



Animal Behaviour Society

**Behaviour 2019**

UNIVERSITY OF ILLINOIS CHICAGO

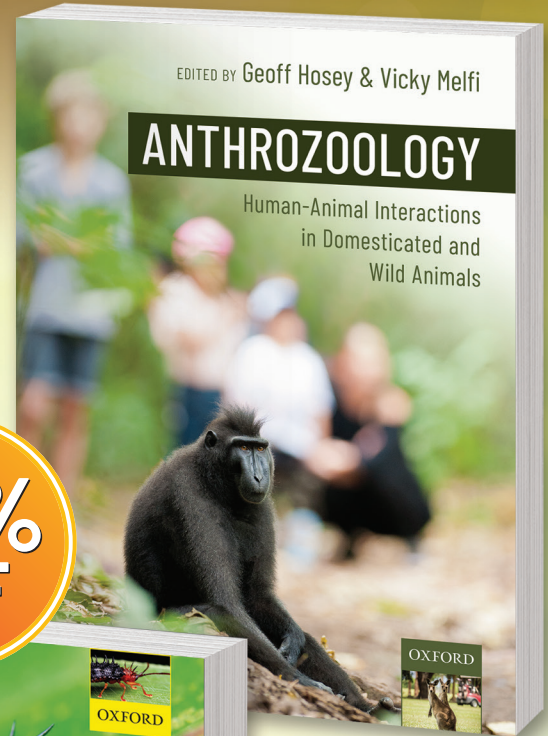
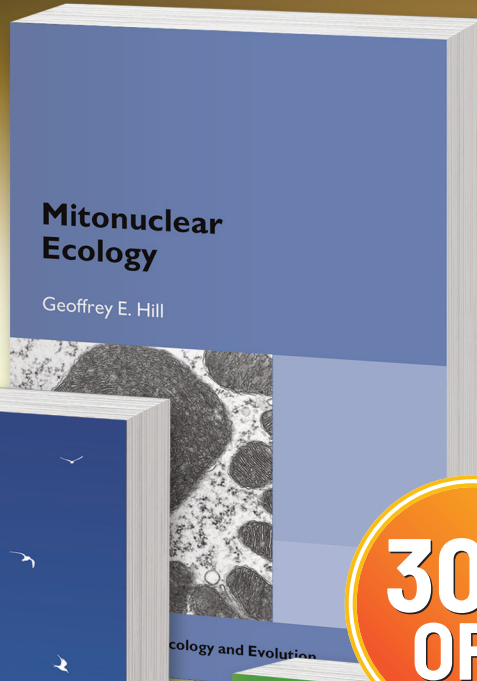
**CONFERENCE PROGRAM**



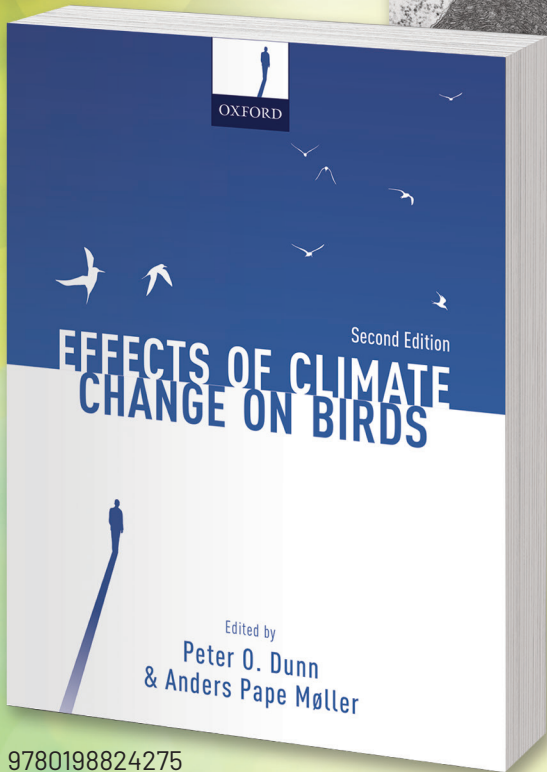
**UNIVERSITY OF ILLINOIS - CHICAGO**  
**JULY 23-27, 2019**

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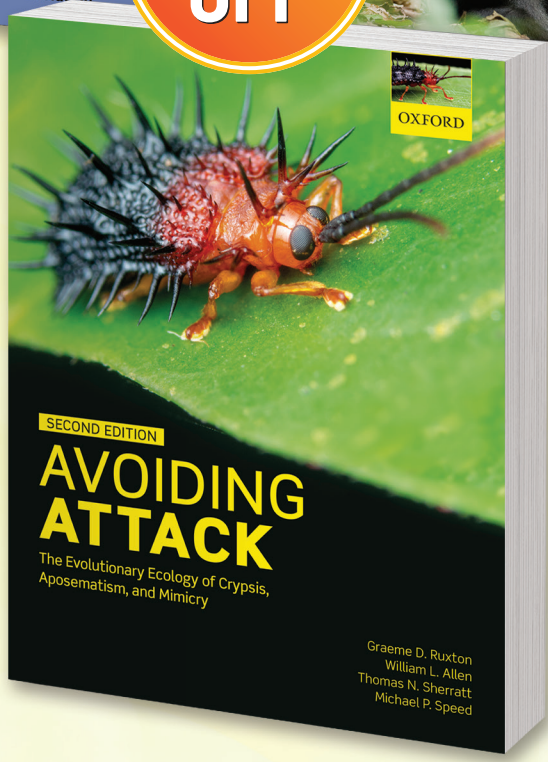
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**ICE** International Council of Ethologists



## GENERAL INFORMATION

### DATES

The joint meeting of the 56th Annual Conference of the Animal Behavior Society and the 36th International Ethological Conference, begins Tuesday, July 23rd and concludes Saturday, July 27th, 2019.

### REGISTRATION INFORMATION

The Registration Desk is located in the East Concourse as you walk into the Student Center East building. Registration will be open during the following hours:

Monday	6:00 pm - 8:00 pm
Tuesday	7:00 am - 8:00 pm
Wednesday	7:00 am - 8:00 pm
Thursday	7:00 am - 8:00 pm
Friday	8:00 am - 8:00 pm
Saturday	9:00 am - 4:00 pm

### INSTRUCTIONS TO TALK PRESENTERS

- Talks will be strictly timed by moderators to keep the concurrent sessions synchronous.
- Contributed Talks should be 12 minutes long. There will be 3 minutes allotted for questions & transition between speakers.
- All rooms will have both a Mac and PC connected to the presentation system.
- Important Note: You will not be able to connect your own computer to the projection system for a contributed or symposium talk.
- All rooms will have both a Mac and PC connected to the presentation system with the current version of Powerpoint and Keynote (macs).
- All presentations should be formatted for 16:9 aspect ratio. Power Point: Design -> Slide Size: Wide (16:9).
- Please note 'presenter view' will NOT be available.
- It is highly recommended that speakers bring their presentations on a jump drive to their sessions as back-up.
- All speakers are expected to visit the Speaker Ready room at least 4 hours before the scheduled presentation time (or as early as possible). Talks should be tested and the final version of your presentation should be saved onto the stations located in the Speaker Ready room (room 713) during the following hours:
  - Tuesday, July 23:** 6:30 pm - 8:00 pm
  - Wednesday, July 24 - Friday, July 26:** 8:00 am - 5:00 pm
  - Saturday, July 27:** 8:00 am - 11:00 am

### INSTRUCTIONS TO POSTER PRESENTERS

All posters will be displayed in the Inner Circle Space in the Student Center East building. There will be three official poster sessions: Wednesday, July 24; Thursday, July 25; Friday, July 26. Assigned poster numbers are listed in this program and in the online conference program (<http://program.abs2019.org>).

All posters must fit within an area no larger than 42" wide x 40" high. Presenters may hang up their poster on the day of their assigned session (beginning at 12:00 pm), and placed on the board with the correct number leaving the board number visible. Posters that are not removed by 10 am the following morning may be discarded. Mounting materials will be provided onsite.

Presenters are asked to stand by and present their poster from 8:00 pm - 9:30 pm during their assigned poster session.

### PRIVACY STATEMENT

Audio recording of presentations at ABS meetings is permitted only with prior approval of the speaker. Video recording may be allowed only under special circumstances with prior approval of the Program Officers, the Executive Committee and the speaker.

### WiFi ACCESS

WiFi is available for all conference attendees in the Student Center East building using the following UIC Guest Wireless accounts:

Login 1: absc\_2  
Password : has5con8

Login 2: absc\_3  
Password: com9swiv

### ONLINE/MOBILE PROGRAM

ABS attendees may access the online conference program using the following link: <http://program.abs2019.org>.

### CAMPUS HOUSING CHECK-IN

#### Courtyard Residence Hall (CTY)

If you have been assigned to Courtyard Residence Hall (CTY), check-in is located at the area desk of the building. CTY is located at 700 S. Halsted St., Second Level, Chicago, Illinois 60607. Check-in is available between 8:30am - 11:30pm. Upon arrival, let our front desk staff know you are here with the Animal Behavior Society Conference and they will provide all check-in information. All guests are required to show a photo ID at the time of check-in. Each guest will be assigned keys that they will use to enter the building and their rooms. A \$350 fee will be billed to you for any lost keys.

#### James Stukel Towers Residence Hall (JST)

If you have been assigned to the James Stukel Towers Residence Hall, check-in is located at the area desk of the building. JST is located at 718 W. Rutherford Street, Second Level, Chicago, Illinois 60607. Check-in is available between 8:30am - 11:30pm. Upon arrival, let our front desk staff know you are here with the Animal Behavior Society Conference and they will provide all check-in information. All guests are required to show a photo ID at the time of check-in. Each guest will be assigned keys that they will use to enter the building and their rooms. A \$350 fee will be billed to you for any lost keys.

### PARKING

Attendees will need to purchase UIC parking passes in person in the parking office located inside SSB (1200 W. Harrison, Suite 2620). Please note you will not be able to reserve passes prior to their arrival. Behaviour 2019 attendees can use the following lots: Nearest UIC Forum/JST dorms: Maxwell Street Parking Structure - 701 West Maxwell Street. Nearest Student Center East: Halsted/Taylor Parking Structure -760 West Taylor Street

Parking Fees: Weekday rate is \$15, Weekend rate is \$9

## WELCOME LETTER

Dear ABS/ICE Members and Friends,

We are pleased to welcome you to Chicago, Illinois for the 56th annual meeting of the Animal Behavior Society and joint meeting with the Ethological Congress. We look forward to hosting you on our campus at the University of Illinois, Chicago (UIC), which is the largest university in the Chicago area. Chicago is an ideal location with easy access from across the country and around the world.

Chicago welcomes more than 50 million visitors a year who come to enjoy the city's striking architecture as well as world-class museums, theaters, and restaurants. In the summer, visitors can also enjoy Chicago's beautiful lake front beaches and parks, street festivals, and outdoor concerts. The UIC campus is located just west of downtown Chicago's "loop" in the University Village neighborhood. It is a short walk to Greektown, Little Italy, Chinatown and the trendy West Loop neighborhood. Grant Park, Millennium Park and the Art Institute are less than two miles from campus. Transportation should be simple as the "Blue line" serves the campus (UIC-Halsted station) and connects UIC to downtown Chicago as well as O'Hare Field. Several bus lines also serve the campus.



We are looking forward to a diverse program, with some outstanding plenary speakers, symposia and workshops. Plenary speakers will include Gail Patricelli (University of California, Davis), Georgia Mason (University of Guelph), Amy Toth (Iowa State University) and local Keynote Tanya Berger-Wolf (University of Illinois, Chicago). Conference symposia include "Animal behavior on an urbanized planet", "Cross-taxa perspectives on behavior and developmental origins", "Proximate causes of complex sociality" and "Phenotypic plasticity". The ABS president's plenary will be given by John Swaddle (College of William and Mary).

Other highlights include the annual graduate student Allee Award session, the Charles H. Turner Workshop for undergraduates (by invitation), a pre-conference Outreach Fair, as well as Public Day (Saturday). The Pre-conference day also includes workshops on teaching and a workshop on "Weaving the future of animal behavior". Please take the time to look at the full list of programs and events as there is sure to be something for everyone!

The Behaviour 2019 conference will be intellectually stimulating, as well as a fun time to meet old friends and make new ones. Please check the mobile web app and meeting Twitter for updates and more details about events.

Please enjoy UIC campus and the beautiful city of Chicago, and, of course, the amazing research that will be presented. We are delighted you are here!



**Mary Ashley**  
Local Host



**Alison Bell**  
ABS Program Officer

## MEETING-RELATED AWARDS

### THE WARDER CLYDE ALLEE AWARD COMPETITION

The 2019 Warder Clyde Allee Session for Best Student Paper Competition will be held during the annual meeting. All eligible students and recent graduates were encouraged to participate. Any independent graduate student research (including, but not limited to, the doctoral dissertation) is suitable for the application. The work presented may be part of a larger collaborative effort, but the student must be first author and have principal responsibility for conceptualization and design of the research, collection and analysis of the data, and interpretation of the results. The entrant cannot have been awarded the Ph.D. degree before the start of the preceding ABS annual meeting (for the 2019 meeting, this date is July 30, 2018). An individual can enter the session only once per lifetime.

### FOUNDERS MEMORIAL POSTER PAPER AWARD

This award is in honor of the founders of the Animal Behavior Society. It is for outstanding posters presented at the annual meeting. Any graduate student or postdoctoral member of the society in good standing is eligible to enter the competition. Applicants can indicate their intention to enter the competition by marking the appropriate box on the Meeting Abstract submission form. All Founders presenters will be expected to provide a single page preview of their poster for the judges.

### CHARLES H. TURNER AWARD

Beginning in 2002, the Animal Behavior Society created the Charles H. Turner Program for undergraduate participation at the annual Society meetings. This program, previously funded by an NSF grant but now supported entirely by the Animal Behavior Society, is a travel grant that supports the goals of increasing the diversity of our membership. Selected Turner Program Fellows will receive support to travel to the Annual Conference, and participate in a one-day workshop structured to integrate students into both the meeting experience and the broader community of the Animal Behavior Society.

### GENESIS AWARD FOR UNDERGRADUATE RESEARCH

First presented at the 2000 ABS Annual Meeting, the Genesis Award honors the best undergraduate poster presentation at the meeting.

### DIVERSITY FUND STUDENT REGISTRATION AWARD

The Animal Behavior Society is strongly committed to increasing the diversity of attendees at the ABS Annual meeting and within its membership.

### LATIN AMERICAN TRAVEL AWARD

The Latin American Travel Awards are intended to encourage greater participation of Latin American researchers in ABS meetings, by helping to defray the costs of international travel, housing, and/or meals at meetings. These awards are restricted to Latin American graduate students enrolled in programs in Latin American institutions, who will be presenting a talk/poster at the ABS meeting. Priority will be given to Ph.D. students who are attending an ABS meeting for the first time and who have not received a Latin American Travel Award in previous years. Award values vary according to funds available.

### GRADUATE STUDENT TRAVEL AWARD

The Graduate Student Travel Grant award is intended to provide financial support for graduate students to attend and present at the annual Animal Behavior Society meeting by helping to defray the costs of travel, housing and/or meals at the meetings.

### CAREGIVER TRAVEL GRANT

The Caregiver Travel Grant award is intended to provide financial assistance for active ABS members whose caregiving responsibilities for dependent persons would otherwise limit their ability to attend and present at the annual ABS meeting. Dependents include but are not limited to young children and aging parents. Receiving this award does not preclude ABS members from applying for additional funding from ABS.

***Announcement of ABS 2019 Meeting, Career Award winners, and ABS Fellows will be made at the Awards Ceremony scheduled on Saturday, July 27 starting at 4:15 PM.***

## PLENARIES & FELLOWS TALKS

### WEDNESDAY, JULY 24TH - 7:45 - 8:45 AM

**COMPUTATIONAL BEHAVIORAL ECOLOGY** - Tanya Berger-Wolf, University of Illinois at Chicago

Computation has fundamentally changed the way we study nature. New data collection technology, such as GPS, high definition cameras, UAVs, genotyping, and crowdsourcing, are generating data about wild populations that are orders of magnitude richer than any previously collected. Unfortunately, in this domain as in many others, our ability to analyze data lags substantially behind our ability to collect it. In this talk I will show how computational approaches can be part of every stage of the scientific process of understanding animal sociality, from intelligent data collection (crowdsourcing photographs and identifying individual animals from photographs by stripes and spots) to hypothesis formulation (by designing a novel computational framework for analysis of dynamic social networks), and provide scientific insight into collective behavior of zebras, baboons, and other social animals.

### THURSDAY, JULY 25TH - 8:00 - 9:00 AM

**FELLOW'S LECTURE: ROBOTS, TELEMETRY, & THE SEX LIVES OF WILD BIRDS: USING TECHNOLOGY TO STUDY COURTSHIP AND CONSERVATION** - Gail Patricelli, University of California, Davis

Males in many species must convince females to mate by producing elaborate courtship displays tuned to female preferences, like the song of a cricket or the train of a peacock. But courtship in many species is more like a negotiation than an advertisement, thus in addition to elaborate signals, success in courtship may require tactical skills. These skills may include the ability to choose a flattering display site, respond appropriately to female courtship signals, and adjust display investment in response to the marketplace of other males and females. My lab has been investigating courtship negotiations in greater sage-grouse, which mate in an open marketplace of competing males and choosing females (the lek). I will discuss experiments using robotic females to investigate courtship interactions between the sexes. I will also discuss ongoing research investigating how off-lek foraging behaviors affect on-lek displays, and how this basic science has informed my lab's research into human impacts on lekking activities.

### THURSDAY, JULY 25TH - 9:00 - 10:00 AM

**KEYNOTE LECTURE: A PALACE OR A PRISON? BEHAVIOURAL DIFFERENCES BETWEEN SPECIES CAN PREDICT RESPONSES TO LIFE IN CAPTIVITY** - Georgia Mason, University of Guelph

Animal welfare science seeks to assess and improve the well-being of the 100s of billions of animals kept or killed by humans. Like conservation biology, its research questions range from applied (e.g. what are the most humane ways to kill chickens?) to fundamental (e.g. which species and life stages are sentient?). Research approaches may involve physiology or immunology, but ethology plays a crucial role. For one, behavioral responses (e.g. alarm calls; stereotypic behavior) can be useful welfare indicators: conspicuous, easy to measure, and valid (since intrinsically linked to affective states). In addition, restricting natural behavior is a major source of welfare problems. My talk will review examples of the latter in zoo animals, and in parrots kept as pets, to show how evolved behavioural differences between species can predispose them to good or poor welfare in captivity. I will present comparative evidence that constraining natural foraging or ranging behaviour can compromise well-being in zoos and aviaries; and draw parallels between coping with 'HIREC' (human-induced rapid environmental changes, for example urbanization or habitat fragmentation) and coping with captivity.

### FRIDAY, JULY 26TH - 9:00 - 10:00 AM

**EFFECTS OF EARLY-LIFE STRESS ON LEARNING STRATEGIES** - Neeltje Boogert, University of Exeter

The use of information provided by others is a common shortcut adopted to inform decision-making. However, instead of indiscriminately copying others, animals are often selective in what, when and whom they copy. How do they decide which learning strategy to use? My research suggests that stress hormone exposure early in life may be important. While developmental stress is often thought to hamper cognitive performance, I will argue that ecologically relevant levels of early-life stress may instead determine how individuals balance the use of different sources of information. Furthermore, early-life stress can also change individuals' interactions with group members, which in turn can affect access to information sources and subsequent information use. I will argue that an information use approach may lead to different insights concerning individuals' cognitive performance than one in which individuals are ranked based on their perceived 'intelligence'.

### SATURDAY, JULY 27TH - 8:00 - 9:00 AM

**BUILDING THE SUPERORGANISM: INTEGRATIVE INSIGHTS INTO THE EVOLUTION AND REGULATION OF INSECT SOCIALITY** - Amy Toth, Iowa State University

The evolution of superorganisms, such as eusocial insect colonies composed of highly cooperative individuals working together as a single whole, has been described as a major transition in the history of life. The question of "why?" has this extreme form of cooperation evolved has been of intense interest to biologists since Darwin. Now, armed with new tools and technologies, animal behaviorists have turned to ask "how" has this revolutionary change in life history evolved? Wasps and bees are excellent comparative study systems for addressing such questions, because they are extremely diverse taxonomically and socially; with multiple independent origins of sociality. Using an integrative approach that blends behavior, physiology, and genomics, our studies on bees and wasps are providing new insights into the mechanisms and evolution of cooperative societies. I will discuss some of these, including: 1) elements of maternal behavior and reproductive physiology becoming "retooled" by evolution for new social purposes, 2) the role of resource limitation and nutritional inequalities in the regulation of cooperative behaviors, 3) incremental changes in social state based on evolutionary shifts in gene regulation based on existing phenotypic plasticity, 4) roles for both deeply conserved "toolkits" as well as newly evolved genes in the evolution of social traits. These studies contribute to a developing picture of the molecular, organismal, and ecological processes that have enabled the evolution of biological complexity.

### SATURDAY, JULY 27TH - 9:00 - 10:00 AM

**PRESIDENT'S LECTURE - PROMOTING ANIMAL BEHAVIOR TO TACKLE GLOBAL CHALLENGES** - John P. Swaddle, College of William & Mary

As a discipline, animal behavior, sits at the interface of the organism and its biotic and abiotic environment. Behavioral flexibility and selection on behaviors often mediate how animals (and other organisms) persist in environments and respond to environmental change. Hence, animal behavior should be a discipline that takes the lead in tackling some of society's largest biologically-relevant problems (e.g. health, food security, conservation, sustainable development). I will describe several case studies where we have used a fundamental understanding of animal behavior to help solve persistent global problems, all related to avian behavior and ecology. For example, I will describe how an understanding of birds' perception of risk and threat has led to us develop a new technology that has proven useful in reducing damages by birds to crops, without habituation. This technology will also improve aviation safety by reducing bird-aircraft strikes. Further, I will describe how birds' perception of environmental cues in flight is leading us to develop better technology for reducing birds' risk of collision with large human-made structures, such as communication towers, wind turbines, and high-rise buildings. Broadly, I will propose that many global challenges in health, food security, conservation, and sustainable development relate to animal behavior. The integrative approaches that many behaviorists adopt and the wealth of fundamental knowledge within our community could be harnessed to produce more reliable solutions.

## SYMPOSIA

**WEDNESDAY, JULY 24TH****PRESIDENTIAL SYMPOSIUM: CONSTRAINTS ON ANIMAL MATING DISPLAYS: LINKING PRODUCTION MECHANISMS TO SIGNAL FUNCTION**

Organizer: Jeff Podos, ABS Immediate Past-President

Illinois A

A long-standing challenge in behavioral biology has been to explain the evolution of elaborate and conspicuous mating displays. Emerging research programs on this topic are plumbing, in new ways, the physiological and biomechanical bases of display performance, and testing if and how variation therein might influence display function. This work aims to de-emphasize generic measures of signaler quality and condition, and instead favor analyses of specific organismal traits that link directly to display attributes including vigor, skill, and consistency. Speakers in this symposium will discuss their own research on these topics, and consider how research on display mechanisms inform our broader understanding of animal communication and sexual selection.

**Speakers:** Sue Bertram; Mark Briffa; Marcela Fernandez-Peters; Franz Goller; Rebecca Koch; Lisa Mangiamele  
Jeff Podos; Barney Schlinger

**WEDNESDAY, JULY 24TH****BEHAVIOURAL PLASTICITY: INTEGRATING VARIATION WITHIN AND AMONG INDIVIDUALS AND SPECIES**

Organizers: Ned Dochtermann, Jennifer Hellmann, Kate Laskowski and Julie Morand-Ferron

Illinois B

Over the past several decades, significant advances have been made in documenting behavioural plasticity across individuals, populations, and species as well as identifying its proximate and ultimate mechanisms. Our symposium aims to highlight recent advances in the study of behavioural plasticity in relation to: the sources and consequences of within-individual variation; transgenerational effects; and the evolution of innovativeness and learning across populations and species. First, we will highlight recent statistical advances in modelling within-individual and genotype plasticity in behaviour, novel insights into the underlying mechanisms of this variation, and its ecological consequences. Second, we will explore how variation in parental experiences (e.g., predation) and parental care induce plasticity in offspring phenotypes. In this regard, we will discuss the relative influence of maternal and paternal effects as well as interactions between genetic variation, early life experiences, and parental experiences. Finally, we will move beyond individuals to discuss how species level variation in behavioural plasticity is crucial to species persistence in a changing environment and reflects aspects of brain function and evolution. We highlight advances in our understanding of the evolution of innovativeness, learning and the brain, stemming from a diversity of approaches including large-scale comparative studies, artificial selection experiments, and the study of intraspecific variation in natural populations. Collectively, we aim to stimulate future research into the causes of variation in behavioural plasticity and its evolutionary significance.

**Speakers:** Rahia Mashoodh; Abraham Kuijper; Sarah Donelan; Jennifer Hellmann; Alex Kotrschal; Louis Lefebvre; Jean-Nicolas Audet; Daniel Sol; Julie Morand-Ferron; Kate Laskowski; Julia Saltz; Judy Stamps; Benjamin de Bivort

Journal of  
Animal  
Ecology

**THURSDAY, JULY 25TH - FRIDAY, JULY 26TH****PROXIMATE MECHANISMS OF COMPLEX SOCIALITY**

Organizers: Emily H. DuVal and Blake C. Jones

Illinois B

Complex social behaviors are an essential part of the lives of many animals, and are shaped by needs for reproduction, foraging, and survival. These social behaviors range from aggressive interactions to cooperation to parental care, and vary considerably both within and among species. The integration of molecular genetics, neurobiology, and physiology with animal behavior have garnered new insights into the proximate causes and consequences of complex sociality. Understanding the proximate mechanisms of social behaviors will help us better understand the adaptive function of these behaviors and ultimately the evolution of sociality. This symposium showcases recent advances in our understanding of the proximate regulation and mediation of animal sociality from the perspective of a variety of fields of study, and to highlight areas of developing research.

