HTA</sup>: Old marker, new tricks: sequencing cytochrome-b to investigate metapopulation dynamics of kangaroo rats in Texas</b> M.K. Halsey*, J.D. Stuhler, L.D. Boswell, C.J. Garcia, R.S. Pfau, R.N. Platt II, R.D. Bradley, R.D. Stevens, and D.A. Ray
8:20 AM	<b>77: Genomics of hybridizing ground squirrels</b> C.W. Thompson* and R.N. Platt II			
8:25 AM	<b>78: Genetic isolation and a unique disease threatening the island fox</b> S.A. Hendricks*, T.W. Vickers, R.K. Wayne, and P.A. Hohenlohe			

<sup>E</sup>Evaluated Presentation

<sup>HTA</sup>Honoraria or Travel Award

<sup>\*\*</sup>Grants-In-Aid or Fellowship

\*Presenter

**FRIDAY, JUNE 23RD, MORNING SESSIONS  
-BRUCE PITMAN CENTER (BPC)-**

<b>8:30 AM</b>	<b>79: Conservation status of black-and-white snub-nosed monkey, <i>Rhinopithecus bieti</i></b> L.-X. Han and L.E. Harding*	<b>90: Indicators of change in ecological restoration: small-mammals and herbaceous cover</b> J.G. Hallett* and M.A. O'Connell	<b>96<sup>E</sup>: Processes of diversification in sigmodontine rodents: the genus <i>Akodon</i> as a first approximation</b> D. Arenas-Viveros* and J. Salazar-Bravo	<b>102<sup>HTA</sup>: Is the Brazilian free-tailed (<i>Tadarida brasiliensis</i>) bat a ring species?</b> V.L. Mathis*, H.M. Gough, K.A. Speer, and D.L. Reed
<b>8:35 AM</b>	<b>80: Body size determines depth and length of hibernation in free-ranging brown bears</b> A.L. Evans*, B. Fuchs, N.J. Singh, S. Blanc, A. Friebe, J.E. Swenson, and J.M. Arnemo			
<b>8:40 AM</b>	<b>81<sup>E</sup>: Craniodental integration and facial length in domestic dogs</b> L. Siciliano-Martina*, J.M. Meik, and A.M. Lawing			
<b>8:45 AM</b>	<b>82: Testing for adaptive introgression between <i>Mus musculus domesticus</i> and <i>Mus spretus</i></b> K.E. Banker* and M.W. Nachman	<b>91: Evaluating the influence of intraguild predation on the spatial dynamics of kit foxes</b> R.C. Lonsinger*, E.M. Gese, L.L. Bailey, and L.P. Waits	<b>97<sup>E</sup>: The utility of zonadhesin in examining a potential reproductive isolation mechanism in rodents</b> E.K. Roberts*, D.M. Hardy, and R.D. Bradley	<b>103<sup>HTA</sup>: Comparing ecology and phylogeographic history in Asian pikas</b> S.W. Liphardt*, K.C. Bell, and J.A. Cook
<b>8:50 AM</b>	<b>83<sup>E</sup>: Management in the anthropocene: conserving the endangered salt marsh harvest mouse in a changing world</b> K.R. Smith*, L. Barthman-Thompson, M.K. Riley, and S. Estrella			
<b>8:55 AM</b>	<b>84: Filling the void: rapid movement of southern bats into the vacated niche of cave bats killed by WNS in the mid-Atlantic states</b> S.R. Sheffield			

<sup>E</sup>Evaluated Presentation

<sup>HTA</sup>Honoraria or Travel Award

\*\*Grants-In-Aid or Fellowship

\*Presenter



**FRIDAY, JUNE 23RD, MORNING SESSIONS  
-BRUCE PITMAN CENTER (BPC)-**

<b>9:00 AM</b>	<b>85: Mandibular shape and diet in foxes</b> L.A. Dolan* and J.S. Scheibe	<b>92<sup>E</sup>: Responses in the cotton rat (<i>Sigmodon hispidus</i>) to the megafauna extinction of the terminal Pleistocene</b> C.P. Tomé*, F.A. Smith, S.D. Newsome, E.A. Elliott Smith and S.K. Lyons	<b>98: Converting fossil information into Bayesian priors for calibrating molecular clock analyses in rodents</b> R.W. Norris*, N.S. Upham, and H.L. Downer	<b>104<sup>E,HTA</sup>: Investigating population structure and barriers to gene flow in the American badger of British Columbia</b> B. Ford*, R. Weir, K. Larsen, and M. Russello
<b>9:05 AM</b>	<b>86: BAT1K: an initiative to sequence genomes from all extant bat species</b> R. N. Platt II* and BAT1K Consortium			
<b>9:10 AM</b>	<b>87<sup>HTA</sup>: Evolution of mammalian parasites: are there signatures of selection in chipmunk sucking lice?</b> K.C. Bell*, A.J. Phillips, J.M. Allen, K.P. Johnson, J.R. Demboski, and J.A. Cook			
<b>9:15 AM</b>	<b>Open</b>	<b>93: Acoustic partitioning in a desert rodent community</b> B. Pasch	<b>99: Phylogenomics of the <i>Tamias quadrivittatus</i> group</b> B. Sarver, J.R. Demboski, K.C. Bell, J.M. Good, and J. Sullivan*	<b>105<sup>E</sup>: Body condition, behavior, and genetic comparisons among coyotes along an urban-rural gradient</b> A.W. Wurth*, J.M. Dubach, and S.D. Gehrt
<b>9:20 AM</b>				
<b>9:25 AM</b>				
<b>9:30 AM</b>	<b>Break – BPC 2nd Floor</b>			
<b>10:00 AM</b>	<b>Poster Session I – BPC Vandal Ballroom</b>			

