## 95TH ANNUAL MEETING OF THE AMERICAN SOCIETY OF MAMMALOGISTS

12-16 JUNE 2015

HYATT REGENCY JACKSONVILLE RIVERFRONT
-JACKSONVILLE, FLORIDA-



**PROGRAM** 



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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**

Welcome to the 95th annual meeting of the American Society of Mammalogists!

The next few days promise to be exciting, busy, and fun. In addition to a full slate of contributed papers and talks covering the latest research in mammalogy, we have scheduled symposia on two important themes: the conservation of Caribbean mammals and the application of emerging technologies to collections-based research. The first is very geographically relevant and will include researchers from Cuba and the Dominican Republic, providing a great opportunity to interact with colleagues from these countries while learning about some cool critters like hutias and solenodons. The second will demonstrate how use of emerging technologies such as genomic sequencing, stable isotope analysis, and CT-scanning to study museum specimens can generate important new insights into mammalian biology.

As part of our Society's commitment to research training and professional development, we are again hosting several pre-meeting workshops, which will take place the day before the regular meeting program begins. These events will provide important opportunities to learn how to publish peer-reviewed papers, how to capture and use digital collections data, and how to incorporate genomic sequencing and bioinformatics into your research. To read more about these workshops, please see the information posted on the meeting website.

In terms of oral presentations, we have a great roster of plenary session speakers. During the first plenary session, we will hear from some of our outstanding student members, including the 2014 recipients of the Hornaday Award (Erin Baerwald), the Shadle Fellowship (Nicté Ordóñez-Garza), and the ASM Fellowship (Melissa Merrick). At the second plenary, we will hear from a stellar group of more established mammalogists, including the 2014 recipients of the Merriam Award (Denise Dearing), Leopold Award (Lawrence Heaney), and Grinnell Award (Troy Best). In addition, we have a bonus presentation from the 2013 recipient of the Grinnell Award (Ricardo Ojeda). The meeting will conclude with a capstone presentation by Dr. Wayne Clough, whose career has integrated his passion for conservation with leadership of important national resources such as the Smithsonian Institution.

And, of course, there will be socializing! This important component of the meeting will begin with an event for new members and first time attendees on Friday night, followed by our traditional opening night social, when you greet old friends and meet new fellow mammalogists. On Saturday night, we will hold a student mixer, which is an important opportunity for this group of attendees to get together and share ideas and experiences. Sunday is the picnic, which will take place at Fionn McCool's Irish pub and will include live music. Monday night is our annual auction, which is always an entertaining event and which supports our Future Mammalogists Fund. Come, have some beer, and bring your checkbook.... The meetings will close with something new ... rather than a formal closing banquet, we will be holding a Closing Social and Awards Ceremony at the River City Brewing Company. With this change, we hope that more meeting attendees will participate in our closing event and thus be present when we honor outstanding achievements in mammalogy.

In closing, I would like to thank our sponsors, exhibitors, and advertisers. Their support is critical to the success of many of our annual functions. Please take some time during the breaks and socials to stop by their tables and displays and be sure to let them know how much you appreciate their participation. Pick up a book, souvenir, or some mammal art.

And yes, there should be manatees!

Enjoy the meetings,

Eileen Lacey President, American Society of Mammalogists

#### **ACKNOWLEDGEMENTS**

## PROGRAM COMMITTEE

Cody W. Thompson (Chair)

Kayce C. Bell

Brad R. Blood

Meredith J. Hamilton

John D. Hanson

Lauren E. Helgen

Sharon A. Jansa

Jessica E. Light

Susan C. Loeb

Verity L. Mathis

R. Neal Platt

Marcia A. Revelez

Margaret H. Schadler

Winston P. Smith

Kelly A. Speer

Patrick A. Zollner

## KANSAS STATE UNIVERSITY CONFERENCE PLANNING SERVICES

Tony Ballard & Dana Flynn

2015 Logo Design

Cheng (Lily) Li

#### **SPONSOR LIST**

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#### **C**ONTRIBUTOR

## Anonymous

## Will Scott Museum & Database Consulting

### LITERATURE ONLY











#### GENERAL MEETING INFORMATION

#### **REGISTRATION DESK**

The ASM Registration Desk, located in the Grand Ballroom Foyer near the top of the escalators, will be open for registration from 7:00 am -7:00 pm on Friday, June 12th, and 7:00 am -5:00 pm during the remainder of the meeting.