**Speakers:** Bruce Cushing, Alex Jordan, Jenny Tung, Aubrey Kelly, Alex Walton, Blake Jones, Emily DuVal, Rebecca Calisi

**THURSDAY, JULY 25TH - FRIDAY, JULY 26TH****ALLEE SYMPOSIUM FOR BEST STUDENT PAPER**

Organizer: Esteban Fernandez-Juricic, ABS Second President-Elect

Cardinal

This symposium features outstanding graduate student research, with an award for the best paper, and is a highlight of ABS meetings. The session honors Dr. Warder Clyde Allee (1885–1955), an animal behavior researcher who was very influential in the development and direction of animal behavior research in the 20th century. He was elected to the National Academy of Sciences in 1951 and ranks among the leading twentieth century ecologists, especially for his work in behavioral and animal ecology. In the 2019 ABS Allee Session, students will present their research to ABS members and talk judges.



## SYMPOSIUM (CONTINUED)

### THURSDAY, JULY 25TH - FRIDAY, JULY 26TH

#### ANIMAL BEHAVIOUR ON AN URBANIZED PLANET

Organizer: James Chadwick Johnson

Illinois B

As more than ½ of the human population now lives in rapidly expanding urban centres, urbanization is a particularly important example of 'human-induced rapid environmental change' (HIREC). The impact that urbanization has on the biota and ecosystems around us has unknown consequences for the long-term sustainability of habitats (both human and non-human). We will present a symposium, well-balanced across taxa, that addresses several emerging themes in the behavioural ecology of urban organisms. In particular, we aim to highlight theory and data that address the intuitive idea that behavioural plasticity in these rapidly changing environments is key for the success of urban organisms. Second, we ask participants to emphasize the benefits of coupling mechanistic and functional approaches in studies of urban behaviour. Third, we address a relatively new theme in urban ecology by examining the implications of spatial/environmental heterogeneity within and across cities. Indeed, this latter issue has the potential to help us understand (predict) how HIREC can affect behaviour (and potentially biodiversity) differently across the landscape. We bring a vibrant and diverse group of symposium participants (e.g. researchers from varied career stages and histories of ABS participation) and a pair of seasoned urban behavior researchers as organizers that will shepherd the discussion to yield the highest impact.

**Speakers:** James Johnson, Megan Kobiela, Kevin McGraw, Mark McDonnell, Oriol LaPiedra, Julie Young, Seth Magle

### FRIDAY, JULY 26TH

#### CROSS-TAXA PERSPECTIVES ON BEHAVIOR AND DEVELOPMENTAL ORIGINS

Organizers: Stacy Rosenbaum and Elizabeth Archie

Illinois A

The developmental origins of later life outcomes, including health, fitness, and life history variables, are still murky in most biological systems. Although experimental work has shed some light on the physiological and (epi)genetic mechanisms regulating the connection between early (or even pre-conception) experiences and later outcomes, behavior is a relatively underexplored frontier in the developmental origins literature. This session will curate papers that integrate developmental origins questions and behavioral data in a range of animal species. Understanding how behavior mediates relationships between early experience and later outcomes is crucial for testing, shaping, and refining foundational theoretical frameworks to understand early life effects. For example, behavior contains important information about how and why organisms make the life history tradeoffs they do, helping us distinguish amongst competing models of the connection between experiences and outcomes that may be removed by months, years, or even decades.

A complete understanding of developmental origins requires both proximate and ultimate levels of explanation. Research on captive populations, which provides critical experimental control and the ability to test causality, needs to be paired with work on wild populations, where organisms are subject to the context and selective pressures that shaped their evolutionary history. Therefore, this session will contain a mix of participants who study wild and captive populations. It will include papers that focus on animals whose life histories span the slow-to-fast continuum, to highlight where (and where not) lessons learned from one end of the spectrum can be applied to the other.

**Speakers:** Ben Dantzer, Christopher Kuzawa, Amanda Lea, Jill Mateo, Ken Norris, Denis Reale, Stacy Rosenbaum, Oliver Schuelke, Elinor Sullivan

### FRIDAY, JULY 26TH

#### THE WHEN, WHY AND HOW OF NEW ANIMAL CONVERSATIONS

Organizers: E. Dale Broder and Robin Tinghitella

Illinois B

Signals used in animal communication are often under stabilizing selection ensuring that senders and receivers speak the same language. Individuals that send signals outside of the norm may not be seen or heard, and receivers that do not perceive or appropriately respond to signals could be left out of the conversation. How, then, do novel signals evolve? We know very little about the mechanisms that would favor the maintenance and fixation of a new signal, and next to nothing about the matching changes that must occur in the receiver to produce a coupled response. This symposium will include ultimate musings on how interactions among selective forces may lead to novel signals as well as conversations about mechanistic approaches exploring the genetic and physical processes involved in signal production and reception.

**Speakers:** Dale Broder, Robin Tinghitella, Gil Rosenthal, Molly Morris, Rafa Rodriguez, Malcolm Rosenthal, Brett Seymore

### SATURDAY, JULY 27TH

#### EMBRACING THE COMPLEXITY OF ANIMAL SOCIAL SYSTEMS USING MULTILAYER NETWORK ANALYSIS

Organizers: Matthew Silk, David Fisher, and Matthew Hasenjager

Illinois B

Social network analysis has generated substantial insight into how behavioural interactions and social relationships within animal populations shape key evolutionary and ecological processes. Previously, social networks have typically been constructed that consider only a single interaction type or aggregate multiple forms of interaction or association within a single network. In reality, animal sociality is multi-faceted, e.g. animals mate, fight, cooperate and compete with one another, and important feedbacks exist between these different relationships. Moreover, animal networks are dynamic systems embedded within the physical environment and wider ecological community whose structure and properties can shift over time. New analytical tools are needed to disentangle the impacts of such interdependencies on social processes, especially given the ever-increasing availability of high-resolution data on many different interaction types. Multilayer network approaches can account for the interconnected nature of animal socio-ecological systems by enabling multiple networks to be analysed within an integrated framework. For example, multiple behavioural interactions can be combined within a multiplex network, or social and spatial networks can be combined within interconnected networks. Therefore, multilayer networks offer a powerful approach for understanding the complexity of animal sociality, from teasing apart how social relationships develop within groups to establishing how movement networks shape population connectivity. Our symposium will provide an opportunity for collaborations between network scientists working on multilayer approaches, ecologists, and animal behaviour researchers. We will set out how multilayer approaches can contribute to key questions in behavioural ecology and provide a practical introduction to key analytical approaches.

**Speakers:** Noa Pinter-Wollman; Kelly Finn; Louise Barrett; Sandra Smith-Aguilar; Subhadeep Paul

## WORKSHOPS

### TUESDAY, JULY 23RD | 8:00 AM - 5:00 PM

#### WEAVING THE FUTURE OF ANIMAL BEHAVIOR WORKSHOP

Organizers: Emilia Martins

Room 302 - Student Center East Building

The Weaving the Future of Animal Behavior workshop is an annual event for early-career professionals in animal behavior. The workshop will consist of panel discussions and other activities on topics such as developing a funding strategy, building a research group, time management, teaching strategies, and professional networking. At the end of the workshop, we will form peer-mentoring circles that will continue to meet via video-conferencing throughout the subsequent year.

### TUESDAY, JULY 23RD | 9:00 AM - 4:00 PM

#### CONSERVATION BEHAVIOR WORKSHOP: IMPLICATIONS OF SOLAR POWER ON WILDLIFE CONSERVATION

Organizer: Barbara Clucas, ABS Conservation Committee Chair

Room 613 - Student Center East Building

The Conservation Committee is hosting a workshop again this year. Fee to attend: \$25 non-students, \$20 students, and \$5 developing nations attendees.

### TUESDAY, JULY 23RD | 9:00 AM - 1:00 PM

#### DEVELOPING A CONCEPT INVENTORY TO EVALUATE STUDENT LEARNING IN UNDERGRADUATE ANIMAL BEHAVIOR COURSES

Organizer: Ben Dantzer

Illinois B - Student Center East Building

The workshop is free and any ABS attendee is encouraged to attend.

Undergraduate courses in animal behavior are taught across the world and are often the gateway into a career in the natural sciences. However, there is currently no common tool to evaluate student learning across animal behavior courses. Concept inventories are widely used in the natural sciences as a robust way to assess comprehension of course materials. They are a jargon-free list of multiple choice questions that are developed for the core competencies of a specific discipline and are carefully validated (e.g., document misconceptions, list learning goals, evaluate efficacy). A concept inventory does not yet exist for animal behavior. The aim of this Behaviour 2019 workshop is for attendees to design a concept inventory for animal behavior. Invited workshop participants will be diverse in gender, race, career stage, level of analysis (mechanism, function) and taxonomic focus of their research. The workshop will be advertised and open to all Behaviour 2019 attendees. The outcome of the workshop will be a finalized list of core competencies and misconceptions in animal behavior. After soliciting feedback and modifying the list accordingly, we will validate the concept inventory by circulating it to instructors of animal behavior courses. After publication, this would be a widely available tool used to assess comprehension of the discipline of animal behavior.

### TUESDAY, JULY 23RD | 10:30 AM - 1:45 PM

#### ABS 2019 OUTREACH FAIR

Organizers: ABS Education Committee

East Terrace - Student Center East Building

**Keynote Speaker: Seth Magle, Lincoln Park Zoo, 2PM -3PM in Illinois A at UIC's Student Center East building**

Faculty members and graduate students representing over a dozen animal behavior research laboratories from across the US, Canada, South America and Australia will offer multiple activities highlighting current research questions, as well as the tools and techniques used in field research. Using interactive displays, activities, and live animals, learn more about how insects, frogs, fish and mammals help scientists to learn more about how our brains, bodies, and world works. Listen to insects walk, get up close and personal with reptiles, make your own cricket song, blow dart a 'baboon,' radio-track a mouse, and hear popular songs through the 'ears' of other animals. Activities will be available for children of all ages!

### TUESDAY, JULY 23RD | 1:00 PM - 5:00 PM

#### ANIMAL BEHAVIOR LAB ACTIVITIES: ENGAGING STUDENTS IN THE SCIENCE OF ANIMAL BEHAVIOR

Organizers: Heather Zimpler-DeLorenzo, Andrea Bierema, Deborah Boege-Tobin and Eduardo Bessa

Illinois C - Student Center East Building

Are you a hawk or a dove? Have you ever seen earwigs taking care of their young? Come find out and learn about other ideas for lab activities, including simulations, research skills, and experimental design. At this year's Education Workshop, participants will learn about different potential learning goals of lab activities and will participate in three different hands-on activities. Presenters will discuss how these ideas were developed and provide opportunities to discuss ideas for adapting these ideas for your own goals, as well as challenges in implementing them. This workshop is free.

### SATURDAY, JULY 27TH | 9:00 AM - 1:00 PM

#### 2019 PUBLIC DAY

Organizer: ABS Applied Animal Behavior Committee and Certified Applied Animal Behaviorists

302 - Student Center East Building

Free and open to the public. No registration required.

## EVENTS &amp; MEETINGS

## TUESDAY, JULY 23RD - SATURDAY, JULY 27TH

## ABS SILENT AUCTION

ABS Registration Desk

Bring items to Donate! Bring items from home, pick up items in your travels, from your field sites, or obtain donations from supportive colleagues and organizations. Drop your items at the registration desk! The more items we have, the more likely the auction will be as successful as it was last year! Items that you donate for the auction will be placed at the meeting on tables next to bidding forms, or described if the item is not present. During the meeting, members will visit the tables and bid on items by entering their bid on the bidding form. The auction will continue for several days while members bid against one another. The member with the highest bid at the deadline wins the item and takes it home with them. Funds raised will support Graduate Student Research and Latin American Affairs!

## TUESDAY, JULY 23RD

## EXECUTIVE COMMITTEE MEETING - INVITATION ONLY

9:00 AM - 5:00 PM (Room 603)

## TURNER WORKSHOP - INVITATION ONLY

9:00 AM - 5:00 PM (Room 713)

## ABS OUTREACH FAIR

10:30 AM - 1:45 PM (East Terrace at Student Center East)

## OPENING RECEPTION

6:00 PM - 8:00 PM (East Terrace at Student Center East)

Greet old friends, meet new ones, and enjoy some great food and drink. This event is included at no additional cost with your registration.

## ABS FILM FESTIVAL

8:00 PM - 10:00 PM (Illinois A)

## WEDNESDAY, JULY 24TH

## NSF WORKSHOP - NEWS UPDATES

12:15 PM - 1:30 PM (Cardinal)

## DIVERSITY WORKSHOP

12:15 PM - 1:30 PM (Illinois B)

## EDUCATION COMMITTEE MEETING

12:15 PM - 1:30 PM (Illinois C)

## UNDERGRADUATE LUNCHEON &amp; ORIENTATION

12:15 PM - 1:30 PM (Room 605)

## IEC MEETING

12:15 PM - 1:30 PM (Room 613)

## OPEN SCIENCE PRACTICES Q&amp;A

12:15 PM - 1:30 PM (Illinois A)

## ABS STUDENT PARTY

9:30 PM - 11:30 PM (Wise Owl - off campus)

## THURSDAY, JULY 25TH

## LATIN AFFAIRS COMMITTEE MEETING

12:45 PM - 2:00 PM (Illinois C)

## ELSEVIER UPDATE AND FEEDBACK

1:00 PM - 2:00 PM (Illinois B)

## NSF WORKSHOP - BEGINNING INVESTIGATORS

1:00 PM - 2:00 PM (Cardinal)

## LGBTQIA SOCIAL

9:30 PM - 11:00 PM (Wise Owl - off campus)

## FRIDAY, JULY 26TH

## CAAB MEET AND GREET

12:45 PM - 2:00 PM (Room 603)

## DIVERSITY COMMITTEE MEETING

12:45 PM - 2:00 PM (Room 713)

## IEC LUNCH MEETING

1:00 PM - 2:00 PM (Room 613)

## ABS BUSINESS MEETING

5:45 PM - 6:30 PM (Illinois B)

## SATURDAY, JULY 27TH

## LUNCH WITH ABS HISTORIAN

*(bring your own meal)*

1:00 PM - 2:00 PM (Room 603)

## ABS AWARDS CEREMONY

4:15 PM - 5:15 PM (Illinois AB)

CLOSING BANQUET *(Ticket Required)*

6:00 PM - 8:00 PM

**2019 ANIMAL BEHAVIOR SOCIETY FILM FESTIVAL in Chicago, Illinois**  
**Tuesday July 23rd | 8:00-10:00pm | Location: Illinois A**

**Non-Commercial Film**

Made by an individual or persons largely associated with animal behavior from a teaching, research, and/or applied perspective, not with the primary goal of earning an income.

**Now or Never**

Approximate start time **8:00pm**

*Directed by: Matt Senior*

Now Or Never tells the story of the Batang Toru Forest, which lies in North Sumatra, Indonesia. It is a forest like no other, and remains largely unexplored. Batang Toru is also the one and only home for the most endangered great ape species on the planet – the newly identified Tapanuli Orangutans. For thousands of years these orangutans have experienced a tranquil existence in this rich rainforest. The local people living adjacent to Batang Toru have also lived comfortably for generations, surviving from the precious water created by the forest. But now, everything is changing. <http://www.nowornever-film.com>



**Commercial Films**

Made by professional photographers and filmmakers with the express purpose of earning a profit.

**The Power of Play**

Approximate start time **8:30pm**

*Directed by: Erin Oakes*

The Power of Play explores the hidden benefits of doing one of the most fun, and often least valued, activities - playing around. Recent research in the field of animal behaviour shows us play is no laughing matter. In fact, evolutionary biologists believe it's one of the keys to surviving. That's how much it benefits the brain. And they're learning it's not just people and pets that play, but reptiles, amphibians, even insects. <https://www.facebook.com/ThePowerofPlayDoc/>

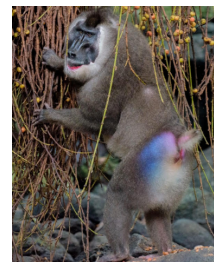


**Lost Kings of Bioko**

Approximate start time **9:00pm**

*Directed by: Oliver Goetzl*

Off the coast of Central Africa lies an isolated island, covered by primeval rainforest and surrounded by dark ocean waters, inhabited by a greater variety of species than nearly any other place on Earth this terra incognita is called BOKO. The ruler of this realm is one of the world's least known primate species, the drill. This film explores the secret lives of drills and their mysterious island home. <http://www.gulofilm.com>

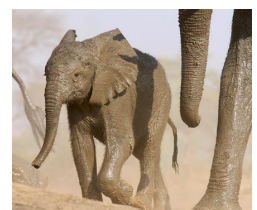


**Elephants up Close – Gentle Giants**

Approximate start time **9:30pm**

*Directed by: Jens Westphalen*

Africa's elephants are more intelligent than we ever imagined. What do we really know about them? 'Elephants up close' draws a complex picture of Africa's 'icon' and provides intimate insights into the lives of the world's largest land mammals. Let's get closer to them than ever before. <http://zorilla.film/en/our-work/elephants>



# SAVE THE DATE

## ABS 2020



57th Annual Conference of the Animal  
Behavior Society (ABS)

July 30 - August 3, 2020  
The University of Tennessee, Knoxville



# PROGRAM SUMMARY

## TUESDAY, JULY 23RD

8:00 am	Weaving the Future of Animal Behavior (WFAB) Workshop 8:00 AM - 5:00 PM Room 302						
9:00 am	Developing A Concept Inventory To Evaluate Student Learning In Undergraduate Animal Behavior Courses 9:00 AM - 1:00 PM Illinois B	ABS EC Meeting 9:00 AM - 5:00 PM Room 603	Turner Workshop Conservation 9:00 AM - 5:00 PM Room 713	Conservation Behavior Workshop: Implications of Solar Power on Wildlife Conservation 9:00 AM - 4:00 PM Room 613			
10:30 am - 1:45 pm	Outreach Fair East Terrace at Student Center East						
1:00 pm - 5:00 pm	Animal Behavior Lab Activities: Engaging Students in the Science of Animal Behavior Workshop Illinois C						
2:00 pm - 3:00 pm	Outreach Fair Keynote: Seth Magle, Lincoln Park Zoo Illinois A						
6:00 pm - 8:00 pm	Opening Reception East Terrace at Student Center East						
8:00 pm - 10:00 pm	Film Festival Illinois A						

## WEDNESDAY, JULY 24TH

7:30 am - 7:45 am	Opening Remarks UIC Dorin Forum						
7:45 am - 8:45 am	Plenary Talk: Computational Behavioral Ecology. Tanya Berger-Wolf - University of Illinois at Chicago UIC Dorin Forum						
8:45 am - 9:30 am	Coffee Break/Walk to Student Center Inner Circle at Student Center East						
9:30 am - 12:00 pm	Behavioural Plasticity Symposium 1 Illinois B	Presidential Symposia 1 Illinois A	Behavior Genetics/ Genomics Cardinal	Neuro/Endocrine and Physiological Mechanisms 1 Dearborn	Predation & Foraging 1 Illinois C	Social Behavior 1 Room 605	Communication 1 Room 302
12:15 pm - 1:30 pm	Diversity Workshop Illinois B	Open Science Practices Q&A Illinois A	NSF Workshop: NSF Directorate for Biological Sciences News and Updates Cardinal	IEC Lunch Meeting Room 613	Education Committee Meeting Illinois C	Undergraduate Luncheon & Orientation Room 605	Lunch on Own
1:30 pm - 3:30 pm	Behavioural Plasticity Symposium 2 Illinois B	Presidential Symposia 2 Illinois A	Conservation 1 Cardinal	Ecological Effects 1 Dearborn	Predation & Foraging 2 Illinois C	Social Behavior 2 Room 605	Communication 2 Room 302
3:30 pm - 4:00 pm	Coffee Break Inner Circle at Student Center East						
4:00 pm - 5:15 pm	Behavioural Plasticity Symposium 3 Illinois B	Neuro/Endocrine & Physiological Mechanisms 2 Illinois A	Genetics & Evolution 1 Cardinal	Ecological Effects 2 Dearborn	Predation & Foraging 3 Illinois C	Sexual Selection & Sexual Conflict 1 Room 605	Communication 3 Room 302
5:15 pm - 5:30 pm	Coffee Break Inner Circle at Student Center East						
5:30 pm - 6:30 pm	Behavioural Plasticity Symposium 4 Illinois B	Cognition & Learning 1 Illinois A	Mating/Breeding Systems 1 Cardinal	Ecological Effects 3 Dearborn	Predation & Foraging 4 Illinois C	Social Behavior 3 Room 605	Parental Care 1 Room 302
8:00 pm - 9:30 pm	Poster Session Inner Circle at Student Center East						
9:30 pm - 11:30 pm	ABS Student Party Wise Owl						

## THURSDAY, JULY 25TH

8:00 am - 9:00 am	Fellow's Talk: Robots, Telemetry, & the Sex Lives of Wild Birds: Using Technology to Study Courtship and Conservation. Gail Patricelli - University of California, Davis UIC Dorin Forum						
9:00 am - 10:00 am	Keynote: A Palace Or A Prison? Behavioural Differences Between Species Can Predict Responses To Life In Captivity. Georgia Mason - University of Guelph UIC Dorin Forum						
10:00 am - 10:45 am	Coffee Break/Walk to Student Center Inner Circle at Student Center East						
10:45 am - 12:45 pm	Proximate Mechanisms Of Complex Sociality Symposium 1 Illinois B	Cognition & Learning 2 Illinois A	Allee Symposium 1 Cardinal	Behavioral Plasticity 1 Dearborn	Ecological Effects 4 Illinois C	Social Behavior 4 Room 605	Communication 4 Room 302
12:45 pm - 2:00 pm	Elsevier Update and Feedback Illinois B		NSF Workshop: NSF Beginning Investigators: Tips for Crafting a Competitive Proposal Cardinal		Latin Affairs Committee Meeting Illinois C		Lunch on Own
2:00 pm - 4:00 pm	Proximate Mechanisms Of Complex Sociality Symposium 2 Illinois B	Cognition & Learning 3 Illinois A	Allee Symposium 2 Cardinal	Behavioral Plasticity 2 Dearborn	Sexual Selection & Sexual Conflict 2 Illinois C	Social Behavior 5 Room 605	Communication 5 Room 302
4:00 pm - 4:30 pm	Coffee Break Inner Circle at Student Center East						
4:30 pm - 6:30 pm	Animal Behaviour On An Urbanized Planet Symposium 1 Illinois B	Cognition & Learning 4 Illinois A	Allee Symposium 3 Cardinal	Behavioral Plasticity 3 Dearborn	Applied Animal Behavior 1 Illinois C	Social Behavior 6 Room 605	Communication 6 Room 302
8:00 pm - 9:30 pm	Poster Session Inner Circle at Student Center East						
9:30 pm - 11:30 pm	LGBTQIA Social Wise Owl						

# PROGRAM SUMMARY

## FRIDAY, JULY 26TH

9:00 am - 10:00 am	Plenary: Effects Of Early-life Stress On Learning Strategies. Neeltje Boogert - University of Exeter UIC Dorin Forum							
10:00 am - 10:45 am	Coffee Break/Walk to Student Center Inner Circle at Student Center East							
10:45 am - 12:45 pm	Animal Behaviour On An Urbanized Planet Symposium 2 Illinois B	Cross-taxa Perspectives On Behavior And Developmental Origins Symposium 1 Illinois A	Applied Animal Behavior 2 Cardinal	Cognition & Learning 5 Dearborn	Behavioral Plasticity 4 Illinois C	Social Behavior 7 Room 605	Communication 7 Room 302	
12:45 pm - 2:00 pm	CAAB Meet and Greet Room 603		Diversity Committee Meeting Room 713		IEC Lunch Meeting (1 PM) Room 613		Lunch on Own	
2:00 pm - 4:00 pm	The When, Why and How of New Animal Conversations Symposium 1 Illinois B	Cross-taxa Perspectives On Behavior And Developmental Origins Symposium 2 Illinois A	Applied Animal Behavior 3 Cardinal	Cognition & Learning 6 Dearborn	Development 1 Illinois C	Social Behavior 8 Room 605	Communication 8 Room 302	
4:00 pm - 4:15 pm	Coffee Break Inner Circle at Student Center East							
4:15 pm - 5:45 pm	The When, Why and How of New Animal Conversations Symposium 2 Illinois B	Cross-taxa Perspectives On Behavior And Developmental Origins Symposium 3 Illinois A	Sexual Selection & Sexual Conflict 3 Cardinal	Cognition & Learning 7 Dearborn	Genetics & Evolution 2 Illinois C	Social Behavior 9 Room 605	Communication 9 Room 302	3 Minute Thesis Talks Room 613
5:45 pm - 6:30 pm	Business Meeting Illinois B							
8:00 pm - 9:30 pm	Poster Session Inner Circle at Student Center East							