<sup>E</sup>Evaluated Presentation

<sup>HTA</sup>Honoraria or Travel Award

\*\*Grants-In-Aid or Fellowship

\*Presenter

**FRIDAY, JUNE 23RD, POSTER SESSION I  
-BRUCE PITMAN CENTER (BPC), VANDAL BALLROOM)-**

10:00 AM	Poster Session I – BPC Vandal Ballroom
<b>106<sup>HTA</sup>: Do striped skunks utilize different defense strategies based on type of predatory threat?</b> K.A. Fisher* and T. Stankowich	
<b>107: Pen trial of estrogen-induced egg aversion in raccoons (<i>Procyon lotor</i>)</b> R.D. Dueser, J.D. Martin, and N.D. Moncrief*	
<b>108: Evaluating nest site selection of southern flying squirrels in west-central Illinois</b> C.N. Jacques* and J.S. Zweep	
<b>109<sup>E,HTA</sup>: Island biogeography of small mammals in Ozark glades while accounting for imperfect detection</b> E.M. Beasley* and S.P. Maher	
<b>110<sup>E,HTA</sup>: Restoration of native baboon-plant mutualisms following eradication of the invasive prickly pear cactus (<i>Opuntia stricta</i>)</b> M.A. Dyck* and A.M.C. Hodge	
<b>111: Source-sink dynamics and sexual dimorphism in Alaskan and Canadian North American wolverines (<i>Gulo gulo luscus</i>)</b> D.M. Krejsa*, S.L. Talbot, G.K. Sage, T.S. Jung, and J.A. Cook	
<b>112: Phylogeographic assessment of the Heermann's kangaroo rat (<i>Dipodomys heermanni</i>)</b> B.B. Downs* and J.E. Light	
<b>113<sup>E,HTA</sup>: Crowd sourcing, citizen scientists, and collecting nontraditional data: the search for the eastern spotted skunk</b> J.C. Perkins*, A.A. Shaffer, and R.C. Dowler	
<b>114<sup>E</sup>: Cryptic variation of two sympatric <i>Akodon</i> species in Interior Atlantic Forest remnants of eastern Paraguay</b> A. Alvarado*, D. Gonzalez, G. Hernandez, J. Vilela, and N.U. de la Sancha	
<b>115<sup>E,HTA</sup>: Investigating elevational gradients as a predictor for host-parasite relationships</b> B.C. Rapier*, M. Matocq, and J.L. Malaney	
<b>116<sup>E</sup>: Testing ecogeographic variation in <i>Microtus</i> – signals of insular gigantism</b> D.C. Nall	
<b>117<sup>E</sup>: Red fox (<i>Vulpes vulpes</i>) colonization in Wisconsin</b> K.L. Black*, S. Petty, M. Mueller, V. Radeloff, D. Drake, and J.N. Pauli	
<b>118<sup>HTA</sup>: Spatial patterns of species richness and functional diversity of Appalachian mammals: implications for conservation</b> J.L. Malaney*, B.C. Rapier, and L.P. Smith	
<b>119: Food habits of coyotes (<i>Canis latrans</i>) in a southern California urban landscape</b> R.N. Larson*, J.L. Brown, S.P.D. Riley, and T.J. Karels	
<b>120<sup>E</sup>: Ontogenetic changes of long bone microstructure in the nine-banded armadillo (<i>Dasypus novemcinctus</i>)</b> C.T. Heck*, D.J. Varricchio, T.J. Gaudin, H.N. Woodward, and J.R. Horner	
<b>121<sup>E</sup>: Spatial variation in sexual-size dimorphism of the American black bear in eastern North America</b> B.M. Pope*, P.K. Kennedy, S.G. Mech, and M.L. Kennedy	
<b>122: Fleas from <i>Peromyscus</i> in the collection of the Denver Museum of Nature &amp; Science</b> J.C. Pigage*, H.K. Pigage, and J.R. Demboski	

<sup>E</sup>Evaluated Presentation    <sup>HTA</sup>Honoraria or Travel Award    \*\*Grants-In-Aid or Fellowship    \*Presenter

**FRIDAY, JUNE 23RD, POSTER SESSION I  
-BRUCE PITMAN CENTER (BPC), VANDAL BALLROOM-**

<p><b>123<sup>E,HTA</sup>: Sublethal effects of predators on prey behavior and stress physiology within individuals and populations</b> C.B. Keller* and T.J. Karels</p>
<p><b>124<sup>E,HTA</sup>: Individual specialization and multiple pathways to dietary generalism in a small mammal community</b> D.R. Boro*, J.R. Goheen, and S.D. Newsome</p>
<p><b>125<sup>E</sup>: Using stable isotope analysis to understand competitive interactions between sympatric pocket mice, historically and today</b> B.H. Regan*, M.C. West, D.S. Taylor, and R.C. Terry</p>
<p><b>126<sup>E</sup>: The importance of residential swimming pools as an urban water source for bats</b> G.S. Nystrom* and V.J. Bennett</p>
<p><b>127<sup>E**</sup>: The current number of recognized mammals with a chronology of described species</b> C.J. Burgin* and N.S. Upham</p>
<p><b>128: The Mammal Collection at California State University, Long Beach</b> S.A. Jacob</p>
<p><b>129: A guide to Southern California terrestrial mammals</b> B.R. Blood* and L.E. Wrenn</p>
<p><b>130: Environmental and hormonal influences on dispersal-related behaviors in brush mice (<i>Peromyscus boylii</i>)</b> K.E. Mabry* and R.A. Kelley</p>
<p><b>131<sup>E</sup>: A genomic-level perspective on immunogenetic variation and mate choice in a monogamous mammal (<i>Peromyscus californicus</i>)</b> J. Meléndez-Rosa*, K. Bi, and E.A. Lacey</p>
<p><b>132<sup>E</sup>: Best practices in stable isotope ecology: correcting stable isotope signals measured in formalin fixed specimens</b> E.J. deJesus*, D.S. Taylor, and R.C. Terry</p>
<p><b>133: Benefits of sociality: a Type IV functional response in a South American fox</b> D.A. Kelt*, R.H. Blenk, P.L. Meserve, W.B. Milstead, M.A. Previtali, and J.R. Gutiérrez</p>
<p><b>134<sup>E</sup>: Individual-based modeling of interactions between ungulates and wolves</b> S.N. Sells*, M.S. Mitchell, A.D. Luis, and K.M. Podruzney</p>
<p><b>135: Molecular phylogenetics of tylomyine rodents (Rodentia: family Cricetidae)</b> N. Lewis-Rogers* and D.S. Rogers</p>
<p><b>136: Abundance and survival of northern flying squirrels in late-successional forests in the Central Oregon Cascades</b> M.J. Weldy, C.W. Epps, and D.B. Lesmeister*</p>
<p><b>137<sup>E</sup>: Baseline camera-trap study in the Amazonian Yasuni Biosphere Reserve</b> B.D. Waterhouse*, F. Vaca, and J. Varner</p>
<p><b>138<sup>E</sup>: Changing diets and chiseling away dogmas on saltbush specialization in <i>Dipodomys microps</i></b> S. Stephens*, T. Orr, and D. Dearing</p>
<p><b>139: American pikas (<i>Ochotona princeps</i>) as a platform for public engagement in climate change</b> J. Varner, A. Craighead, L. Erb, E. Garrouette, M. Mueller, and C. Ray</p>
<p><b>140: Mammalian reproduction: a female perspective</b> V. Hayssen* and T.J. Orr</p>

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**FRIDAY, JUNE 23RD, POSTER SESSION I  
-BRUCE PITMAN CENTER (BPC), VANDAL BALLROOM-**