#### **MEETING ROOM INFORMATION**

Please turn off beepers and cell phones or set them to manner mode during presentations.

```
Auction & Raffle — Grand Ballroom 5
Board of Directors Meeting I — River Terrace 2
Board of Directors Meeting II — River Terrace 2
Capstone — Grand Ballroom 4
Closing Social & Awards Ceremony — River City Brewing Co.
Committee Meetings — Board Rooms 1, 2, 3, 4, St. John's Room, and Daytona Room
Exhibit Area — Grand Ballroom Fover
Members Meetings — Grand Ballroom 4
New Members/Attendees Reception — River Terrace 1 & River Deck 1 Officers & Plenary I Speakers Lunch — River Terrace 3
Opening Social — River Terrace 1 & River Deck 1
Picnic — Fionn MacCool's
Plenary I — Grand Ballroom 4
Plenary II — Grand Ballroom 4
Poster Sessions — Grand Ballroom 5
Refreshment Breaks — Grand Ballroom Foyer
Registration — Grand Ballroom Foyer
Run for Research — Start at the Hyatt Regency Jacksonville Riverfront
Poster Social — Grand Ballroom 5
Student Mixer — River Terrace 1 & River Deck 1
Symposium I — Grand Ballroom 4
Symposium II — Grand Ballroom 4
Technical Sessions — Grand Ballroom 2, 3, 4, and 6
Thematic Session I — Grand Ballroom 4
Thematic Session II — Grand Ballroom 4
Thematic Session III — Grand Ballroom 4
Workshop I — Daytona Room
Workshop II — St. John's Room
Workshop III — Clearwater Room
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#### **INTERNET ACCESS**

Internet access is free to all ASM participants in hotel rooms, public areas of the hotel, and throughout the conference area.

#### **BUSINESS CENTER**

The Hyatt Regency Jacksonville Riverfront provides business travelers with the convenience of a staffed FedEx Office business center, which offers special services such as 24-hour access to computers and Internet, large format color printing and file assistance. The business center is conveniently located on the third floor and is staffed 7:00 am - 7:00 pm.

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

Message boards are located near the Registration Desk. Participants may post messages or job announcements for friends and colleagues. The registration staff also will post telephone and other messages on these boards.

Urgent messages should be directed to the Hyatt Regency Jacksonville Riverfront (904) 588-1234. These will be relayed to meeting coordinators and posted for participants as soon as possible.

#### FOOD & BEVERAGE

Morning and afternoon refreshment breaks will be served in the Grand Ballroom Foyer. Breakfast and lunch is on your own each day. However, the hotel will provide breakfast and lunch carts in the Grand Ballroom Foyer with an assortment of "grab and go" food options. Breakfast will be available from 7:00 – 8:30 am and lunch will be available from 11:30 – 1:00 pm. There also are a number of restaurants, from casual to fine dining, on-site or nearby. A list of local restaurants is listed on page 14.

Host and/or cash bars will be available during:

New Members/Attendees Social, 6:00 – 7:00 pm, Friday, June 12th

Opening Social, 7:00 – 10:00 pm, Friday, June 12th

Student Mixer, 6:00 – 7:30 pm, Saturday, June 13th

Picnic, 6:00 – 9:00 pm, Sunday, June 14th

Poster Session II, 6:00 – 7:30 pm, Monday, June 15th

Auction & Raffle, 7:30 – 10:00 pm, Monday, June 15th

Closing Social & Awards Ceremony, 6:00 – 9:00 pm, Tuesday, June 16th

#### NAME BADGE COLOR SCHEME

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

Following the conclusion of the conference, be sure to stop by ASM's Registration Desk to drop off your badge and lanyard—ASM is striving to recycle as many meeting materials as possible.

#### 17TH ANNUAL GORDON L. KIRKLAND MEMORIAL RUN/WALK FOR RESEARCH

All proceeds go to the ASM Future Mammalogists Fund

Date and Race Start Time: Sunday, June 14th, 6:00 am

Start Location: Outside the Hyatt Regency at the Riverfront

Race Course: Along the St. John's River, over the bridge, and back to the hotel (5K run or 2K run/walk)

Sign-up: Register on-line or during Registration hours at the Registration Desk

Entry Fee: \$20 (no t-shirt); \$35 (includes t-shirt)

#### PRESENTATION INFORMATION

#### ORAL PRESENTERS

Oral presentations will be allotted 12 min for the talk and 3 min for questions. Please bring your presentation to the assigned session at least 15 min prior to the start of your session on a USB Flash "thumb" drive or a CD. Laser pointers will be available. The computers used for presentations will have internet access.

Your presentation must be created in, or converted to, Microsoft's PowerPoint program. The computers in the session rooms will be Windows based PCs (Windows 7) with Microsoft Office 2010. It is recommended that all image and video files be saved into a folder with your PowerPoint file on a USB Flash "thumb" drive or a CD in the event that there are problems when you review your presentation. PowerPoint files created on Macintosh computers should be previewed on a PC to ensure cross-platform compatibility.

Session moderators are designated to facilitate each session. The names of the moderators are noted in the session schedule. Moderators will be provided a packet of instructions in advance and when checking in at the Registration Desk.

#### **POSTER PRESENTERS**

Poster session dates and times are as follows:

Poster Session I: Saturday, June 13th, 4:00-5:30 pm Poster Session II: Monday, June 15th, 6:00-7:30 pm

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

Poster Size—Poster boards (4' high and 4' long) [1.2 m high by 1.2 m wide] and pushpin attachments 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.

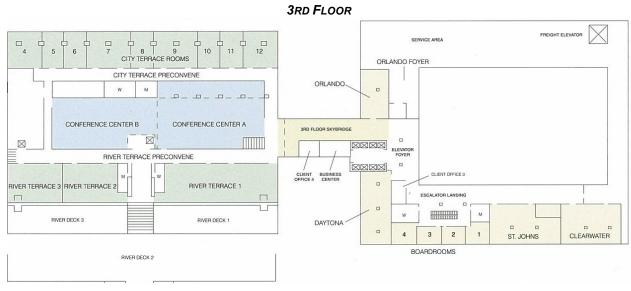
Poster Board Set-up and Take-down—Posters should be made available for viewing during the entire meeting. You can place your poster on your assigned board beginning 8:00 am Saturday, June 13th; all posters must be in place before the first poster session. Your poster must be removed by the end of the conference. If your poster is not removed or claimed by 5:00 pm on Tuesday, June 16th, it will be discarded.

#### **CONFERENCE VENUE**

Welcome to the Hyatt Regency Jacksonville Riverfront, your relaxing getaway in the heart of Jacksonville. We are currently recharging our riverfront hotel in order to offer an inspired guest room experience and amenities.

Our location speaks for itself, with a four-mile river walk right out our front door and The Landing only a short walk away. The north bank of the river is teeming with activities around every corner, and in the rare instance they are not within walking distance; our complimentary shuttle will put you at their doorstep. Traveling to the south bank for a quick bite and shopping is just as easy, with a convenient water taxi nearby. Have an incredible time in Jacksonville with numerous music, art, and film festivals as well as many museums, concerts, sporting events, holiday celebrations and more. Discover the sights and sounds that make the city unique.





#### **VENDOR SHOW**

Exhibitors are located in the Grand Ballroom Foyer of the Hyatt Regency Riverfront Jacksonville conference center during the following hours:

Saturday, June 13th 8:00 am - 5:30 pm Sunday, June 14th 8:00 am - 5:30 pm

Monday, June 15th 8:00 am - 5:00 pm, and 6:30 - 9:00 pm (evening optional)

Tuesday, June 16th 8:00 am - 1:30 pm

#### **EXHIBITORS**

Alpha Mach offers scientific instrumentation for submerged and hostile environments.

**Association Book Exhibit** represents leading publishers at major academic/professional meetings nationwide.

**H. B. Sherman Traps** is the worldwide standard in live animal traps, helping facilitate small mammal research in a safe, environmentally friendly way.

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

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

**Reconyx** is known worldwide as the industry leader in digital infrared game cameras.

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

**Telenax** provides telemetry, electronic, and telecommunications equipment for wildlife research and its conservation.

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

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

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

**University of Florida's Institute of Food and Agricultural Sciences (UF/IFAS)** is dedicated to developing knowledge in agriculture, human and natural resources, and the life sciences and to making that knowledge accessible to sustain and enhance the quality of human life.

Viking Metal Cabinet Company is the premier manufacturer of custom metal fabrications.

#### LITERATURE ONLY

**ALL PACKAGING COMPANY** has been a designer and manufacturer of custom paperboard folding cartons for decades.

Alpha Mach offers scientific instrumentation for submerged and hostile environments.

**AXIELL** is the leading supplier of IT systems and services to European archives, libraries and museums.

**Canadian Science Publishing** is an independent, not-for-profit scholarly publisher dedicated to serving the needs of researchers and their communities.

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

**Lynx Edicions** is a publishing house committed to providing high-quality ornithology and natural history books.

#### **LOCAL RESTAURANTS & BREWERIES**

The following is a list of a diverse array of restaurants and breweries that are less than 2 miles from the Hyatt Regency Jacksonville Riverfront. The Jacksonville Landing also is a short 0.3 mile walk (or 0.5 mile walk along the river) from The Hyatt Regency Jacksonville Riverfront and has several dining options, some of which are listed below (\*)

Aardwolf Brewing Company (1.4 miles) Fionn MacCool's Irish Pub\* (0.3 miles)

American Grill\* (0.3 miles) Great Wraps\* (0.3 miles)

bb's (1.0 mile) Hooters\* (0.3 miles)

Benny's Steak & Seafood" (0.3 miles) Intuition Ale Works (3.0 miles)

Big Pete's Pizzeria Italian Restaurant (0.6 miles)

Juliette's Bistro (0.5 miles)

Bistro Aix Restaurant and Lounge (1.3 miles) Koja Sushi\* (0.3 miles)

Bold City Brewery (2.9 miles) Matthew's Restaurant (1.9 miles)

Burrito Gallery (0.3 miles) Olio (0.2 miles)

Cafe Nola (0.6 miles) Pierre's Pizza\* (0.3 miles)

Calvin's Cajun Express\* (0.3 miles) Pierre's Subs\* (0.3 miles)

Chart House (1.0 mile) Pizza Palace (1.9 miles)

Chicago Pizza and Sports Grille\* (0.3 miles)

River City Brewing Company (0.8 miles)

Cinco de Mayo\* (0.3 miles) Sakkio Japan\* (0.3 miles)

Clara's at the Cathedral (0.5 miles) TAVERNA (1.9 miles)

Clara's Tidbits Restaurant (1.1 miles) Village Bread Café\* (0.3 miles)

De Real Ting Café (0.5 miles) Vito's Italian Café\* (0.3 miles)

European Street- San Marco (1.5 miles) ZAP'S GRILL\* (0.3 miles)

#### **TEACHER WORKSHOPS**

#### Tracking Mammals for Elementary Teachers

Thursday, June 11th, 9:00 am – 4:00 pm — Museum of Science and History

Developed by Dr. Pamela Owen from the Texas Natural Science Center Senior Biodiversity Center, Dr. Laurie Schlittler from Emporia State University Emeritus faculty, and Dr. Barbara Shaw from Colorado State University Extension STEM Specialist for the Western Region. Dr. Schlitter will provide you with engaging activities for your students to become Mammal Detectives, and use available clues (such as footprints, and scat) to piece together who has been here. This program will also provide you with tools to use simple, age appropriate math, to analyze results for students to interpret their findings. These lessons meet the Next Generation of Science Standards, as well as Florida Mathematics standards.

#### Population Dynamics for Middle School/High School Teachers

Thursday, June 11th, 9:00 am – 4:00 pm — Museum of Science and History

This workshop is led by Dr. George Feldhamer, Professor Emeritus from Southern Illinois University, author of the college text, Mammalogy: Adaptation, Diversity, Ecology; Deer: The Animal Answer Guide; and Wild Mammals of North America: Biology, Management, and Conservation. Dr. Feldhamer will guide you through a series of activities to examine populations of a closed and open system using taxi cabs and green pick-up trucks as proxy for mammals in the wild. Additionally, he will work with you on analyzing data meeting statistical analysis standards. This class will add authenticity for your students by clearly demonstrating these concepts. This program has been developed to meet Florida Science and Mathematics Standards.

#### PRE-MEETING WORKSHOPS

ASMomics: A Hands-On introduction to Bioinformatics and Genomics
Organizers: R. Neal Platt & John D. Hanson