## SATURDAY, JULY 27TH

8:00 am - 9:00 am	Plenary: Building The Superorganism: Integrative Insights Into The Evolution And Regulation Of Insect Sociality. Amy Toth - Iowa State University UIC Dorin Forum							
9:00 am - 10:00 am	Plenary: President's Lecture. John P. Swaddle - College of William & Mary UIC Dorin Forum							
10:00 am - 10:45 am	Coffee Break/Walk to Student Center Inner Circle at Student Center East							
10:45 am - 12:45 pm	Embracing The Complexity Of Animal Social Systems Using Multilayer Network Analysis Symposium 1 Illinois B	Predation & Foraging 5 Illinois A	Applied Animal Behavior 4 Cardinal	Sexual Selection & Sexual Conflict 4 Dearborn	Social Evolution 1 Illinois C	Social Behavior 11 Room 605	Miscellaneous 1 Room 613	
12:45 pm - 2:00 pm	WFAB Workshop Room 613		Lunch with ABS Historian, Zuleyma Tang-Martinez (1 PM) Room 603			Lunch on Own		
2:00 pm - 4:00 pm	Embracing The Complexity Of Animal Social Systems Using Multilayer Network Analysis Symposium 2 Illinois B	Parental Care 2 Illinois A	Applied Animal Behavior 5 Cardinal	Sexual Selection & Sexual Conflict 5 Dearborn	Mating/ Breeding Systems 2 Illinois C	Social Behavior 10 Room 605	Miscellaneous 2 Room 613	
4:00 pm - 4:15 pm	Coffee Break Illinois C							
4:15 pm - 5:15 pm	Awards Ceremony Illinois AB							
6:00 pm - 8:00 pm	Closing Banquet - Ticket Required Inner Circle at Student Center East							

## TUESDAY, JULY 23

## TUESDAY, JULY 23 / WEDNESDAY, JULY 24

Time	East Terrace at Student Center East	Illinois B	613	603	713
8:00 am - 5:00 pm	Weaving the Future of Animal Behavior Workshop 8AM-5PM				
9:00 am	ABS 2019 Outreach Fair 10:30 am - 1:45 pm	Developing A Concept Inventory To Evaluate Student Learning in Undergraduate Animal Behavior Courses 9:00 am - 1:00 pm	Conservation Behavior Workshop: Implications of Solar Power on Wildlife Conservation 9:00 am - 4:00 pm	ABS Executive Committee Meeting 9:00 am - 5:00 pm (invite only)	Turner Workshop 9:00 am - 5:00 pm
1:00 pm - 5:00 pm		Illinois C Animal Behavior Lab Activities: Engaging Students in the Science of Animal Behavior Workshop: 1PM -5PM Moderator: Heather Zimbley-DeLorenzo Et Al			
2:00 pm - 3:00 pm		Illinois A Outreach Fair Keynote: Seth Magle, Lincoln Park Zoo			
6:00 pm - 8:00 pm		East Terrace at Student Center East Opening Reception			
8:00 pm - 10:00 pm		Illinois A Film Festival			

## WEDNESDAY, JULY 24

Time	UIC Dorn Forum	Illinois C	605	302
7:30 am - 8:45 am	Opening Remarks & Plenary: Tanya Berger-Wolf			
8:45 am - 9:30 am	Inner Circle at Student Center East Coffee Break/Walk to Student Center			
9:30 am - 12:00 pm	Illinois B Behavioural Plasticity Symposium 1 Moderator: Ned Docterhmann	Cardinal Behavior Genetics/Genomics Moderator: Floria M.K. Uy	Dearborn Neuro/Endocrine and Physiological Mechanisms 1 Moderator: Lara D. LabDage	Illinois C Predation & Foraging 1 Moderator: Laura K. Lopez
9:30	Individual differences in multiple facets of behavioural plasticity: innovation, information use, and learning J. Morand-Ferron	Cascading Effects of Early Life Stress: An Integrative Dog Model S. Bissell, L. Boghean, D. Klinkbeil, R. Strasser	Identifying Haemolympic Changes via NMR-based Metabolomics after Fights in Male Cyphoderris monstrosa T. Chang, R. Kim, A. Mason	Detection of Web Builder Size via Chemical Cues in Webs by Web Invading Cellar Spiders (Araneae, Phididae) A. Berry, A. Rypstra
9:45	Mechanisms and benefits of avian innovation: NMIDA and reduced extinction risk. L. Lelievre - McGill University	Transcriptomic Insights for Magnetoreception Mechanisms in the Caribbean Spiny Lobster D. Ernst, R. Flak, M. Schmidt, C. Derby, S. Johnsen, K. Lohmann	Hormonal correlates of personality in American bullfrogs D. da Silva, F. Gomes	Eastern Gray Squirrels Scirus carolinensis Cache Nuts More Quickly as Additional Nuts are Provided B. Cianci, H. Chapin, K. Arntson, C. Borowski, S. Halkin
10:00	Dynamic properties of rodent vocalizations are fundamental to understanding development, function, mechanisms and evolution of acoustic communication. M. FemAmbez-Vargas - Department of Psychological and Brain Sciences, University of Massachusetts Amherst	Behavioral and peripheral gene expression responses to acoustic stimuli of varying salience in a wild songbird. M. Hauber(1), M. Louder(1,2), M. Lalayete(3), K. Yasukawa(3) - (1)University of Illinois, (2)University of Tokyo, (3) Beibei College, (4)East Carolina University	Gravimensation in Monarch Butterflies: A Multigenerational Orientation Behavior. M. Kendzel, N. Plunkett, M. Plunkett, P. Guerra - University of Cincinnati	Predictors of individual participation in intergroup encounters among urban rhesus macaques (Macaca mulatta) B. Chakraborty, S. Kaburu, P. Marty, K. Balasubramaniam, B. Beisner, L. Mohan, S. Rattan, B. McCowan
10:15		Viral-mediated transgenesis of MAOA and AVP increases territorial aggression in stickleback. N. James(1), A. Bell(2) - (1)Neuroscience Program, University of Illinois at Urbana-Champaign, (2) Integrative Biology, University of Illinois at Urbana-Champaign	The effects of early life and transgenerational stress on the brain. L. Ladage(1), T. Robbins(2), T. Langkilde(3) - (1)Penn State Altoona, (2)University of Nebraska Omaha, (3)Penn State University	State-dependent learning influences foraging behavior in an acoustic predator. C. Henningway(1,2), M. Ryan(1,2), R. Page(2) - (1)University of Texas, (2) Smithsonian Tropical Research Institute
			Community diversity determines how foraging animals form evolution: Implications for signal Arizona	Spatiotemporal Variation in Network Structure Among Resident and Irruptible Visitor Chickadees. R. Curry, R. Garinger, M. Dula, C. Roche, C. Eldredge - Department of Biology, Villanova University
			Sociality and Personality in Captive American Alligators. P. Foerder(1), K. Bagley(1), J. Wawra(2), S. Webb(2) - (1) University of Tennessee at Chattanooga, (2)The Tennessee Aquarium	Species discrimination in a hybridizing population of Blue-winged and Golden-winged Warblers A. Janik, M. Vonhof, S. Gill - Western Michigan University
				Planar ears in a 3D world; Larviposition aiming behaviour of the acoustic parasitoid <i>Ormia ochracea</i> . A. Masson, A. Masson - University of Toronto Scarborough



10:30	<p><b>Cold-blooded cognition: brain evolution in ectothermic vertebrates.</b> A. Kolitschal - <i>Stockholm University</i></p> <p><b>Fighting skill – a neglected component of RHP?</b> M. Briffa - <i>University of Plymouth</i></p>	<p><b>Brain Serotonin Deficiency Affects Female Aggression.</b> N. Käsner(1,2), S. Richter(1,2), S. Kaiser(1,2), S. Norbert(1,2) - (1)Department of Behavioural Biology, University of Münster, (2)Münster Graduate School of Evolution</p> <p><b>Neurogenomic signatures that parents impart on their offspring.</b> J. Keagy, A. Bell - <i>University of Illinois</i></p>	<p><b>Locomotion and winter movement patterns in two migratory birds.</b> J. Majors(1), K. Berg(1), D. Newslead(2) - (1)University of Texas Rio Grande Valley, (2)Coastal Bend Bays &amp; Estuaries Program</p> <p><b>A comparison of eye morphology in migrant and non-migrant monarch butterflies.</b> J. Nathan, P. Guerra - <i>University of Cincinnati</i></p>	<p><b>Differential responses of avian and mammalian predators to phenotypic variation in Australian Broad Frogs.</b> J. Lawrence(1,2), M. Mahony(3), B. Noonan(3) - (1)University of Mississippi, (2)University of California, Irvine, (3)University of Newcastle</p> <p><b>Does social context mediate the effects of multiple stressors?</b> L. Lopez(1), M. Hansen(2), C. Cooley-Rieders(3), N. Fangué(3), A. Shi(3) - (1)University of Michigan, (2)GB Leibniz-Institute of Freshwater Ecology and Inland Fisheries, (3)University of California Davis</p>	<p><b>Scent of eviction: opportunities for resource acquisition trigger rapid responsiveness.</b> N. Funnell, M. Laidre - <i>Department of Biological Sciences, Dartmouth College</i></p> <p><b>Effect of Sterilizing Adult Males on Feral Horse Social and Reproductive Behavior.</b> S. King(1), M. Cole(1), K. Schoenacker(1, 2) - (1)Colorado State University, (2)US Geological Survey</p>	<p><b>The relationship between contact call rate and Zosterops japonicus.</b> E. Meaux, C. Mammides, I. Peabotou, M. E. Goodale - <i>Guangxi University</i></p>
10:45	<p><b>Rebecca Koch Presentation.</b> R. Koch Adrian - <i>Monash University</i></p>	<p><b>Gut microbiome varies with host social rank, age, and individual identity in wild spotted hyenas.</b> W. M. MacDonald(1,2,3), K. Theis(3,4), V. Souza(5), J. Urban(1,2), K. Heidegger(1,2,3), Michigan State University, (2)Program in Ecology, Evolutionary Biology, and Behavior, Michigan State University, (3)BEACON Center for the Study of Evolution in Action, (4)Department of Biochemistry, Michigan State University, (5)Institute of Ecology, Universidad Nacional Autónoma de México</p>	<p><b>Antibiotics, the Microbiome and Behaviour: An Opportunistic Study in a Native Australian Rodent.</b> T. Rymer(1,2), M. Rowell(1,2) - (1)College of Science and Engineering, James Cook University, (2)Centre for Tropical Environmental and Sustainability Sciences, James Cook University</p>	<p><b>Chemical defenses and predator avoidance support aposematism in the poison frog <i>Phyllotritus vittatus</i>.</b> F. Protti-Sánchez(1), B. Willink(2), H. Prohl(3), L. Quiros-Guero(4,5), V. Escobar(6), J. Sánchez de los Ríos(7), F. Sánchez de los Ríos(7), F. Escobar(6), R. Escobar(6), de Costa Rica, (3)Instituto de Zoología, (4)EPGL, University of Geneva, (5)Centro de Investigaciones en Productos Naturales (CIPRONA), Universidad de Costa Rica</p>	<p><b>A Comparison Of Social Interaction Networks in A Wild, Urban Dwelling Parrot.</b> J. Pennard(1), L. Applin(1, 2) - (1)Max Planck Institute for Ornithology, (2)Edward Grey Institute, Department of Zoology, University of Oxford</p>	<p><b>Using developmental plasticity to study the genetic basis of call diversity in acoustic insects.</b> J. Schul - <i>University of Missouri</i></p>
11:15	<p><b>Exploring The Mechanisms Underlying The Link Between Innovation, Sexual Signalling, and Sociality.</b> L. Cauchoard(1), B. Doligez(2), P. Bize(1) - (1)University of Aberdeen, (2)University of Lyon</p>	<p><b>Highly Heritable and Functionally Relevant Breed Differences in Dog Behavior.</b> N. Snyder-Mackler(1), E. MacLean(2), B. vonHoldt(3), J. Serpell(4) - (1)University of Washington, (2)University of Arizona, (3)Princeton University, (4)University of Pennsylvania</p>	<p><b>Mimicry-dependent Lateralization of Visual Inspection of Foreign Eggs by American Robins.</b> H. Scharf, K. Stenstrom, T. Benson, M. Hauber - <i>University of Illinois at Urbana-Champaign</i></p>	<p><b>An escape theory model for migrating prey: juvenile salmon change speed under predation risk.</b> M. Sabal(1), J. Merz(1,2), S. Alonso(1), E. Palkovacs(1) - (1)University of California Santa Cruz, (2)Cramer Fish Sciences</p>	<p><b>Split between two worlds: consistent above- and belowground social networks in a free-living mammal.</b> J. Smith(1), D. Gamboa(1), J. Spencer(1), S. Travençolo(1), A. Shi(2) - (1)Mills College, (2)University of California</p>	<p><b>When in doubt . . . hedge: nuthatches vary their alarm calls based on the reliability of eavesdropped signals.</b> C. Templeton(1), N. Carlson(2), E. Greene(3) - (1)Pacific University, (2)Max Planck Institute for Ornithology, (3)University of Montana</p>
11:30	<p><b>The effects of dietary nutrient balance on field cricket life-history traits and sexual signalling.</b> S. Bertram - <i>Carleton University</i></p>	<p><b>Relationship between social assessment system, behavior, and gene expression in paper wasps.</b> F. Uy, C. Jernigan, N. Zaba, M. Sheehan - <i>Cornell University</i></p>	<p><b>Energetics of locomotion after leg loss in harvestmen.</b> I. Escalante, V. Ellis, D. Elias - <i>University of California Berkeley</i></p>	<p><b>Single versus multiple predator cues: what scares threespine stickleback fish?</b> M. Wurd, M. Rodriguez, O. Davis, J. Douedi, P. Shah - <i>The College of New Jersey</i></p>	<p><b>Coordination of sentinel behavior in captive meerkats (<i>Suricata suricatta</i>).</b> C. Stahmann Roder(1), J. Wark(1), K. Cronin(1), S. Pruett-Jones(2) - (1)Animal Welfare Science Program, Lincoln Park Zoo, (2)Department of Ecology and Evolution, University of Chicago</p>	<p><b>Female Japanese tree frogs discern thrydri-potential status of their calls.</b> B. Waldman(1), J. Woo(1), D. Lee(1), I. Lee(2), J. Kang(1) - (1)Seoul National University, (2)McGill University</p>
11:45		<p><b>The genetic architecture of signal-preference coevolution in the rapidly speciating Hawaiian cricket <i>Laupala</i>.</b> M. Xu, K. Shaw - <i>Cornell University</i></p>	<p><b>Idiosyncratic neural coding and neuromodulation of olfactory individuality in <i>Drosophila</i>.</b> M. Smith(1,2), K. Honninger(3), B. de Bivort(1,2), G. Turner(4), QEB, (2)Harvard Center for Brain Science, (3)Ann and Robert H. Lurie Children's Hospital of Chicago, (4)Janelia Research Campus</p>	<p><b>Peer pressure: the influence of social group size on susceptibility to an evolutionary trap.</b> L. Pollack(1), A. Munson(1), E. Zepeda(1), M. Cushman-Mauver(2,3), A. Shi(1) - (1)Department of Environmental Science and Policy, University of California, Davis, (2)Department of Entomology and Nematology, University of California and Ecology, University of California, Davis</p>	<p><b>Effects of sickness on social networks depend on the type of behaviour, measure, and relationship.</b> S. Stockmaler(1,3), D. Bolnick(1,2), R. Page(3), G. Carter(3,4) - (1)University of Texas at Austin, (2)University of Connecticut, (3)Smithsonian Tropical Research Institute, (4)The Ohio State University</p>	<p><b>Open Slot</b></p>

Time	On Own	Lunch On Own	On Own
12:00 pm - 1:30 pm			
12:15 pm - 1:30 pm	<p><b>NSF Workshop: NSF Directorate for Biological Sciences News and Updates</b></p>	<p><b>Cardinal</b></p>	<p><b>Illinois B</b></p> <p><b>Diversity Workshop</b> Moderator: Cameron Jones</p>
12:45 pm - 1:30 pm	<p><b>Education Committee Meeting</b></p>	<p><b>Illinois C</b></p>	<p><b>Undergraduate Luncheon &amp; Orientation</b></p>
1:30 pm - 2:00 pm	<p><b>Open Science Practices Q&amp;A</b></p>	<p><b>Illinois A</b></p>	<p><b>IEC Lunch Meeting</b></p>

Time	Illinois B	Illinois A	Cardinal	Dearborn	Illinois C	605	302
	Behavioural Plasticity Symposium 2 Moderator: Ned Docterhmann, et al	Presidential Symposium 2 Moderator: Jeff Podos	Conservation 1 Moderator: Allison Injauan	Ecological Effects 1 Moderator: Elizabeth Derryberry	Predation & Foraging 2 Moderator: Peter Bednekoff	Social Behavior 2 Moderator: Amanda K. Beckman	Communication 2 Moderator: David Logue
1:30 pm - 3:30 pm							
1:30	Synergies between transgenerational and developmental plasticity: the importance of considering multiple aspects of legacy. S. Donnellan - <i>Smithsonian Environmental Research Center</i>	Sex steroids and the motor skills of courtship. M. Fujigayer - <i>Wake Forest University</i>	Ultrasonic vocalizations in the Humboldt's flying squirrel. B. Clucas, T. Farwell - <i>Humboldt State University</i>	Digging Deep Into The Future: Effects Of Global Warming In A Fossiliferous Viviparous Lizard. I. Bellam, M. Whiting - <i>Department of Biological Sciences, Macquarie University</i>	Effects of Fluoxetine and Predation Risk Span Generations in a Freshwater Fish. S. Shail, L. Beatty, N. Covin, A. Simpson - <i>Penn State Erie, The Behrend College</i>	Characteristics of male lance-tailed manakin social networks and their impact on future social status. A. Beckman(1), J. C. Vanderbill(1), E. Duval(1) - (1) <i>Florida State University-Department of Biological Science, (2)Texas A&amp;M University- Ecology and Evolutionary Biology Program</i>	Family Matters – Bacterial Communities on the Skin of Birds. K. Engel, B. Caspers - <i>Department of Animal Behaviour</i>
1:45			Are avian laser-deterrents safe? A study on how visual foraging is affected by laser exposure. E. Fernandez-Juricic(1), A. Blumenthal(1), D. Harris(1), E. Melvin(2) - (1) <i>Purdue University, (2)University of Washington</i>	Simulated heat waves reduce cognitive and motor performance of an endotherm. E. Derryberry(1), C. Coomes(1), R. Danner(2) - (1) <i>University of Tennessee, (2)University of North Carolina</i>	Florida scrub-jay sentinels choose perches with a view, and a safe retreat nearby. P. Bednekoff - <i>Eastern Michigan University</i>	Longitudinal microbiome dynamics in a socially structured population. J. Bjork(1), M. Dasari(1), D. Jansen(1), T. Gould(2), L. Grensen(2), J. Grenier(3), V. Tolvalds(3), N. Gatter(4), J. Gilbert(4), L. Barreto(5), S. Blekman(2,6), S. Alberts(7,8), J. Tung(7,8), E. Achit(1) - (1) <i>Department of Biological Sciences, (2)University of Notre Dame,</i>	Sensory drive in the Old World leaf warblers ( <i>Phylloscopus warblers</i> ). K. Flakó - <i>University of Chicago</i>
2:00	Transcriptional changes in changes in parental care regimes in a burying beetle. R. Washood - <i>Department of Zoology, University of Cambridge</i>	Androgenic signaling and the evolution of gestural communication in a Bornean frog ( <i>Stauralis parvus</i> ). L. Mangamele - <i>Smith College</i>	Habitat use and associations by whooping cranes ( <i>Grus americana</i> ) in eastern Wisconsin. M. Gondek(1), M. McPhee(1), A. Lacy(2) - (1) <i>University of Wisconsin Foundation</i> , (2) <i>International Crane Foundation</i>	The effect of light at night on nocturnal singing in a diurnal bird species. A. Dickerson, M. Hall, T. Jones - <i>University of Melbourne</i>	The Influence of Predatory Sounds on the Nocturnal Neotropicals. M. Dixon(1,2), A. Savages(2), M. Ryan(1,2), R. Page(2) - (1) <i>University of Texas at Austin, (2)Smithsonian Tropical Research Institute</i>	Regulation of Social Facilitation by Group Composition and Mesosociality. Z. Dawish, K. Cunningham, P. Dare, R. Strasser - <i>University of Nebraska Omaha</i>	Conservation practices induce dialect formation in the endangered Puerto Rican Parrot ( <i>Amazona vittata</i> ). D. Logue(1), T. Martiniz(2) - (1) <i>University of Lethbridge, (2)Depto. de Recursos Naturales y Ambientales</i>
2:15			Assessing the effects of aircraft noise on the vocal behavior of passerine bird communities. A. Injauan(1,2), R. Klinck(1), S. Kalam(2) - (1) <i>Research Program, Cornell Lab of Ornithology, (2)Dept. of Ecology and Evolutionary Biology, Cornell University</i>	Toxoplasma gondii infections predict hyena boldness. E. Gering, Z. Laubach, P. Weber, G. Husey, J. Turner, K. Lehman, T. Montgomery, K. Holakamp, T. Getty - <i>Michigan State University</i>	Does an Asian natrixine snake recognize fireflies that have cardiac steroidal toxins? M. Fukuda(1), A. Mori(1), G. Chen(2) - (1) <i>Kyoto University, (2)Chengdu Institute of Biology</i>	Go with the flow? Individualism versus collective movement during travel. C. Doherty, M. Laidre - <i>Dartmouth College</i>	TEMPERATURE HAS DIFFERENT EFFECTS ON REPRODUCTIVE BEHAVIOR OF MALE VERSUS FEMALE TREEHOPPERS. A. Macchiano, D. Sesson, N. Leith, K. Fowler-Pinn - <i>Saint Louis University</i>
2:30	A coevolutionary model of adaptive paternal and maternal effects: should offspring ever listen to both parents? A. Kujber - <i>University of Exeter, Pennyrh Campus</i>	Vocal athletics – from birdsong production mechanisms to sexy songs. F. Geff - <i>School of Biological Sciences, University of Utah</i>	From beach mice to whooping cranes: Using behavioral ecology to conserve endangered species. M. McPhee - <i>University of Wisconsin Oshkosh</i>	Behavioral trait diversity and population disease risk. N. Keiser(1), P. Rudroff, J. Salt(2) - (1) <i>University of Florida, (2)Rice University</i>	Fear on the Reef: Fish Behavioral Responses to Predation Risk. M. J. Blom(1,2), C. Whelan(1,3), J. Brown(1,2) - (1) <i>University of Illinois at Chicago, (2)Field Museum of Natural History, (3)H. Lee Moffitt Cancer Center &amp; Research Institute</i>	How Individual Learning Affects Collective Foraging Behavior in Differently Structured Landscapes. N. Lennox(1,2), G. Cook(2), C. Ozkan(2), B. Smith(2), N. Philpott(1) - (1) <i>University of Arizona, (2)Volcan State University</i>	Zebra finches go wild! Experimental cultural evolution of birdsong. S. MacDougall-Shackleton, A. Diez - <i>University of Western Ontario</i>
2:45			A comparison of mitigation methods to prevent African elephant ( <i>Loxodonta africana</i> ) crop raiding. B. Schulte(1), R. Von Hagen(1), S. Kalam(2), M. Wemul(2), B. Amakobe(2) - (1) <i>Wildlife Works</i> , (2) <i>Western Kentucky University, (2)University of Kentucky</i>	Individual behavioral response across a gradient of human disturbance at a keystone mammal. C. Ortiz(1), J. Smith(1) - (1) <i>University of California, Davis, (2)Mills College</i>	Tactics used by bats when pursuing prey: predictive control of echolocation sonar of echolocation and flight. F. Ujiflora(2), S. Hill(2) - (1) <i>National Institute for Basic Biology, (2)Doshisha University</i>	Cognitive Phenotype, Social Network Position & Distribution of Social Associations in a Foraging Bird. A. Plerai(1), G. Brauch(2), E. Bridge(3), V. Pavosonis(1), J. Elie(1), W. Halfwerk(1) - (1) <i>Wife University, (2)Brookings Research Program, (3)Ornithology, Cornell University, (3)Oklahoma State University, (3)University of Chicago, (4)University of Chile, (5)Smithsonian Tropical Research Institute</i>	Wind affects tremulatory signaling of a Neotropical katydid ( <i>Cyrtopora neivrossi</i> ). E. Vail(1), L. Sykes(2), H. ter Huis(2), M. Mu(1), A. W. Ologa(1), R. Page(5), J. Elie(1), W. Halfwerk(1) - (1) <i>Wife University, (2)Brookings Research Program, (3)Ornithology, Cornell University, (3)Oklahoma State University, (3)University of Chicago, (4)University of Chile, (5)Smithsonian Tropical Research Institute</i>
3:00	Sperm-mediated paternal effects in three-spined sticklebacks. J. Hellmann - <i>University of Illinois, Urbana-Champaign</i>	Open	Determining the Causes of High Chick Mortality in Wisconsin's Whooping Cranes. K. Stewart, D. McPhee - <i>University of Wisconsin Oshkosh</i>	Ambient temperature, nest structure, and reproductive success in Mountain Chickadees at different elevations. B. Sommer(1), C. Brant(1,2), L. Benedict(1), A. Plerai(1), V. Pravoslov(1) - (1) <i>University of Nevada, Reno, (2)Cornell University</i>	Complex stories: Multiple aposematic signals in cryptic messages of the Pentachocidae family. P. A. Batista(2), D. Mészáros(1), A. Batista(2), D. Mielke(1) - (1) <i>Universidade de Los Andes, (2)Universidad Autónoma de Chiriquí</i>	The relationship between food preferences and invasibility. A. Rubio, N. Price-Vollman - <i>University of California Los Angeles</i>	Experimental Evidence for FoxP2's Key Role in Maintaining Lifelong Vocal Learning in Bunting's T. Wright(1), M. Ayala-Salazar(2), A. Acosta(1), S. White(3), G. Kolada(1) - (1) <i>New Mexico State University, (2)Universidad de Costa Rica, (3)University of California Los Angeles</i>
3:15			Automated Acoustic Localization and its Application to Behavioral Ecology and Conservation. D. Wilcox, W. Bahari, J. Ethier - <i>Memorial University of Newfoundland</i>	Effects of Methylmercury and Chronic Stressors on Migratory Behaviour in Song Sparrows. M. C. Battin(1), S. Macdonald, S. Shackleton(1,2) - (1) <i>Biological Department, Advanced Faculty of Avenir Research, University of Western Ontario, (2)Psychology Department, Advanced Faculty for Avenir Research, University of Western Ontario</i>	Uncovering the Network: Interseasonal patterns of social nesting in wild ducks ( <i>Anas platyrhynchos</i> ). T. Stair(1), M. Hatch(1), C. Wells(1), C. Bridges(3), B. Olson(2), J. Easler(1), The University of California, Davis, (2)The University of California, Santa Cruz, (3)The University of Oklahoma	Is a species a species? Vocal and morphological traits among African parrots tell different stories. A. Yoccoz(1), D. Carlsten(2), K. Carlsten(2), B. Galbraith(1), E. Carlsten(2), R. Math(3,4) - (1)Wimberly(2), (2)Wild Bird Trust, (3)FitzPatrick Institute of African Ornithology, Institute of Cape Town, (4)Africa Conservation Programme, World Parrot Trust	