<b>141<sup>E</sup>: Estimating recruitment of wolves with limited data</b> A.C. Keever*, M.S. Mitchell, K.M. Podruzny, A.D. Luis, and J.T. Peterson	
<b>142: Effects of species traits and landscape configuration on small mammal occurrence in human-dominated landscapes</b> K.F. Kellner* and R.K. Swihart	
<b>143: Development of a long-term bat monitoring program at Fort Indiantown Gap-National Guard Training Center, Pennsylvania</b> C. Hauer*, L. Powers, D. McNaughton, C. Paul, and B.J. Sewall	
<b>144: Identifying a neo-sex chromosome via deep resequencing in a hybridizing primate species</b> M.D. Nidiffer*, L. Cortés Ortiz, P.K. Tucker, and J.L. Mueller	
<b>145: An association between differential expression and adaptive divergence in the Patagonian olive mouse (<i>Abrothrix olivacea</i>)</b> F.M. Giorello, M. Feijoo, D.E. Naya, L. Valdez, J.C. Opazo, G. D'Elía, and E.P. Lessa*	
<b>146: March Mammal Madness: communicating science and art across social media</b> J.E. Light*, S.P. Maher, C.N. Anderson, V. Apkenas, J.A. Drew, C. Henning, K.L. Lewton, B.P. Tanis, and K. Hinde	
<b>147: Estimating quantity and quality of moose forage in northern Idaho</b> T.V. Schrempf*, J.L. Rachlow, L.A. Shipley, R.A. Long, and T.R. Johnson	
<b>148: Fate of the immigrant: post-translocation survival of southern Idaho ground squirrels (<i>Urocitellus endemicus</i>)</b> T. Tarifa*, E. Yensen, T. Fleming, and C. Noya-Rada	
<b>149: Tolerance of foraging constraints in female barren-ground caribou (<i>Rangifer tarandus granti</i>)</b> P.S. Barboza*, R. D. Shively, and D.P. Thompson	
<b>150<sup>E</sup>: Biting mechanics of rabies vectors: exploring the link between cranial morphology and infectious disease control</b> C.M. Klimovich and S.H. Williams	
<b>151: Nutritive composition of bamboo culm, leaves, and shoots selected by two captive giant pandas</b> A. Christian*, K. Knott, C. Paulk, A. Kouba, and T. Wickersham	
<b>11:30 AM</b>	<b>Lunch – On Your Own</b>
<b>12:00 PM</b>	<b>Gather at Registration Desk for Charter Bus to Evolution 2017 – BPC 2nd Floor</b>
<b>12:30 PM</b>	<b>Evolution 2017 Charter Departs</b>
<b>1:00 PM</b>	<b>Thematic Session IV: Pangolins, Pikas, and Polar Bears – Recent Advances in the Conservation of Threatened Taxa – BPC International Ballroom</b>
<b>1:00 PM</b>	<b>Technical Sessions 10, 11, and 12 – BPC Borah Theater, NW Ballroom, and SW Ballroom</b>

<sup>E</sup>Evaluated Presentation    <sup>HTA</sup>Honoraria or Travel Award    \*\*Grants-In-Aid or Fellowship    \*Presenter

**FRIDAY, JUNE 23RD, AFTERNOON SESSIONS  
-BRUCE PITMAN CENTER (BPC)-**

Session	Thematic Session IV: Pangolins, Pikas, and Polar Bears – Recent Advances in the Conservation of Threatened Taxa	Technical Session 10: Behavior	Technical Session 11: Conservation	Technical Session 12: Natural History
Room	International Ballroom	Borah Theater	NW Ballroom	SW Ballroom
Moderator	Eric Yensen	Charlotte R. Milling	Elmer J. Finck	Luis A. Ruedas
1:00 PM	<b>152<sup>E</sup>: Is snow cover an adequate predictor of suitable habitat for wolverines?</b> K.A. Carroll* and A.J. Hansen	<b>160: Natal dispersal of tree sloths in a highly modified landscape: Implications for tropical biodiversity conservation</b> M.F. Garces-Restrepo*, M.Z. Peery, and J.N. Pauli	<b>168<sup>HTA</sup>: Regional landscape connectivity for recolonizing populations of American black bears (<i>Ursus americanus</i>)</b> M.G. Gantchoff*, J. L. Belant, J. Beringer, and R. Rummel	<b>176: Small mammals of Yacuri National Park, Loja Province, Ecuador</b> T.E. Lee, Jr.*, M.J. Feller, D. Gomez, N. Tinoco, M.A. Camacho, and S.F. Burneo
1:15 PM	<b>153<sup>E</sup>: Cortisol levels in <i>Pekania pennanti</i>: relationship between home range disturbance and physiological stress</b> J.R. Kordosky*, E.M. Gese, S.S. French, C.M. Thompson, L. Neuman-Lee, and J.D. Schneiderman	<b>161<sup>E</sup>: Glucocorticoid changes over pregnancy in mammals: similarities and differences among and within orders</b> P.D. Edwards* and R. Boonstra	<b>169<sup>E</sup>: Status and distribution of the plains spotted skunk (<i>Spilogale putorius interrupta</i>) in Texas</b> J.C. Perkins*, A.A. Shaffer, and R.C. Dowler	<b>177<sup>E,HTA</sup>: Comparison of trapping techniques for <i>Glaucomys volans</i> in a bottomland hardwood forest in central Louisiana</b> T.R. Preuett
1:30 PM	<b>154: Rapid evolution and the genetics of disease resistance in Tasmanian devils</b> P.A. Hohenlohe*, B. Epstein, M. Jones, R. Hamede, S. Hendricks, H. McCallum, and A. Storfer	<b>162<sup>E</sup>: Temperature and food quality influence selection of food patches and diets by small mammalian herbivores</b> M.J. Camp*, L.A. Shipley, C.R. Milling, J.L. Rachlow, and J.S. Forbey	<b>170<sup>E,HTA</sup>: Population genetic structure of recolonizing American marten in the northeastern United States</b> C.M. Aylward*, J.D. Murdoch, T.M. Donovan, and C.W. Kilpatrick	<b>178: Locomotor performance in the striped skunk (<i>Mephitis mephitis</i>)</b> E.A. Flaherty
1:45 PM	<b>155: Understanding and predicting habitat for Canada lynx conservation at the range periphery</b> J.D. Holbrook*, J.R. Squires, L.E. Olson, N.J. DeCesare, and R.L. Lawrence	<b>163: The role of male testosterone in the scramble-competition mating system of North American red squirrels</b> R. Boonstra*, A. Dusek, J. Lane, and S. Boutin	<b>171: Preliminary results of an acoustic bat survey at Camp Gruber Training Center, Braggs, Oklahoma</b> A.R. Ritchie*, J. Lovett, R. Koch, and K. McBee	<b>179: Comparative microbiomes of feeding generalist <i>Sciurus niger</i> and specialist <i>S. aberti</i></b> A. Reed, J.M. Bono, H.K. Pigage*, C. Glickman, and J.C. Pigage