Friday, June 12th, 10:30 am – 5:00 pm — Daytona Room

This workshop will be used to give participants hands-on experience with high-throughput sequencing data as they walk through a project from conception to completion. During the workshop, instructors will give brief introductions to each of the major bioinformatic steps involved in analyzing high-throughput sequencing data. Following the introductory presentations, participants will spend time analyzing a sample data set that follows a predetermined bioinformatics pipeline. During this time, instructors will be available to help participants through each step as needed. By the end of the workshop, each participant will have gained valuable experience from analyzing a smaller data set that can then be transferred to larger more expansive projects. Presenters: John D. Hanson and R. Neal Platt.

#### ASM/iDigBio Collections Digitization and Imaging Workshop

Organizers: Cody W. Thompson & Gil Nelson Friday, June 12th, 10:30 am – 5:00 pm — St. John's Room

Although the digitization of museum collection data has been an effort underway in the mammal community for quite sometime, there still remain many mammal collections unavailable to the rest of the scientific world, especially those at smaller institutions without the infrastructure or support to undergo such efforts. However, through the support of the National Science Foundation (NSF), a national effort is underway to make these collections, among others, available to the greater research community, government agencies, students, educators, and the general public. This effort is being coordinated nationally through the Integrated Digitized Biocollections (iDigBio). With the help of iDigBio, the goal of this workshop is to offer a template for those interested in sharing their collections with the global scientific community. Presenters: Brandi S. Coyner, Noe U. de la Sancha, Tanya A. Dewey, Jonathan L. Dunnum, Sean Moran, Gil Nelson, Larry M. Page, M. A. Revelez, Nelson Rios, Cody W. Thompson, and Verity L. Mathis.

#### Publishing a Peer-Reviewed paper from Start to Finish – Advice from the Experts

Organizers: ASM Education and Graduate Students Committee Friday, June 12th, 2:00 – 5:00 pm — Clearwater Room

The publication process can be a daunting process for students, full of unknowns, frustrations, and opportunities to make mistakes. This workshop will help to demystify the publication process, introduce members of the publications committee that work so hard behind the scenes, and identify common pitfalls and best practices in writing a scientific paper from the perspective of those charged with reviewing them. This workshop will provide attendees a clearer picture of what to expect during the submission, review, and revision process, what editors see as common characteristics of a really good paper, what are general characteristics of papers that don't make the cut, and things authors can do to make an editor's job easier. The panelists will also address how authors decide what journals are most appropriate for a given manuscript. The workshop will conclude with a round-table, informal question and answer session where attendees will be able to ask panel participants about specific details of interest to them or applicable to their particular experiences. Additionally, panelists have generously agreed to provide a cursory review of polished manuscripts submitted by workshop attendees prior to the workshop, with the understanding that this review is in no way an endorsement that the manuscript be published in the Journal of Mammalogy. This is an excellent opportunity to receive constructive feedback regarding an editor's general impressions of a manuscript and their thoughts regarding the manuscript's strong points and how the manuscript may be improved. Following the workshop, the panelist reviewing a manuscript will then meet one on one with the manuscript author for 20-30 minutes to discuss reviewer comments and their rationale behind them. Presenters: Leslie N. Carraway, Ed J. Heske, Christine R. Maher, Marjorie D. Matocq, Joseph F. Merritt, Robert K. Rose, and Bradley J. Swanson.

#### **FIELD TRIPS**

#### White Oak Conservation Center

Friday, June 12th, 1:00 – 5:00 pm & Wednesday, June 17<sup>th</sup>, 8:00 am – 12:00 pm

These in depth-tours bring you face to face with the animals and people of White Oak's conservation programs. The tours are led by wildlife experts, which introduce our guests to our conservation programs, facilities, and some of the 27 species that call White Oak home, including rhino, giraffe, okapi and cheetah. Step on board our open-air tour vans or trolleys and experience White Oak with all your senses. All experiences occur outside across the nearly 7,400 acres of upland forests and wetlands. Appropriate outdoor clothing, insect repellent, sunscreen, sunglasses, and a refillable water bottle are recommended for all experiences. Photo opportunities abound, so be sure and bring your camera. Trip includes round trip transportation via air-conditioned school bus.

#### Catty Shack Ranch Wildlife Sanctuary Saturday, June 13th, 6:00 – 8:30 pm

Catty Shack is a wildlife sanctuary and forever home for endangered big cats. Enjoy a guided tour of all the residents (Siberian tigers, lions, cougars, black leopards, a bobcat, a coatimundi and foxes) at the sanctuary! Tours last about 45 minutes and include a viewing of all our residents, as time allows, along with facts about the animals. Following the tour, you will get to watch over 450 pounds of meat distributed throughout the sanctuary! Get ready to see their "wild" side – there's sure to be plenty of roaring! Trip includes round trip transportation via air-conditioned school bus.

Kayak Amelia at Long Island Outfitters Wednesday, June 17th, 10:00 am – 3:00 pm

Guided Kayak nature tours are a great way to learn about kayaking and the local environment. Tours are planned to go with the current so you can work on those paddling skills and really take in the scenery. Along the way the naturalists describe the salt marsh eco-system, critters and local history. A 3-hour tour has about 2 hours of kayaking. Trip includes round trip transportation via air-conditioned school bus.

#### **CAPSTONE**

#### Dr. Wayne Clough

A new era for conservation biology: the Smithsonian view Tuesday, June 16th, 4:00 – 5:00 pm — Grand Ballroom 4

The capstone speaker for the 2015 meeting will be Dr. Wayne Clough, who recently stepped down after more than 6 years as the 12th Secretary of the Smithsonian Institution. In this position, he oversaw 19 museums and galleries, 20 libraries, the National Zoo, numerous research centers, a \$1 billion annual budget, 6400 employees, and almost as many volunteers. One of his passions is conservation, and to this end, during his reign as the SI Secretary, they created the Smithsonian/Mason School of Biological Conservation, built a campus at the Smithsonian Conservation Biology Institute at Front Royal (VA), and launched the Tennenbaum Marine Observatory Network to monitor the coastal waters of the world. In his "retirement", Dr. Clough will serve as a SI "ambassador" and continue to work on ongoing projects. Prior to his time at the Smithsonian, Dr. Clough was Provost at the University of Washington, and President for 14 years at the Georgia Institute of Technology, where he had earned his Bachelors and Masters degrees in civil engineering. He earned his doctorate (also in civil engineering, 1969) from Berkeley, and then served as a faculty member at Duke, Stanford and Virginia Tech, where he also served as a Department Head and Dean. Among his many honors, Dr. Clough was elected to the National Academy of Engineering in 1990, and has served on the National Science Board and the President's Council of Advisors on Science and Technology. In 2011, Clough wrote "Increasing Scientific Literacy: A Shared Responsibility," a monograph on the nation's urgent need to improve scientific literacy, and the role that the Smithsonian can play.

#### **PLENARY I**

#### Erin F. Baerwald, William T. Hornaday Award

Bat migration and wind energy: making the most of destructive sampling Saturday, June 13th, 9:30 – 9:50 am — Grand Ballroom 4

The recipient of the 2014 American Society of Mammalogist's William T. Hornaday Award is Erin Baerwald. The William T. Hornaday Award is awarded to a student who has made a significant contribution to the conservation of mammals and their habitats. Erin is a Ph.D student at the University of Calgary. Erin has already made a tremendous impact on mammalian conservation by exploring the causes and extent of bat mortalities related to wind turbine generators. These energy installations have seen astronomical growth over the last decade on our planet. Both her master's thesis and doctoral research focused on bat conservation, including the impact of wind turbines on bat migration. Erin's master's thesis generated some of the very first publications on bats and wind energy. She was the first to describe the phenomena of barotrauma as one source of fatality at wind turbines. To date Erin has published 8 papers on bats and wind turbines (with another now in revision). She has delivered numerous conference (3 invited) and public talks on different aspects of this conservation issue as well. She is an excellent communicator of information to diverse audiences. Erin has worked closely with industry to design operational mitigation to reduce bat mortalities, discovering that death could be significantly reduced if turbines altered their nightly activity patterns. These kinds of applied studies are critical to mammalian conservation in a rapidly changing world.

# Nicté Ordóñez-Garza, Albert R. Alma Shadle Fellowship Award Reconstructing the evolutionary history of small mammals in Nuclear Central America Saturday, June 13th, 10:20 – 10:50 am — Grand Ballroom 4

This year's recipient of the Albert R. and Alma Shadle award is Nicté Ordóñez-Garza from Texas Tech University. Ms. Ordóñez has been a member of The American Society of Mammalogists for 10 years. Ms. Ordóñez's research focuses on using phylogeographic approaches to better understand the role of history in determining the mechanisms that structure biodiversity in Mesoamerica. She has published 22 manuscripts in books and journals including three in the *Journal of Mammalogy* and one *Mammalian Species* account. Ms. Ordóñez has presented her research results at ASM meetings three times and has garnered research funds, travel awards and fellowships to the sum of \$126,000 from agencies such as

the Fulbright Foundation and ASM's Grants-in-Aid of Research program. Ms. Ordóñez has served on multiple ASM committees including the Conservation Awards Committee, International Relations Committee and the Systematic Collections Committee. Also of note is that our recipient was president of the Guatemalan Society of Mammalogists from 2010 to 2011 and has been instrumental in terms of editing Spanish abstracts for the *Journal of Mammalogy* for a number of years. Ms. Ordóñez has been described as "truly an outstanding individual and is developing into one of the best students I have had." Her abilities in the field have been described as "far above average compared to many professional biologists." Finally, she has been described as "a remarkable young scientist with a set goal to return to Latin America and develop a mammalogy program that will nurture future generations of scientists in Latin America."

#### Melissa J. Merrick, ASM Fellowship Award

Natal dispersal on the edge: why they leave, why they stop, how they get there Saturday, June 13th, 10:50 – 11:20 am — Grand Ballroom 4