## Inner Circle at Student Center East

3:30 pm - 4:00 pm

Coffee Break

Time	Illinois B	Cardinal	Dearborn	Illinois C	605	302	Illinois A	
4:00 pm - 5:15 pm	<p><b>Behavioural Plasticity Symposium 3</b> Moderator: Ned Doctermaier, et al</p> <p>Using Bayesian updating to predict patterns of within and transgenerational plasticity in empirical studies. J. Schjorup - University of California, Davis</p>	<p><b>Genetics &amp; Evolution 1</b> Moderator: Kasey Fowler-Finn</p> <p>Individual and genetic variation in reproductive thermal tolerance in sunfishes. K. Fowler-Finn, D. Sasson - Saint Louis University</p>	<p><b>Ecological Effects 2</b> Moderator: Catarina Vila Pouca</p> <p>Ontogeny of locomotion in mouse lemurs: behavior and performance. G. Boulenger, A. Amoise, A. Herrer, E. F. Foubertat - National Museum of Natural History</p>	<p><b>Predation &amp; Foraging 3</b> Moderator: Jessica L. Ward</p> <p>Behavior, morphology, and drives in natural niche variation? R. Costa-Pereira, V. Prullit - Department of Psychology, Neuroscience &amp; Behavior, McMaster University</p>	<p><b>Sexual Selection &amp; Sexual Conflict 1</b> Moderator: Emily J. Potratz</p> <p>Facultative responses to local competition in satin powerbirds (<i>Ptilinopus</i> spp.) (Acanthopneuste, Phalaenoptilus). E. Bergen - Cornell University</p>	<p><b>Communication 3</b> Moderator: Stephen Nowicki</p> <p>Investigation of interspecific signal interactions of Schizocosa wolf spiders in multi-species assemblages. N. Choi, E. Hebert - University of Nebraska-Lincoln</p>	<p><b>302</b></p> <p>Temperature effects on production in male zebra finches. C. Coomes, L. Denyberry - University of Tennessee Knoxville</p>	<p><b>Neuro/Endocrine &amp; Physiological Mechanisms 2</b> Moderator: Lynn Sieferman</p> <p>Social buffering of stress in a cooperatively breeding fish. B. Sullivan, K. Mourou, S. B. Palsline - University of Guelph, (2) University of Ottawa, (3) McMaster University</p>
4:15	<p><b>Choose your own adventure!</b> learning shapes genotype-by-environment interaction in fruit flies. J. Saltz - Rice University</p>	<p><b>Evolution of vision dependency for mating.</b> J. Gleason, P. Roy, K. Coyolt - University of Kansas</p>	<p><b>Robust development: boobies take El Niño in the stride.</b> H. D. Grimmond, C. Rodriguez, S. Ortega - Universidad Nacional de Mexico</p>	<p><b>The Evolution of Sacrificing a Limb (i.e. Autonomizing) to Escape Predation.</b> Z. Emberts, C. St. Mary, M. Foltman, C. Miller - University of Florida</p>	<p><b>Divergent effects of selection on different components of a seed-trait.</b> J. Lovel, J. Keller - (1) University of Utah, (2) University of Muenster</p>	<p><b>Temperature effects on production in male zebra finches.</b> C. Coomes, L. Denyberry - University of Tennessee Knoxville</p>	<p><b>Measuring Golden and Bald Eagle Hearing for Development of Eagle Callers.</b> B. Gellert, P. Baumann, N. Golter, E. Fernandez, L. Lucas - Dept. of Biological Sciences, Purdue University</p>	
4:30	<p><b>Accelerated Reproduction is Not an Adaptive Response to Early Adversity in Wild Baboons.</b> C. Weibel, J. Tung, S. Alberts, E. Archie - (1) Department of Biological Sciences, University of Notre Dame, (2) Department of Biology and Evolution, Anthropology, Duke University, (3) Institute of Primate Research, National Museums of Kenya</p>	<p><b>Behavioral atomization: New conceptual approaches to address "how" behavior changes.</b> R. Lugo, E. Scheele - (1) Cornell University, (2) Cornell Lab of Ornithology</p>	<p><b>Effects of a meningial parasite <i>Toxoplasma</i> sp. on the behavior of the fish <i>Gasterosteus maculatus</i>.</b> M. R. Lopez-Rodriguez, G. Goshima, J. Stueben, K. F. Miller - UCSC, (3) CIBAS UCSC</p>	<p><b>Safety cues can give prey more valuable information than the fish.</b> B. Luthiges, M. Ferrari, D. Blumstein, D. Chiriac, D. Blumstein, State University, (2) University of Saskatchewan, (3) University of California</p>	<p><b>Using mate choice to improve reproductive success in the endangered black-footed ferret.</b> E. Panfili, J. Brown - (1) The University of Illinois at Chicago, (2) Prairie Center, (3) Department of Integrated Mathematical Oncology, Moffitt Cancer Center</p>	<p><b>How do gray treefrogs form auditory objects of vocalizations?</b> S. Gupta, M. Bee - University of Minnesota</p>	<p><b>Two rhythmic patterns in calls of <i>Nocce cephalus</i> katydid: CPGs in thoracic abdominal ganglia.</b> K. Murphy, C. Steinmetz, S. Schul - University of Missouri</p>	
4:45	<p><b>Multiple genetic loci affect place learning and memory performance in <i>Drosophila melanogaster</i>.</b> P. Williams, Simon C. Posey, S. Mitchell, E. Ngoma, T. Zais, E. King - University of Missouri</p>	<p><b>Accelerated Reproduction is Not an Adaptive Response to Early Adversity in Wild Baboons.</b> C. Weibel, J. Tung, S. Alberts, E. Archie - (1) Department of Biological Sciences, University of Notre Dame, (2) Department of Biology and Evolution, Anthropology, Duke University, (3) Institute of Primate Research, National Museums of Kenya</p>	<p><b>The dark side of light: effect of artificial light at night on cricket calling behavior.</b> R. Singh, M. Jain - INDIAN INSTITUTE OF SCIENCE EDUCATION &amp; RESEARCH (IISER)</p>	<p><b>Harmful Algal Blooms Impair Prey Reception and Foraging Success in a Freshwater Fish.</b> J. Ward - Ball State University</p>	<p><b>Investigating mechanisms of sexual cannibalism avoidance by a male wolf spider - <i>P. rabida</i> (Family: Lycosidae).</b> D. Schoenberg, L. Sullivan-Beckets - Murray State University</p>	<p><b>Effects of Categorical Perception on the Reliability of an Assessment Signal.</b> S. Nowicki, J. P. Nelson, M. Zipse, J. P. Green - (1) University of Florida</p>	<p><b>Behavioral, physiological and morphological patterns of the tree swallow: an unusual southward range shift.</b> L. Sieferman, A. Albers, K. Rosvall - (1) Appalachian State University, (2) Appalachian State University, (3) Indiana University</p>	
5:00	<p><b>Does ocean warming affect shark learning abilities?</b> C. Vila Pouca, C. Genois, J. Reed, J. J. Michael, C. Brown - (1) IMECC/Univ. of ParisTech</p>	<p><b>Evolution of vision dependency for mating.</b> J. Gleason, P. Roy, K. Coyolt - University of Kansas</p>	<p><b>Does the dark side of light: effect of artificial light at night on cricket calling behavior.</b> R. Singh, M. Jain - INDIAN INSTITUTE OF SCIENCE EDUCATION &amp; RESEARCH (IISER)</p>	<p><b>Open Slot</b></p>	<p><b>Female mating preference functions and their genetics underlying speciation in <i>Drosophila</i>.</b> R. Yukiievich - Union College</p>	<p><b>Anthropogenic noise and responses to avian predator calls in chickadees, titmice, and nuthatches.</b> H. Jung, A. Sherrod, T. Freeseberg - University of Tennessee, Knoxville</p>	<p><b>Open Slot</b></p>	

## Inner Circle at Student Center East

5:15 pm - 5:30 pm

Coffee Break

Time	Illinois B	Cardinal	Dearborn	Illinois C	605	Illinois A	
5:30 pm - 6:30 pm	Behavioural Plasticity Symposium 4 Moderator: Ned Docter, et al	Mating/Breeding Systems 1 Moderator: Claire W. Varian Ramos	Ecological Effects 3 Moderator: Amanda Melin	Predation & Foraging 4 Moderator: Leticia M. Closser-Rodríguez	Social Behavior 3 Moderator: Jim McGerick	Parental Care 1 Moderator: Roberto Munguia-Steyer	
5:30	Neurobiological underpinnings of intragenotypic variability. B. de Bivort - <i>Harvard University</i>	Environmental Uncertainty influences the Evolution of Host Specialization in Avian Brood Parasites. N. Altonson(1), D. Rubenstein(2), M. Hauber(1), C. Bolero(3), (1) <i>University of Illinois Urbana-Champaign</i> , (2) <i>Columbia University</i> , (3) <i>Washington University in St. Louis</i>	The influence of golden-fronted woodpeckers as ecosystem engineers on the local avian community. F. Hardin(1), J. Gracet(1), D. Calms(2), T. Campbell(3), M. Morrison(1), (1) <i>Department of Wildlife and Fisheries, Texas A&amp;M University</i> , (2) <i>Department of Geography, Texas A&amp;M University</i> , (3) <i>East Foundation</i>	A secretion a day keeps the ants away - Predation on <i>Leobanum</i> harvestmen (Opiliones:Arachnida). F. Classen-Rodriguez, K. Fowler-Finn - <i>Saint Louis University</i>	Collective Foraging Behavior is Driven by Individual Variation in Learning, Waggle Dancing in Honey Bees. C. Cook(1), Mosquero(2), J. Gadau(3), C. Ozurk(1), B. N. Pinter-Wolman(2), B. Smith(1) - (1) <i>Arizona State University</i> , (2) <i>University of California Los Angeles</i> , (3) <i>University of Münster</i>	Paternal effort, condition and sexual selection in two waterbug species (Hemiptera: Belostomatidae). K. Munguia-Steyer, M. Olvera, E. Gonzalez, C. Aparicio - <i>Universidad Nacional Autónoma de México</i>	
5:45	Smart is the new sexy: Females increase reproductive output when mated to males with better cognition. C. Branch(1), A. Pflera(2), D. Kozlovsky(3), E. Bridge(4), V. Pravosudov(2) - (1) <i>Cornell Lab of Ornithology</i> , (2) <i>University of Nevada</i> , (3) <i>University of Oklahoma</i> , (4) <i>University of Oklahoma</i>	Smart is the new sexy: Females increase reproductive output when mated to males with better cognition. C. Branch(1), A. Pflera(2), D. Kozlovsky(3), E. Bridge(4), V. Pravosudov(2) - (1) <i>Cornell Lab of Ornithology</i> , (2) <i>University of Nevada</i> , (3) <i>University of Oklahoma</i> , (4) <i>University of Oklahoma</i>	Fruit scent and observer color vision shape food-selection strategies in wild capuchin monkeys. A. Melin(1), O. Nevot(2), M. Shirasu(3), R. Williamson(1), E. Garret(4), M. Endo(3), K. Sakurai(3), M. Saitoh(3), K. Tsuburata(3), S. Kawamura(3) - (1) <i>University of Caigay</i> , (2) <i>University of Urm</i> , (3) <i>University of Tokyo</i> , (4) <i>Boston University</i>	Resource competition can explain coexistence and switching of collective states in fish shoals. H. Macgregor, J. Herberich-Read, C. Ioannou - <i>University of Bristol</i>	Perceived reward attainability contributes to dogs' responses in inequity paradigms. J. McGerick, A. Koran, R. Feisch, S. Stegmann, F. Reinge - <i>Domestication Lab, Konrad Lorenz Institute of Ethology, University of Veterinary Medicine, Vienna</i>	When and how: temporal patterns, and adaptive benefits of parental care in the glassrog <i>Centronie savagei</i> . A. Ospina-Larrea(1), P. Navarro-Salcedo(2), J. Rios-Soto(3), S. Duarte-Marin(2), J. Delata(4), F. Vargas-Salinas(2) - (1) <i>Instituto Alexander von Humboldt</i> , (2) <i>Secretaría de Gestión rural y Desarrollo sostenible</i> , (4) <i>Boston University</i>	
6:00	High-res tracking of clonal fish offers novel insight into individual behavioral trajectories. K. Laskowski - <i>University of California Davis</i>	The major histocompatibility complex, mate choice and seabird. S. Jennigs(1), B. Scooper(1,2), S. (3,4), G. Nevitt(1), S. Edwards(4), S. Ebeler(1) - (1) <i>University of California, Davis</i> , (2) <i>Ferallon Institute</i> , (3) <i>The University of Hong Kong</i> , (4) <i>Harvard University</i>	Habitat As A Basis For Estimating Parameters Of Visual Perception. M. Murphy, E. Westerman - <i>University of Arkansas</i>	Vigilance in an African ground squirrel: Sentinel or synchrony? A. van der Marrel(1), J. Waterman(1), M. Lopez-Danada(2) - (1) <i>University of Miami</i> , (2) <i>Island Ecology and Evolution Research Group, Instituto de Producción Agrícola y Agrobiología (IPNA-CSC)</i>	The geometry of decision-making. B. Shridhar(1,2,3), R. Bastien(1,2,3), M. Gov(4), Szyzkal(2,5), N. Gov(4), I. Conant(1,2,3) - (1) <i>Max Planck Institute of Ornithology</i> , (2) <i>University of Konstanz</i> , (3) <i>Centre for the Advanced Study of Collective Behaviour</i> , (4) <i>Weizmann Institute of Science</i> , (5) <i>University of Otago</i>	The Intestinal Environment as an Evolutionary Adaptation to Mouthbrooding in a cichlid fish. S. Renn(1), J. Papei-Hammond(1), R. Roberts(2) - (1) <i>Reed College Biology Department</i> , (2) <i>North Carolina State University</i>	The Sensory Control of Navigation in Amphipods. D. Fliegmann(1,4), P. Castot(1), K. Flanagan(1), B. Concordat(1), M. Moore(2), E. Hebert(3), V. Bingham(2,4) - (1) <i>Bowling Green State University</i> , (2) <i>Department of Biological Sciences</i> , (3) <i>Bowling Green State University</i> , (4) <i>Department of Psychology</i> , (5) <i>University of Nebraska-Lincoln</i> , (6) <i>School of Biological Sciences</i> , (7) <i>Bowling Green State University</i> , (8) <i>Scott Center for Neuroscience, Mind and Behavior</i>
6:15	An assessment of the presence and consequences of alternative nesting tactics in Tree Swallows. E. Leidi, F. Pelletier, D. Garant - <i>Département de biologie</i>	Intraspecific genetic variation for lead-induced changes in reproductive strategies. E. Peterson(1,2), R. Rossidente(3), A. Stark(1), K. H. Roehner(4), F. Carrico(1), A. (1) <i>State University of New York-Albany</i> , (2) <i>Colorado State University-Fueblo</i> , (3) <i>Sidmore College</i> , (4) <i>Union College</i>	Turbidity and social information transmission in fish shoals. M. Webster, School of Biology, University of St. Andrews	Sociality and Reproductive Success of Female Dolphins ( <i>Tursiops truncatus</i> ) of the St. Johns River, FL. K. Bingham(1), A. MacVicar(1,2), G. Gibson(1) - (1) <i>University of North Florida</i> , (2) <i>Lehigh University</i>	HOMING AND PARENTAL CARE IN THE GLASSROG CENTRONE SAVAGER: FATHERS COME BACK FROM FARTHER THAN SINGLES. F. Vargas-Salinas(1), P. Navarro-Salcedo(1), S. Duarte-Marin(1), M. Rada(2) - (1) <i>Universidad del Quindío</i> , (2) <i>Instituto de Biociencias, Universidad de São Paulo, Brasil</i>	Social cues speed up tool-use cognition in an invertebrate. J. Krieger(1), L. Labor(2) - (1) <i>Department of Cytology and Evolutionary Biology, Zoological Institute and Museum, University of Greifswald</i> , (2) <i>Department of Biological Sciences, Dartmouth College</i>	
6:30	Offspring sex ratios do not reflect adult sex ratios in Lark Buntings ( <i>Calospiza melanocorys</i> ). C. Varian Ramos, M. Fall - <i>Colorado State University - Pueblo</i>	Offspring sex ratios do not reflect adult sex ratios in Lark Buntings ( <i>Calospiza melanocorys</i> ). C. Varian Ramos, M. Fall - <i>Colorado State University - Pueblo</i>					

## Inner Circle at Student Center East

Poster Session

Wise Owl

ABS Student Party

## THURSDAY, JULY 25

Time

8:00 am - 9:00 am

Plenary Session: Gail Patricelli

Time

9:00 am - 10:00 am

Plenary Session: Georgia Mason

Time

10:00 am - 10:45 am

Inner Circle at Student Center East

Coffee Break/Walk to Student Center

10:45 am - 12:45 pm  
**Allele Symposium 1**  
 Moderator: Esteban Fernandez-Juricic

**Proximate Mechanisms of Complex Sociality Symposium 1**  
 Moderator: Emily DuVal & Blake Jones

Personality and pair bonds: Individual differences in zebra finch personality and cognition.  
 L. Barrett(1,2), J. Marslin(1), N. Boogert(3), C. Templeton(4), S. Benson-Amiri(1,2) - (1)Dept. of Zoology & Physiology, University of Wyoming, (2) Program in Ecology, University of Wyoming, (3) Department of Biosciences, University of Exeter, (4) Department of Biology, Pacific University Oregon

11:00  
**Variation in nestling corticosterone, not relatedness, predicts helping in a cooperative breeder.**  
 J. Cusick(1,2), E. DuVal(1), J. Cox(2) - (1)Florida State University, (2) Tall Timbers Research Station and Land Conservancy

11:15  
**Social regulation of the mammalian genome.** J. Tung - *Duke University*

11:30

11:45  
**Female competition promotes hybridization between sex-role reversed species.**  
 S. Lipschutz(1,2,3), J. Meier(4), G. Derryberry(5), M. Miller(6), O. Seehausen(4), E. Derryberry(5,3) - (1)Indiana University, (2) Tulane University, (3) University of Tennessee, (4) Institute of Ecology and Evolution, (5)Louisiana State University, (6) University of Oklahoma

12:15  
**Predicting and measuring decision rules for social recognition in a neotropical frog.**  
 J. Turnulty(1,2), J. Mumby(1,2) - (1)University of Minnesota, (2)Cornell University

**Behavioral Plasticity 1**  
 Moderator: TBD

The Influence of Nociceptive Sensitization and Visual Cues on the Camouflage Behaviors of Injured Octopuses.  
 R. Howard, R. Crook - *San Francisco State University*

11:00  
**Anthropogenic change alters the development of personality in a common freshwater fish.**  
 G. Lamka, A. Swank, J. Ward - *Baylor State University*

11:15  
**Exploratory Behaviour Related to Latitudinal Migration Distance in Song Sparrows (*Melospiza melodia*).**  
 C. Posliff, E. MacDougall-Shackleton - *Western University*

11:30  
**Consistency of Personality Traits in Meadow Voles, *Microtus pennsylvanicus*.**  
 K. Rohrer, M. Ferkin - *University of Memphis*

11:45  
**Causes of variation in black widow web architecture.**  
 C. Sergi, R. Rodriguez - *University of Wisconsin - Milwaukee*

12:00  
**Complex interactions between maternal and personal experience with predation risk across populations.**  
 L. Stein(1,2), K. Hoker(1) - (1)Colorado State University, (2) University of Oklahoma

12:15  
**Flooding the Market: Experimentally Altered Home Supply and Demand Drives Behavioral Plasticity.**  
 L. Valdes, M. Laidre - *Dartmouth College*

12:30  
**Black howler monkeys show mixed strategies in response to fragmented habitat variation in Chiapas, Mexico.**  
 K. Klass(1,2), S. Van Belle(3), A. Estrada(2) - (1)University of Toronto, (2)National Autonomous University of Mexico, (3)University of Texas

**Ecological Effects 4**  
 Moderator: Karina Sanchez

Malaria as a mediator of sexual dimorphism in western fence lizards (*Sceloporus occidentalis*).  
 M. Chelini(1), D. Edwards(2) - (1)Duke University, (2)UC Merced

11:00  
**Parasite-host dynamics of two passerines and ectoparasites using both spatial and temporal parameters.**  
 K. Gussman, L. Siefertman - *Appalachian State University*

11:15  
**Predator density, hunting voracity, and personality diversity structure meadow communities.**  
 J. Lichtenstein(1), B. McEwan(2), S. Primavera(1), L. Lenhain(1), Z. Wood(3), R. Costa Pereira(2), J. Pruitt(2) - (1)University of California Santa Barbara, (2)McMaster University, (3)Bowdoin College

11:30  
**Predicting drivers of group demise.**  
 B. McEwen(1), J. Lichtenstein(2), D. Fisher(1), C. Wright(3), G. Chism(4), N. Pinter-Wollman(5), J. Pruitt(1) - (1)McMaster University, (2)University of California, Santa Barbara, (3) Pennsylvania State University, (4) University of Arizona, (5)University of California, Los Angeles

11:45  
**Correlates and consequences of maternal stress in a socially flexible hibernator.**  
 G. Pinno(1), X. Ross(2), A. Rees(3), D. Blumstein(1) - (1)UCLA, (2) College of the Atlantic, (3)Indiana University

12:00  
**Shoaling and Aggression in Trinidadian Guppies, *Poecilia reticulata*.**  
 S. Ruckman(1), D. Reznick(2) - (1)Texas A&M University, (2)University of California, Riverside

12:15  
**Uptown birds living in an altered world: Urban characteristics and avian species in Weld County.**  
 CO. K. Sanchez, C. Kennedy, L. Benedict, J. Salo - *University of Northern Colorado*

12:30  
**The role of social behaviour in infectious disease risk varies across the lifespan in a group-living mammal.**  
 M. Silk(1), R. McDonald(1), R. Delahay(2), D. Hoodson(1) - (1)University of Exeter

**Social Behavior 4**  
 Moderator: Evan Kelemen

A study of alarm propagation in ants with machine learning and network building.  
 X. Guo(1), M. Lin(2), L. Saldy(3), T. Pavlic(4), Y. Kang(2), J. Fellvelli(1) - (1) Social Insect Research Group, School of Life Sciences, Arizona State University, (2)Simon Fraser University, (3)Department of Mathematics, Computer Science, and Evolution and Social Change, Arizona State University, (3)Computer Science, Arizona State Polytechnic, (4) School of Computing, Informatics, and Decision Systems Engineering, School of Life Sciences, Arizona State University

11:00  
**Resolving Michener's Paradox is all about scale.**  
 E. Kelemen, A. Dornhaus - *University of Arizona*

11:15  
**Individual capture data reveals large-scale patterns in social behavior in 12 species of birds.**  
 K. LaBarbera(1), J. Scullen(2) - (1) University of Minnesota - Twin Cities, (2) San Francisco Bay Bird Observatory

11:30  
**Aggression underlies the relationship between native and invasive ants.**  
 K. Neumann, N. Pinter-Wollman - *University of California, Los Angeles*

11:45  
**Moment-to-moment behavioral synchrony prior, R. Pooling.**  
 G. Ball - *Psychology, University of Maryland*

12:00  
**Social environment magnifies facultative migratory response to declining food availability.**  
 A. Robert(1,2), H. Watis(2) - (1) Cal Poly Pomona, (2) Washington State University

12:15  
**Comparative study of age polyethism in Unnikrishnan, A. Brockmann - National Centre for Biological Sciences, TIFR**

12:30  
**Let's play - an experimental study on play contention in ravens.**  
 K. Weng(1,2), T. Bugnyar(1,2) - (1)Department of Cognitive Biology, University of Vienna, (2)Hahnhof Research Station

**Communication 4**  
 Moderator: Tamra Mendelson

The role of male-male interactions in female reproductive decisions.  
 M. Bircher(1,2), K. van Oers(1,2), C. Hinder(1), M. Naguib(1) - (1)Behavioural Ecology Group, Wageningen Ecology Group, Wageningen University & Research, (2) Department of Animal Ecology, Netherlands Institute of Ecology (NIOO-KNAW)

11:00  
**Olfactory parent offspring recognition in a songbird.**  
 B. Caspers(1), E. Krause(2), J. Hegelin(3) - (1)Department of Animal Behaviour, Bielefeld University, (2)Friedrich-Loffler Institute, (3)Institute of Arctic Biology, University of Alaska, Exeter

11:15  
**Examining intrinsic and extrinsic factors underlying dominance and aggressive behaviour in field crickets.**  
 L. Kaira(1), A. Chaudhuri(2), M. Jain(2) - (1)ISER Mohali, (2)University of Minnesota

11:30  
**Complex nuptial patterns of fish species mimic the spatial statistics of their habitat.**  
 T. Wendelson(1), S. Huise(1), J. Renoult(2) - (1)UMBC