<sup>E</sup>Evaluated Presentation

<sup>HTA</sup>Honoraria or Travel Award

\*\*Grants-In-Aid or Fellowship

\*Presenter

**FRIDAY, JUNE 23RD, AFTERNOON SESSIONS  
-BRUCE PITMAN CENTER (BPC)**

<b>2:00 PM</b>	<p><b>156<sup>E</sup>: Characterizing adaptations in Tasmanian devil (<i>Sarcophilus harrisii</i>) populations in the face of a transmissible cancer</b> A.K. Fraik*, B. Epstein, M.J. Margres, B. Schonfeld, R. Hamede, M. Jones, H. McCallum, P.A. Hohenlohe, J.L. Kelley, and A. Storfer</p>	<p><b>164: The trap-happy trap-shy dilemma: trappability is not always a proxy for personality</b> A. Brehm and A. Mortelliti*</p>	<p><b>172<sup>E</sup>: Reconstructing the mechanisms behind the decline of snowshoe hare via translocation</b> E.C. Wilson* and J.N. Pauli</p>	<p><b>180: Mineral phenology of forages available for migratory caribou in Alaska</b> K.W. Oster*, P.S. Barboza, and D.D. Gustine</p>
<b>2:15 PM</b>	<p><b>157<sup>E</sup>: Ectoparasite diversity of New England cottontails (<i>Sylvilagus transitionalis</i>) and habitat when non-native species are present</b> S.L. Mello*, J.B. Cohen, and C.M. Whippis</p>	<p><b>165: Subtle social structure in eastern grey kangaroos revealed through association indices and lagged association rates</b> W.J. King*, G. Coulson, M. Festa-Bianchet, and A.W. Goldizen</p>	<p><b>173<sup>E</sup>: Modeling the influence of landscape connectivity on dispersal movements of the northern flying squirrel</b> C.C Day*, S.E. Trapp, P. A. Zollner, and W.P. Smith</p>	<p><b>181: The rest of the story: black bears' bed sites in northern Minnesota</b> R.A. Powell*, L.L. Rogers, and S.A. Mansfield</p>
<b>2:30 PM</b>	<p><b>158: Forest structure influences bushy-tailed woodrat and northern flying squirrel density in the eastern Cascade Range</b> P.H. Singleton</p>	<p><b>166: Seasonal body condition and space use of urban raccoons in the Chicago Metropolitan Area</b> K.E. Robertson*, S.C. McKenzie, and S.D. Gehrt</p>	<p><b>174<sup>E</sup>: Accounting for species-specific biogenic fractionation of <math>\delta^{13}C</math> and <math>\delta^{15}N</math> in hair and bone collagen</b> D.S. Taylor* and R.C. Terry</p>	<p><b>182<sup>E</sup>: Seasonal roost networks of southeastern myotis in an old-growth bottomland hardwood forest</b> S.P. Kimpel* and S.C. Loeb</p>
<b>2:45 PM</b>	<p><b>159: Comparing the effectiveness of RADseq and microsatellites for parentage and sibship assignment in mammal populations</b> K.R. Andrews*, J.R. Adams, F. Cassirer, R. Plowright, C. Gardner, S. Barrett, M. Dwire, P.A. Hohenlohe, and L. Waits</p>	<p><b>167: Indirect effects of wolf presence on moose behavior in Minnesota</b> M.A. Ditmer*, R.A. Moen, S.K. Windels, J.R. Fieberg, S.P. Stapleton, and T.R. Harris</p>	<p><b>175<sup>E</sup>: Unmanned aerial systems measure structural habitat quality for pygmy rabbits across multiple scales</b> P.J. Olsoy*, L.A. Shipley, J.L. Rachlow, J.S. Forbey, N.F. Glenn, and D.H. Thornton</p>	<p><b>183: New species of cottontails (Leporidae: <i>Sylvilagus</i>) from northern South America illuminate previously concealed regional biodiversity</b> L.A. Ruedas</p>
<b>3:00 PM</b>	<b>Break – BPC 2nd Floor</b>			
<b>3:30 PM</b>	<b>Symposium II: Climate Change and Small Mammals: A Global Perspective – BPC International Ballroom</b>			

<sup>E</sup>Evaluated Presentation

<sup>HTA</sup>Honoraria or Travel Award

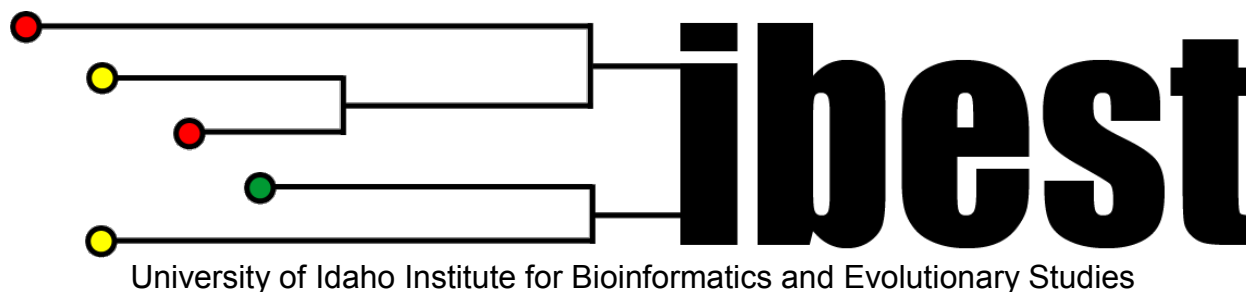
\*\*Grants-In-Aid or Fellowship

\*Presenter

**FRIDAY, JUNE 23RD, SYMPOSIUM II  
-BRUCE PITMAN CENTER (BPC), INTERNATIONAL BALLROOM-**

3:30 PM	<b>Symposium II: Climate Change and Small Mammals: A Global Perspective – BPC International Ballroom</b>
3:30 PM	<b>Welcome &amp; Introduction</b> Peter L. Meserve
3:35 PM	<b>184: Small mammal responses to climate change in the Colorado Rocky Mountains</b> C.M. McCain* and S.R.B. King
4:00 PM	<b>185: Whither climate change in the Kluane Boreal Forest ecosystem?</b> C.J. Krebs*, S. Boutin, and R. Boonstra
4:25 PM	<b>186: Climate forcing, inter-individual variation, and specialization in an African small-mammal community</b> J.R. Goheen*, D.E. Boro, R.P. Jakopak, T.R. Kartzinel, S.D. Newsome, and A.M. Wambua
4:50 PM	<b>187: Responses of Australian desert mammals to extreme climatic events: past, present, and future</b> C.R. Dickman*, A.C. Greenville, and G.M. Wardle
5:15 PM	<b>Panel Discussion</b> C.R. Dickman, J.R. Goheen, C.J. Krebs, and C.M. McCain
5:30 PM	<b>Open</b>
7:00 PM	<b>Poster Session II &amp; Social – BPC Vandal Ballroom</b>
8:30 PM	<b>Auction for the Future Mammalogists’ Fund &amp; Social – BPC Vandal Ballroom</b>

<sup>E</sup>Evaluated Presentation    <sup>HTA</sup>Honoraria or Travel Award    <sup>\*\*</sup>Grants-In-Aid or Fellowship    <sup>\*</sup>Presenter