The recipient of the 2014 American Society of Mammalogists Award is Melissa Merrick from the University of Arizona. Ms. Merrick's research addresses the proximate cues and ultimate fitness consequences of juvenile exploration and settlement during the dispersal process. In particular, she focusses on Mt. Graham red squirrels to test effects of natal habitat, behavioral phenotypes, and forest fragmentation on emigration, exploration, and settlement to assess the ultimate consequences of settlement decisions, namely, time to settlement, survivorship, and reproductive success. Ms. Merrick is the author of 11 publications, including three Mammalian Species accounts. Other outlets include: Journal of Wildlife Management, Journal of Experimental Biology, Environmental Entomology, the Southwestern Naturalist and Endangered Species Research. She has received 21 grants and honorary awards including a Grant-in-Aid of Research and two travel awards from our society. Ms. Merrick has presented results of her research at ASM meetings three times. She has served our society by reviewing for the Journal of Mammalogy, as well as serving on the Education and Graduate Student Committee and the Public Outreach and Education Committee. She was elected to the ASM Board of Directors at our annual meeting in 2014. Ms. Merrick has been described as "a clear leader among her peers that would rank in the top 3-4% of all the students I have advised." She "has a long and substantial academic record that epitomizes excellence in mammalogy, research and public outreach." One reference writer wrote "I anticipate that she will emerge from her Ph. D. experience as a true star and leader in the field of mammalian ecology in a way that few graduate students are able."

#### **PLENARY II**

**Dr. Ricardo Ojeda, 2013 Joseph Grinnell Award**Towards a training research program in arid land mammals
Sunday, June 14th, 8:00 – 8:45 am — Grand Ballroom 4

The 2013 recipient of the Joseph Grinnell Award is Dr. Ricardo Ojeda, Investigador Principal CONICET, Jefe del Grupo de Investigaciones de la Biodiversidad, Instituto Argentino de Investigaciones de las Zonas Aridas. Dr. Ojeda has directed 41 doctoral, masters, and research investigators, one of the largest mammal-training programs in Argentina. His students have conducted investigations on mammals and desert ecology and on topics from physiology to phylogenetics. His students have gone on to be researchers, teachers, and wildlife and conservation personnel at provincial and national levels. Ricardo has opened new opportunities for young scientists in the Argentine scientific establishment. He has created opportunities not only through teaching but also by helping create the Argentine Mammal Society (SAREM) and being founding editor of *Mastozoologia Neotropical*, the premier scientific journal on mammals in South America. His impact in training the next generation of desert mammal ecologists and his influence as a teacher will continue for decades to come.

#### Dr. Troy L. Best, 2014 Joseph Grinnell Award

Multi-use management of lands in southeastern New Mexico: impacts of "development" on flora and fauna

Sunday, June 14th, 8:45 – 9:30 am — Grand Ballroom 4

The 2014 recipient of the Joseph Grinnell Award is Dr. Troy Best, Professor of Biological Sciences at

Auburn University. Troy has been Curator of Mammals at the Auburn University Natural History Museum since 1991 and has made important contributions to other museums including the Sam Noble Museum and the New Mexico Museum of Natural History and Science in Albuquerque. Troy has been major advisor to 30 graduate students and has served as a committee member for dozens more. With these students, he has conducted research in North America, South America, Europe, and Africa. From this research, Troy has heightened understanding of mammals through more than 200 journal articles, review papers, books, book chapters, and technical reports. Troy has taught a wide array of courses that reflect his passion for mammals, evolutionary biology, ecology and applied ecology. He is particularly well known for his class field trips to the southwestern US and Mexico – trips that allowed many of his students to realize their own passion for mammalogy. Troy has also made significant contributions to conservation, especially in raising awareness of threats to bat species. Beyond the many public lectures he gives, he coordinates yearly public events where hundreds of children and adults learn about bat ecology and conservation.

#### Dr. Lawrence R. Heaney, Aldo Leopold Award

The role of biogeography in promoting the conservation of mammalian diversity in the Philippines Sunday, June 14th. 10:00 – 10:45 am — Grand Ballroom 4

The 2014 Aldo Leopold Conservation Award from the American Society of Mammalogists is awarded to Dr. Lawrence Heaney. Dr. Heaney is Curator and Head of Mammals at the Field Museum of Natural History in Chicago. Dr. Heaney has worked tirelessly over the past three decades to creatively explore, document and conserve the highly diverse mammalian fauna of one of the most diverse oceanic archipelagos on our planet. During that time, he also was heavily engaged in training the next generation of local mammalogists; many of these individuals are now in professional conservation, resource management, or academic positions in this archipelago. His work has been sponsored by the National Science Foundation and a wide range of conservation NGOs and foundations. As a student, our awardee was naturally drawn to Southeast Asia through his interest in biogeography and his appreciation that islands of this part of the world provided fertile ground for research into the diversification of insular faunas. Interest in this region early in his career led to a lengthy and highly productive research program, with more than 160 publications that detail impressive new taxonomic discoveries, new insights into the biogeography of the region, conservation biology of endemic species and phylogenetic relationships among a significant portion of the mammalian fauna (especially rodents and bats) of this Southeast Asian region. All aspects of his research are oriented toward conservation. In addition to his high research productivity, our awardee also was instrumental in the formation and development of several conservation efforts in the region including new conservation NGOs (Wildlife Conservation Society of the Philippines) and through his training efforts, the development of human capacity in conservation biology for the region. He also has made information on mammals accessible to the general public by publishing beautiful popular books focused on conservation topics for the region including the widely acclaimed Vanishing Treasures of the Philippine Rain Forest.

# Dr. M. Denise Dearing, C. Hart Merriam Award Eating and not dying: how mammalian herbivores cope with plant toxins Sunday, June 14th, 10:45 – 11:30 am — Grand Ballroom 4

The 2014 recipient of the Merriam Award is Professor Denise Dearing from the University of Utah. Dr. Dearing has pioneered the development of new theoretical frameworks in ecology by combining biochemical and molecular tools from pharmacological science with hypothesis-driven investigations from an ecological perspective. Professor Dearing is particularly well known for her transformative and cross-disciplinary research on the ecological factors and physiological constraints that influence mammalian foraging behavior and the evolution of diet breadth in mammalian herbivores, both of which clearly demonstrate the central role mammalian herbivores play in the structure and functioning of ecological communities. As noted by several of her colleagues, Professor Dearing represents much of what we celebrate about C. Hart Merriam: a view of ecology that isn't strictly taxon-limited (he was an MD, ornithologist, mammalogist and more), a link between biology/ecology and medicine, and a focus on placing ecological phenomena in a biome or "life zone" context. Professor Dearing's research clearly embodies these qualities; she has opened up entirely new horizons in mammalian physiological ecology.

#### **SYMPOSIA**

## The Last Remaining Caribbean Mammals: Conservation Priorities and the Historical Context of Extinctions in an Island Biodiversity Hotspot

Organizers: Nathan S. Upham, Burton K. Lim, and Bradley J. Bergstrom Monday, June 15th, 9:50 – 11:50 am & 1:10 – 3:10 pm — Grand Ballroom 4

The Caribbean mammal fauna has endured the highest rate of recent species loss of any mammal fauna globally, both after European colonization (~500 years ago) and through the Holocene (~12,000 years ago). During the Holocene, at least 95 species have gone extinct on islands in the Greater and Lesser Antilles, representing over half of the described mammal species in the region. Native groups of sloths. shrews, and monkeys have gone completely extinct, along with dozens of species in unique groups of rodents and bats. However, the historical dynamics and causes of this Caribbean mass extinction are poorly understood, as are the ecological consequences of native species loss and their subsequent replacement by invasive species. Of the surviving native mammals in the Caribbean (14 species of hutia, 2 species of solenodon, and 37 species of bat), most are threatened with extinction from human-mediated factors. Coastal mangrove areas are particularly threatened, and efforts for sustainable tourism development are in need of synthetic information about the region's history and biodiversity. To address these issues, a 2-part symposium is planned—Conservation Priorities and Historical Context—with the aim of providing mutually illuminating perspectives on "what to do now" and "how we got here". Presenters include: Rafael Borroto-Páez, Selina Brace, Jorge L. Brocca, Siobhán B. Cooke, Liliana M. Dávalos, Ros Kennerly, Ross D. E. MacPhee, J. Angel Soto-Ceteno, Samuel T. Turvey, Nathan S. Upham

#### Advanced Tools for Collection-Based Mammalogy

Organizers: Matthew S. Leslie & C. Miguel Pinto Tuesday, June 16th, 10:00 am – 12:00 pm — Grand Ballroom 4

The goal of this symposium is to present and discuss cutting-edge research techniques available for collections-based scientific inquiry. Presentations will provide broad context and detailed examples of state-of-the-art technologies for non- or minimally invasive examination of research collections that yield information unavailable via traditional morphological inspection. The topics covered by these presentations will include: 1) Stable Isotope Analyses, 2) Detection of Heavy Metals, 3) Genomics, and 4) Computer Tomography (CT) Scanning. Presenters include: John Flynn, Kristofer Helgen, Anjali Kumar, Carolyn Kurle, and Michael Nachman.



### **BOARD OF DIRECTORS, MEMBERS, AND COMMITTEE MEETINGS**

#### FRIDAY, JUNE 12TH

8:00 am - 5:00 pm Board of Directors Meeting I – River Terrace 2 (refreshments & lunch provided)

#### SATURDAY, JUNE 13TH

11:20 am - 12:30 pm	Members Meeting I – Grand Ballroom 4
12:30 – 1:30 pm	Latin American Fellowship Committee – Board Room 3
12:30 – 1:30 pm	Mammal Images Library Committee – Board Room 1
12:30 – 2:00 pm	Honoraria & Travel Awards Committee – Board Room 2
2:00 – 3:00 pm	Human Diversity Committee – Board Room 1
3:30 – 4:30 pm	African Graduate Student Research Fund – Board Room 2
3:30 – 4:30 pm	Animal Care & Use Committee – Board Room 3
3:30 – 4:45 pm	Publications Committee – Board Room 1

#### SUNDAY, JUNE 14TH

11:45 am – 12:45 pm	Conservation Committee – Board Room 4
12:00 – 1:00 pm	Informatics Committee – Board Room 2
12:00 – 1:00 pm	Systematic Collections Committee – Board Room 3
12:30 – 1:30 pm	Nomenclature Committee – Board Room 1
2:00 – 3:00 pm	Human Diversity Committee – Board Room 3
2:00 – 3:15 pm	International Relations Committee – Board Room 2
2:15 – 3:15 pm	Student Science Policy Award Committee – Board Room 1
3:15 - 4:45 pm	Members Meeting II – Grand Ballroom 4

#### MONDAY, JUNE 15TH

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11:45 am - 12:45 pm	Publications Committee – Board Room 1
11:45 am – 1:15 pm	Membership Committee – Board Room 3
11:45 am - 1:15 pm	Program Committee – Board Room 4
11:45 am - 1:15 pm	Public Education Committee – Board Room 2
2:00 – 4:00 pm	Grants-in-Aid Committee – St. John's Room
3:00 – 4:00 pm	Jackson Award Committee – Board Room 1
6:00 – 7:30 pm	Board of Directors Meeting II – River Terrace 2 (dinner not provided)

#### **COMMITTEES MEETINGS NOT SCHEDULED**

**Archives Committee Checklist Committee Conservation Awards Committee Coordination Committee Development Committee Education & Graduate Students Committee Grinnell Award Committee** Honorary Membership Committee Legislation & Regulations Committee Marine Mammals Committee Merriam Award Committee Office of Ombudsperson **Resolutions Committee** 

#### SOCIAL EVENTS

#### Friday, June 12th, 6:00 - 7:00 pm

#### New Members/Attendees Reception - River Terrace 1 & River Deck 1

Members who have recently joined the ASM or are attending their first meeting are invited to this New Member/Attendees Reception to meet ASM members and other new members. Even if this isn't your first time to an ASM Annual Meeting or you are not a new member, feel free to stop by and welcome new members and new meeting attendees. The New Member and Attendee Reception is hosted by the Membership Committee. Hosted keg beer and cash bar, as well as heavy hors d'oeurves, will be available.