11:45  
**19 Years of Consistently Positive and Strong Female Mate Preferences Despite Individual Variation.**  
 M. Ryan(1,2) - (1)University of Texas, (2)Smithsonian Tropical Research Institute

12:00  
**Multimodal control of reproductive behavior and physiology in male tungara frogs.**  
 M. Stille(1), A. Lea(1), B. Hare(3), N. Snyder-Wackler(1), H. Hofmann(1), M. Ryan(1,2) - (1)University of Texas at Austin, (2)Smithsonian Tropical Research Institute

12:15  
**An Experimental Test of the Condition-Dependent Hypothesis using Field Crickets, *Gryllus pennsylvanicus*.**  
 D. Treblay, S. Bertram - *Carleton University*

12:30  
**Carnivore-livestock interactions in a Namibian Agricultural Landscape.**  
 S. Fink, R. Chandler, M. Chamberlain, S. Cassteberry, S. Thrasher - *University of Georgia*

**Cognition & Learning 2**  
 Moderator: Eduardo B. Ottoni

Social Learning Strategies in Guppies Exposed to Matching Versus Mismatching Stress Paradigms.  
 M. Gugueno(1), M. Colinet(1,2), S. Reader(1) - (1) McGill University, (2) Université de Namur

11:00  
**Assortment by learning ability leads to differential fitness outcomes for pheasants in the wild.**  
 E. Langley, J. van Horik, M. Whiteside, C. Beardsworth, M. Weiss, J. Madden - *University of Exeter*

11:15  
**Copy or innovate: contrasting responses to chemical social information in bees.**  
 R. Olake, S. Dobsala - *Kyoto Biological University*

11:30  
**Experimentally induced diffusion of probe tool use in a group of turtled capuchin monkeys (*Sapajus sp*).**  
 E. Ottoni, H. Ruffo - *University of São Paulo*

11:45  
**Mirror-Induced Behavior in Paper-Wasps: Is an Insect Capable of Self-Recognition?**  
 J. Rojas(1), A. Toft(2,3) - (1)Biology Program, Iowa State University, (2) Department of Ecology, Evolution, and Organismal Biology, Iowa State University, (3) Department of Entomology, Iowa State University

12:00  
**Age Influences Domestic Dog (*Canis familiaris*) Cognition Independent of Breed Lirespan.**  
 M. Walcovich(1), E. MacLean(2), B. Hare(3), N. Snyder-Wackler(1) - (1)University of Washington, (2) University of Arizona, (3) Duke University

12:15  
**Behavior systems and behavioral organization: Time to think 'big' again?**  
 G. Burghardt - *University of Tennessee*

12:30  
**Influence of sociality on innovation in a facultatively social mammal.**  
 D. Williams, D. Blumstein - *University of California, Los Angeles*

Time	Illinois C	Illinois B	Illinois C	Illinois B	Illinois C	Illinois B	Illinois A	
12:45 pm - 2:00 pm	Latin Affairs Committee Meeting							
1:00 pm - 2:00 pm	NSF Workshop: NSF Beginning Investigators: Tips for Crafting a Competitive Proposal	Cardinal	Dearborn	Illinois C	605	Elsevier Update and Feedback	Illinois A	
2:00 pm - 4:00 pm	Allele Symposium 2 Moderator: Esteban Fernandez-Juricic	Proximate Mechanisms Of Complex Sociality Symposium 2 Moderator: Emily DuVal & Blake Jones	Behavioral Plasticity 2 Moderator: David F. Westneat	Sexual Conflict & Sexual Selection 2 Moderator: Pearl R. Rivers	Social Behavior 5 Moderator: Marina Donaldson-Matasci	Communication 5 Moderator: James P Higham	Cognition & Learning 3 Moderator: Sarah Benson-Amram	
2:00	Testing the hypothesis that migratory behavior and high latitudes drive increased song complexity. N. Najari, L. Benedict. <i>University of Northern Colorado</i>	Animal nutritional state can profoundly affect behavior, including various forms of cooperative behavior. A. Walton. <i>Iowa State University / Cornell University</i>	Characterizing evolutionary strategies in <i>Drosophila</i> thermal preference via temporal and geographic sampling. J. Akhunc-Zadei(1), D. Yoon(1), A. Bangerter(2), M. Campbell(2), N. Polzons(3), E. Wice(4), J. Salz(4), M. Klein(3), A. Berglund(2), B. de Bivort(1). (1) <i>Harvard University</i> , (2) <i>University of Virginia</i> , (3) <i>University of Miami</i> , (4) <i>Rice University</i>	Male relatedness and familiarity do not affect female fitness in seed beetles. E. Berg(1), M. Brdic(2), S. Monahan(1), S. Riccio(1), A. Maklakova(3). (1) <i>The American University of Paris</i> , (2) <i>Uppsala University</i> , (3) <i>University of East Anglia</i>	How Does Group Size Contribute to Social Stress? H. Anderson, A. Little, B. McEwen, S. Baisaine, J. Pruitt. <i>McMaster University</i>	Robust generative models for the study of mate choice signaling dynamics in <i>Poeciliidae</i> spp. R. Etheredge(1,2,3,4), L. Jordan(1,2,3) - (1) <i>Max Planck Institute for Ornithology</i> , (2) <i>University of Konstanz</i> , (3) <i>Centre for the Advanced Study of Collective Behaviour</i> , (4) <i>International Max Planck Research School for Organismal Biology</i>	Hippocampal neuron number predicts problem-solving abilities in raccoons. S. Benson-Amram(1), M. Kent(2), S. Daniels(1), J. Drake(2), R. Fanelli(1), A. Gilbert(4), S. Johnson(4), A. Lai(2), A. Miller(3), N. Nalate(2), S. Herculano-Houzel(3), K. Lambert(2) - (1) <i>University of Wyoming</i> , (2) <i>University of Richmond</i> , (3) <i>Vanderbilt University</i> , (4) <i>USDA/APHIS National Wildlife Research Center</i>	
2:15			Newly-established widow spiders are larger and more dispersive across multiple invasion fronts. M. Mowery(1), Y. Lubin(2), A. Mason(1), M. Andrade(1) - (1) <i>University of Toronto Scarborough</i> , (2) <i>Ben-Gurion University of the Negev</i>	The evolution of mate selection: the "indirect confusion" hypothesis. J. Fry. <i>University of Rochester</i>	Individual information access resulting from fine-scale movement decisions. B. Costelloe(1,2), B. Koger(1,2), J. Graving(1,2), I. Couzin(1,2) - (1) <i>Max Planck Institute for Ornithology</i> , (2) <i>Center for the Advanced Study of Collective Behaviour</i> , <i>University of Konstanz</i>	The evolution of acoustic communication in a hybridization event within a genus of poisonous frogs. M. González, P. Palacios, A. Amezcua. <i>University of Los Andes</i>	Brain Size Predicts Performance, but Not Learning Strategy, in a Serial Reversal Learning Test. A. Boussard(1), M. Ancoff(1), W. van der Bill(2), A. Kotschal(1), N. Kolm(1) - (1) <i>Stockholm University</i> , (2) <i>University of British Columbia</i>	
2:30	The dynamics of dominance in a convention-based society. E. Strauss, K. Holekamp. <i>Michigan State University</i>	Same building blocks different design: the complexity of "love" from the lab to the field. B. Cushing. <i>University of Texas at El Paso</i>	Multilevel phenotypic integration of energy metabolism and behavior. T. Salzman, D. Westneat. <i>University of Kentucky</i>	Songbirds show odour-based discrimination of similarity and diversity at MHC. L. Gieves, G. Gloor, M. Bernards, B. MacDougall-Shackleton. <i>University of Western Ontario</i>	Intraspecific variation in the collective heartbeat of ant societies. G. Doering(1), K. Scheib(2), J. Lichtenstein(2), B. Dravett(3), L. Pezout(2), J. Pruitt(1) - (1) <i>McMaster Univ</i>	The role of familiarity in signaler-receiver interactions. J. Higham(1), W. Ma(2,3) - (1) <i>Department of Anthropology</i> , <i>New York University</i> , (2) <i>Department of Psychology</i> , <i>New York University</i> , (3) <i>Center for Neural Science</i> , <i>New York University</i>	Exploring problem-solving and innovation in two species of carnivores. V. O'Connor(1), S. Chase(1), P. Thomas(2,3), N. Borrogo(4) - (1) <i>The City University of New York - Hunter College</i> , (2) <i>The Wildlife Conservation Society</i> , (3) <i>The Bronx Zoo</i> , (4) <i>The American University of Cairo</i>	Ants learn fast and do not forget: light environments and memory extinction in <i>Formica fusca</i> . B. Piqueres(1), J. Sandoz(2), P. Etienne(1) - (1) <i>University of Paris-Saclay</i> , (2) <i>University Paris-Saclay, IRD, University Paris-Saclay</i>
2:45			Social experience, neurohormones, and plasticity in mating behaviors of a wolf spider. B. Stoffer(1), J. Price(2), R. Wilson(2), T. Jones(2), G. Uetz(1) - (1) <i>University of Cincinnati</i> , (2) <i>Eastern Tennessee State University</i>	Female calls reduce intraspecific or interspecific sexual coercion in two Japanese pond frog. M. Itoh. <i>Kyoto Univ.</i>	Transport in the trees: How arboreal ants construct networks under spatial constraints. M. Donaldson-Matasci(1), J. Chang(2) - (1) <i>Harvey Mudd College</i> , (2) <i>Pomona College</i>	Links between circadian rhythms, light environments and courtship success in <i>Schizocosa wolf spiders</i> . R. McGinley(1), J. Bond(2), J. Staret(2), E. Hebel(1) - (1) <i>University of Nebraska-Lincoln</i> , (2) <i>University of California Davis</i>	Problem Solving in Fawn-footed Mosaic-tailed Rats is Not Constrained by Personality. M. Rowell(1,2), (1) <i>James Cook University</i> , (2) <i>Centre for Tropical Environmental and Sustainability Sciences</i> , <i>James Cook University</i>	
3:00	Reduced cooperative behavior as a cost of high testosterone in male wire-tailed manakins. B. Vernasco(1), B. Horton(3), I. Moore(1), T. Ryder(2) - (1) <i>Virginia Tech</i> , (2) <i>Smithsonian Institution</i> , (3) <i>Millersville University</i>	Revealing proximate mechanisms of parental care using highly replicated RNAseq experiments. R. Callisi, Rodi Aguez. <i>University of California, Davis</i>	Correlational selection may influence reaction norm shape. D. Westneat(1), S. Nakagawa(2), J. Schroeder(3), T. Burke(4) - (1) <i>University of Kentucky</i> , (2) <i>University of New South Wales</i> , (3) <i>Imperial College</i> , (4) <i>University of Sheffield</i>	Post-Copulatory Sexual Selection May Accommodate Sexual Signal Loss in the Pacific field cricket. M. Kola, E. Urquhart, M. Zuk. <i>University of Minnesota</i>	Comparing randomisation approaches and exponential random graph models in simulated animal social networks. D. Fisher(1), J. Evans(2), M. Silk(3) - (1) <i>McMaster University</i> , (2) <i>University of Zurich</i> , (3) <i>University of Exeter</i>	City life changes the trajectory of cultural evolution for song performance in bird songs. D. Moseley(1,2,3), J. Phillips(4), E. Derybery(5), D. Luther(2) - (1) <i>James Madison University</i> , (2) <i>George Mason University</i> , (3) <i>Smithsonian Migratory Bird Center</i> , (4) <i>Cal Poly State University</i> , (5) <i>University of TN</i>	Problem Solving in Fawn-footed Mosaic-tailed Rats is Not Constrained by Personality. M. Rowell(1,2), (1) <i>James Cook University</i> , (2) <i>Centre for Tropical Environmental and Sustainability Sciences</i> , <i>James Cook University</i>	Neurally underdeveloped cuttlefish newborns exhibit social learning. E. Sampaio(1,2,3), C. Ramos(1), B. Bernardino(1), M. Bleuven(1), M. Augustin(1), E. Mourai(1), V. Lopes(1), R. Rosa(1) - (1) <i>IMARE - Marine and Environmental Sciences Centre, Laboratório Marítimo da Guia, Faculdade de Ciências</i> , (2) <i>Department of Collective Behaviour</i> , <i>Max Planck Institute for Ornithology</i> , <i>University of Konstanz</i> , (3) <i>Centre for the Advanced Study of Collective Behaviour</i> , <i>University of Konstanz</i>
3:15			Giving-up Densities as a Measure of Boldness in a Native and Invasive Crayfish. A. Pergams(1), M. McNickle(2), C. Whelan(1), J. Brown(1,3) - (1) <i>UIUC</i> , (2) <i>Purdue University</i> , (3) <i>Moffitt Cancer Center</i>	Reduced Mating Between Populations Can Evolve Very Early in Divergence. A. Lackey(1), A. Murray(1), G. Ragland(2), D. Hahn(3), J. Feder(4), T. Powell(1) - (1) <i>Birmingham University</i> , (2) <i>University of Colorado Denver</i> , (3) <i>University of Florida</i> , (4) <i>University of Notre Dame</i>	Benefits of Groups to Optimal Shelter Choice in Cockroaches. T. Freeberg(1), A. Akhter(1) - (1) <i>University of Tennessee</i> , (2) <i>University of Tennessee</i>	Dancing in the dark: Complex Courtship and the Signal environment. L. Sullivan-Beckers. <i>Murray State University</i>	Neurally underdeveloped cuttlefish newborns exhibit social learning. E. Sampaio(1,2,3), C. Ramos(1), B. Bernardino(1), M. Bleuven(1), M. Augustin(1), E. Mourai(1), V. Lopes(1), R. Rosa(1) - (1) <i>IMARE - Marine and Environmental Sciences Centre, Laboratório Marítimo da Guia, Faculdade de Ciências</i> , (2) <i>Department of Collective Behaviour</i> , <i>Max Planck Institute for Ornithology</i> , <i>University of Konstanz</i> , (3) <i>Centre for the Advanced Study of Collective Behaviour</i> , <i>University of Konstanz</i>	

3:30 Learning Experiments in the Field: How Squirrels Learn to Cross/ Circumvent Obstacles to Reach Food. K. Waliczewski Seanie, S. Falkin - *Biology Dept., Central Connecticut State University*

3:45 Testing hypotheses about song type matching and song sequences in songbird vocal repertoires. Ziadi, B., Blakely, R., Anderson - *Florida Atlantic University*

Individual experience and polymorphism shape ant nest architecture. C. Kwabuchi, G. Alentini, B. Hollobiel - *Arizona State University, School of Life Sciences*

Multiple paternity in a lek mating system: females mate multiply when they choose inexperienced sires. P. Rivens, E. Duval - *Florida State University*

Diverse selective pressures drive color and contrast evolution in wood-warblers. R. Simpson, A. Mistakidis, S. Doucet - *University of Windsor*

Testing for links of cooperative behaviors with glucocorticoid and telomere variation. B. Jones - *FLORIDA STATE UNIVERSITY*

Spatially separated cricket songs facilitate temporal pattern recognition in *Ormia oryzaea*. K. Jirik(1), L. Almanza(1), S. Thompson(1), C. Mason(2), N. Lee(1) - (1)St. Olaf College, (2)University of Toronto Scarborough

Effects of corticosteroids on song babbling in an extremely altricial bird. R. Eggleston(1), K. Berg(1), R. Kline(1), A. Mala-Betancourt(2) - (1)University of Texas Rio Grande Valley, (2) Instituto Venezolano de Investigaciones Cientificas, Centro de Ecologia

Chronic fluoxetine exposure modulates social and startle behavior in the fish *Astatotilapia burtoni*. A. Fulmer(1), S. Shih(2), B. Perez(2), M. Adelman(2), H. Neumeister(2), T. Preuss(2) - (1) Lehman College, City University of New York, (2) Hunter College, City University of New York

Exploratory behaviours and diet breadth of a wild canid reveal low repeatability. K. Jumbam(1), A. le Roux(1), M. Petela(1,2) - (1)University of the Free State, QwaQwa Campus, (2) Max Planck Institute for Ornithology

Behavioural and physiological responses to reward quality as a way to assess goat emotions. A. McElligott(1), E. Briefer(2), M. Baciadonna(3) - (1) University of Roehampton, (2) ETH Zurich, (3) Queen Mary University of London

Urban carnivore behavior and the role of human culture. J. Young - *USDA-National Wildlife Research Center-Predator Research Facility*

Inner Circle at Student Center East Coffee Break

Time 4:00 pm - 4:30 pm

Time 4:30 pm - 6:30 pm

Time 4:45

Time 5:00

Time 5:15

**Illinois A**  
**Cognition & Learning 4**  
 Moderator: Jimena Lois-Milevich

**Illinois B**  
**Animal Behaviour On An Urbanized Planet Symposium 1**  
 Moderator: James Chadwick Johnson

**Illinois C**  
**Applied Animal Behavior 1**  
 Moderator: Alan G. McElligott

**Illinois D**  
**Social Behavior 6**  
 Moderator: Emily C. Laub

**Illinois E**  
**Communication 6**  
 Moderator: Trevor Price

**Illinois F**  
**Cardinal**  
**Alees Symposium 3**  
 Moderator: Esteban Fernandez-Juricic

**Illinois G**  
**Behavioral Plasticity 3**  
 Moderator: Kimberly E. Dolphin

**Illinois H**  
**Behavioral Plasticity 3**  
 Moderator: Kimberly E. Dolphin

**Illinois I**  
**Behavioral Plasticity 3**  
 Moderator: Kimberly E. Dolphin

**Illinois J**  
**Behavioral Plasticity 3**  
 Moderator: Kimberly E. Dolphin

**Illinois K**  
**Behavioral Plasticity 3**  
 Moderator: Kimberly E. Dolphin

**Illinois L**  
**Behavioral Plasticity 3**  
 Moderator: Kimberly E. Dolphin

**Illinois M**  
**Behavioral Plasticity 3**  
 Moderator: Kimberly E. Dolphin

**Illinois N**  
**Behavioral Plasticity 3**  
 Moderator: Kimberly E. Dolphin

**Illinois O**  
**Behavioral Plasticity 3**  
 Moderator: Kimberly E. Dolphin

**Illinois P**  
**Behavioral Plasticity 3**  
 Moderator: Kimberly E. Dolphin

**Illinois Q**  
**Behavioral Plasticity 3**  
 Moderator: Kimberly E. Dolphin

**Illinois R**  
**Behavioral Plasticity 3**  
 Moderator: Kimberly E. Dolphin

**Illinois S**  
**Behavioral Plasticity 3**  
 Moderator: Kimberly E. Dolphin

**Illinois T**  
**Behavioral Plasticity 3**  
 Moderator: Kimberly E. Dolphin

**Illinois U**  
**Behavioral Plasticity 3**  
 Moderator: Kimberly E. Dolphin

**Illinois V**  
**Behavioral Plasticity 3**  
 Moderator: Kimberly E. Dolphin

**Illinois W**  
**Behavioral Plasticity 3**  
 Moderator: Kimberly E. Dolphin

**Illinois X**  
**Behavioral Plasticity 3**  
 Moderator: Kimberly E. Dolphin

**Illinois Y**  
**Behavioral Plasticity 3**  
 Moderator: Kimberly E. Dolphin

**Illinois Z**  
**Behavioral Plasticity 3**  
 Moderator: Kimberly E. Dolphin

**Illinois AA**  
**Behavioral Plasticity 3**  
 Moderator: Kimberly E. Dolphin

**Illinois AB**  
**Behavioral Plasticity 3**  
 Moderator: Kimberly E. Dolphin

**Illinois AC**  
**Behavioral Plasticity 3**  
 Moderator: Kimberly E. Dolphin

**Illinois AD**  
**Behavioral Plasticity 3**  
 Moderator: Kimberly E. Dolphin

**Illinois AE**  
**Behavioral Plasticity 3**  
 Moderator: Kimberly E. Dolphin

**Illinois AF**  
**Behavioral Plasticity 3**  
 Moderator: Kimberly E. Dolphin

**Illinois AG**  
**Behavioral Plasticity 3**  
 Moderator: Kimberly E. Dolphin

Time	Cardinal	Illinois B	Dearborn	Illinois C	605	302	Illinois A
4:30 pm - 6:30 pm	<p><b>Allele Symposium 3</b> Moderator: Esteban Fernandez-Juricic</p> <p><b>Why Do Females Sing? Pair Communication and Long-term Pair Bonds.</b> E. Rosei(1), D. Coss(1,2), C. Haines(1), S. Danquah(1), C. Studds(1), K. Omland(1) (1)University of Maryland, Baltimore County, (2)Salisbury University</p>	<p><b>Animal Behaviour On An Urbanized Planet Symposium 1</b> Moderator: James Chadwick Johnson</p> <p><b>Nutrition in the city: effects of roadside pollutants on butterfly life history and behavior.</b> M. Koblele - University of Minnesota - Twin Cities</p>	<p><b>Behavioral Plasticity 3</b> Moderator: Kimberly E. Dolphin</p> <p><b>The shake, rattle, and role of flexibility in foraging behavior for plant health and reproduction.</b> A. Russell(1), A. Fellers(1), M. Rebolosa-Gomez(1), T. Shamble(2), T. Ashman(1) - (1)Quebec Center for Biodiversity Science, (3)New South Wales Department of Primary Industries</p>	<p><b>Applied Animal Behavior 1</b> Moderator: Alan G. McElligott</p> <p><b>Behavior of the World's Largest Piranha, <i>Pycnocentrus piraya</i>, and Welfare of Body Fishes in Zoos.</b> R. Ordfield(1), J. Wark(2), J. Thal(1), P. Das(1), N. Zaiting(3), K. Lucas(1,3) - (1)Department of Biology, Case Western Reserve University, (2)Lincoln Park Zoo, (3)Cleveland Metroparks Zoo</p>	<p><b>Social Behavior 6</b> Moderator: Emily C. Laub</p> <p><b>Response of Chambered Nautilus (<i>Nautilus pompilius</i>) to Conspecific Scent.</b> N. Lewandowski(1,2), J. Basil(1,2) - (1)Brooklyn College, City University of New York, (2)The Graduate Center - City University of New York</p>	<p><b>Communication 6</b> Moderator: Trevor Price</p> <p><b>How complex is the song of the Carolina chickadee?</b> J. Lucas, K. Genry, L. Bennett, A. Lowe-Wilasi, M. Weber, S. Zelli, L. Emlinger, G. Wood - Purdue University</p>	<p><b>Cognition &amp; Learning 4</b> Moderator: Jimena Lois-Milevich</p> <p><b>Differentiation of scent from different origins of the body.</b> S. Gains(1), L. Pierson(2), M. Felkin(1) - (1)University of Memphis, (2)Christian Brothers University</p>
5:45			<p><b>Kangaroo females compensate for reproductive costs by adjusting foraging behaviour.</b> P. Toni(1,2), D. Forsyth(3), M. Fesia-Bianchi(1,2) - (1)University of Sherbrooke, (2)Quebec Center for Biodiversity Science, (3)New South Wales Department of Primary Industries</p>	<p><b>The effect of predator presentation on behavioural pattern of laboratory rats reared in burrows.</b> R. Loganathan(1,3), T. Mandal(1), A. Anvalagan(2) - (1)Department of Veterinary Pharmacology and Toxicology, Faculty of Veterinary Sciences, WBUAFS, (2)Department of Veterinary Pharmacology and Toxicology, Veterinary College and Research Institute, TANUVAS, (3)Department of Veterinary Pharmacology and Toxicology, Ranchi Veterinary College, BAU</p>	<p><b>Ants, Plants and Honey Pooping</b> Finn - Saint Louis University</p>	<p><b>Evolution of sexual cooperation from sexual conflict.</b> T. Price(1), M. Servodolo(2), J. Powers(3), R. Landet(4) - (1)University of Chicago, (2)University of North Carolina, (3)University of California, (4) Norwegian University of Science and Technology</p>	<p><b>The role of early acoustic experience in song discrimination.</b> E. Hudson(1,2), N. Cleanza(1), D. Shukatz(2) - (1)Vanderbilt University, (2)University of Nebraska</p>
6:00	<p><b>Behavior-mediated urban success from individuals to species.</b> O. Lepieura - CREAF</p>		<p><b>Intraspecific variation in habitat use in wild capuchin monkeys (<i>Cebus capucinus imitator</i>).</b> R. Williamson, L. Fedigan, A. Mellin - University of Calgary</p>	<p><b>Scratch that itch: farrowing crate scratching enrichment for sows.</b> K. Smith(1), B. Gaskill(1), M. Erasmus(1), J. Radcliffe(1), D. Lay(2) - (1)Purdue University, (2)USDA-ARS Livestock Behavior Research Unit</p>	<p><b>Signal manipulation alters the integration of behavior, physiology, microbiome, and fitness in a wild bird.</b> C. Iltari, C. Zimmer, M. Viloušek - Cornell University</p>	<p><b>Secondary Song as a Mechanism for Reproductive Isolation Between Warblers.</b> S. Tyndel(1,2), M. Ward(1) - (1)University of Illinois at Urbana-Champaign, (2)ERDC-CERL</p>	<p><b>Mechanical Problem Solving by Push-crested Jays: Air Tools Special After.</b> A. J. Lois-Milevich(1), L. Rat-Fischer(2), A. de la Kacelnik(4), J. Reboreda(1), A. Kacelnik(4) - (1)Departamento de Ecología, Genética y Evolución, IEGEBA-CONICET, Facultad de Ciencias Exactas y Naturales, Universidad de Buenos Aires, (2)Laboratoire Ethologie Cognition Développement, Université Paris Nanterre, (3)Departamento de Conservación e Investigación, Fundación Terraliken, (4)Department of Zoology, University of Oxford</p>
6:15			<p><b>Adaptive shaping of social behavioural phenotypes during adolescence.</b> T. Zimmermann(1), S. Kaiser(1), M. Hennessy(2), N. Sacher(1), J. Essler(1), A. Rubenstein(1), S. Figard(2), C. Otto(1) - (1)University of Münster, (2)Department of Psychology, Wright State University</p>	<p><b>Determining Behavioral Patterns Associated with Purpose Police RG.</b> J. Ghespiet(1), J. Essler(1), A. Rubenstein(1), S. Figard(2), C. Otto(1) - (1)University of Pennsylvania, (2)Bob Jones University</p>	<p><b>Island Invasion Biology in a Japanese Ant.</b> D. Full(1), E. Ogi(1), T. Yamataka(2), A. Cronin(1) - (1)Tokyo Metropolitan University, (2)Okayama University</p>	<p><b>Detection of wolf spider courtship signals against complex chromatic backgrounds.</b> G. Uetz(1), R. Gilbert(1,2), D. Wilson(1,3), D. Clark(4) - (1)University of Cincinnati, (3)Eastern Tennessee State University, (4)Alma College</p>	<p><b>Attractiveness to highly informative flowers and absence of conditioning in the southern monarch butterfly.</b> D. Rodrigues, M. Estrella, U. G. Rodrigues, Federal do Rio de Janeiro, Instituto de Biologia, Departamento de Ecologia</p>
6:30 pm - 8:00 pm							
8:00 pm - 9:30 pm							
9:30 pm - 11:00 pm							