**FRIDAY, JUNE 23RD, POSTER SESSION II & SOCIAL  
-BRUCE PITMAN CENTER (BPC), VANDAL BALLROOM-**

7:00 PM	Poster Session II & Social – BPC Vandal Ballroom
<b>188: Variation in femora of Late Pleistocene muskrats (<i>Ondatra zibethicus</i>) from Darke County, Ohio</b>	R.G. Vodden, A.K. Hastings, and N.D. Moncrief*
<b>189<sup>E</sup>: Usage of a major North Dakota river as a corridor by migratory bats</b>	K. Cortes* and E. Gillam
<b>190: Morphometric analysis and geographical-climatic distribution of endemic rodents in the <i>Peromyscus megalops</i> species group</b>	L.E. Reyes Martínez* and L.L. Paniagua
<b>191<sup>E</sup>: The role of the Andean rivers in the speciation of Sigmodontinae: an approach from <i>Oligoryzomys</i></b>	N. Hurtado* and G. D'Elía
<b>192: Influence of trap modifications and environmental predictors on capture success of southern flying squirrels</b>	C.N. Jacques*, J.S. Zweep, S.E. Jenkins, R.W. Klaver, and S.A. Dubay
<b>193: Preliminary data on the genetic structure of puma (<i>Puma concolor</i>) populations in Argentina</b>	O. Gallo, D.F. Castillo*, R. Godinho, M.M. Guerisoli, M. Lucherini, and E.B. Casanave
<b>194<sup>E</sup>: Determining patterns of community assembly using species distribution models and Late Quaternary fossil assemblages</b>	J.E. Williams* and J.L. Blois
<b>195<sup>E</sup>: Phylogeography of <i>Sciurus carolinensis</i>: can museum specimens say anything new? Yes</b>	I. Fielding* and V. Hayssen
<b>196: Impacts of long-term predation risk on stress response and behavior in the rodent, <i>Octodon degus</i></b>	N.E. Johnson*, S. Grillo, E.H. Gillam, L.D. Hayes, L.A. Ebersperger, and R.A. Vásquez
<b>197<sup>E</sup>: Habitat associations of small mammals along an extensive elevation gradient</b>	A. Karasov-Olson* and D.A. Kelt
<b>198: Irregular annual cycles in captive Southern Idaho Ground Squirrels (<i>Uroditellus endemicus</i>)</b>	T.J. Fleming*, T. Tarifa, and E. Yensen
<b>199<sup>E</sup>: A diversity assessment of small mammals and their ectoparasites in south Texas</b>	H.A. Folmar*, A.P. Galán, R.P. Eckerlin, A.P.G. Dowling, T. Campbell, and J.E. Light
<b>200<sup>E</sup>: Are elephant shrews more like elephants, or shrews? Quantifying life-history and demographics of <i>Elephantulus rufescens</i></b>	R.P. Jakopak*, A.M. Wambua, and J.R. Goheen
<b>201<sup>E</sup>: Immunogenetic variation in a declining native species and its introduced congener</b>	K.B. Neil* and T.J. McGreevy Jr.
<b>202: Fisher (<i>Pekania pennanti</i>) reproductive parameters in the southern Sierra Nevada relative to the broader range</b>	R.E. Green*, K.L. Purcell, C.M. Thompson, D.A. Kelt, and H.U. Wittmer
<b>203: Environmental factors and population demography of the big-eared woodrat in coastal-central California</b>	V. Rolland, W.D. Tietje, A. Srivathsa, A.Y. Polyakov, and M.K. Oli*
<b>204: Hybridization of deer in Texas utilizing a sperm-egg fusion protein called zonadhesin</b>	E.A. Wright*, E.K. Roberts, and R.D. Bradley

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\*Presenter



**FRIDAY, JUNE 23RD, POSTER SESSION II & SOCIAL  
-BRUCE PITMAN CENTER (BPC), VANDAL BALLROOM-**

<p><b>205: Population ecology of mule deer in northeastern Oregon: understanding the fundamental role of nutrition</b> J.L. Merems*, R.A. Long, L.A. Shipley, D.A. Clark, and M. Wisdom</p>
<p><b>206<sup>E</sup>: Documenting the interactions of leopards with anthropogenic disturbances on a livestock ranch in central Kenya</b> E. Van Cleave*, L. Bidner, A.T. Ford, P.J. Klimley, and L.A. Isbell</p>
<p><b>207: Effects of forest management techniques on bat habitat use at Fort Indiantown Gap, Pennsylvania</b> C.P. Paul*, L. Powers, C. Hauer, S. Henry, T. Haydt, and B.J. Sewall</p>
<p><b>208<sup>E</sup>: Development of a y-maze visual assay for <i>Peromyscus leucopus</i> and <i>Sigmodon hispidus</i></b> J.J. Lovett*, E. Shore, and K. McBee</p>
<p><b>209<sup>E</sup>: Effects of domestic dog scent on nocturnal small mammal foraging</b> A.A. Baade* and J.M. Duggan</p>
<p><b>210: Intraspecific space use in <i>Peromyscus polionotus</i></b> E.E. Evans and M. Cawthorn*</p>
<p><b>211: Abundance, activity patterns and interactions among ocelots, bobcats, cattle, nilgai, feral hog, and javelinias</b> S.B. Carter*, M.E. Tewes, J.V. Lombardi, J.P. Wied, J.P. Leonard, A. Ortega-Sanchez, and T.A. Campbell</p>
<p><b>212: Recovery of an imperiled swamp rabbit metapopulation following the Bird's Point Levee breach</b> J.S. Scheibe*, D.K. Fantz, I.W. Vining, B. Henry, B.N. Gillespie, P.H. Marley, and C. Dicks</p>
<p><b>213: Interaction networks of bats, their blood-feeding parasites, and the microbiome</b> K.A. Speer*, S.L. Perkins, and N.B. Simmons</p>
<p><b>214: ASM Systematic Collections Committee 2017 resurvey of the mammal collections of the western hemisphere</b> J.L. Dunnum*, R.C. Dowler, and ASM Systematic Collections Committee</p>
<p><b>215: Morphological and genetic variation in southwestern chickarees (Genus <i>Tamiasciurus</i>)</b> A.P. Hill*, S. O'Connor, and J.L. Malaney</p>
<p><b>216: Use of "cover" in habitat ecology: A framework for operationalizing the concept</b> E.D. Nightingale*, K.N. Fletcher, and J.L. Rachlow</p>
<p><b>217<sup>E</sup>: Hearing sensitivities of sympatric grasshopper mice (genus <i>Onychomys</i>)</b> T. Scolman*, D. Green, and B. Pasch</p>
<p><b>218<sup>E</sup>: Small mammalian herbivores decrease herbaceous plant cover in shrub invaded grassland</b> S.T. Abercrombie*, J.S. Fehmi, J.L. Koprowski, and M.H. Nichols</p>
<p><b>219<sup>E</sup>: Identification and characterization of SNP markers for the Columbia Basin pygmy rabbit (<i>Brachylagus idahoensis</i>)</b> S.A. Nerkowski*, K. Warheit, P.A. Hohenlohe, and L.P. Waits</p>
<p><b>220: A survey of the mammals of Refugio Nacional de Vida Silvestre Curú, Costa Rica</b> S.R. Sheffield*, C.A. Iudica, and J.R. Holt</p>

<sup>E</sup>Evaluated Presentation    <sup>HTA</sup>Honoraria or Travel Award    \*\*Grants-In-Aid or Fellowship    \*Presenter

**FRIDAY, JUNE 23RD, POSTER SESSION II & SOCIAL  
-BRUCE PITMAN CENTER (BPC), VANDAL BALLROOM-**

<b>221: Landscape correlates of small mammal communities along an urban-rural gradient in Xinjiang, China</b> J.A. Yunger*, Y. Qi, S.R. Sheffield, L. Hai-Rong, and L. Xin
<b>222<sup>E</sup>: Can prey gut microbiome predict stress response in predator-prey interactions? A wolf-livestock study</b> A. Valerio*, M. Valerio, L. Casadei, and R. Wielgus
<b>223<sup>E</sup>: Home range and survival of bobcats in an agriculturally dominated landscape</b> T.C. Swearingen*, C.N. Jacques, R.W. Klaver, C.R. Anderson, and R. Bluett
<b>224<sup>E</sup>: Effects of hunting pressure by humans on survival and habitat selection by elk</b> M. Sergejev*, B.R. McMillan, K.R. Hersey, and R.T. Larsen
<b>225<sup>E</sup>: Relationship between specific gravity, osmolarity, and creatinine in giant panda urine</b> K.R. Counsell*, A.J. Kouba, and C.K. Vance
<b>226: Alternative methods to evaluate plant part selection by the giant panda</b> A. Christian*, K. Knott, C. Paulk, A. Kouba, and T. Wickersham
<b>227: Resolving rodent ecology using 3D dental shape descriptors</b> J.S. Keller*, T.S. Cicak, K.P. McNulty, and D.L. Fox
<b>228: An undergraduate course to prepare students to optimize their experience at a national conference</b> C.C. Day, E.A. Flaherty, P.A. Zollner, and V.S. Quinn*
<b>229<sup>E</sup>: Resource selection in desert bighorn sheep (<i>Ovis canadensis nelsoni</i>): tradeoffs associated with recruitment</b> M.E. Blum*, K.M. Stewart, M. Cox, and B. Wakeling
<b>230: A summary for the African Graduate Student Research Fund Committee of the American Society of Mammalogists, 2013-2017</b> V. Apkenas, B. Buttler, T. Demos, A. Ferguson, J. Goheen, L. Helgen, A. Hodge, A. Linzey, M. McDonough, P. Moehlman, R. Norris, B. Patterson, C. Rodrigues, R. Rose, D. Schlitter, and P. Webala
<b>231<sup>E</sup>: Quantifying prey selection for mountain populations of carnivores using metabarcoding, hair microscopy, and camera traps</b> M.M. Gitari*, N.N. Gichuki, R.M. Chira, B. Agwanda, R. Kays, and M.M. McDonough
<b>232<sup>E</sup>: Variation in disease prevalence of a contagious cancer across the geographic range of Tasmanian devils</b> S. Kallinen*, A.K. Fraik, I. Barnes, E. Lopez-Contreras, T. Studzinski, B. Epstein, M. Jones, R. Hamede, J.L. Kelley, and A. Storfer
<b>8:30 PM Auction for Future Mammalogists' Fund &amp; Social – BPC Vandal Ballroom</b>