#### Friday, June 12th, 7:00 - 10:00 pm

#### Opening Social - River Terrace 1 & River Deck 1

Attendees will kick off the conference with an opening night reception. Enjoy the opportunity to socialize with friends, colleagues, and other conference attendees, and meet our 2015 exhibitors. Hosted keg beer and cash bar, as well as heavy hors d'oeurves, will be available.

#### Saturday, June 13th, 6:00 – 7:30 pm Student Mixer – River Terrace 1 & River Deck 1

All student members of the ASM are welcome to come and socialize with your friends and colleagues, and meet new student members. Student Mixer is hosted by the Education and Graduate Students Committee. Hosted keg beer and cash bar, as well as light hors d'oeurves, will be available.

#### Sunday, June 14th, 6:00 – 9:00 pm Picnic – Fionn MacCool's

Join your friends and colleagues for food, drink, and live music at the picnic at the Fionn MacCool's Irish Pub. There is nothing quite like a genuine Irish pub experience, and Fionn MacCool's will not disappoint!!! Must purchase ticket in advance!

#### Monday, June 15th, 6:00 – 7:30 pm Poster Session II – Grand Ballroom 5

The Monday night poster session will include poster presentations, a social, auction, and raffle. 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! Hosted keg beer and cash bar will be available.

#### Monday, June 15th, 7:30 – 10:00 pm Auction & Raffle – Grand Ballroom 5

Continue your socializing and support the ASM's Future Mammalogists Fund through donating to and purchasing from the auction! The Auction and Raffle will follow Poster Session II. Hosted keg beer and a cash bar will be available.

## Tuesday, June 16th, 6:00 - 9:00 pm

#### Closing Social & Awards Ceremony - River City Brewing Co.

Join us at the Closing Social and Awards Ceremony at the River City Brewing Co. Nestled along the Southbank of the St. John's River, the River City Brewing Co. will offer the perfect opportunity for everyone to unwind, socialize, and say good-byes at this conclusion to a great week. A river taxi ride across the St. John's River to and from the brewery will provide a unique opportunity to relax Florida-style! Must purchase ticket in advance!

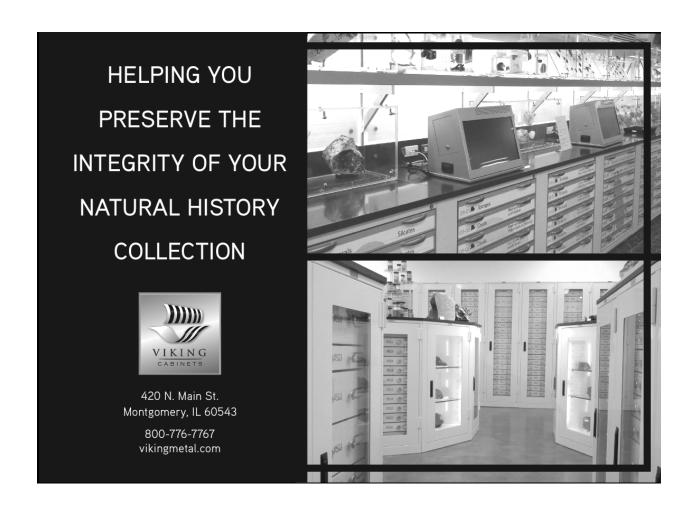
### PROGRAM AT-A-GLANCE

Friday, June 12th, 2015			
TIME	EVENT	LOCATION	
7:00 am	Registration Grand Ballroom Foyer		
8:00 am	Board of Directors Meeting I River Terrace 2		
10:30 am	Workshop I: ASMomics	Daytona Room	
10:30 am	Workshop II: ASM/iDigBio	St. John's Room	
1:00 pm	Fieldtrip: White Oak Conservation Center	Yulee, Florida	
2:00 pm	Workshop III: Publishing a Peer-Reviewed Paper	Clearwater Room	
6:00 pm	New Members/Attendees Social	River Terrace 1 & River Deck 1	
7:00 pm	Opening Social	River Terrace 1 & River Deck 1	
	Saturday, June 13th, 2015		
TIME	EVENT	LOCATION	
7:00 am	Registration	Grand Ballroom Foyer	
8:00 am	Plenary Session I	Grand Ballroom 4	
9:50 am	Break	Grand Ballroom Foyer	
10:20 am	Plenary Session I	Grand Ballroom 4	
11:20 am	Members Meeting I	Grand Ballroom 4	
12:30 pm	Lunch	On Your Own	
12:30 pm	Officers & Student Plenary Speakers Lunch	River Terrace 3	
2:00 pm	Thematic Session I: Genome Evolution in Mammals	Grand Ballroom 4	
2:00 pm	Technical Sessions 1 & 2	Grand Ballrooms 3 & 6	
3:30 pm	Break	Grand Ballroom Foyer	
4:00 pm	Poster Session I	Grand Ballroom 5	
6:00 pm	Student Mixer	River Terrace 1 & River Deck 1	
6:00 pm	Fieldtrip: Catty Shack Ranch Wildlife Sanctuary	Jacksonville, Florida	
-	Sunday, June 14th, 2015		
TIME	EVENT	LOCATION	
6:00 am	Gordon L. Kirkland Memorial Run for Research	Hyatt Regency Jacksonville	
7:00 am	Registration	Grand Ballroom Foyer	
8:00 am	Plenary Session II	Grand Ballroom 4	
9:30 am	Break	Grand Ballroom Foyer	
10:00 am	Plenary Session II	Grand Ballroom 4	
	Group Photo	River Deck 2	
11:45 am	Lunch	On Your Own	
1:15 pm	Thematic Session II: Methods in Disease Ecology	Grand Ballroom 4	
1:15 pm	Technical Sessions 3 & 4	Grand Ballrooms 3 & 6	
2:45 pm	Break	Grand Ballroom Foyer	
3:15 pm			
3. 13 DHI	Members Meeting II	Grand Bailroom 4	
	Members Meeting II  Town Hall Meeting: ASM – The Next 100 Years	Grand Ballroom 4 Grand Ballroom 4	
4:45 pm 6:00 pm	Members Meeting II  Town Hall Meeting: ASM – The Next 100 Years  Picnic	Grand Ballroom 4 Grand Ballroom 4 Fionn MacCool's	
4:45 pm	Town Hall Meeting: ASM – The Next 100 Years	Grand Ballroom 4	
4:45 pm 6:00 pm	Town Hall Meeting: ASM – The Next 100 Years Picnic  Monday, June 15th, 2015	Grand Ballroom 4 Fionn MacCool's	
4:45 pm 6:00 pm	Town Hall Meeting: ASM – The Next 100 Years Picnic  Monday, June 15th, 2015  EVENT	Grand Ballroom 4 Fionn MacCool's  LOCATION	
4:45 pm 6:00 pm TIME 7:00 am	Town Hall Meeting: ASM – The Next 100 Years Picnic  Monday, June 15th, 2015  EVENT Registration	Grand Ballroom 4 Fionn MacCool's  LOCATION Grand Ballroom Foyer	
4:45 pm 6:00 pm	Town Hall Meeting: ASM – The Next 100 Years Picnic  Monday, June 15th, 2015  EVENT	Grand Ballroom 4 Fionn MacCool's  LOCATION	

11:50 am	Lunch	On Your Own	
1:10 pm	Symposium I: Caribbean Mammals, Part 2	Grand Ballroom 4	
3:00 pm	Break	Grand Ballroom Foyer	
3:30 pm	Technical Sessions 8, 9, and 10	Grand Ballrooms 4, 3, and 6	
6:00 pm	Board of Directors Meeting II	River Terrace 2	
6:00 pm	Poster Session II & Social	Grand Ballroom 5	
7:30 pm Auction & Raffle		Grand Ballroom 5	
Tuesday, June 16th, 2015			
TIME	EVENT	LOCATION	
7:00 am	Registration	Grand Ballroom Foyer	
8:00 am	Technical Sessions 11, 12, and 13	Grand Ballrooms 4, 3, and 6	
9:30 am	Break	Grand Ballroom Foyer	
10:00 am	Symposium II: Museum Methods	Grand Ballroom 4	
12:00 pm Lunch		On Your Own	
3:30 pm	Thematic Session III: Conservation of Florida Mammals	Grand Ballroom 4	
1:30 pm	Technical Sessions 14, 15, and 16	Grand Ballrooms 3, 6, and 2	
3:00 pm	Break	Grand Ballroom Foyer	
3:30 pm	Special Seminar: Women in ASM	Grand Ballroom 4	
4:00 pm	Capstone	Grand Ballroom 4	
5:30 pm	Water Taxi Boarding to River City Brewing Co. Begins	Jacksonville Landing	
6:00 pm Closing Social & Awards Ceremony River City Brewing Comp		River City Brewing Company	

## FRIDAY, JUNE 12TH, OPENING DAY

7:00 AM	Registration – Grand Ballroom Foyer		
8:00 AM	Board of Directors Meeting I – River Terrace 2		
10:30 AM	Workshop I: ASMomics: A Hands-On introduction to Bioinformatics and Genomics – Daytona Room Presenters: R. N. Platt and J. D. Hanson		
10:30 AM	Workshop II: ASM/iDigBio Collections Digitization and Imaging – St. John's Room Presenters: B. S. Coyner, N. U. de la Sancha, T. A. Dewey, J. L. Dunnum, S. Moran, G. Nelson, L. M. Page, M. A. Revelez, N. Rios, C. W. Thompson, and V. L. Mathis		
1:00 PM	Fieldtrip – White Oak Conservation Center		
2:00 PM	Workshop III: Publishing a Peer-Reviewed paper from Start to Finish – Advice from the Experts – Clearwater Room Presenters: L. N. Carraway, E. J. Heske, C. R. Maher, M. D. Matocq, J. F. Merritt, R. K. Rose, and B. J. Swanson		
5:00 PM	Open		
6:00 PM	New Members/Attendees Social – River Terrace 1 & River Deck 1		
7:00 PM	Opening Social – River Terrace 1 & River Deck 1		



## SATURDAY, JUNE 13TH, PLENARY SESSION I -GRAND BALLROOM 4-

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A. Brazier Howell Award  4 <sup>E,TA</sup> : Biotic responses of canids to the terminal Pleistocene megafauna extinction  M. I. Pardi* and F. A. Smith		
William T. Hornaday Award 5 <sup>TA</sup> : Bat migration and wind energy: making the most of destructive sampling E. F. Baerwald		
tral		
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4		

Evaluated Presentation TAHonoraria or Travel Award \*\*Grants-In-Aid or Fellowship \*Presenter

## SATURDAY, JUNE 13TH, AFTERNOON SESSIONS

Session	Thematic Session I: Genome Evolution in Mammals	Technical Session 1: Biogeography	Technical Session 2: Community Ecology
Room	Grand Ballroom 4	Grand Ballroom 3	Grand Ballroom 6
Moderator	R. Neal Platt	Jacob A. Esselstyn	Jacob R. Goheen
2:00 PM	8: The role of transposable elements in mammalian genome evolution D. A. Ray*, S. Mangum, and R. N. Platt II	11: The role of geography in the adaptive radiation of sigmodontine rodents in South America J. J. Schenk and S. J. Steppan*	17: Interannual variation in the magnitude and outcome of competition among grassland rodents A. W. Reed*, M. Bani- Yaghoub, and N. A. Slade
2:15 PM		12 <sup>E</sup> : Determining spatial and temporal overlaps of endangered small mammals and their invasive predators J. Cove*, T. Simons, B. Gardner, and A. O'Connell	18 <sup>TA</sup> : The potential role of a native grazer and keystone species in managing woody encroachment S. L. Hale*, J. L. Koprowski, and S. R. Archer
2:30 PM	9: Phylogenomics of hybridization using whole genome data W. J. Murphy*, G. Li, B. W. Davis, and E. Eizirik	13 <sup>E</sup> : Biogeography and population genetics on Sulawesi, Indonesia: a case study of the shrew <i>Crocidura elongata</i> R. A. Eldridge*, A. S. Achmadi, T. C. Giarla, K. C. Rowe, and J. A. Esselstyn	19 <sup>E</sup> : The effects of carcass size, habitat type, and season on vertebrate scavenging community dynamics K. L. Turner*, E. F. Abernethy, O. E. Rhodes, Jr., and J. C. Beasley
2:45 PM		14: The newcomers follow old rules: body size evolution in mammals introduced onto islands G. A. Lyras, A. A. van der Geer, and M. V. Lomolino*	20 <sup>E</sup> : Selection of wetland habitats by bats in coastal South Carolina: an acoustic study L. H. Moore* and T. L. Best
3:00 PM	10: Genomic and ecological interactions in woodrat contact zones: insights into hybridization and diet specialization M. D. Matocq*, P. J. Murphy, C. Jeffrey, L. Richards, and T. Parchman	15: Unraveling the ecosystem consequences of the terminal Pleistocene Megafaunal Extinction F. A. Smith*, S. K. Lyons, E. A. Elliott Smith, S. D. Newsome, T. W. Stafford, and C. P. Tome	21: Understanding the trophic role of marsupial predators in Australia's deserts C. R. Pavey*, C. J. Burwell, G. Körtner, and F. Geiser
3:15 PM		chrotorrhinus (rock vole),	22: Diet composition of meadow voles in postagricultural wetlands A. N. Shenko* and W. F. Bien
3:30 PM	Break – Grand Ballroom Foyer		
4:00 PM		ster Session I – Grand Ballroo	m 5

Evaluated Presentation <sup>1A</sup>Honoraria or Travel Award \*\*Grants-In-Aid or Fellowship \*Presenter

#### SATURDAY, JUNE 13TH, POSTER SESSION I -GRAND BALLROOM 5-

23<sup>E,TA</sup>: Seasonal circadian rhythm shift and lunar chronobiology of the nine-banded armadillo (Dasypus novemcinctus)

E. N. Green\*, D. M. Green, and L. Robbins

24<sup>TA</sup>: An examination of regional variation in southern flying squirrel ultrasonic communication J. W. Eisinger\*, J. Scheibe, and E. A. Flaherty

25<sup>\*\*</sup>: Agonistic interactions in harbor seals (*Phoca vitulina concolor*) vary with density on haulout ledges

A. F. Honeywell\* and C. R. Maher

26: Predation risks and oak dispersal by squirrels: Do predators direct the seed dispersal process?

M. A. Steele\*, G. Rompré, J. A. Stratford, H. Zhang, M. Suchocki, and S. Marino

27: The effects of North American porcupine (Erethizon dorsatum) herbivory on forest diversity E. R. H. Crocker\*, M. E. Harrington, E. Siracusa, and E. L. Barthelmess

28<sup>E,TA</sup>: Body size patterns in pikas (*Ochotona*) reflect ecology

M. L. Westover\* and F. A. Smith

29: Mammalogy at Wildsumaco Biological Station: the first five years

T. W. Knowles\*, B. S. Arbogast, E. N. Vanderhoff, and A.-M. C. Hodge

30: A novel use of Specify Database Software for museum collections

W. H. Brown, V. L. Mathis\*, and R. H. Robins

31<sup>E,TA</sup>: Comparative phylogeography of parasites reveals the history of North American pikas H. M. Toman\* and K. E. Galbreath

32: Occurrence of deer mice on high-elevation peaks in Colorado

D. W. Hale

33<sup>E<sup>--</sup></sup>: Effects of hemlock woolly adelgid on small mammal community assemblages in eastern hemlock forests

A. L. Degrassi\*, A. M. Ellison, and N. J. Gotelli

34: Small mammals from three mountain ranges in Nuclear Central America

R. P. Eckerlin\*, J. O. Matson, S. Pérez, and N. Ordóñez-Garza

35: Similarity of mammalian abundance and richness among four sites in Western Central Georgia

K. A. Champagne\* and G. D. Stokes

36: Patch size effects and functional diversity thresholds: A small mammals approach

R. S. Bovendorp\*, R. A. McCleery, and M. Galetti

37: The effect of ecology, allometry, and phylogeny on reproduction patterns in Canidae and Leporidae

K. Pielmeier\* and V. Hayssen

38: Importance of the field biology EXPERIENCE: undergraduates in the forests of northern New York