9:00 am - 10:00 am

Plenary Session: Neeltje Boogert

Time

Inner Circle at Student Center East

10:00 am - 10:45 am

Coffee Break/Walk to Student Center

Time	Illinois B	Illinois A	Cardinal	Dearborn	Illinois C	605	302
10:45 am - 12:45 pm	<p><b>Animal Behaviour On An Urbanized Planet Symposium 2</b> Moderator: James Chadwick-Johnson</p> <p><b>Surface sterilization and city sickness: a case study with bird feeders and water baths.</b> K. McGraw - <i>Arizona State University</i></p>	<p><b>Cross-taxa Perspectives On Behavior And Developmental Origins Symposium 1</b> Moderator: Stacy Rosenbaum &amp; Elizabeth Archie</p> <p><b>A hierarchical analysis of the Pace-of-Life syndrome.</b> D. Reale - <i>UQAM</i></p>	<p><b>Applied Animal Behavior 2</b> Moderator: Maria Diez-LeUn</p> <p><b>The predictive power of personality for hatchery raised Atlantic salmon (<i>Salmo salar</i>).</b> K. Church(1), L. Nguyen-Dang(1), B. Neft(2), C. Semeniuk(1) - (1) <i>GLIER</i>, (2) <i>Western University</i></p>	<p><b>Cognition &amp; Learning 5</b> Moderator: Miles K Bensky</p> <p><b>Using electrophysiology to uncover the sources of variation of an important learning phenomenon in honey bees.</b> M. Bennett, H. Lei, C. Cook, B. Smith - <i>Arizona State University</i></p>	<p><b>Behavioral Plasticity 4</b> Moderator: Matthew K Lefauve</p> <p><b>Intraspecific variation and behavior in bumble bees: population-level consequences.</b> M. Austin, A. Duniap - <i>University of Missouri - St. Louis</i></p>	<p><b>Social Behavior 7</b> Moderator: Helen F McCreery</p> <p><b>Collective transport up vertical surfaces in the weaver ant <i>Oecophylla smaragdina</i>.</b> A. Pavic(1), S. Pratt(1) - (1) <i>Arizona State University</i>, (2) <i>Macquarie University</i></p>	<p><b>Communication 7</b> Moderator: Daniel T Blumstein</p> <p><b>Costly calling? Alarm calling is associated with decreased annual survival but not longevity.</b> D. Blumstein, J. Uy - <i>Dept. EEB, UCLA</i></p>
11:00	<p><b>Novel Fear Dynamics in Urban Ecosystems.</b> S. Magle - <i>Lincoln Park Zoo - Lincoln Wildlife Institute</i></p>	<p><b>Early life effects on biomarkers of adult health in the Turkana people.</b> A. Lea - <i>Princeton University</i></p>	<p><b>Does territoriality explain abnormally behavior in critically endangered captive European mink? M. Diez-Leon(1), L. Timmel(2,3), K. Nemvalts(3), T. Maran(2,3) - (1) <i>Royal Veterinary College, University of London</i>, (2) <i>Estonian University of Life Sciences</i>, (3) <i>Tallinn Zoological Gardens</i></b></p>	<p><b>Differences in cognitive flexibility among populations of sticklebacks are preserved in a common garden.</b> M. Bensky, A. Bell - <i>University of Illinois Urbana-Champaign</i></p>	<p><b>Anthropogenic noise and plasticity in a common urban passerine.</b> E. Grabarczyk, M. Vonhof, S. Gill - <i>Western Michigan University</i></p>	<p><b>3D-tracking allows disentangling private from social information in damselfish collective escape.</b> S. Gings(1,2,3), R. Bastien(1,2,3), L. Jordan(1,2,3), I. Couzin(1,2,3) - (1) <i>Department of Collective Behaviour, Max Planck Institute for Ornithology</i>, (2) <i>Department of Biology, University of Konstanz</i>, (3) <i>Centre for the Advanced Study of Collective Behaviour, Medical Procedures (CAMP), Technical University of Munich</i>, (4) <i>Computer Scientist München</i>, (6) <i>MTA-ELTE Statistical and Biological Physics Research Group, Hungarian Academy of Sciences</i></p>	<p><b>Do Starlings use 'contact calls' to coordinate group foraging behaviour? N. Carlson(1,2,3), H. Naik(1,2,3,4,5), M. Nagy(1,2,3,6), J. Kobiltz(1,2,3), I. Couzin(1,2,3) - (1) <i>Cousin Lab, Max Planck Institute for Collective Behaviour, Department of Biology, University of Konstanz, Germany</i>, (3) <i>Centre for the Advanced Study of Collective Behaviour, University of Konstanz</i>, (4) <i>Computer Aided Medical Procedures (CAMP), Technical University of Munich</i>, (6) <i>MTA-ELTE Statistical and Biological Physics Research Group, Hungarian Academy of Sciences</i></b></p>
11:15	<p><b>Aggression toward familiar people, strangers, and conspecifics in guppies mixed and intact dogs.</b> P. Fancs(1), I. Mallavaratch(2), P. Taniguchi(3), J. Seppel(4), B. O'Leary(5), C. Zink(6) - (1) <i>Department of Biomedical Sciences, Texas Tech University, Health Sciences Center at El Paso</i>, (3) <i>Department of Biostatistics, University of Texas Health Science Center at Houston</i>, (4) <i>Department of Clinical Studies, University of Pennsylvania</i>, (5) <i>Department of Psychology and Effectiveness, University of the Arts</i>, (6) <i>Zink Integrative Sports Medicine</i></p>	<p><b>Network to understand life history patterns of chimpanzees in Japan.</b> M. Kanda(1), K. Watanuki(1,2), M. Tomonaga(3), T. Matsuzawa(2,3,4), S. Hirata(1) - (1) <i>Wildlife Research Center</i>, (2) <i>Japan Monkey Center</i>, (3) <i>Primate Research Institute</i>, (4) <i>Kyoto University Institute for Advanced Study</i></p>	<p><b>A Pilot Study for Training Canines to Recognize Volatile Organic Compounds from Cancer Positive Plasma Samples.</b> J. Essler(1), Y. Lee(2), G. Preti(2,3), J. Gillespie(1), J. Eades(2), Z. Vesley-Gross(1), P. Smith(1), J. Tsang(1), J. Tanyi(4), J. Piltz-Seymour(5), A. Johnson(6), C. Otto(1) - (1) <i>Penn Vet Working Dog Center, University of Pennsylvania School of Veterinary Medicine</i>, (2) <i>Monell Chemical Senses Center</i>, (3) <i>Department of Psychiatry, University of Pennsylvania</i>, (4) <i>Department of Obstetrics and Gynecology, Perlemin School of Medicine, University of Pennsylvania</i>, (5) <i>Perlemin School of Medicine, University of Pennsylvania</i>, (6) <i>Department of Physics and Astronomy, University of Pennsylvania</i></p>	<p><b>COGNITIVE SENESECE EXPLAINS DECLINE IN REPRODUCTIVE SUCCESS AND SURVIVAL IN WILD GREAT TIT.</b> L. Cauchard(1), B. Doligez(2), P. Bize(1) - (1) <i>University of Aberdeen</i>, (2) <i>CNRS UMR 5558 / University of Lyon 1</i></p>	<p><b>Correlated Behavioral Traits: A Window into Invasiveness.</b> M. Lefauve, L. Hernandez - <i>George Washington University</i></p>	<p><b>Emergent coordination and collective transport in ant.</b> H. McCreery - <i>Havard University</i></p>	<p><b>Categorical perception of carotenoid-based color signal variation in male zebra finches.</b> P. Green, E. Caves, M. Zippel, S. Peters, S. Johnsen, S. Nowicki - <i>Biology Department, Duke University</i></p>
11:30	<p><b>Behavioural ecology of urban organisms: Moving beyond the low-hanging research fruits.</b> M. McDonnell - <i>University of Melbourne</i></p>	<p><b>Prenatal maternal stress effects on the development of primate social behavior.</b> O. Schuelke - <i>University of Goettingen</i></p>	<p><b>The type of nest threat predicts defenses responses in hosts of avian brood parasites.</b> J. Ellis, S. Lawson, M. Hauber - <i>University of Illinois at Urbana-Champaign</i></p>	<p><b>More social female yellow-bellied marmots (<i>Marmota flaviventris</i>) have enhanced summer survival.</b> A. Menner(1), D. Williams(1,2), J. Martin(1), D. Blumstein(1,3) - (1) <i>The Rocky Mountain Biological Laboratory</i>, (2) <i>Department of Ecology and Evolutionary Biology, University of California</i>, (3) <i>Institute of Biological &amp; Environmental Sciences, School of Biological Sciences, University of Aberdeen</i></p>	<p><b>Temperament and plasticity in defensive behaviour of rhesus (<i>Macaca mulatta</i>), Hystricognath (<i>S. Naouie-Filho</i>)(1), M. Mend(2) - (1) <i>Universidade Estadual de Santa Cruz</i>, (2) <i>University of Bristol</i></b></p>	<p><b>Does multivariate plasticity vary between spotted hyenas, T. Montgomery(1), K. Lehmann(1), J. Beehner(2), K. Holekamp(1) - (1) <i>Michigan State University</i>, (2) <i>University of Michigan</i></b></p>	<p><b>Signal Allocation &amp; Competition in House Mice.</b> C. Miller, M. Sheehan - <i>Cornell University</i></p>

Time	Illinois B	Illinois A	Cardinal	Dearborn	Illinois C	605	606
10:45 am - 12:45 pm	Animal Behaviour On An Urbanized Planet Symposium 2 Moderator: James Chadwick Johnson	Cross-taxa Perspectives On Behavior And Developmental Origins Symposium 1 Moderator: Stacy Rosenbaum & Elizabeth Archie	Applied Animal Behavior 2 Moderator: Maria Diez-LeUn	Cognition & Learning 5 Moderator: Miles K Bensky	Behavioral Plasticity 4 Moderator: Matthew K LeFauve	Social Behavior 7 Moderator: Helen F McCreery	Communication 7 Moderator: Daniel T Blumstein
12:00	CONTINUED Behavioural ecology of urban organisms: Moving beyond the low-hanging research fruits. M. McDonnell - University of Melbourne	Can training species of conservation concern prior to release increase survival? C. Kopack(1,2), E. Felherman(2), R. Fitzpatrick(2), E. Broder(1), L. Angeloni(1) - (1)Colorado State University, (2)Colorado Parks and Wildlife	Natural selection and spatial cognition in wild food-caching mountain chickadees. V. Pravosudov(1), B. Sonnenberg(1), C. Branch(1,2), A. Pitera(1), E. Bridge(3) - (1)University of Nevada Reno, (2)Cornell University, (3)University of Oklahoma	Does different energy intake gradually promote personality variation in a clonal gecko species? O. Sakai - Kyoto University	Influence of the Physical and Social Environment on Nest Site Choice and Foraging in a Social Spider. G. Najm(1), A. Pe(1), J. Pruitt(2), N. Pinter-Wollman(1) - (1)University of California, Los Angeles, (2)McMaster University Department of Biological Sciences, University of Los Andes, (3)Department of Ecology and Evolutionary Biology, University of California, (4)Department of Integrative Zoology, University of Vienna, (5)Department of Biology, Stanford University	Perch Higher and be Quieter: Acoustic Adaptation and Sound Radiation Patterns in <i>Allobates femoralis</i> . C. Rodriguez(1,2), A. Amezcuita(2), M. Ringler(1,3,4), A. Pasukonis(5), W. Hod(4) - (1)Department of Cognitive Biology, University of Vienna, (2)Department of Biological Sciences, University of Los Andes, (3)Department of Ecology and Evolutionary Biology, University of California, (4)Department of Integrative Zoology, University of Vienna, (5)Department of Biology, Stanford University	
12:15	Group Discussion	Do Captive Ruffed Lemurs ( <i>Varecia spp.</i> ) Contrafreeload or Forage Using Optimal Foraging Theory? R. Vagell(1), S. Matters(2), A. Baden(3,4,5) - (1)Primate Molecular Ecology Lab (PMEEL), (2)Training Matters LLC, (3)Department of Anthropology, Hunter College of the City University of New York, (4)Departments of Anthropology and Biology, The Graduate Center of the City University of New York, (5)The New York Consortium in Evolutionary Primatology	Get the show on the road: Pre-castination in bonobos ( <i>Pan paniscus</i> ). N. Schwob(1,2), A. Epling(2), D. Weiss(1) - (1)The Pennsylvania State University, (2)Ape Cognition and Conservation Initiative	Evolution, Transgenerational Plasticity, Social Learning and Response to Environmental Change. A. Sih(1), B. Barrett(2), A. Bell(3), D. Clement(1), S. Donelan(4), J. Hellmann(3), B. Luttberg(5), A. Munson(1), I. Neylan(1), J. Orrock(6), L. Pollack(1), N. Roberts(1), S. Schreiber(1), M. Sheriff(7), P. Trimmer(8), E. Zepeda(1) - (1)University of California, (2)Max Planck Institute for Evolutionary Anthropology, (3)Smithsonian Environmental Research Center, (5)Oklahoma State University, (6)University of Wisconsin, (7)Pennsylvania State University, (8)University of Bielefeld	Macronutrient regulation by the desert leafcutter ant <i>Acromyrmex versicolor</i> . N. Smith, J. Fewell - Arizona State University	Vocal turn-taking in meerkat groups. A. Strandburg-Peshkin(1,2), V. Demarisev(1,2), M. Manser(1,2,3) - (1)Department of Evolutionary Biology and Environmental Studies, University of Zurich, (2)Kalahari Meerkat Project, (3)Mammal Research Institute, University of Pretoria	
12:30		Case Studies of Pairing Singly Housed Rhesus Macaques ( <i>Macaca mulatta</i> ) at a Monkey Sanctuary: H. Henness-Kavanaugh(1), B. Cyr(1), S. Alger(2) - (1)Primates Incorporated, (2)University of Wisconsin	Experience influences mating behavior in <i>Pericenturus</i> beetles. E. Westerman, P. Rahnert, A. Herzog, D. Ernst - University of Arkansas	Evaluating the Behavioral Plasticity of Urban Carnivores. L. Stanton(1), E. Bridger(2), J. Tuzing(3), S. Boniger(4), J. Young(5), S. Benson-Avram(1) - (1)University of Wyoming, (2)USDA/APHIS National Wildlife Research Center, (3)USDA/APHIS National Wildlife Research Center, (5)USDA/APHIS National Wildlife Research Center	Why do birds exhibit female-biased patterns of chemical communication? D. Pattiker(1), J. Nagel(2) - (1)Michigan State University, (2)University of Alaska Fairbanks		
Time	603	603	713	613	605	605	302
12:45 pm - 2:00 pm	CAAB Meet and Greet		Diversity Committee Meeting	IEC Lunch Meeting	On Own	Lunch On Own	
1:00 pm - 2:00 pm							
Time	Illinois B	Illinois A	Cardinal	Dearborn	Illinois C	605	302
2:00 pm - 4:00 pm	The When, Why and How of New Animal Conversations 1 Moderator: E. Dale Broder & Robin Tinghitella	Cross-taxa Perspectives On Behavior And Developmental Origins Symposium 2 Moderator: Stacy Rosenbaum & Elizabeth Archie	Applied Animal Behavior 3 Moderator: Barbara Natterson-Horowitz	Cognition & Learning 6 Moderator: Aimee S. Dunlap	Development 1 Moderator: Zach Laubach	Social Behavior 8 Moderator: Linda S. Rayor	Communication 8 Moderator: Grace Smith-Vidaurre
2:00	How do new conversations begin? A discussion synthesizing what we know and what we need to know. G. Rosenthal - Texas A&M University	Natal environmental effects on life history decisions in the <i>Mauritius kestrel</i> . K. Norris - Institute of Zoology	Using Humans as Early Life Stressors to Improve Coping in Sheep. L. Atkinson, R. Doyle, E. Jongman - Animal Welfare Science Centre, University of Melbourne	Long-term memory and cultural transmission in a predatory context in common ravens ( <i>Corvus corax</i> ). C. Blum, T. Fitch, T. Bugnyar - Department of Cognitive Biology, University of Vienna	Sibling social influences on vocal development in a wild parrot. C. Ariellano(1), K. Berg(1), A. Mala-Balanour(2) - (1)University of Texas Rio Grande Valley, (2)Centro de Ecología Instituto Venezolano de Investigaciones Científicas	Tracking vampire bat cooperative relationships from the lab to the field. G. Carter(1,2), S. Ripperger(1,2) - (1)The Ohio State University, (2)Smithsonian Tropical Research Institute	A novel aspect of goby-shrimp mutualism: Shrimp excavate sand sediments and provide food to the goby. S. Awata, H. Yamanouchi, T. Saeki, S. Saoh, S. Sogawa, M. Kohda - Osaka City University

<p>2:15</p>	<p><b>A Review of the Impact of Dog Physical Traits on Shelter Outcomes.</b> J. Friend, C. Bench - Department of Agricultural, Food and Nutritional Science, University of Alberta</p>	<p><b>Sexual conflict and cognition--reviewing their relationship in poeciliid fishes.</b> M. Cummings - University of Texas</p>	<p><b>Early development of behavior in Mexican Gray Wolf using Multivariate statistical techniques.</b> M. Amella(1), C. Vazquez-Gonzalez(2), M. Sotolongo(1), M. Yañez-Lopez(3) - (1) Dept. of Biology, Universidad Autónoma Metropolitana, (2) San Juan de los Rios, (3) Dept. Of Biotechnology, Universidad Autónoma Metropolitana</p>	<p><b>The Function and Mechanisms of Female Ornamentation in a Lekking Bird.</b> A. Earl(1), A. Kimmit(2), R. Simpson(3), J. Yorzinski(1) - (1) Texas A&amp;M University, (2) Indiana University, (3) University of Windsor</p>	<p><b>Using Acoustic Signals to Reduce Bird Collisions with Human-made Structures in Open Airspace.</b> Swadlow - William &amp; Mary</p>
<p>2:30</p>	<p><b>Maternal effects, development and behavioral plasticity.</b> J. Mateo - The University of Chicago</p>	<p><b>Daily positive human contact alters the frequency of social interactions with a stockpiper.</b> Hayes(1), L. Hensworth(1), R. Monson(2), M. Rice(1), P. Hensworth(1) - (1) Animal Welfare Science Centre, University of Melbourne, (2) Rivalea Australia</p>	<p><b>Investigating the ontogeny of behavioral patterns and independence in beluga catfish (<i>Delphimphurus leucus</i>).</b> B. Brown(1), H. Hill(2) - (1) The University of Southern Mississippi, (2) St. Mary's University</p>	<p><b>Are Humpback Whale Non-Song Call Types Consistent Across Time, Space and Environment?</b> M. Epp(1), M. Fournet(2), G. Silber(3), G. Davoren(1) - (1)University of Manitoba, (2) Shell Lab of Ornithology, (3) Smithsonian Environmental Sciences</p>	<p><b>Shifting sands and contentious cohabitation: social networks in the maritime yevinger (<i>Ambrosia maritima</i>).</b> V. Iyerigari, A. Coonfield - Villanova University</p>
<p>2:45</p>	<p><b>Exploratory behaviour of piglets raised in two farrowing-lactation systems.</b> A. Hensworth(1), M. Duke(1), A. Tyrook(2), P. Hensworth(1) - (1) The Animal Welfare Science Centre, The University of Melbourne, (2) Centre for Animal Science, Queensland Alliance for Agriculture and Food Innovation, The University of Queensland</p>	<p><b>Hierarchical integration of multimodal cues facilitates nest recognition in carpenter ant aggregations.</b> M. Oswald, Z. Shalizi, S. Pratt, J. Fowell - Arizona State University</p>	<p><b>The Development of Object Play in Dog Breeds (<i>Canis lupus familiaris</i>).</b> K. Davis(1,2,3), G. Burghardt(2,4), D. Abright(3), J. Wolf(2), S. Brown(1) - Department of Ecology &amp; Evolutionary Biology, University of Tennessee, Knoxville, (3) College of Veterinary Medicine, University of Tennessee, Knoxville, (4) Department of Psychology, University of Tennessee, Knoxville</p>	<p><b>Females that look like males: Testing condition dependence among polychromatic female hummingbirds.</b> J. Falk(1,2), D. Rubenstein(3), M. W. Sletten(1) - (1) Cornell University, (2) Smithsonian Tropical Research Institute, (3) Columbia University</p>	<p><b>Leadership and collective movement in the murine guineaowl.</b> D. Papageorgiou(1,2), D. Finner(1,2,3,4), (1) Department of Collective Behaviour, Max Planck Institute for Ornithology, (2) Chair in Biodiversity and Collective Behaviour, Department of Biology, University of Konstanz, (3) Centre for the Advanced Study of Collective Behaviour, University of Konstanz, (4) Edward Grey Institute of Field Ornithology, Department of Zoology, University of Oxford</p>
<p>3:00</p>	<p><b>Insights from comparative studies for the evolution of communication..</b> M. Morris - Ohio University</p>	<p><b>Comparative Analysis of Ontogenetic Trends in Motor Activity between Dispersing and Fledgling Adolescents.</b> B. Nelsonson-kowitz, K. Bowers - Harvard Department of Human Evolutionary Biology</p>	<p><b>Associations of early life environment, DNA methylation, and life history traits in wild baboons.</b> D. Nyilas, Z. B. Labadi(1), C. Faulk(2), P. Irons(3), K. Montrose(4), M. Plon(5), K. Holekamp(1), (1) Michigan State University, (2) University of Minnesota, (3) University of Michigan, (4) Boise State University, (5) Mara Nyeru Project</p>	<p><b>Social evolution via black swans.</b> J. Pruitt(1), D. Fisher(1), A. Little(2) - (1) McMaster University, (2) University of California Santa Barbara</p>	<p><b>Pair Associated Variation in Alarm Call Acoustics of Wild Marjuna Crows (<i>Corvus kubaryi</i>).</b> J. Honjo(1), H. Fandel(1), R. Halz(2) - (1) Binghamton University, (2) University of Washington</p>
<p>3:15</p>	<p><b>Habitat use and novel sexual signals in the wolf spider <i>Schizocosa flridana</i>.</b> M. Rosenthal - UC Berkeley</p>	<p><b>Equine Discomfort Ethogram.</b> K. Rochelle, S. McDonnell - University of Pennsylvania School of Veterinary Medicine</p>	<p><b>Discrimination of phonemic and identity cues in human speech by domestic dogs (<i>Canis familiaris</i>).</b> H. C. Gutteridge(1), D. Reby(1), (1) Max Planck Vocal Communication and Cognition Lab, University of Sussex</p>	<p><b>Blind herds: misinformation amplified via social contagion.</b> E. Steele(1), M. Colston(2) - (1) Department of Biological Sciences, Dartmouth College, (2) Department of Biological Sciences, Dartmouth College</p>	<p><b>Whale Non-Song Calls on Newfoundland Ingoing Grounds.</b> A. Mikhalchukenko, G. Davoren - University of Manitoba</p>
<p>3:30</p>	<p><b>Maternal stress and behavior as a mediator of plasticity in offspring behavior, and life histories in wild mammals.</b> B. Danzler</p>	<p><b>Using the ZooMonitor App to Explore Environmental Influence on Behavior and Space Use.</b> J. Ward(1), C. Stabel(1), T. Niesen(2), M. Wierzel(1), K. Cronin(1) - (1) Lincoln Park Zoo, (2) Zier Nienman Consulting</p>	<p><b>Age, Rank, and Strategy - Factors Influencing Reproductive Success in Mating Male A. Murwill(1), T. Zimmern(1), C. Reuland(1), S. Fuchs(2), K. Umf(2), S. Richter(1), S. Kaiser(1), N. Sachser(1) - (1) University of Münster, (2) University of Dortmund</b></p>	<p><b>Experimental change in cooperative partner effects with altered male tactics.</b> K. Silver(1), H. Helm(2), S. Marsh-Roloff(3), S. Altm(2), (1) Southern Connecticut State University, (2) University of Illinois Urbana-Champaign, (3) McMaster University, (4) University of California, Santa Cruz</p>	<p><b>Evolutionary loss of a signaling color trait is linked to increased response choice stability.</b> S. Romero-Diaz(1), J. Pruett(2,3), S. Canero(4), A. Ossip(4), Diabos(5), J. Zuniga-Vega(6), C. Vilas Garcia(7), H. Her(2), E. Martinis(1) - (1) School of Life Sciences, Arizona State University, (2) University of California, Santa Cruz</p>
<p>3:45</p>	<p><b>Achieving Health, Welfare, and Education Goals in a Zoo and Aquarium through Applied Animal Behavior.</b> M. Farnelle - Pittsburgh Zoo &amp; PPG Aquarium</p>	<p><b>Comparative studies on the evolution of the exploitation-exploration tradeoff in honey bees.</b> A. Veyna(1), A. Brockman(2), F. Ding(1) - (1) Michigan State University, (2) National Centre for Biological Sciences</p>	<p><b>Isolation calls in house mouse pups: individual consistency across time and situations.</b> A. Veyna, H. Rodeh, C. Féron - Laboratoire d'Éthologie Expérimentale et Comparée E.A. 4443 (LEEC), Université Paris 13</p>	<p><b>Interactions between individual variation in behaviour and group performance in House Sparrow.</b> B. Tulizzi, M. Gioglio - Università degli Studi di Padova</p>	<p><b>Social information differs among contact calls of three vocal learning species.</b> G. Smith-Vogel(1), M. A. Ayala-Salas(2), T. Wright(1) - (1) Department of Biology, New Mexico State University, (2) Universidad de Costa Rica</p>
<p>4:00 pm - 4:15 pm</p>	<p>Time Inner Circle at Student Center East Coffee Break</p>				