<sup>E</sup>Evaluated Presentation    <sup>HTA</sup>Honoraria or Travel Award    \*\*Grants-In-Aid or Fellowship    \*Presenter

**SATURDAY, JUNE 24TH, MORNING SESSIONS  
-BRUCE PITMAN CENTER (BPC)-**

7:00 AM	Registration – BPC 2nd Floor			
8:00 AM	Thematic Session V: Pangolins, Pikas, and Polar Bears – “Mammal Selfies” – Camera Trap Applications in Mammalogy – BPC International Ballroom			
8:00 AM	Technical Sessions 13, 14, and 15 – BPC Borah Theater, NW Ballroom, and SW Ballroom			
Session	Thematic Session V: “Mammal Selfies” – Camera Trap Applications in Mammalogy	Technical Session 13: Disease Ecology	Technical Session 14: Genetics	Technical Session 15: Population Ecology
Room	International Ballroom	Borah Theater	NW Ballroom	SW Ballroom
Moderator	Adam T. Ford	Snehal Chavda	Timothy J. Smyser	Melissa J. Merrick
8:00 AM	<b>233<sup>E,HTA</sup>: Optimizing detection of a desert carnivore at scent stations</b> K.A. Richards*, R.T. Larsen, M.G. Crane, R. Lawrence, R.N. Knight, K. Hersey, and B.R. McMillan	<b>238: Interspecific comparison of hantavirus prevalence in <i>Peromyscus</i> from a fragmented agro-ecosystem in Indiana</b> J.L. Berl, A.J. Kuenzi, E.A. Flaherty, and R.K. Swihart*	<b>244<sup>E,HTA</sup>: Genetic structure and differentiation within the eastern spotted skunk (<i>Spilogale putorius</i>): a microsatellite analysis</b> A.A. Shaffer*, J.C. Perkins, R.C. Dowler, and L.K. Ammerman	<b>250<sup>E</sup>: Life at the edge: genetic and ecological interaction across a woodrat hybrid zone</b> D. P. Nielsen* and M. Matocq
8:15 AM	<b>234: Winter bait stations as a multi-species survey tool</b> L. Robinson, M.K. Lucid*, and S. Cushman	<b>239: Does urbanization ameliorate the effect of endoparasite infection in Merriam’s kangaroo rat (<i>Dipodomys merriami</i>)?</b> G. Hurtado*, G. Mayer, and K. Mabry	<b>245: Comparative population genomics of New England cottontail (<i>Sylvilagus transitionalis</i>) and eastern cottontail (<i>S. floridanus</i>)</b> T.J. McGreevy, Jr.*, M.E. Sullivan, and T.P. Husband	<b>251: Density responses of small mammals to timber harvesting for oak regeneration</b> D.L. Nelson*, K.F. Kellner, and R.K. Swihart
8:30 AM	<b>235<sup>HTA</sup>: Coyote dominance and urban avoidance in the occupancy of gray foxes</b> M.E. Egan*, C.C. Day, T.E. Katzner, and P.A. Zollner	<b>240: Bat behavioral responses to white-nose syndrome and implications for resistance and tolerance</b> M. Gagnon*, G.G. Turner, D.M. Reeder, and B.J. Sewall	<b>246: Getting the scoop from poop: telling the story of the expanding wolf population in Oregon</b> J.R. Adams*, R. Brown, R. Morgan, and L.P. Waits	<b>252: Population ecology of the California mouse in a semi-arid oak woodland</b> W.D. Tietje*, A.Y. Polyakov, V. Rolland, J.E. Hines, and M. K. Oli

<sup>E</sup>Evaluated Presentation

<sup>HTA</sup>Honoraria or Travel Award

\*\*Grants-In-Aid or Fellowship

\*Presenter

**SATURDAY, JUNE 24TH, MORNING SESSIONS  
-BRUCE PITMAN CENTER (BPC)-**

<b>8:45 AM</b>	<b>236: Pictures, predators, and prey: Camera data and community dynamics after a fisher reintroduction</b> R.A. Powell* and A.N. Facka	<b>241: Speak of the devil: Acoustic communication in the endangered Tasmanian devil</b> J.A. Clarke* and K.L. Davis	<b>247: Determining distribution boundaries of Oklahoma pocket gophers (<i>Geomys</i>) using microsatellite and mitochondrial markers</b> M. L. Haynie and C. N. Coffman*	<b>253: Bat response to prescribed fire frequency in oak-dominated forests</b> L.E. Powers*, C. Hauer, C. Paul, D. McNaughton, S. Henry, T. Haydt, and B.J. Sewall
<b>9:00 AM</b>	<b>237: Trophic traps: Inferring species relationships from camera trap imagery</b> A.T. Ford*, T. Clevenger, T. Otieno, and J. Goheen	<b>242: Prevalence of hantaviruses in rodent assemblages from sylvan and disturbed habitats in Mexico and Texas</b> I. Castro-Arellano*, M.T. Milholland, E. Arellano, F.X. Gonzalez-Cozatl, T. Schountz, S. Gerardo, S. Gonzalez-Padron, A. Viguera, T.J. Maikis, B. Westrich, M. Torres, E.R. Rodriguez-Ruiz, D. Hahn, and T.E. Lacher, Jr.	<b>248: Comparing SNPs and microsatellites for sibship analysis in grey wolves (<i>Canis lupus</i>)</b> H. Clendenin*, J. Adams, J. Hayden, J. Struthers, P. Hohenlohe, and L. Waits	<b>254: Dominant, generalist species of small mammals and forestry management practices in northern California</b> A.K. Fraik and A.N. Facka*
<b>9:15 AM</b>	<b>Open</b>	<b>243: Effects of age and colony experience on bat responses to white-nose syndrome</b> B.J. Sewall*, G.G. Turner, D.M. Reeder, M. Gagnon, K.A. Field, T.M. Lilley, J.M. Prokkola, J.P. White, and C. Herzog	<b>249: Genetic origins of US feral swine populations</b> T.J. Smyser*, M.S. Robeson, H.J. Megens, M. Bosse, M.A.M. Groenen, S.R. Paiva, D. Paiva, H.D. Blackburn, B.S. Schmit, and A.J. Piaggio	<b>255: Patterns of genetic variation in the pygmy rabbit (<i>Brachylagus idahoensis</i>) in California and Nevada, USA</b> M.D. Matocq*, E. Larrucea, M. Robinson, and J. Rippert
<b>9:30 AM</b>	<b>Break – BPC 2nd Floor</b>			
<b>10:00 AM</b>	<b>Symposium III: Ecophysiology of Large Body Size in a Changing Climate – BPC International Ballroom</b>			