D. M. Kaufman

39<sup>E</sup>: Food habits of black bears in urban versus rural Alabama

L. A. Garland\*, T. D. Steury, and C. J. Ellis

40: First specimens of Pekania (Martes) pennanti (Fisher) from Virginia

N. D. Moncrief\* and M. L. Fies

41: Genetic structure assessment of the Ryukyu wild boar populations in the Ryukyu Archipelago, Japan

Y. Mizoguchi\*, S. Konishi, and S. Yoshikawa

Evaluated Presentation TAHonoraria or Travel Award \*\*Grants-In-Aid or Fellowship

\*Presenter

### SATURDAY, JUNE 13TH, POSTER SESSION I -GRAND BALLROOM 5-

- 42: Evaluation of growth hormone gene haplotyes between domestic pigs and wild boars in Japan
- S. Yoshikawa\* and Y. Mizoguchi
- **43:** Genetic characterization of wild boar populations in Japan, based on SRY gene haplotypes S. Konishi\*, S. Kitahara, and Y. Mizoguchi
- 44: Influence of manatee diving on watercraft collision risk
- H. H. Edwards\*, J. Martin, C. J. Deutsch, R. G. Muller, S. M. Koslovsky, A. J. Smith, and M. E. Barlas
- 45: Peripheral isolation promotes diversification while increasing risk of extirpation among North American red squirrels
- A. G. Hope\*, K. C. Bell, F. Salazar-Miralles, J. L. Malaney, and J. A. Cook
- 46<sup>E™</sup>: Resistance of cotton mice (*Peromyscus gossypinus*) to pigmy rattlesnake (*Sistrurus miliarius*) venom
- S. A. Smiley-Walters\*, T. M. Farrell, and H. L. Gibbs
- 47: De novo identification of transposable elements recovers lineage-specific transposable element families
- R. N. Platt\* and D. A. Ray
- 48: Preliminary data on the taxonomic status of the Everglades mink (Neovison vison evergladensis)
- P. Hapeman
- **49**<sup>E</sup>: Using fecal DNA to examine social structure in the North American porcupine C. Pitz\* and E. L. Barthelmess
- 50<sup>E</sup>: Drivers of morphological diversity in *Peromyscus leucopus* populations of northern Michigan
- J. Baumgartner\* and S. Hoffman
- **51<sup>E</sup>: Ontogenic development of** *Akodon montensis*: a geometric morphometric approach G. Hernandez\*, S. Garcia, M. Winters, and N. U. de la Sancha
- **52<sup>E</sup>: Cranial ontogenetic variation patterns in** *Oligoryzomy nigripes* **from eastern Paraguay** M. Winters\*, S. Garcia, G. Hernandez, and N. U. de la Sancha
- 53<sup>E</sup>: Seasonal sex ratio variation of Gray Bats (*Myotis grisescens*) near a hibernaculum in southwest Missouri
- D. Green\*, C. Gerdes, and L. Robbins
- **54: Changes in distribution and phenology of mammals in the Greater Gila Ecosystem** A. K. Jones\* and J. A. Cook
- **55: Investigating nutritional status of the West Indian manatee (***Trichechus manatus***)** G. A. Alvarez\*, R. L. Cimino, R. K. Bonde, and J. P. Avery
- **56<sup>E</sup>: Antler and body size in black-tailed deer: retrospective analysis of cohort effects** J. C. Thalmann\*, R. T. Bowyer, K. A. Aho, F. W. Weckerly, and D. R. McCullough
- 57: Synchronous changes in bush and rock hyrax abundances over 13 years in the Matopos, Zimbabwe
- R. E. Barry\*, N. Chiweshe, and P. J. Mundy
- 58: Body size and reproductive characteristics of deer mice in anthropogenic and native habitats in Kansas
- G. A. Kaufman\* and D. W. Kaufman
- 59<sup>E</sup>: Intra- vs. Inter- generational tradeoffs in mammalian life histories
- J. F. Moore, C. P. Wells, D. H. Van Vuren, and M. K. Oli\*

### SATURDAY, JUNE 13TH, POSTER SESSION I -GRAND BALLROOM 5-

**60<sup>E</sup>: Molecular systematics of Geomys based on two nuclear and two mitochondrial genes** E. K. Roberts, E. Gomez, S. Ayers, J. Q. Francis\*, and R. D. Bradley

61<sup>E</sup>: The prevalence of *Borrelia burgdorferi* in prairie dependent rodent species of northern Illinois

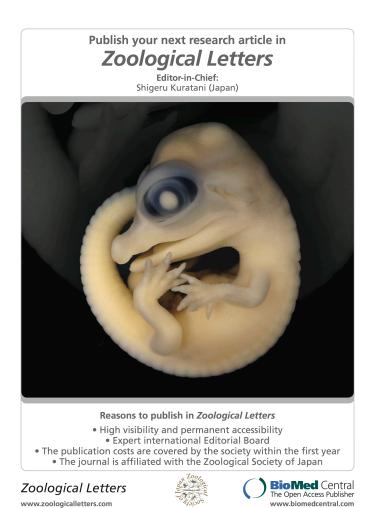
A. L. Rodgers\*, H. M. Pehl, M. V. Hoefer, and S. M. Beckmann

**62<sup>E</sup>: Prevalence of** *Baylisascaris procyonis* in Southern California paratenic hosts E. Kincaid\*, E. Rickards, S. West, and M. Ingle

**63: Genetic variation and subspecific status of the grey wolf (***Canis Iupus***) in Saudi Arabia** T. C. Bray, O. B. Mohammed, T. M. Butynski, T. Wronski, M. A. Sandouka, and A. N. Alagaili\*

5:30 PM	Open			
6:00 PM	Student Mixer – River Terrace 1 & River Deck 1			
6:00 PM	Fieldtrip – Catty Shack Ranch Wildlife Sanctuary			

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## SUNDAY, JUNE 14TH, PLENARY SESSION II -GRAND BALLROOM 4-

6:00 AM	17th Annual Gordon L. Kirkland Memorial Run/Walk for Research – start at Hyatt Regency Riverfront Jacksonville		
7:00 AM	Registration – Grand Ballroom Foyer		
8:00 AM	Welcome & Announcements President-Elect Robert Sikes		
8:00 AM	2013 Joseph Grinnell Award 64: Towards a training research program in arid land mammals R. A. Ojeda		
8:45 AM	2014 Joseph Grinnell Award 65: Multi-use management of lands in southeastern New Mexico: impacts of "development" on flora and fauna T. L. Best		
9:30 AM	Break – Grand Ballroom Foyer		
10:00 AM	Aldo Leopold Award 66: The role of biogeography in promoting the conservation of mammalian diversity in the Philippines L. R. Heaney*, D. S. Balete, and E. A. Rickart		
10:45 AM	C. Hart Merriam Award 67: Eating and not dying: how mammalian herbivores cope with plant toxins M. D. Dearing		
11:30 AM	Group Photo – River Deck 2		
11:45 AM	Lunch – On Your Own		
1:15 PM	Thematic Session II: Methods in Disease Ecology – Grand Ballroom 4		
1:15 PM	Technical Sessions 3 & 4 - Grand Ballrooms 3 & 6		

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## SUNDAY, JUNE 14TH, AFTERNOON SESSIONS

Session	Thematic Session II: Methods in Disease Ecology	Technical Session 3: Behavior	Technical Session 4: Population Ecology
Room	Grand Ballroom 4	Grand Ballroom 3	Grand Ballroom 6
Moderator	Matthew R. Mauldin	John Scheibe	Karen E. Munroe
1:15 PM	68: Assessing monkeypox prevalence in small mammal communities at the human-animal interface in DR Congo J. B. Doty*, J. Malekani, L. Kalemba, W. T. Stanley, B. Monroe, Y. Nakazawa, M. R. Mauldin, A. McCollum, L. Osadebe, N. Gallardo-Romero, M. Reynolds, I. K. Damon, and D. S. Carroll	71 <sup>E</sup> : The role of prescribed fire in a region recently recolonized by black bears D. M. Techentin* and W. S. Fairbanks	77 <sup>E</sup> : Occupancy and distribution of carnivores within the Chernobyl Exclusion Zone S. C. Webster*, M. E. Byrne, C. Love, S. L. Lance, T. Hinton, and J. C. Beasley
1:30 PM		72 <sup>E**</sup> : Differences in day- roost habitat characteristics of <i>Artibeus</i> <i>lituratus</i> , between two disparate landscapes G. D. Langlois*, S. Fernandez, and R. D. Stevens	78 <sup>TA</sup> : The absent niche: a historical perspective on the ecology of <i>Enhydra lutris</i> in California E. A. Elliott Smith*, M. T. Tinker, M. G. Hylkema, E. L. Whistler, and S. D. Newsome
1:45 PM	69: Laboratory investigations of pouched rats ( <i>Cricetomys</i> ) and dormice ( <i>Graphiurus</i> ) as potential monkeypox reservoir species C. L. Hutson*, N. Gallardo-Romero, Y. J. Nakazawa, V. A. Olson, R. L. Regnery, J. Self, S. Weiss, Z. Braden, C. Hughes, J. Malekani, E. Jackson, M. Tate, K. L. Karem, T. E. Rocke, J. E. Osorio, I. Damon, and D. S. Carroll	73T <sup>A**</sup> : Socio-spatial organization and kin structure in ocelots from integration of camera trapping and noninvasive genetics T. W. Rodgers*, J. Giacalone, E. J. Heske, J. E. Janečka, P. A. Jansen, and R. L. Schooley	79: Comparative Andean small mammal ecology and additional records of mammals from Guandera Biological Reserve, Ecuador T. E. Lee, Jr.*, A. R. Ritchie, S. Vaca-Puente, A. Camacho, and S. F. Burneo
2:00 PM	Presentation TAHonoraria or	74 <sup>E</sup> : Territorial calls analysis insights in the Broad Tailed Bat ( <i>Nyctinomops laticaudatus</i> ) F. J. Montiel-Reyes*, K. Bohn, and J. Ortega	80: Influence of pine forest fragmentation on southeastern fox squirrel (Sciurus niger) occupancy patterns J. T. Pynne* and A. J. Edelman

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## **SUNDAY, JUNE 14TH, AFTERNOON SESSIONS**

2:15 PM	70**: Bats, bedbugs, and Chagas disease: an olinguito connection C. M. Pinto* and K. M. Helgen	75: Effects of coyotes on sympatric mesopredator activity patterns T. Forrester, M. C. Baker-Whatton*, R. Kays, A. Parsons, R. Costello, L. Kalies, and J. Millspaugh	81 <sup>TA</sup> : The effects of urbanization on genetic variation in the Cotton mouse, <i>Peromyscus gossypinus</i> S. M. Beckmann* and M. S. Gaines
2:30 PM		76 <sup>E</sup> : Long-term radio tracking of pangolin SM. Sun* and K. JC. Pei	82: Risk assessment of roadway crossings in radio-collared mule deer on the Air Force Academy C. W. Burney, S. A. Christensen, and E. T. Unangst, Jr.*
2:45 PM	Break – Grand Ballroom Foyer		
3:15 PM	Members Meeting II – Grand Ballroom 4		
4:45 PM	Town Hall Meeting: ASM – The Next 100 Years – Grand Ballroom 4  Moderator: Marjorie D. Matocq		
5:30 PM	Open		
6:00 PM	Picnic – Fionn MacCool's		

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#### MONDAY, JUNE 15TH, MORNING SESSIONS

7:00 AM	Registration – Grand Ballroom Foyer			
8:00 AM	Technical Sess	ions 5, 6, and 7 – Grand Ballr	ooms 4, 3, and 6	
Session	Technical Session 5: Conservation	Technical Session 6: Biogeography	Technical Session 7: Community Ecology	
Room	Grand Ballroom 4	Grand Ballroom 3	Grand Ballroom 6	
Moderator	Aaron N. Facka	Noe U. de la Sancha	John A. Yunger	
8:00 AM	OPEN	88 <sup>E**</sup> : Using bat flies to examine bat dispersal in an island system K. Speer* and D. Reed	94: Spatio-temporal dynamics of mammals in a woody encroached southern African savannah J. R. Soto-Shoender*, R. A. McCleery, D. C. Gwinn, W. M. Giuliano, and A. Monadjem	
8:15 AM	83: Sanctuary in city: a high-density Formosan Reeves' muntjac population in an isolated tropical urban forest YY. Ho, CY. Huang, JY. Ho, MH. Hsu, JM. Tsao, YL. Huang, SY. Liang, SH. Chen, HY. Wang, ST. Hsu, CJ. Tan, HC. Lee, and HW. Chang*	89 <sup>E**</sup> : Phylogeography of the Himalayan wood mouse ( <i>Apodemus gurkha</i> ) in Central Nepal N. Pradhan*, A. N. Sharma, A. M. Sherchan, S. Chhetri, and C. W. Kilpatrick	95 <sup>E</sup> : Browsing, bioturbation and biodeposition by <i>Brachylagus</i> : burrowing influences the environment through multiple pathways M. A. Parsons, T. Barkley, J. L. Rachlow*, J. Johnson-Maynard, T. R. Johnson, C. Milling, J. Hammel, and I. Leslie	
8:30 AM	84: Ranging patterns and habitat use of striped hyaenas ( <i>Hyaena hyaena syriaca</i> ) in Lebanese human-dominated landscapes M. R. Abi-Said*, R. A. Sadek, and N. Leader-Williams	90: Spatiotemporal diversification of a low-vagility Neotropical mammal clade (short-tailed opossums, Didelphidae: <i>Monodelphis</i> ) S. E. Pavan*, S. A. Jansa, and R. S. Voss	96 <sup>TA,E</sup> : Niche compression enhances competition between two reintroduced carnivores P. J. Manlick* and J. N. Pauli	
8:45 AM	85: Bats and rats: Mammal communities and prescribed fire in the southern Appalachians A. Edelman*, J. Stober, and J. Johnson	91: Cryptic shrew diversity and fine-scale endemism on the Asian continental shelf T. C. Demos*, A. S. Achmadi, T. C. Giarla, H. Handika, Maharadatunkamsi, K. C. Rowe, and J. A. Esselstyn	97 <sup>E**</sup> : Does seed dispersal by olive baboons affect germination of an invasive cactus in central Kenya? AM. C. Hodge* and J. R. Goheen	
9:00 AM	86 <sup>TA</sup> : People homogenize how wolves but not cougars use the landscape A. T. Ford	92 <sup>E**</sup> : Zoogeography of bats from Ecuador J. P. Carrera-E.*, C. J. Phillips, and R. J. Baker	98: Anti-androgenic effects of fungicides on small mammals inhabiting grape vineyards in western Xinjiang Province, China S. R. Sheffield*, J. A. Yunger, H. Lin, and X. Lu	

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#### MONDAY, JUNE 15TH, MORNING SESSIONS

9:15 AM	87: Is the Homosassa shrew naturally rare in most habitats? K. D. Teets, K. M. Enge, T. J. Doonan*, and M. P. Tucker	93 <sup>E</sup> : The phylogeography of endemic Sulawesi squirrels generated from high throughput sequencing of museum specimens M. T. R. Hawkins*, J. A. Leonard, K. M. Helgen, M. M. McDonough, C. A. Hofman, L. L. Rockwood, and J. E. Maldonado	99: 300 ma of species co- occurrence patterns reveal a shift in community structure in the Holocene S. K. Lyons*, K. L. Amatangelo, A. K. Behrensmeyer, A. Bercovici, J. L. Blois, M. Davis, W. A. DiMichele, A. Du, J. T. Eronen, J. T. Faith, G. R. Graves, N. Jud, C. Labandeira, C. Looy, B. McGill, J. H. Miller, D. Patterson, S. Pineda-Munoz, R. Potts, B. Riddle, R. Terry, A. Tóth, W. Ulrich, A. Villaseñor, J. W. Williams, S. Wing, H. Anderson, J. Anderson, D. Waller, and N. J. Gotelli
9:30 AM		Break – Grand Ballroom Foye	r