Time	Illinois B	Illinois A	Cardinal	Dearborn	Illinois C	605	302	613
4:15 pm - 5:45 pm	The When, Why and How of New Animal Conversations Symposium 2 Moderator: E. Dale Broder and Robin Tinghitella	Cross-taxa Perspectives On Behavior And Developmental Origins Symposium 3 Moderator: Stacy Rosenbaum & Elizabeth Archie	Sexual Selection & Sexual Conflict 3 Moderator: Melissa Hughes	Cognition & Learning 7 Moderator: TBD	Genetics & Evolution 2 Moderator: Chris Clark	Social Behavior 9	Communication 9 Moderator: Brittany A. Coppinger	3 Minute Thesis Talks Moderator: Danielle Whittaker
4:15	Seeing the light in visual signals: global change alters the natural signaling environment. B. Seymoure - Colorado State University	Do social relationships mediate the relationship between early adversity and adult glucocorticoids in wild baboons? S. Rosenbaum - University of Notre Dame	Sexual selection on female ground weta leads to female ornaments and post-copulatory sexual selection in males. J. Browne, D. Gwynne - University of Toronto Mississauga	Understanding the sources of variation that contribute to differences in learning outcomes. M. Burns, J. Saltz - Rice University	Gut microbiota across a primate hybrid zone are explained by site soil properties, not host species. E. Archie(1), L. Grieneisen(2), M. Chapman(3), S. Alberts(4), R. Blekman(3), G. Bradburd(5), J. Tung(4) - (1)University of Notre Dame, (2)University of Minnesota, (3)University of Michigan State University	Comparing the function of play bows in dingo puppies to dogs and wolf puppies. S. Byssiere(1), J. Espinosa(2), B. Smith(3) - (1)La Trobe University, (2)University of Toronto, (3)Central Queensland University	Why so many song types? Testing hypotheses about aggressive signaling in Bachman's sparrow. R. Anderson, P. Zladi, J. Niederhauser - Florida Atlantic University	
4:30			Functional failures: fluffed intrusions act as cryptic sperm removal behaviors. A. Danielson-Francois, V. Gerios, Y. Drobot - University of Michigan - Dearborn	Experimental support for the mosaic brain evolution hypothesis. S. Fong, N. Kolm - Stockholm University	Hybrid hummingbird courtships: sequence analysis reveals transgressive displays and other behavioral novelty. C. Clark(1), B. Myers(2) - (1)University of California, (2) San Diego State University	Observational Study Of Contagious Yawning In Captive Chimpanzees (Pan Troglodytes). M. Campbell(1), C. Cox(2) - (1)California State University, Channel Islands, (2)Los Angeles Zoo	Risk-Associated Audience Effects in Heterospecific Flocks of Chickadees and Titmice. B. Coppinger(1), S. Kanial(1), J. Lucas(2), K. Sieving(3), T. Freeberg(1) - (1)University of Tennessee, (2)Purdue University, (3)University of Florida	
4:45	Social plasticity and the origin of novelty in mating signals and mate preferences: a case study with <i>Enchenopatrechoppers</i> (Hemiptera: Membracidae). R. Rodriguez - University of Wisconsin-Milwaukee	Can animals predict the future? Evolutionary perspectives on the developmental origins of adult biology. C. Kuzawa - Northwestern	Sex and Death: Sexually Dimorphic Weaponry and Antipredator Behavior in Snapping Shrimp. M. Hughes, N. Patel - College of Charleston	Do dolphins show preference for fish quantity? Initial training investigation. H. Hill(1), K. Dudzinski(2), D. Yeater(3), L. Highfill(4), D. Meizer(3), T. Clarke(5), D. Cox(5) - (1)St Mary's University, (2) Dolphin Communication Project, (3) Sacred Heart University, (4) Eckerd College, (5) The Blue Lagoon, Home of Dolphin Encounters	Understanding age-related changes in the mammalian gut microbiome. M. Dasari(1), D. Jansen(1), T. Gould(2), L. Grieneisen(2), J. Bjork(1), J. Grenier(3), V. Yotova(3), N. Gotell(4), J. Gilbert(4), L. Barreiro(3,5), S. Alberts(6,7), R. Blekman(2,8), J. Tung(6,7), E. Archie(1) - (1)Department of Biological Sciences, University of Notre Dame, (2)Department of Genetics, Cell Biology, and Development, University of Minnesota, (3)CHU Sainte Justine Research Center, (4)Department of Pediatrics and Scripps Institution of Oceanography, University of California San Diego, (5)Department of Genetic Medicine, University of Chicago, (6) Department of Biology, Duke University, (7) Department of Evolutionary Anthropology, Duke University, (8)Department of Ecology, Evolution, and Behavior, University of Minnesota	Disentangling the relative importance of honeybee communication pathways with network-based diffusion analysis. M. Hasenlager, W. Hopfitt, E. Leadbeater - Royal Holloway, University of London	Multiple receivers of a multi-component cricket call. C. Kerian, J. Ralston, H. ter Hofstede - Dartmouth College	
5:00			Re-evaluating testosterone as a phenotypic integrator: implications for behavioral evolution. K. Rosvall, S. Lipschutz - Indiana University	Innovation and fitness in wild spotted hyenas. L. Johnson-Ulrich(1), S. Benson-Amram(2), K. Holekamp(1) - (1)Michigan State University, (2)University of Wyoming	Musicology, string sequences, and motifs: analysis of phylogenetic signal in silk spinning behavior. J. Ederly B. Sandel, O. Okolo, I. Regoil - Santa Clara University	Open Slot	Tracking communication: a spatially explicit approach to duet function. S. Krause, S. Booth, P. Mower, M. Dostle, D. Logue - University of Leithbridge	
5:15	How do new conversations begin? A discussion synthesizing what we know and what we need to know. R. Tinghitella - University of Denver		Social Networks Reveal Hidden Social Strategies for Large and Small Males in a Wild Population. U. Somjee(1,3), G. Kohn(2), C. Miller(3) - (1) Smithsonian Tropical Research Institute, (2) Department of Biology, New Mexico State University, USA, (3) University of Florida	Learning and problem solving in wild bat-eared foxes, <i>Otocorys megalotis</i> . A. le Roux(1), P. Jacobs(1), M. Pelele(1,2) - (1)University of the Free State-Owaga, (2)Max Planck Institute for Ornithology	Co-opting evo-devo concepts for new insights into mechanisms of behavioral diversity. K. Hoker(1), E. Adkins-Regan(2), A. Bass(2), A. McCune(2), M. Wolfner(2) - (1)Colorado State University, (2)Cornell University	Strategies for collective attack and defense of nests in the ant <i>Temnothorax rugatulus</i> . D. Charbonneau(1), J. Jackson(2), D. Diek(2), S. Pratt(1) - (1)University of Arizona, (2)Scientific Systems Company, Inc.	Investigating Individual and Group Signatures in Whoops, the Long Distance Calls of the Spotted Hyena. K. Lehmann, K. Holekamp - Michigan State University	
5:30			Social and physiological costs maintain the plumage in the Red-backed Fairywren. J. Weiklin(1), S. Lantz(2), S. Khallil(2), J. Karubian(2), M. Webster(1) - (1)Cornell University, (2)Tulane University	Use a tool, get a tool. Sequential tool use in parrots? T. Roessler(1,2), A. Auerberg(1) - (1)Comparative Cognition, Messeri Research Institute, Cooperative Institute: University of Veterinary Medicine Vienna, University of Vienna, (2)Department of Austria, (2)Department of Cognitive Biology, University of Vienna, Austria	Contemporary loss of migration in commercially-sourced monarch butterflies. A. Tenger-Trolander, W. Lu, M. Noves, M. Kronforst - University of Chicago	Collective decision-making, social organization, and group foraging in capuchin and spider monkeys. G. Davis(1,2), M. Crofoot(1,2) - (1)University of California, Davis, (2)Smithsonian Tropical Research Institute	Complex communication: Receiver-sourced signals that regulate information flow during social recruitment. T. Pavlic, S. Pratt, S. Walker - Arizona State University	

## Inner Circle at Student Center East

## Poster Session

## Time

8:00 pm - 9:30 pm

## SATURDAY, JULY 27

## Time

8:00 am - 9:00 am

## UIC Dorin Forum

Plenary Session: Amy Toth

## Time

9:00 am - 10:00 am

## UIC Dorin Forum

Plenary Session: John Swaddle

## Time

10:00 am - 10:45 am

## Inner Circle at Student Center East

## Coffee Break/Walk to Student Center

## Time

10:45 am - 12:45 pm

## Illinois B

## Illinois A

## Time

6:13

## Miscellaneous 1

## Predation &amp; Foraging 5

## Moderator: Sean M Ehlman

## Social Behavior 11

## Illinois C

## 6:05

## Social Evolution 1

## Moderator: Etya Ansaalem

## Dearborn

## Sexual Selection &amp; Sexual Conflict 4

## Moderator: Reuven Dukas

## Cardinal

## Applied Animal Behavior 4

## Moderator: Sergio Nogueira-Filho

## Illinois B

## Embracing The Complexity Of Animal Social Systems Using Multilayer Network Analysis Symposium 1

## Moderator: Matthew Silk

## 10:45

Kelly Finn  
Presentation, K. Finn - *Animal Behavior Graduate Group*

**Pesky Primates and Lurking Leopards: Can predator stimuli reduce crop-raiding by green monkeys?** M. Burns-Cusato, E. Bell, K. Kamenish, B. Cusato - *Centre College*

**Plumage coloration predicts haemosporidian infection incidence in birds** V. Aguiar de Souza Penha(1), R. Rodrigues(2), A. Quaglia(3), P. Hoepers(4), K. Del-Ciolo(4), L. Soares(5) - (1)Federal University of Parana, (2)Federal University of Sao Carlos, (3)University of Florida, (4)Federal University of Uberlandia, (5)Western Ontario University

**The road to sociality: Brood regulation of worker reproduction in the simple eusocial bee *Bombus impatiens*** E. Ansaalem, J. Starkey, A. Brown - *Department of Entomology, Huck Institutes of the Life Sciences*

**Get back to home: homing behavior in the rubi poison frog (*Dendrobates bomboetes*)** L. Arclia-Pérez, M. Alehortua-Vallejo, F. Vargás-Salinas - *Universidad del Quindío*

**Spatial Memory and Nutritional Balancing in Bornean Orangutans (*Pongo pygmaeus wurmbii*)** S. Alavi(1), E. Vogel(2,3) - (1) Department of Anthropology, University of California, Davis, (2) Department of Anthropology, Rutgers University, (3)The Center for Human Evolutionary Studies, Rutgers University

**Carotenoid concentration in avian retinal oil droplets correlates with categorical color discrimination.** E. Gavies(1), L. Schweiker(1,2), P. Green(1), C. Taboada(1), M. Zippel(1), S. Peters(1), S. Nowicki(1), S. Johnsen(1) - (1)Duke University, Biology Department, (2) Florida International University, Biology Department

## 11:00

**Behavioral Diversity as a Potential Positive Indicator of Animal Welfare.** L. Miller - *Chicago Zoological Society - Brookfield Zoo*

**Genetic variation in sexual aggression and the factors that determine success.** R. Dukas, C. Baxter, J. Yan - *McMaster University*

**Replacing kin-selection with a maternal risk-management model on the origin of animal societies.** D. Cassill - *USF*

**Social Play and the Genesis of Empathy in Male Long-Tailed Macaques (*Macaca fascicularis*)** M. Bardi - *Randolph-Macon College*

**Tracking insect flight path with GoProS and VSLAM software, a case study with dragonflies.** P. Brady - *The University of Texas at Austin*

**Hormonal Responses to Both Real and Simulated Social Challenges in a Competitive Female Songbird.** E. George, A. Bentz, S. Wolf, K. Rosvall - *Indiana University*

## 11:15

**Potential of the multiplex approach for the analysis of animal social structure.** S. Smith-Aguilar - *Conservación Biológica y Desarrollo Social AC*

**Individual temperament traits and production efficiency of the collared peccary (*Pecari tajacu*).** S. Nogueira-Filho(1), P. Cairo(1), R. Borges(1), M. Vandenheede(2), S. Nogueira(1), J. Bindelle(2) - (1) Universidade Estadual de Santa Cruz, (2) University of Liege

**Flex time: Causes and consequences of variation in development time in a field cricket.** S. Geishman - *The Ohio State University at Marion*

**Developmental plasticity shapes social traits and selection in a facultatively eusocial bee.** K. Kapheim(1,2), B. Jones(3), W. Wasio(2) - (1)Utah State University, (2)Smithsonian Tropical Research Institute, (3) University of Illinois

**The Role of Temporal and Motivational Processing in the Organization of Rat String-Pulling Behavior.** A. Blackwell, D. Wallace - *Northern Illinois University*

**Provenance mediates survival and the perception of risk in guppies exposed to turbidity.** S. Ehlman(1,2), A. Munson(2), A. Sin(2) - (1)University of Minnesota - Twin Cities, (2)University of California - Davis

**Male and female virile crayfish (*Faxonius virilis*) signal honesty during territorial contests.** Z. Graham(1), D. Padilla-Perez(1,2), M. Angilletta(1) - (1)Arizona State University, (2)Federal University of Sao Paulo

## 11:30

**Assessing Long-Term Social Bonds in a Colonial Bird.** P. Rose(1,2), D. Croft(1) - (1) University of Exeter

**Sex in murky waters: turbidity increases sexual selection in Guppy fish.** P. Glaum(1), B. dos Santos(1), B. Gonçalves(1), A. Ribeiro(1), D. Pinhal(1) - (1)State University of Sao Paulo,

**From wolffo dog: did domestication affect stress responsiveness?** K. Kotekaas(1,2,3), K. Kotschal(2,3) - (1)Department of Cognitive Biology, University of Vienna, (2)Department of Behavioural Biology, University of Vienna, (3)Wolf Science Center, Konrad-Lorenz Institute of Ethology, University of Veterinary Medicine

**The Role Of Interaction Between Personality, Cognition And Physiology In Neotropical Venomous Frogs.** J. Hernández, A. Amézquita, S. Rodríguez, P. Palacios, M. González - *University of los Andes*

**Coping with Uncertainty: Individual Variation in Behavioral Strategies in *Passer domesticus*.** A. McLaughlin, D. Westneat - *University of Kentucky*

**Bin-opening by Sulphur-crested cockatoos – a case of wild culture?** B. Klump(1), J. Martin(2), J. Hoisch(1), R. Major(3), L. Aplin(1) - (1)Cognitive and Cultural Ecology Group, Max Planck Institute for Ornithology, (2)School of Biological, Earth and Environmental Sciences, University of New South Wales, (3) Australian Museum Research Institute, Australian Museum

**Male and female virile crayfish (*Faxonius virilis*) signal honesty during territorial contests.** Z. Graham(1), D. Padilla-Perez(1,2), M. Angilletta(1) - (1)Arizona State University, (2)Federal University of Sao Paulo

## 11:45

**Sex and Power: Males, Females and Multi-Layer Networks.** L. Barrett - *University of Leithbridge*

**The cascading effects of aggression on novelty and reproductive isolation within a radiation of pupfishes.** M. St. John(1,2), C. Martin(1,2) - (1) University of California, (2) University of North Carolina

**Measuring rates of vestigial singing behavior after sexual signal loss in the pacific field cricket.** R. Olzer, M. Zuk - *University of Minnesota-Twin Cities*

**Changes with Group Size: A Comparative Analysis of Nest Connectivity in Ants.** J. Miller, E. Wan, N. Pinter-Wollman - *University of California, Los Angeles*

**The evolution of decision-making, social information, and information-encoding systems.** E. Hobson(1), S. DeBoo(1,2) - (1) Santa Fe Institute, (2) Carnegie Mellon University

**A Sticky Insect From Australia That Collects Glue to Capture Difficult Prey.** F. Soley(1,2), M. Herberstein(3) - (1)Escuela de Biología, Universidad de Costa Rica, (2)Endeavour Research Fellow, Endeavour Awards, Australia, (3)Department of Biological Sciences, Macquarie University

**Submissiveness Personality Traits in Spotted Hyenas (*Crocuta crocuta*).** S. McCormick, K. Holekamp - *Michigan State University*

12:00	Using thermography to detect arousal induced by an ephemeral and low-level frustration event. M. Whiteside, J. Madden - <i>University of Exeter</i>	Male mate choice and the effects of male preferences in behavioral isolation. N. Roberts, T. Mendelson - <i>University of Maryland Baltimore County</i>	Trait-mapping sociality and life-history adaptations in social and solitary huntman spiders. L. Rayer, J. Gomeau, C. Moreau - <i>Dept. Entomology, Cornell University</i>	How and Why to Become Anti-Social: Lessons from Hermits. M. Laidre - <i>Dartmouth College</i>	Hidden Markov models reveal variability in subsurface foraging behavior by fish-eating killer whales. J. Tennesen(1,2), M. Ann(2), E. Ward(2), B. Hanson(2), C. Emmons(2), D. Gies(3), J. Hogan(4) - (1)Lymer Technologies, (2)NMFS/NOAA Fisheries Northwest Fisheries Science Center, (3)University of Washington Friday Harbor Laboratories, (4)Cascadia Research Collective	Empirical test of the many-wrongs principle using homing pigeons. <i>Columba livia</i> . T. Sasaki(1), N. Masuda(2), R. Mann(3), D. Biro(4) - (1)University of Georgia, (2)University of Bristol, (3)University of Leeds, (4)University of Oxford
12:15	Potential Lasting Effects of Therapeutic Play in Shelter Dogs to Reduce Stress and Increase Adoption. E. Congdon(1), J. Williamson(1), J. Copeland(1), M. Evans(2) - (1) Bethune Cookman University, (2) TheraPet	Water deprivation affects mating behaviors and outcomes in the harvestman, <i>Lepoburnum vittatum</i> . D. Sasson(1), T. Johnson(1), E. Scott(2), K. Fowler-Finn(1) - (1)Saint Louis University, (2)University of Colorado Denver	Reproductive control via the threat of eviction in the clown anemonefish. T. Rueger(1), T. Barbasch(1), M. Wong(2), N. Srinivasan(3), G. Jones(3,4), P. Buston(1) - (1)Department of Biology, SUNY College of Environmental Science and Forestry, (2)University of Massachusetts Lowell, (3)Department of Biology, University of North Carolina at Chapel Hill, (4)Department of Biology, University of California, San Diego	Substrate vibration caused by calling frogs: A cue for predatory spiders? P. Torres(1,2), A. Anzures(1), J. Casas(2), O. Herrera(2) - (1)Universidad de los Andes, (2)Universidad Central	Plasticity facilitates the diversification of communication systems. E. Tibbets(1), B. Fuller(2), E. Snell-Rood(3) - (1)University of Michigan, (2)University of Illinois, (3)University of Minnesota	
12:30	Making Movement Personal: Inferring Personality Traits from GPS Tracking Data of Coyotes. C. Schell(1), M. Murray(2), C. Angeloni(5), S. Poessel(4), L. Tacoma, (2)Lincoln Park Zoo, (3)University of Alberta, (4)Forest and Rangeland Ecosystem Science Center, (5)Colorado State University, (6)National Wildlife Research Center	Dancing Drives Evolution of Sexual Size Dimorphism in Manakins. E. Shogren, W. Boyle - <i>Kansas State University</i>	Strength of Social Selection Depends on the Physical Environment. E. Wice, J. Saltz - <i>Rice University</i>	Open Slot	Horses in transition. Increasing options for horses in need of homes. E. Weiss, E. Dolan, H. Mohan-Gibbons, S. Gramann, M. Slater - <i>ASPCA</i>	
Time	On Own	On Own	613	WFAB Workshop Moderator: Emilia Martins et al		
12:45 pm - 2:00 pm	Lunch On Own	Lunch On Own	603	Lunch with ABS Historian, Zuleyma Tang-Martinez		
Time	Cardinal	Dearborn	605	Social Behavior 10 Moderator: Kaitlin Baudier	Miscellaneous 2 Moderator: Cameron Jones	
1:00 pm - 2:00 pm	Applied Animal Behavior 5 Moderator: Kristyn R. Vitale	Sexual Selection & Sexual Conflict 5 Moderator: Heather L Auld	Mating/Breeding Systems 2 Moderator: Courtney Fitzpatrick	Ageing modulates defensive tasks performed by soldiers of the stingless bee <i>Tetragonisca angustula</i> . K. Baudier, M. Bennett, J. Fowell, S. Pratt, T. Pavlic - <i>Arizona State University</i>	Size and Dominance Judgements From the Human Voice. M. Armstrong(1), C. Han(2), J. Ostrega(1), D. Feinberg(1) - (1)McMaster University, (2)Zhejiang University	
Time	Illinois B	Illinois C	302	Illinois A	Parental Care 2 Moderator: Matthew N. Zippie	
2:00 pm - 4:00 pm	Embracing The Complexity Of Animal Social Systems Using Multilayer Network Analysis Symposium 2 Moderator: Matthew Silk et al	Genome wide patterns of mate selection in wild and hatchery coho salmon. H. Auld(1), D. Jacobson(1), A. Rhodes(2), M. Banks(1) - (1) Oregon State University, (2) Broad Institute	Widespread signal jamming in brown-headed cowbirds ( <i>Molothrus ater</i> ) suggests sexual conflict. H. Anderson(1), J. Gottfried(1), C. Vigil(1), A. Perkes(1), D. White(2), M. Schmidt(1) - (1)University of Pennsylvania, (2)Wilfrid Laurier University	Proximate predictors of variation in egg rejection behavior by avian brood parasite hosts. M. Abolins-Abolis, M. Hauber - <i>University of Illinois Urbana-Champaign</i>		
2:00	Statistical models and inference for multilayer and multimodal networks. S. Paul - <i>The Ohio State University</i>	CALORIE RESTRICTION DECREASES SEDENTARY BEHAVIOR AND IMPROVES METABOLIC PARAMETERS IN MICE DURING AGING. I. Benfato, A. Quintanilha, R. Santos, C. de Oliveira - <i>Federal University of São Paulo (UNIFESP) - Baixada Santista</i>	Can't kill a bird twice: asking questions at the interface of sexual selection and gut microbial research. M. Berlow(1), K. Kohl(2), E. Deryberry(1) - (1) University of Tennessee, (2) University of Pittsburgh	Can you think outside the box? Exploring the role of habits and mental fixation in human innovation. P. Ibañez de Aldecoa(1), S. de Wit(2), S. Tebbich(1) - (1)Department of Cognitive Biology, University of Vienna, (2)Department of Clinical Psychology, University of Amsterdam	Optimizing Embryonic Development: Modelling the Incubation-Foraging Trade-Off. A. Cones, D. Coomes, P. Crowley - <i>University of Kentucky</i>	
2:15	Physiological and Behavioral Effects of a Therapy Session on the Therapy Dog, K. Cunningham, Z. Danwish, R. Strasser - <i>University of Nebraska at Omaha</i>	Semiochemical communication in female of domestic dogs in context of reproductive behavior. M. Dzieciol(1), A. Szumny(2), T. Jezewski(3), M. Woszczyński(1), B. Pieczewska(1), W. Nizankowski(1), E. Godzińska(4) - (1)Wrocław University of Environmental and Life Sciences, Department of Reproduction, 50-366 Wrocław, (2)Pia Grunwaldzki 49				