<sup>E</sup>Evaluated Presentation    
<sup>HTA</sup>Honoraria or Travel Award    
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\*Presenter

**SATURDAY, JUNE 24TH, SYMPOSIUM III  
-BRUCE PITMAN CENTER (BPC), INTERNATIONAL BALLROOM-**

<b>10:00 AM</b>	<b>Symposium III: Ecophysiology of Large Body Size in a Changing Climate – BPC International Ballroom</b>
<b>10:00 AM</b>	<b>Welcome &amp; Introduction</b> Ryan A. Long and Charlotte R. Milling
<b>10:05 AM</b>	<b>256: Heat dissipation limit theory: from laboratory mice to Svalbard reindeer</b> E. Król*, S.D. Albon, L.E. Loe, and J.R. Speakman
<b>10:30 AM</b>	<b>257: Ecosystem engineering by subterranean insects buffers large mammals against climate warming</b> R.A. Long*, E. Gosselin, S. Kollasch, W.P. Porter, and R.M. Pringle
<b>10:55 AM</b>	<b>258: The physiological limits to foraging in pinnipeds: ability to respond to a changing world</b> D. P. Costa
<b>11:20 AM</b>	<b>259: Limitations of large body size in determining polar bear responses to sea ice loss</b> K.D. Rode*, A. Pagano, T. Atwood, G. Durner, R. Wilson, E. Regehr, and M. St. Martin
<b>11:45 AM</b>	<b>Panel Discussion</b> D.P. Costa, E. Król, R.A. Long, and K.D. Rode
<b>12:00 PM</b>	<b>Lunch – On Your Own</b>
<b>12:00 pm</b>	<b>Wildlife Acoustics Bioacoustics Hands-On Lunch &amp; Learn – BPC Borah Theater</b>
<b>1:30 PM</b>	<b>Technical Sessions 16, 17, 18, and 19 – International Ballroom, Borah Theater, NW Ballroom, and SW Ballroom</b>

<sup>E</sup>Evaluated Presentation    <sup>HTA</sup>Honoraria or Travel Award    <sup>\*\*</sup>Grants-In-Aid or Fellowship    <sup>\*</sup>Presenter



University of Idaho College of Natural Resources

**SATURDAY, JUNE 24TH, AFTERNOON SESSIONS  
-BRUCE PITMAN CENTER (BPC)-**

Session	Technical Session 16: Biogeography	Technical Session 17: Conservation	Technical Session 18: Physiology	Technical Session 19: Wildlife Management
Room	International Ballroom	Borah Theater	NW Ballroom	SW Ballroom
Moderator	Lois F. Alexander	Alessio Mortelliti	Perry S. Barboza	Natalie G. Dawson
1:30 PM	<b>260: The shrew from Palawan</b> R. Hutterer, D.S. Balete, T.C. Giarla, L.R. Heaney*, and J.A. Esselstyn	<b>268<sup>E</sup>: Modeling distribution and connectivity of recovering American marten populations in Vermont using expert elicitation techniques</b> C.M. Aylward*, J.D. Murdoch, and C.W. Kilpatrick	<b>276<sup>HTA</sup>: Use of cooler microclimates by herbivores challenged with dietary plant toxins</b> P.K. Connors*, M. Giles, and M.D. Dearing	<b>284: Mountain goat: Montana's bipolar alpine ungulate</b> B.L. Smith* and N.J. DeCesare
1:45 PM	<b>261: Central America and its squirrel of many colors: phylogeography of <i>Sciurus variegatoides</i></b> A.A. Castellanos*, W.J. Murphy, and J.E. Light	<b>269<sup>E</sup>: Integrating step-selection functions with movement states to investigate black bear habitat selection</b> D.L. Karelus*, J.W. McCown, B.K. Scheick, M. van de Kerk, B.M. Bolker, and M.K. Oli	<b>277<sup>E,HTA</sup>: The influence of social context on call amplitude in grasshopper mice (<i>Onychomys</i>)</b> G. Griffiths* and B. Pasch	<b>285<sup>E</sup>: Ecology of prairie deer mice in cultivated habitats and implications for agricultural ecosystem services</b> J.L. Berl*, E.A. Flaherty, B.J. Danielson, K.F. Kellner, and R.K. Swihart
2:00 PM	<b>262: Climate change may adversely affect Dall sheep populations through variation in snow extent</b> M. van de Kerk*, D. Verbyla, A.W. Nolin, K.J. Sivy, and L.R. Prugh	<b>270: Characteristics associated with tree cavities used by female fishers (<i>Pekania pennanti</i>) as reproductive dens</b> R.E. Green*, K.L. Purcell, C.M. Thompson, D.A. Kelt, and H.U. Wittmer	<b>278: Comparative liver metabolism between juniper specialist <i>Neotoma stephensi</i> and generalist <i>Neotoma albigula</i></b> T.J. Orr*, S. Kitanovic, K.M. Schramm, M.M. Skopec, P.R. Wilderman, J.R. Halpert, and M.D. Dearing	<b>286: Effects of prolonged immunocontraception on the breeding behavior of American bison</b> C.L. Duncan, J.L. King, and P. Stapp*
2:15 PM	<b>263: Biotic and abiotic factors predicting the distribution and population density of an invasive large mammal</b> J.S. Lewis*, M.L. Farnsworth, C.L. Burdett, D.M. Theobald, M. Gray, and R.S. Miller	<b>271: Impact of linear features on boreal caribou and moose distributions with implications for apparent competition</b> M.A. Mumma*, M.P. Gillingham, K.L. Parker, C.J. Johnson, and M. Watters	<b>279<sup>E</sup>: The comprehensive visual system of Ord's kangaroo rat (<i>Dipodomys ordii</i>) and the potential for UV-communication</b> S. Vrla*, B. McDonald, B. Geiger, and J. Macedonia	<b>287: Impacts of range seedings on a keystone species: Piute ground squirrel diets in southwestern Idaho</b> E. Yensen*, T. Tarifa, and J. Holderman