9:50 AM	Symposium I: The Last Remaining Caribbean Mammals: Conservation Priorities and the Historical Context of Extinctions in an Island Biodiversity Hotspot, Part I – Grand Ballroom 4		
<sup>∟</sup> Evaluated	Presentation <sup>IA</sup> Honoraria or	Travel Award **Grants-In-A	Aid or Fellowship *Presenter

## MONDAY, JUNE 15TH, SYMPOSIUM I THE LAST REMAINING CARIBBEAN MAMMALS: CONSERVATION PRIORITIES AND THE HISTORICAL CONTEXT OF EXTINCTIONS IN AN ISLAND BIODIVERSITY HOTSPOT, PART I – GRAND BALLROOM 4

9:50 AM	Welcome & Introduction N. S. Upham
9:50 AM	100: The last ones standing: why mammalogists should care about Caribbean bats L. M. Dávalos
10:10 AM	101: DNA barcoding of bats from the Dominican Republic: implications to Neotropical biodiversity  B. K. Lim*, L. O. Loureiro, N. S. Upham, and J. L. Brocca
10:30 AM	102: Cuba's endemic mammals: current biodiversity, invasive species, and conservation threats R. Borroto Páez
10:50 AM	103: Hispaniola's endemic mammals: current biodiversity, conservation threats and invasive species  J. L. Brocca*, W. Jolley, K. Swinnerton, J. L. Herrera, J. M. Nuñez-Miño, R. P. Young, S. T. Turvey, and R. J. Kennerley
11:10 AM	104: Assessing spatial habitat use of terrestrial and arboreal mammals in the Dominican Republic R. J. Kennerley*, M. A. C. Nicoll, S. J. Butler, J. L. Brocca, R. P. Young, and S. T. Turvey
11:30 AM	Panel Discussion L. M. Davalos, B. K. Lim, R. Borroto-Paez, J. L. Brocca, and R. J. Kennerley
11:50 AM	Lunch – On Your Own
1:10 PM	Symposium I – The Last Remaining Caribbean Mammals: Conservation Priorities and the Historical Context of Extinctions in an Island Biodiversity Hotspot, Part II – Grand Ballroom 4

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## MONDAY, JUNE 15TH, SYMPOSIUM I THE LAST REMAINING CARIBBEAN MAMMALS: CONSERVATION PRIORITIES AND THE HISTORICAL CONTEXT OF EXTINCTIONS IN AN ISLAND BIODIVERSITY HOTSPOT, PART II – GRAND BALLROOM 4

1:10 PM	Welcome & Introduction N. S. Upham
1:10 PM	105: Endangered Cuban hutias: population genetics and biogeography in the context of an evolutionary radiation N. S. Upham* and R. Borroto-Paez
1:30 PM	106: Fossil assemblages of cave-dwelling bats: tracking evolution and extinction in the Caribbean J. A. Soto-Centeno
1:50 PM	107: Endemic primate extinctions in the Greater Antilles S. B. Cooke*, A. Mychajliw, and L. B. Halenar
2:10 PM	108: Patterns of Quaternary evolution in Greater Antillean lipotyphlans S. T. Turvey*, A. Lamb, S. Brace, S. Peters, N. Crumpton, J. Hansford, I. Barnes, J. M. Nuñez-Miño, and R. P. Young
2:30 PM	109: The evolutionary history of extinct Caribbean mammal radiations: insights from ancient DNA S. Brace*, S. T. Turvey, M. Weksler, M. L. P. Hoogland, and I. Barnes
2:50 PM	Panel Discussion N. S. Upham, J. A. Soto-Centeno, S. B. Cooke, S. T. Turvey, and S. Brace
3:10 PM	Break – Grand Ballroom Foyer
3:30 PM	Technical Sessions 8, 9, and 10 – Grand Ballrooms 4, 3, and 6

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#### MONDAY, JUNE 15TH, AFTERNOON SESSIONS

Session	Technical Session 8: Evolutionary Biology	Technical Session 9: Genetics	Technical Session 10: Natural History
Room	Grand Ballroom 4	Grand Ballroom 3	Grand Ballroom 6
Moderator	Adam W. Ferguson	Melina Del Real-Monroy	Ryan W. Norris
3:30 PM	110: High-contrast 3D imaging of fetal bats using microCT imaging J. M. Ryan*, K. Dormans, S. McMorris, and M. Riccio	118 <sup>E</sup> : MHC variation and genetic population structure of <i>Artibeus jamaicensis</i> in Mexico M. Del Real-Monroy* and J. Ortega	126 <sup>E</sup> : Status of swift foxes, Vulpes velox, in northwestern Texas G. C. Pavur*, P. S. Gipson, S. Ghosh, C. D. Laws, and M. De Leon
3:45 PM	111 <sup>E**</sup> : Evolution of the zonadhesin gene depicts a unique history during the origin of Eutherian mammals E. K. Roberts*, D. M. Hardy, R. N. Platt II, C. D. Phillips, and R. D. Bradley	119 <sup>E</sup> : Microevolutionary analysis of large-scale dispersal patterns in the striped skunk ( <i>Mephitis mephitis</i> ) across Ohio M. Wentz* and S. Kolomyjec	127 <sup>E</sup> : Space use in a seasonal environment: antelope jackrabbits in the Sonoran Desert M. M. Altemus*, J. L. Koprowski, and D. E. Brown
4:00 PM	112 <sup>TA</sup> : Natural selection determines palate shape and allometry constrains palate dimensions in New World leaf-nosed bats S. A. DelSerra*, E. R. Dumont, K. E. Sears, and L. M. Dávalos	120: Molecular markers, modelling and morphometrics: Increasing our understanding of the platypus S. H. Kolomyjec	128 <sup>E</sup> : Biodiversity assessment of small mammals, ticks, and tick- borne pathogens in South Texas A. P. Galán*, H. A. Folmar, S. A. Hamer, T. Campbell, and J. E. Light
4:15 PM	113: Temporal patterns of diversification and disparity in opossums: a marsupial success story S. A. Jansa, J. F. Díaz-N., T. C. Giarla, E. E. Gutiérrez, S. E. Pavan, and R. S. Voss*	121: Population genomics of a global urban invader, the brown rat ( <i>Rattus norvegicus</i> ) J. Munshi-South	129 <sup>E**</sup> : Characteristics of fisher ( <i>Pekania pennanti</i> ) reproductive dens in the southern Sierra Nevada R. E. Green*, K. L. Purcell, C. M. Thompson, D. A. Kelt, and H. U. Wittmer
4:30 PM	114: Survey and implication of dental anomalies found in extant sloths (Order Pilosa) R. K. McAfee	122: Genetic variability of Abrothrix olivaceus (Rodentia, Sigmodontinae) among mainland and island populations of southern Chile R. E. Palma*, P. S. Zepeda, R. A. Cancino, and J. L. Celis	130 <sup>E</sup> : Photoreceptors of the Kangaroo Rat ( <i>Dipodomys</i> ordii) and implications for UV-vision and activity patterns S. Vrla*, B. McDonald, B. Geiger, and J. Macedonia
4:45 PM	skeletal indices of aggression is widespread in Carnivora J. S. Morris* and D. R. Carrier	A. Schroeder, and M. D. Matocq	131: Visual modeling of the kangaroo rat ( <i>Dipodomys ordii</i> ) and implications for UV communication  B. McDonald*, A. Wells, and J. Macedonia

<sup>&</sup>lt;sup>E</sup>Evaluated Presentation

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<sup>\*</sup>Presenter

#### MONDAY, JUNE 15TH, AFTERNOON SESSIONS

5:00 PM	geometric-morphometrics analysis of integration in Rodents	124 <sup>E</sup> : Inferring population structure of depleted eastern tropical Pacific spinner dolphins ( <i>Stenella</i> <i>longirostris</i> ) using RAD-seq data M. S. Leslie*, F. I. Archer, W. F. Perrin, and P. A. Morin	132: The giant woolly rats of New Guinea (Muridae: <i>Mallomys</i> ): systematics, biogeography, and natural history K. M. Helgen, E. G. Veatch*, and L. E. Helgen
5:15 PM	117 <sup>E,TA</sup> : Dental ecomorphology and evolution of Malagasy rodents (Muroidea: Nesomyinae) J. S. Keller*, S. A. Jansa, and D. L. Fox	125: Improving non-model mammalian genome assemblies using optical mapping technology P. A. Larsen*, C. R. Campbell, S. J. Brown, J. Shelton, J. Rogers, and A. D. Yoder	OPEN
5:30 PM	Open		
6:00 PM	Board of Directors Meeting II – River Terrace 2		
6:00 PM	Poster Session II & Social – Grand Ballroom 5		

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#### MONDAY, JUNE 15TH, POSTER SESSION II -GRAND BALLROOM 5-

133: Adaptive roost selection by Rafinesque's big-eared bats (Corynorhinus rafinesquii) in relation to management history

S. C. Loeb

134<sup>E,TA</sup>: Nectar bats reliance on visual, olfactory, and acoustic cues in flower choice M. Novillo\* and B. S. Arbogast

135<sup>E,TA</sup>: Vocal ontogeny in grasshopper mice (*Onychomys*)

M. Wilson\*, D. Zhao, and B. Pasch

136: How ecological variables influence social network structure and fitness in Octodon degus K. A. Carroll\*, L. Ebensperger, and L. D. Hayes

137: Comparative phylogeography of a Beringian mammal-parasite assemblage

S. R. Gallagher \*, G. M. Haas, and K. E. Galbreath

138<sup>E</sup>: Exploring arvicoline colonization history across Beringia: a molecular phylogenetic analysis of a tapeworm species complex

G. M. Haas\* and K. E. Galbreath

139: Phylogeography of Mongolian pika

S. W. Liphardt\*, K. C. Bell, and J. A. Cook

140<sup>E</sup>: Phylogeography of the North American meadow vole (*Microtus pennsylvanicus*) D. Jackson\* and J. A. Cook

141: Small mammal communities in experimentally manipulated sites within the Flint Hills tallgrass prairie

D. W. Kaufman\*, G. A. Kaufman, and D. M. Kaufman

142: Effects of deer exclosure fences on population estimates and niche breadths of small mammals

D. Byman\* and A. Ahmetbeg

143<sup>E</sup>: Time as a niche dimension: an examination of temporal partitioning in two Paraguayan bat communities

C. J. Garcia\* and R. D. Stevens

144: Increasing the dimensions of human diversity: approaching the next 100 years of North American mammalogy

D. M. Kaufman

145<sup>E</sup>: Regional differences in bobcat (*Lynx rufus*) occupancy in Connecticut

K. Testerman\* and P. Hapeman

146<sup>E</sup>: Small mammals and associated ectoparasites occupying distinct south Texas ecoregions H. A. Folmar\*, A. P. Galán, T. Campbell, and J. E. Light

147<sup>E</sup>: Den use and activity patterns of Spilogale putorius in the Talladega National Forest, Alabama

T. Sprayberry\* and A. Edelman

148: Inferring the demographic history of Florida black bears: fragmentation, bottlenecks or both?

C. Smith\*, M. Oli, W. McCown, B. Scheick, J. Dixon, and J. D. Austin

149<sup>E</sup>: Phylogeography and population genetics of North American wolverine (*Gulo gulo*) D. M. Krejsa\*, J. A. Francés, and J. A. Cook

150: Effective rehabilitation techniques contributing to successful release of the Florida Panther (Puma concolor corvi)

S. Tribuzio\*, K. Ziegler-Meeks, and I. Burden

<sup>L</sup>Evaluated Presentation <sup>1A</sup>Honoraria or Travel Award \*\*Grants-In-Aid or Fellowship \*Presenter

#### MONDAY, JUNE 15TH, POSTER SESSION II -GRAND BALLROOM 5-

**151: Drinking water as a source of environmental DNA for the detection of terrestrial species** T. W. Rodgers\* and K. E. Mock

152<sup>E</sup>: Patterns of genetic diversity in wild and domesticated cane rats (*Thryonomys swinderianus*) from Southwestern Nigeria

O. M. Coker\*, J. D. Austin, C. L. Pylant, and A. O. Omonona

153<sup>E</sup>: Evaluating performance of GPS technology to quantify space use by a semi-fossorial small mammal

L. A. McMahon\*, J. L. Rachlow, J. S. Forbey, L. A. Shipley, and D. H. Thornton

154: A novel break-away device for use with radiocollars on small carnivores

R. E. Green\*, K. L. Purcell, and C. M. Thompson

155: Effects of habit disturbance on small mammal communities associated with Kibale National Park, Uganda

J. S. Salzer\*, D. S. Carroll, J. C. Kerbis Peterhans, I. B. Rwego, A. J. Williams-Newkirk, S. Ockers, I. K. Damon, and T. R. Gillespie

156: Quartz sand and the origin of crown cementum in horses

J. A. O'Sullivan\*, R. C. Hulbert, Jr., and A. Rincon

157<sup>E</sup>: Genetic microstructure as possible explanation of philopatry

E. F. Aguilera Miller\* and S. T. Álvarez-Castañeda

158: Phylogenetic analysis of *Myotis peninsularis* (Chiroptera: Vespertilionidae) blending geometric morphometrics and molecular datasets

L. A. Nájera-Cortazar\*, S. T. Álvarez-Castañeda, and E. De Luna

159<sup>E</sup>: An analysis of pleiotropic effects of the agouti gene in the genus *Peromyscus* J. Magri\* and V. Hayssen

160: Ontogenic variation of *Akodon montensis*, an extremely successful rodent in the Atlantic Forest

S. Garcia\*, G. Hernandez, M. Winters, and N. U. de la Sancha

161<sup>E</sup>: Cranial morphology of the variegated squirrel (*Sciurus variegatoides*)

M. L. Argo\* and A. A. Castellanos

162: A morphological phylogeny of the genus *Molossus* (Chiroptera, Molossidae)

L. O. Loureiro\*, R. Gregorin, and F. A. Perini

163: Taxa centered versus content centered view of mammalogy from undergraduate students

V. S. Quinn\* and P. A. Zollner

164<sup>E</sup>: Habitat use on a fragmented landscape by *Peromyscus polionotus*, an early successional species

E. H. Evans\* and M. Cawthorn

165: The future of ASM meetings: 2016 and beyond

C. W. Thompson\*, S. A. Jansa, K. C. Bell, B. R. Blood, M. J. Hamilton, J. D. Hanson, L. E. Helgen, J. E. Light, S. C. Loeb, V. L. Mathis, R. N. Platt II, M. A. Revelez, M. H. Schadler, W. P. Smith, K. A. Speer, P. A. Zollner, and T. Ballard

166<sup>E</sup>: Population genomics of rats in New York City

M. A. Combs\* and J. Munshi-South

167<sup>E</sup>: Evaluating scat detection rates and methods of detection for quantifying wild pig (*Sus scrofa*) abundance

D. A. Keiter\*, F. L. Cunningham, O. E. Rhodes, Jr., and J. C. Beasley