<sup>E</sup>Evaluated Presentation

<sup>HTA</sup>Honoraria or Travel Award

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\*Presenter

**SATURDAY, JUNE 24TH, AFTERNOON SESSIONS  
-BRUCE PITMAN CENTER (BPC)-**

2:30 PM	<b>264: Modeling range dynamics of montane rodents to evaluate climate tracking over time</b> M.I. Pardi*, R.C. Terry, E.A. Rickart, and R.J. Rowe	<b>272: Low survival, high predation pressure present conservation challenges for an endangered endemic forest mammal</b> M.J. Merrick*, E.A. Goldstein, and J.L. Koprowski	<b>280<sup>E</sup>: Immunity and growth trade-offs vary with elevation in a hibernating small mammal</b> C.A. Falvo*, A. Webb, S.S. French, and L.M. Aubry	<b>288: Survival and cause-specific mortality of American pronghorn in western South Dakota</b> A.J. Kauth*, J.A. Jenks, K.A. Robling, and K.L. Schuler
2:45 PM	<b>265: A test of three habitat suitability indexes for black bears in northeastern Minnesota</b> S.J. Robison*, L.L. Rogers, S. Mansfield, and R.A. Powell	<b>273<sup>E</sup>: Evaluation of non-invasive fecal sampling for monitoring bobcats and ocelots in South Texas</b> D.R. Taylor*, R.W. DeYoung, M.E. Tewes, T.L. Blankenship, and T.A. Campbell	<b>281<sup>E</sup>: Life history trade-offs within an artificially selected species</b> C.C. Josefson* and W.R. Hood	<b>289: Effects of silvicultural herbicides on the nutritional ecology of Columbian black-tailed deer</b> A.C. Ulappa*, L.A. Shipley, R.C. Cook, J.G. Cook, and M. Swanson
3:00 PM	<b>266: Cryptic and sympatric: untangling <i>Sylvilagus</i> spp. in western North Carolina</b> L.P. Erb*, J.J. Apodaca, C.A. Diggins, B. Dowling, M. Olszack-Marewski, and C.A. Weaver	<b>274: Are North American populations of migratory tree-roosting bats declining?</b> E.F. Baerwald* and R.M.R. Barclay	<b>282<sup>E**</sup>: Variation in body fat along an elevational gradient in the deer mouse (<i>Peromyscus maniculatus</i>)</b> C.J. Wolf* and Z.A. Cheviron	<b>290<sup>E</sup>: Follow the bear: expanding understanding of black bear ecology across variable densities and landscapes</b> J.B. Smith*, D.M. Williams, M.T. Wegan, D.R. Etter, and W.F. Porter
3:15 PM	<b>267: Historical biogeography of mustached bats (genus <i>Pteronotus</i>)</b> A.C. Pavan	<b>275: Estimating winter habitat quality of New England cottontail with a focus on diet and nutrition</b> W.C. Finn*, S.R. McWilliams, T.J. McGreevy, and B.C. Tefft	<b>283: Seasonal nutrient utilization by two captive giant pandas consuming a bamboo-based diet</b> A.Christian*, K. Knott, C. Paulk, A. Kouba, and T. Wickersham	<b>291: Of the Northwest wind: pine marten science and politics in forest planning</b> N.G. Dawson* and R. Romero
3:30 PM	<b>Break – BPC 2nd Floor</b>			
4:00 PM	<b>Capstone Session: The evolution of intelligence in mammalian carnivores – BPC International Ballroom</b>			

<sup>E</sup>Evaluated Presentation

<sup>HTA</sup>Honoraria or Travel Award

<sup>\*\*</sup>Grants-In-Aid or Fellowship

<sup>\*</sup>Presenter

**SATURDAY, JUNE 24TH, CAPSTONE SESSION  
-BRUCE PITMAN CENTER (BPC), INTERNATIONAL BALLROOM-**

<b>4:00 PM</b>	<b>Welcome &amp; Announcements</b> Vice President Felisa A. Smith
<b>4:00 PM</b>	<b>Capstone</b> <b>292: The evolution of intelligence in mammalian carnivores</b> K.E. Holekamp
<b>5:00 PM</b>	<b>Open</b>
<b>6:00 PM</b>	<b>Closing Social &amp; Awards Ceremony – Idaho Commons Plaza &amp; Green</b>

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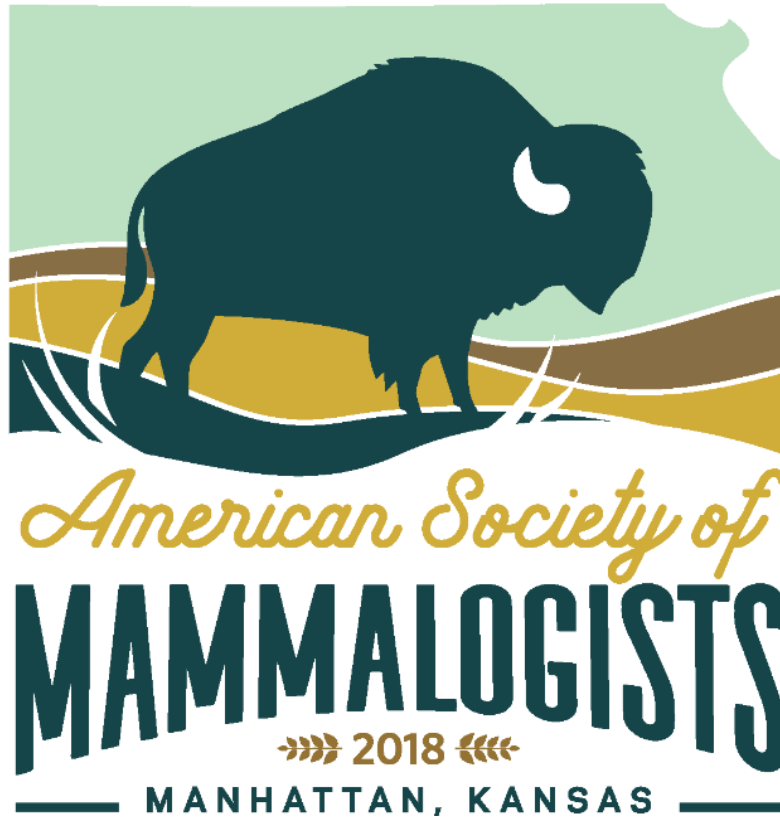






**SAVE THE DATE!!!**

**98TH ANNUAL MEETING OF THE AMERICAN  
SOCIETY OF MAMMALOGISTS**



Please join us June 25-29, 2018, in Manhattan, Kansas for the 98th Annual Meeting of the American Society of Mammalogists. The conference will be held on the campus of the Kansas State University, located in the Flint Hills of Kansas, in the Southern Tallgrass Prairie Region of the Central Plains. Learn about the latest advances in the study of mammals and interact with researchers and educators specializing in these fascinating animals. Come and enjoy everything this grassland region has to offer!

On-campus housing will be available 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](http://www.mammalmeetings.org)).

The scientific program will include contributed oral and poster presentations as well as symposia, plenary speakers, and workshops. A full social agenda is planned including the opening mixer at the Flint Hills Discovery Center, an awards social at the KSU Alumni Center, picnic on the Konza Prairie Biology Station, the annual Run-for-Research, and fieldtrips. Details for these events will be made available on the conference website.

For more information about the 2018 meeting, contact the chair of the Program Committee, Cody Thompson, University of Michigan Museum of Zoology (734-615-2810, [mammal.meetings@gmail.com](mailto:mammal.meetings@gmail.com)), local co-hosts from the Kansas State University, Adam Ahlers (785-532-0875, [aahlers2@k-state.edu](mailto:aahlers2@k-state.edu)), Andrew Hope (785-532-6347, [ahope@k-state.edu](mailto:ahope@k-state.edu)), Drew Ricketts (785-532-1949, [arickett@k-state.edu](mailto:arickett@k-state.edu)), and Elmer J. Finck from Fort Hays State University (785-628-4269, [ejfinck@fhsu.edu](mailto:ejfinck@fhsu.edu)), or Tony Ballard, Kansas State University Conference Services (785-532-2402, [tballard@k-state.edu](mailto:tballard@k-state.edu)).

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