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#### MONDAY, JUNE 15TH, POSTER SESSION II -GRAND BALLROOM 5-

168: Long-term decline of thirteen-lined ground squirrel populations in Colorado shortgrass steppe

P. Stapp\* and M. D. Lindquist

**169: Distribution of nine-banded armadillo and gopher tortoise burrows in south Georgia** B. A. Mixon\*, C. M. McDonough, C. D. Anderson, J. M. Lockhart, P. C. Vincent, and G. W. Lee

170<sup>E</sup>: Factors influencing mule deer fawn survival

D. R. Walsh\*, K. M. Stewart, B. K. Johnson, and M. J. Wisdom

171<sup>E</sup>: Patterns of genetic diversification in a widely distributed species of bat, *Molossus molossus* 

L. L. Lindsey\* and L. K. Ammerman

172: Environment and demography predict seroprevalence of pseudorables in feral swine populations of Florida

A. Carr\*, F. Hernández, M. Milleson, and S. Wisely

173<sup>E</sup>: Are raccoons (*Procyon lotor*) good sentinels of metal contamination? – A wildlife health perspective

F. Hernández\*, R. Oldenkamp, S. Webster, S. Wisely, J. Beasley, and L. Farina

174: Body temperature rhythms of Arabian oryx (*Oryx leucoryx*) in the extreme desert of the Empty Quarter and Mahazat as-Sayd, Saudi Arabia

A. N. Alagaili\*, M. F. Bertelsen, O. B. Mohammed, K. Ismael, P. R. Manger, and N. C. Bennett

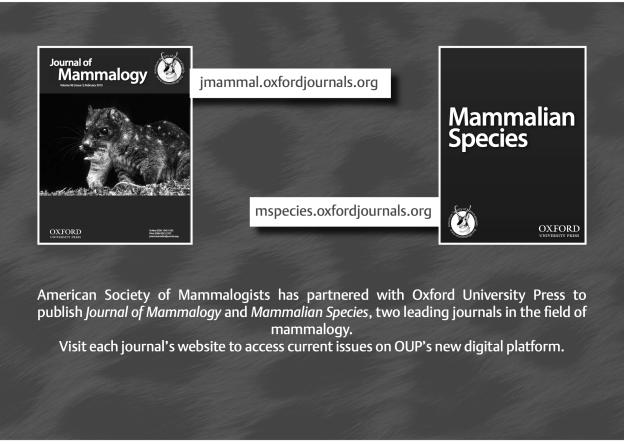
175<sup>E,TA</sup>: Mitogenomic diversity of Procyonidae genera (Mammalia, Carnivora)

M. T. N. Tsuchiya\*, K. M. Helgen, K.-P. Koepfli, L. L. Rockwood, and J. E. Maldonado

7:30 PM Auction & Raffle – Grand Ballroom 5

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#### TUESDAY, JUNE 16TH, MORNING SESSIONS

7:00 AM	Regis	stration – Grand Ballroom Fo	oyer
8:00 AM	Technical Sessions 11, 12, and 13 – Grand Ballrooms 4, 3, and 6		
Session	Technical Session 11: Conservation	Technical Session 12: Behavior	Technical Session 13: Wildlife Disease
Room	Grand Ballroom 4	Grand Ballroom 3	Grand Ballroom 6
Moderator	Andrew J. Edelman	R. Terry Bowyer	Helen K. Pigage
8:00 AM	176 <sup>E**</sup> : Diversity, distribution and conservation of Holarctic ground squirrels ( <i>Urocitellus</i> ): new phylogenetic insights B. S. McLean*, D. J. Jackson, and J. A. Cook	182: What impacts the global home ranges of wild pigs (Sus scrofa)? S. J Garza* and C. Burdett	188: The relationship between <i>Baylisascaris</i> procyonis and genetic variation in <i>Procyon lotor</i> M. Ingle*, K. Hernandez, E. Kincaid, Y. Lee, T. Quezada, E. Rickards, S. West, and S. Dunbar
8:15 AM	177 <sup>E</sup> : Population level effects of invasive fire ants on cotton rats A. K. Long*, L. M. Conner, L. L. Smith, and R. A. McCleery	183 <sup>E,TA</sup> : Species differences in close-distance mating vocalizations in grasshopper mice (Onychomys) D. Zhao*, M. Wilson, and B. Pasch	189: Visiting an old friend: using recent data to revise expectations of white-nose syndrome spread S. P. Maher*, A. M. Kramer, J. T. Pulliam, K. E. Langwig, A. M. Kilpatrick, W. F. Frick, and J. M. Drake
8:30 AM	178 <sup>TA</sup> : Conservation translocations as experiments: using the reintroduction of a carnivore to understand its habitat requirements A. N. Facka*, R. Callas, D. Clifford, T. Engstrom, L. Finley, S. M. Matthews, K. P. Smith, R. C. Swiers, J. S. Yaeger, and R. A. Powell	184: Behavioral strategies used by Neotropical singing mice (Scotinomys) to maximize sound propagation B. Pasch	190: The role of cutaneous fatty acids in the resistance of <i>Eptesicus fuscus</i> to WNS C. L. Frank*, R. Ravenelle, M. Ingala, and K. Howard
8:45 AM	179: A model based data- fusion approach to estimate occurrence probabilities S. Ghosh*, P. S. Gipson, G. C. Pavur, C. D. Laws, and M. T. De Leon	185: Effects of predator cues on vertical foraging habits of white-footed mice C. Stark and J. A. Yunger*	191: Age, prion protein and chronic wasting disease status of a mule deer (Odocoileus hemionus) population J. C. Pigage*, H. K. Pigage, and J. M. Bono
9:00 AM	180 <sup>E</sup> : Habitat selection by mule deer within migration corridors in Nevada M. E. Blum*, K. M. Stewart, T. Dilts, and C. Schroeder	186 <sup>E</sup> : Can state-dependent foraging alter endocrine-energy relationships? B. R. Jesmer*, J. R. Goheen, M. J. Kauffman, and K. L. Monteith	192: The past and future of bat research in West Africa R. W. Norris*, J. Decher, and J. Schaer

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#### **TUESDAY, JUNE 16TH, MORNING SESSIONS**

9:15 AM	181 <sup>E</sup> : Live capture and ownership of lemurs in Madagascar: extent and conservation implications K. E. Reuter*, H. Randell, A. R. Wills, and B. J. Sewall	density on sexual segregation by North American Elk	193 <sup>E</sup> : Small mammal interactions with invasive species: implications for tick-borne disease risk A. A. Castellanos*, S. A. Hamer, L. D. Auckland, M. E. Morrow, and J. E. Light
9:30 AM	В	reak – Grand Ballroom Foye	r
10:00 AM	Symposium II: Advanced Tools for Collection-Based Mammalogy  — Grand Ballroom 4		

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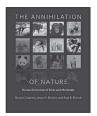
#### TUESDAY, JUNE 16TH, SYMPOSIUM II ADVANCED TOOLS FOR COLLECTION-BASED MAMMALOGY -GRAND BALLROOM 4-

10:00 AM	Welcome & Introduction M. Leslie
10:00 AM	194: Museums, biodiversity, and the Anthropocene K. M. Helgen
10:15 AM	195: Population genomics and museum specimens M. W. Nachman*, M. Phifer-Rixey, and K. Bi
10:30 AM	196: High-resolution CT scanning and 3-D cranial analyses reveal hidden anatomical, phylogenetic, and functional information J. J. Flynn*, C. Grohé, M. Spaulding, and Z. J. Tseng
10:45 AM	197: Reconstructing animal foraging ecology and movement patterns with stable isotope analysis of archived samples C. M. Kurle
11:00 AM	198: Historical and present day mercury contamination from gold mining in three trophic levels of bats  A. Kumar*, T. Divoll, C. H. Lamborg, P. M. Ganguli, and F. A. Trama
11:15 AM	Panel Discussion K. M. Helgen, M. W. Nachman, J. J. Flynn, C. M. Kurle, and A. Kumar
12:00 PM	Lunch – On Your Own
1:30 PM	Thematic Session III: Conservation of Florida Mammals – Grand Ballroom 4
1:30 PM	Technical Sessions 14, 15, and 16 – Grand Ballrooms 3, 6, and 2

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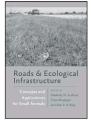


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#### TUESDAY, JUNE 16TH, AFTERNOON SESSIONS

Session	Thematic Session III: Conservation of Florida Mammals	Technical Session 14: Behavior	Technical Session 15: Community Ecology	Technical Session 16: Systematics
Room	Grand Ballroom 4	Grand Ballroom 3	Grand Ballroom 6	Grand Ballroom 2
Moderator	Kelly A. Speer	Barbara Blake	Susan C. Loeb	Nancy D. Moncrief
1:30 PM	199: Conspicuous genetic structure belies recent dispersal in an endangered beach mouse ( <i>Peromyscus polionotus trissyllepsis</i> ) J. D. Austin*, J. A. Gore, D. U. Greene, and C. Gotteland	205": Spatial variation in population density affects dispersal behavior in brush mice K. E. Mabry*, C. M. Wojan, and S. M. Knapp	OPEN	216 <sup>E</sup> : Morphometric and genetic variation in eight breeds of Ethiopian camels ( <i>Camelus dromedarius</i> ) Y. W. Legesse, C. D. Dunn*, M. R. Mauldin, G. R. Rowden, N. Ordòñez-Garza, S. A. Mohammed, M. K. Yusuf, G. Perry, and R. D. Bradley
1:45 PM	200 <sup>E</sup> : Does historical diversity contribute to regional vulnerability in Florida mice ( <i>Podomys floridanus</i> )? A. Marx*, T. J. Doonan, C. Pylant, and J. D. Austin	206 <sup>E</sup> : Resource selection of a native grazer in nutritionally heterogenous grassland E. J. Raynor*, A. Joern, and J. M. Briggs	211 <sup>E</sup> : Survival and cause- specific mortality of white- tailed deer fawns in urban and rural areas C. R. Williamson*, T. C. Carter, and C. M. Stewart	217: A multi-locus history of Australo-Papuan rodents: Origins, biome transitions and species delimitation K. C. Rowe* and P. J. Smissen
2:00 PM	201 <sup>E</sup> : Home ranges and habitat selection of a recently colonized population of Florida black bears D. L. Karelus*, J. W. McCown, B. K. Scheick, M. van de Kerk, and M. K. Oli	207: Population genetics of two overlapping populations of tree squirrels ( <i>Sciuris</i> carolinesis and <i>S. niger</i> ) K. E. Munroe	212 <sup>E</sup> : Design of genetic population estimate and food preference studies of recolonizing black bears E. Artz*, W. S. Fairbanks, and S. Bales Lyda	218*: A new classification scheme for southern African gerbils ( <i>Gerbilliscus</i> ) based on genetic and morphological data M. M. McDonough*, K. M. Helgen, D. A. Schlitter, J. Bryja, and R. J. Baker
2:15 PM	before and after genetic introgression	208 <sup>E</sup> : Quantifying the effects of human food subsidies on black bear diet across Colorado R. Kirby*, M. W. Alldredge, and J. N. Pauli	functional diversity in a highly fragmented forest	

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#### TUESDAY, JUNE 16TH, AFTERNOON SESSIONS

2:30 PM	203: Reproduction and activity patterns in the Florida bonneted bat ( <i>Eumops floridanus</i> ) J. A. Gore*, H. K. Ober, J. Myers, A. Bailey, and R. A. McCleery	209 <sup>E</sup> : Denning ecology of American black bears ( <i>Ursus</i> <i>americanus</i> ) in southeast Oklahoma M. A. Pfander*, W. S. Fairbanks, and S. Lyda	214: Spatially heterogeneous impact of climate change on small mammals of montane California K. M. C. Rowe*, K. C. Rowe, M. W. Tingley, M. S. Koo, J. L. Patton, C. J. Conroy, J. D. Perrine, S. R. Beissinger, and C. Moritz	220: Diversity and systematics of South American rodents: transitioning into the genomics era E. P. Lessa*, J. A. Cook, G. D'Elia, and J. C. Opazo	
2:45 PM	204: Use of Florida hibernacula caves by tricolored bats and potential white-nose syndrome impacts J. A. Gore, K. J. Oxenrider, L. Smith, J. R. Mayersky, T. J. Doonan*, and M. P. Tucker	210 <sup>E</sup> : Foraging strategies of Perognathus flavus in a nutrient limited desert ecosystem J. D. Noble* and S. D. Newsome	215 <sup>E</sup> : A hard reset; shrub encroachment, habitat restoration, and mammalian diversity in longleaf pine sandhills W. W. Boone IV* and R. A. McCleery	221: The challenges of resolving a rapid radiation of Philippine shrews: Empirical and simulated phylogenomic approaches T. C. Giarla* and J. A. Esselstyn	
3:00 PM		Break – Grand	Ballroom Foyer		
		Special Seminar & Capstone Moderator  Vice President Tom Tomasi			
3:30 PM		Special Seminar – Grand Ballroom 4  222: Women in ASM  R. J. Rowe			
4:00 PM	Capstone – Grand Ballroom 4  223: A new era for biological conservation: the Smithsonian view  G. W. Clough				
5:00 PM	Open				
5:30 PM	Water Taxi Boarding to River City Brewing Begins – Jacksonville Landing				
6:00 PM	Closing Social & Awards Ceremony – River City Brewing Company				

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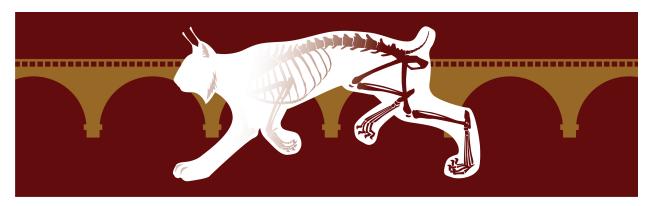
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#### **NOTES**

#### **SAVE THE DATE!!!**

### 96TH ANNUAL MEETING OF THE AMERICAN SOCIETY OF MAMMALOGISTS



 $ASM \cdot 2016 \cdot MPLS$ 

Please join us June 24-28, 2016, in Minneapolis, Minnesota for the 96th Annual Meeting of the American Society of Mammalogists. The conference will be held on the campus of the University of Minnesota, home of the Golden Gophers! Come learn about the latest advances in the study of mammals and interact with researchers and educators specializing in the biology of these fascinating animals. Come and enjoy everything the Land of 10,000 Lakes has to offer!

Dorm rooms will be available in residence housing. In addition, hotel blocks will be made available to meeting attendees. Detailed conference and registration information will be made available on the conference website, which will be posted on the "Meetings" tab of the ASM webpage (http://www.mammalsociety.org).

The scientific program will include contributed oral and poster presentations as well as symposia, plenary speakers, and workshops. A full social agenda is being planned that includes multiple mixers, an awards social, a picnic, our annual Run-for-Research, and fieldtrips. Details for these events will be made available on the conference website.

For more information about the 2016 meeting, contact the chair of the Program Committee, Cody Thompson, University of Michigan Museum of Zoology (734-615-2810 or cwthomp@umich.edu), local host, Sharon Jansa, University of Minnesota (612-624-6293 or jansa003@umn.edu), or Tony Ballard, Kansas State University Conference Services (785-532-2402 or tballard@k-state.edu).



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