<p><b>2:30</b></p>	<p><b>Are wolves and dogs equally aroused during rest?</b> H. Jean-Joseph (1, 2), K. Kotekaas (1, 2, 3), F. Rance (2), K. Kortschal (2, 3) (1)Department of Cognitive Biology, (2)Wolf Science Center, Domestication Lab Konrad-Lorenz Institute of Ethology, (3)Department of Behavioural Biology</p>	<p><b>Love in Disguise: Sensory Ecology and Signaling in Jumping Spider Myrmecomorphs</b> A. Dodson (1), D. Outomuro (1), N. Morehouse (1), A. Weir (2) - (1)University of Cincinnati, (2)Purdue University</p>	<p><b>Can "good genes" in females maintain male mate choice and female ornaments in polygynous systems?</b> C. Fitzpatrick (1), S. Dhole (2), M. Servadio (3) - (1)Indiana University, (2)North Carolina State University, (3)University of North Carolina Chapel Hill</p>	<p><b>Diet and Inflammation Induce Inflammatory Polarization in Nonhuman Primates</b> C. Johnson (1), T. Register (2), K. Michalson (2), R. DeBo (2), T. Howard (2), S. App (2), C. Shivel (2), N. Snyder-Mackler (1) - (1)University of Washington, (2)Wake Forest School of Medicine</p>	<p><b>Love thy neighbor: Modeling optimal personality-dependent settling decisions in widow spiders</b> C. Jones (1), M. Gill (2), A. Shih (1) - (1)University of California, Davis, (2)University of California, Santa Cruz</p>	<p><b>Evidence for Maternal Style in Pectoral Fin Contact in Dolphins</b> K. Dudzinski (1), H. Hill (2), C. Ribic (3), T. Bolton (4) - (1)Dolphin Communication Project, (2)Psychology, St. Mary's University, (3)Department of Forest and Wildlife Ecology, University of Wisconsin, (4)Institute for Marine Sciences, Anthony's Key Resort</p>
<p><b>2:45</b></p>	<p><b>A Comparison of Attachment Styles in Foster and Shelter Dogs</b> L. Thielke, M. Udell - Oregon State University</p>	<p><b>Analysis of Male Display Behaviors Used in Natural and Staged Contexts in a Stalk-Eyed Fly</b> J. Grace (1), S. Pohl (2), A. Kamnangath (2), P. Lee (2), R. Wahab (3), P. Johns (2) - (1)Bradley University, Department of Biology, (2)Yale-NUS College Division of Life Sciences, (3)Universiti Brunei Darussalam Institute for Biodiversity and Environmental Research</p>	<p><b>How does mate assortment influence sexual selection in a highly polyandrous system?</b> G. Greenway (1), J. Hamsel (2), C. Miller (1) - (1)University of Florida, (2)Elon University</p>	<p><b>Competitive behaviour and the mechanisms behind negative frequency-dependent selection on aggrandisement</b> R. Klogar, A. McAdam, R. Norris - University of Guelph</p>	<p><b>Privileged Creatures: Are There Level Playing Fields in Nature?</b> B. Naiterson-Horowitz, K. Bowers - Harvard Department of Human Evolutionary Biology</p>	<p><b>Temperature Affects Duet Latency and Copulation Duration but Not Latency to Mate in a Treehopper</b> N. Leith, K. Fowler-Finn - Saint Louis University</p>
<p><b>3:00</b></p>	<p><b>Using multilayer networks to study and the ecological and evolutionary consequences of social structure</b> M. Silk, E. Al</p>	<p><b>Is individual variation in female behavior driven by variation in male courtship and coercion?</b> P. Queller, Y. Shirai, M. Cummings - University of Texas at Austin</p>	<p><b>Female cuticular hydrocarbon profile and male courtship behavior in two hybridizing field crickets</b> M. Maroja (1), B. Heggeseth (2), D. Sim (1), L. Parikida (1) - (1)Williams College, (2)Macalester College</p>	<p><b>Reciprocity Mechanisms in Chimpanzees (Pan troglodytes)</b> J. Ryul (1, 2), K. W. Sotnik (3), J. Lehmann (2) (1)Emory University, (2)Roanhampton University</p>	<p><b>Developments in Amphibian Parental Care Research: History, Present Advances and Future Perspectives</b> J. Synniski (1, 2), L. K. Schuller (3), E. Ringler (4, 5), B. Rojas (6) - (1)Department of Biology, Colorado State University, (2)Instituto Clodomiro Picado, Universidad de Costa Rica, (3)Faculty of Biological Sciences, Geetha University, (4)Department of Biology, Virginia University of Veterinary Medicine, (5)Medical University of Vienna, University of Vienna, (6)Department of Integrative Zoology, University of Vienna, (6)Department of Zoology and Environmental Science, University of Jyväskylä</p>	<p><b>Temperature Affects Duet Latency and Copulation Duration but Not Latency to Mate in a Treehopper</b> N. Leith, K. Fowler-Finn - Saint Louis University</p>
<p><b>3:15</b></p>	<p><b>Impact of Socialization Intentions on Shelter Behavior</b> K. Vitale, M. Udell - Oregon State University</p>	<p><b>Do social stress and social unpredictability affect attention to social cues in Xiphioides tegulatus?</b> Y. Shirai, P. Queller, M. Cummings - University of Texas at Austin</p>	<p><b>Changes in urinary sex steroids of greater horseshoe bats during hibernation</b> K. W. Sotnik (3), J. Ryul (1, 2), K. W. Sotnik (3), J. Lehmann (2), S. Kim (2) - (1)Emory University, (2)Roanhampton University, (3)Wildlife Research Center, Kyoto University</p>	<p><b>How do humans 'break' octopus camouflage?</b> J. Mather, G. Wickens - University of Lethbridge</p>	<p><b>Chronic Social &amp; Environmental Stressors Impair Pair-Bonding and Altruistic Behaviors in Prairie Voles</b> W. Maltanosky, M. N. Monnani, E. Viator, M. Cox, A. Grippo - Northern Illinois University</p>	<p><b>Temperature Affects Duet Latency and Copulation Duration but Not Latency to Mate in a Treehopper</b> N. Leith, K. Fowler-Finn - Saint Louis University</p>
<p><b>3:30</b></p>	<p><b>Japanese Macaque Rank is a Predictor of Aggression Toward Visiting Males</b> S. Ross (1), K. Coonin (1, 3), J. Lester, E. Fisher (1) Center for the Study and Conservation of Apes, Lincoln Park Zoo, (2)Animal Welfare Science Program, Lincoln Park Zoo, (3)Center for the Science of Animal Care and Welfare, Chicago Zoological Society</p>	<p><b>Uncertainty about flying conspecifics causes territorial contests of the butterfly, <i>Papilio machaon</i></b> H. Takeuchi (3), S. Yabuta (2), T. Takeda (3), (1)Osaka Prefecture University, (2)Teikyo University of Science and Technology, (3)Okayama University of Science</p>	<p><b>Size doesn't matter: Caribbean livebearing fishes do not prefer large mates</b> M. Sikes, S. Huebner, I. Schlupp - University of Oklahoma</p>	<p><b>Does Telomere Length Predict Trade-Offs between Aggression, Self-Maintenance, and Parental Care?</b> S. Wolf (1), S. Sanders (2), S. Beitran (3), K. Rosvall (1) - (1)Indiana University, (2)Okayama State University, (3)Dominican University</p>	<p><b>Simulating the evolution of inter-specific mating signal diversity: a machine learning approach</b> S. Winters, J. Highnam - New York University</p>	<p><b>Discussion Panel</b></p>
<p><b>3:45</b></p>	<p><b>Evaluation of Playgroup Size and Methodology on Behavioral and Physiological Welfare in Shelter Dogs</b> L. Mehtam (1), N. Driscoll (2), A. Heary (1), T. Ward (1), A. Powers (1), M. O'Rourke (1), M. Concha (1) - (1)Mornmouth University, (2)Penn State University</p>	<p><b>Should I sit or should I go? Temperature and hatching success affects avian incubation</b> S. Edwards (2), R. Martin (1), S. Healy (2), D. Sherr (1), M. Daley (1) - (1)Western University, (2)University of St. Andrews</p>	<p><b>Resolving dominance in dogs: Behavioral measures fail to predict multi-dog homes</b> C. Walsh (1), M. Castro (1), M. Kinnunen (2), R. Anderson (1) - (1)Memorial University of Newfoundland, (2)University of Oulu</p>	<p><b>Open Slot</b></p>	<p><b>Open Slot</b></p>	<p><b>Open Slot</b></p>

**Time**  
4:00 pm - 4:15 pm  
**Coffee Break**

**Time**  
4:15 pm - 5:15 pm  
**Awards Ceremony**  
Moderator: Alison Bell

**Time**  
6:00 pm - 8:00 pm  
Inner Circle at Student Center East  
Closing Banquet  
Ticket Required

# POSTER SESSION

WEDNESDAY, JULY 24TH - 8:00 PM - 9:30 PM

P1 Cognition & learning	<b>EFFECT OF COLOR AND NECTAR CONCENTRATION ON THE ECONOMICAL CHOICE OF <i>APIS MELLIFERA</i> L. VAR. AFRICANIZED</b> M. Amaya-Marquez(1), J. Hernandez(1,2), J. Garcia(3), V. Solarte(1,2), H. Wells(4) - (1)Instituto de Ciencias Naturales, Universidad Nacional de Colombia, (2)Departamento de Biología, Universidad Nacional de Colombia, (3)RMIT University, (4)Tulsa University
P2 Cognition & learning	<b>Brain regions involved in problem-solving in birds</b> J. Audet, G. Watters, E. Jarvis - <i>Rockefeller University Field Research Center</i>
P3 Cognition & learning	<b>Are Smart Flies Off the Menu? The Effect of Evolved Learning Ability on Survival Under Predation.</b> M. Austin, S. Feldman, L. Sheets, A. Dunlap - <i>Uni. of Missouri, St. Louis</i>
P4 Cognition & learning	<b>Elevation-related and age-structural differences in survival of wild, food-caching mountain chickadees</b> L. Benedict(1), C. Branch(2), A. Pitera(1), D. Kozlovsky(3), B. Sonnenberg(1), V. Pravosudov(1) - (1)University of Nevada, Reno, (2)Cornell Lab of Ornithology, (3)University of Ottawa
P5 Cognition & learning	<b>A behavioral study of sound learning and discrimination in terrestrial frogs</b> D. Cruz(1), C. Gerhard(1) - (1)University of Missouri-Columbia, (2)University of Missouri-Columbia
P6 Cognition & learning	<b>Understanding connection: Effects of prior task-relevant experience on understanding connectivity in gibbons</b> C. Cunningham, M. Schubiger - <i>Abertay University</i>
P7 Cognition & learning	<b>Effects of a common fungicide on olfactory associative learning in honey bees</b> N. DesJardins, A. Fisher, J. Harrison, B. Smith - <i>Arizona State University</i>
P8 Cognition & learning	<b>Anticipatory Motor Planning in Bonobos (<i>Pan paniscus</i>)</b> A. Epping(1), N. Schwob(1,2), D. Weiss(2), J. Tagliabue(1,3) - (1)Ape Cognition & Conservation Initiative, (2)The Pennsylvania State University, (3)Kennesaw State University
P9 Cognition & learning	<b>Development of Nectar Robbing Tactics in a Naturalistic Setting</b> N. Giebink, S. Bish, D. Papaj - <i>University of Arizona</i>
P10 Cognition & learning	<b>Sex differences on cognitive inhibitory control of a cichlid fish</b> E. Gonçalves-de-Freitas(1,2,3), A. Fernandes(1), M. Brandão(1,3) - (1)UNESP - University of São Paulo State, (2)Aquaculture Center of UNESP, (3)FAPESP
P11 Cognition & learning	<b>Item Size And Food Quantity Preference In A Cichlid Fish</b> L. Gómez Laplaza - <i>University Of Oviedo</i>
P12 Cognition & learning	<b>ManyPrimates: A multinational, multi-institutional, multi-species collaboration to study primate cognition</b> L. Hopper(1) - (1)Lincoln Park Zoo
P13 Cognition & learning	<b>Problem-solving performance of songbirds in urban and rural environments</b> K. Miller(1), L. Hopper(2), S. Magle(3), J. LaMontagne(1,2) - (1)DePaul University, Department of Biological Sciences, (2)Lincoln Park Zoo, Lester E. Fisher Center for the Study and Conservation of Apes, (3)Lincoln Park Zoo, Urban Wildlife Institute
P14 Cognition & learning	<b>Whether individuals respond consistently to winning and losing experiences</b> Y. Sun, Y. Hsu - <i>Department of Life Science, National Taiwan Normal University</i>
P15 Cognition & learning	<b>Ability to attend to functionally relevant features of objects in gibbons (<i>Hylobatidae</i>)</b> H. Taylor(1), C. Cunningham(1), S. Hardie(1), G. Skollar(2) - (1)Abertay University, (2)Gibbon Conservation Center
P16 Cognition & learning	<b>Prior encouragement and dogs solving an unsolvable task: Gazing for permission or gazing for help?</b> J. Templeton(1), J. Noble(2), C. Ordas(1), K. Gould(2) - (1)Knox College, (2)Luther College
P17 Cognition & learning	<b>Differences in caching behaviour between highly-social and relatively non-social corvids.</b> A. Vernouillet, D. Clary, D. Kelly - <i>University of Manitoba</i>
P18 Genesis Award	<b>The effect of social rearing on morphology and neural anatomy in <i>Bicyclus anynana</i></b> B. Allen, E. Westerman - <i>University of Arkansas</i>
P19 Genesis Award	<b>Vibratory sensitivity in the female prairie mole cricket <i>Gryllotalpa major</i></b> L. Almanza(1), A. Kirtley(1), C. Hall(2), D. Howard(2), N. Lee(1) - (1)St. Olaf College, (2)University of New Hampshire
P20 Genesis Award	<b>The impact of vegetation clipping by Black-tailed prairie dogs on biodiversity in a grassland ecosystem</b> C. Back(1), J. Morales(1), S. Dudley(1), C. Weiter(1), C. Jones(2), C. Varian Ramos(1), F. Sandmeier(1), B. Vanden Heuvel(1), E. Peterson(1) - (1)Colorado State University-Pueblo, (2)U.S. Fish & Wildlife Service
P21 Genesis Award	<b>The Role of Predation Threat in the Development of Antipredator Behavior</b> C. Bardjis, D. Stevens II, M. Graham, J. Mason, S. Foster, J. Baker - <i>Clark University</i>
P22 Genesis Award	<b>Could Fur Rubbing with Stink Bugs by Capuchin Monkeys Prevent Mosquito Bites?</b> K. Bohl(1), J. Art(1), L. Sirot(1), L. Phelan(2) - (1)College of Wooster, (2)Ohio State University: Ohio Agricultural Research and Development Center
P23 Genesis Award	<b>Effects of urbanization on extra-pair paternity in the song sparrow</b> V. Brewer(1), S. Lane(2), K. Sewall(2), K. Mabry(1) - (1)New Mexico State University, (2)Virginia Polytechnic and State University
P24 Genesis Award	<b>Exposure to predators affects average behaviors as well as "personality" and plasticity</b> A. Bucklaew(1), N. Dochtermann(2) - (1)Canisius College, (2)North Dakota State University
P25 Genesis Award	<b>Conditioning and Landmark Use in <i>Tamias striatus</i></b> N. Burski, P. Freeman - <i>The College of St. Scholastica</i>
P26 Genesis Award	<b>The Behavioral Effects of Carbamazepine (CBZ) on <i>Manduca sexta</i></b> S. Colby, E. Gostin, B. Vanden Heuvel - <i>Colorado State University-Pueblo</i>
P27 Genesis Award	<b>Live long or prosper: An investigation of immunological memory and its reproductive costs in crickets</b> C. Craig, L. Mack, A. Worthington - <i>Creighton University</i>
P28 Genesis Award	<b>Do threespine stickleback fish use social cues to learn about predation risk?</b> O. Davis, P. Shah, M. Wund - <i>The College of New Jersey</i>
P29 Genesis Award	<b>Effect of Group Composition on Space Use in Group-Housed Domestic Cats</b> N. Dickan, M. Suchak - <i>Canisius College</i>
P30 Genesis Award	<b>Differences in Risk-sensitive Foraging due to the Availability Heuristic</b> R. Donka, J. Sevigny, B. Craft - <i>Seattle Pacific University</i>
P31 Genesis Award	<b>Relationship between reproductive polymorphism in the Spotted Salamander and their algal symbiont</b> C. Dorin, G. Neufeld, M. Gangloff, L. Siefferman - <i>Appalachian State University</i>



## POSTER SESSION

- P32**  
Genesis Award  
**The impact of stressors on parental behavior in Black-tailed prairie dogs (*Cynomys ludovicianus*)**  
S. Dudley(1), C. Weiter(1), C. Back(1), J. Morales(1), R. Cuttrel(2), C. Jones(3), E. Peterson(1) - (1)Colorado State University-Pueblo, (2) Fornever Productions, (3)U.S. Fish & Wildlife Service
- P33**  
Genesis Award  
**Androgens Modulate Multimodal Display Bouts and Behavior Sequences in the Frog *Stauroids parvus***  
A. Eigerman(1), A. Privett-Mendoza(1), D. Preininger(2), M. Fuxjager(3), L. Mangiamele(1) - (1)Smith College, (2)Vienna Zoo, (3)Wake Forest University
- P34**  
Genesis Award  
**The effects of developmental lead (Pb<sup>2+</sup>) exposure on aggression in a model system, *Drosophila pseudoobscura***  
K. Espinoza, T. Harvey, H. Long, E. Peterson - Colorado State University-Pueblo
- P35**  
Genesis Award  
**Evolutionary trade-offs between dispersal and sexually-selected traits in the bean beetle**  
S. Gascoigne, F. Barbosa - Lake Forest College
- P36**  
Genesis Award  
**Feminization Of Behavior, Sex Hormone, And Gonads From Endocrine Disruption In Sexually Labile Anemonefish**  
J. Gonzalez(1), J. Rhodes(1), D. Lange(1), S. Bhuvanagiri(1), A. Kaur(1), C. Parker(1), N. Denslow(3), C. Rosenfeld(2), C. Martyniuk(3) - (1) Department of Psychology, Beckman Institute, (2)Department of Biomedical Sciences, Bond Life Sciences Center, MU Informatics Institute, University of Missouri, (3)Department of Physiological Sciences, University of Florida
- P37**  
Genesis Award  
**Differential effects of ethanol on behavior and GABA<sub>A</sub> receptor subunit expression in zebrafish**  
A. Goodman, R. Wong - University of Nebraska at Omaha
- P38**  
Genesis Award  
**The Effects of Sperm Competition Cues on Mating Behavior in Bean Beetles**  
E. Grossman, A. O'Neill, F. Barbosa - Lake Forest College
- P39**  
Genesis Award  
**A host of hardships: Can male crickets infected with long-lived parasites still obtain fitness?**  
E. Harders, B. Huynh, A. Worthington - Creighton University
- P40**  
Genesis Award  
**Male Allen's Hummingbirds Hold Mating Territories with Abundant Food Sources**  
L. Hollingsworth - University of California, Riverside
- P41**  
Genesis Award  
**Effects of short- and long-term enrichment on neophobic behaviors in Trinidadian guppies**  
R. Iffert - Colorado State University
- P42**  
Genesis Award  
**Studying the functions and contexts of vibrational communication in Neotropical katydids**  
A. Iwan(1), C. Kernan(2), A. Litterer(2), H. ter Hofstede(2), J. Hamel(1) - (1)Elon University, (2)Dartmouth College
- P43**  
Genesis Award  
**The Effects of Prey and Anthropogenic Chemical Cues on Black Widow Web Structure and Habitat Preference**  
K. Johnson, C. Jones, A. Sih - University of California, Davis
- P44**  
Genesis Award  
**Men alter ejaculate parameters in response to sex-biased auditory cues.**  
H. Jones, J. Neuhoff, L. Sirot - The College of Wooster
- P45**  
Genesis Award  
**Time Course of Metabolomic Recovery from Stress in the Monster Haglid, *Cyphoderris monstrosa***  
R. Kim, T. Chang, A. Mason - University of Toronto
- P46**  
Genesis Award  
**Hybrid Barn X Cliff Swallows: How Colonial vs Solitary Nesting Behavior May be Related to Plumage Anomalies**  
K. Kreizel, E. Ewing, L. Gillespie - Central Community College
- P47**  
Genesis Award  
**Androgen receptor does not affect temporal or spectral properties of calls in foot flagging frogs**  
K. LeCure(1), D. Preininger(2), M. Fuxjager(3), L. Mangiamele(1) - (1)Smith College, (2)Vienna Zoo, (3)Wake Forest University
- P48**  
Genesis Award  
**Variation in learning ability across colony developmental stage in bumble bees (*Bombus impatiens*)**  
T. Manning, M. Austin, A. Dunlap - University of Missouri Saint Louis
- P49**  
Genesis Award  
**Does Variation in Calling Songs Signal Quality of Male Spermatophylaxes in *Gryllodes sigillatus*?**  
Z. Michael, K. Allensworth, D. Horner, C. Mitra - North Central College
- P50**  
Genesis Award  
**Behavior through time: activity differences of young gorillas in zoos as they age**  
M. Miller, C. Robinson, S. Margulis - Canisius College
- P51**  
Genesis Award  
**Exploring different types of affiliative social interactions for developmental markers in beluga calves**  
J. Miranda, R. Wincheski, A. Velarde, H. Hill - St. Mary's University
- P52**  
Genesis Award  
**An experimental test of mixed-species flock audience effects on chickadee calling behavior.**  
A. Montgomery(1), B. Coppinger(1), J. Lucas(2), K. Sieving(3), T. Freeberg(1) - (1)University of Tennessee, (2)Purdue University, (3)University of Florida
- P53**  
Genesis Award  
**Effects of a novel antidepressant on stress-related behaviors and learning in a fish model**  
H. Mullinax, J. Ward - Ball State University
- P54**  
Genesis Award  
**Effects of two different interventions on cortisol and repetitive abnormal behaviour in police dogs**  
L. Nogueira(1,2), R. Palme(3), O. Mendonça-Furtado(2) - (1)Faculdade de Medicina Veterinária e Zootecnia, Universidade de São Paulo, (2) Departamento de Psicologia Experimental, Instituto de Psicologia, Universidade de São Paulo, (3)Unit of Physiology, Pathophysiology and Experimental Endocrinology, Department of Biomedical Sciences, University of Veterinary Medicine
- P55**  
Genesis Award  
**The effect of carbamazepine on the activity of *Drosophila melanogaster***  
O. Oloyede, S. Colby, Z. Giltner, G. James, M. Jansen, J. Carsella, E. Peterson, B. Vanden Heuvel - Colorado State University-Pueblo
- P56**  
Genesis Award  
**Effects of Traffic Noise on Zebra Finch Problem-Solving Performance**  
A. Osbrink-McInroy, C. Templeton - Pacific University
- P57**  
Genesis Award  
**Calling and Other Social Behavior in Mixed-Species Flocks**  
H. Pepper(1), B. Coppinger(1), K. Sieving(2), J. Lucas(3), T. Freeberg(1) - (1)University of Tennessee, (2)University of Florida, (3)Purdue University
- P58**  
Genesis Award  
**Environmental Effects on Stress Levels within Babydoll Southdown Sheep (*Ovis aries aries southdown*)**  
R. Pera, H. Zimmler-DeLorenzo - Alfred University
- P59**  
Genesis Award  
**Vasotocin and Social Experience Affect Aggression and Electrocommunication in *Apterionotus albifrons***  
B. Pessman(1), M. Freiler(2), G. Smith(2) - (1)Department of Biology, North Central College, (2)Department of Biology and Center for the Integrative Study of Animal Behavior, Indiana University
- P60**  
Genesis Award  
**A Novel Form of Altruism: *A. ocellaris* Non-Breeders Step-Father Unrelated Eggs When Left Unattended**  
E. Phillips, J. Rhodes - University of Illinois at Urbana-Champaign
- P61**  
Genesis Award  
**Female Interaction and Male Mate Choice Influence Pair Bond Formation in the Convict Cichlid**  
J. Pletcher, W. Powers, E. Saliu, J. Gagliardi-Seeley, PhD - Metropolitan State University of Denver
- P62**  
Genesis Award  
**Behavioral Effects of Different Enrichment Stimuli on Zoo-housed Social and Solitary Felids**  
A. Robinson, S. Margulis - Canisius College

## POSTER SESSION

P63 Genesis Award	<b>The Role of Interfemale Aggression On Male Mate Preference In Convict Cichlids</b> C. Rogers, M. Rushbrook, J. Gagliardi-Seeley, PhD. - <i>Metropolitan State University of Denver</i>
P64 Genesis Award	<b>Calcium hydroxide may promote hybridization in a freshwater fish</b> A. Rose, D. Powell, G. Rosenthal - <i>Texas A&amp;M University</i>
P65 Genesis Award	<b>A Behavioral Study of Brain Lateralization in Frogs: Does a Right Ear Advantage Bias Phonotaxis?</b> A. Ruppert, M. Bee - <i>University of Minnesota – Twin Cities</i>
P66 Genesis Award	<b>Captive caprine preference of enrichment objects</b> R. Schweiger, H. Zimpler-DeLorenzo - <i>Alfred University</i>
P67 Genesis Award	<b>Lifetime Variation In Choosiness In Female <i>Enchenopa binotata</i> Treehoppers (Hemiptera: Membracidae)</b> S. Seidita, B. Speck, . Rodriguez - <i>University of Wisconsin Milwaukee</i>
P68 Genesis Award	<b>A Taxonomy based Meta-analysis of Risk-sensitive Foraging Models from 1950 to Present</b> J. Sevigny, R. Donka, E. Long, B. Craft - <i>Seattle Pacific University</i>
P69 Genesis Award	<b>Learning Shapes Risk-Assessment in Foraging for Honeybees</b> E. Sezen, C. Cook, B. Smith - <i>Arizona State University</i>
P70 Genesis Award	<b>Effects of Drought on Sex Ratio Biasing in Cassin's Sparrows (<i>Peucaea cassinii</i>)</b> A. Sinker, C. Ramos - <i>CSU-Pueblo CBASE</i>
P71 Genesis Award	<b>Diet Has a Significant Effect on a Variety of Mating Behaviors in <i>Gryllodes sigillatus</i></b> S. Smick - <i>North Central College</i>
P72 Genesis Award	<b>Social interactions between colony house cats in an animal shelter</b> T. Smith, M. Suchak - <i>Canisius College</i>
P73 Genesis Award	<b>Influence of Maternal Aggression and Stress Response on Offspring Quality in Tree Swallows</b> K. Todd(1), K. Content(1,2), L. Siefferman(1) - (1) <i>Appalachian State University</i> , (2) <i>Indiana University</i>
P74 Genesis Award	<b>The effects of developmental lead (Pb2+) exposure on mate choice</b> S. Ulrich, A. Losch, M. Randall, A. Garcia Costas, E. Peterson - <i>Colorado State University-Pueblo</i>
P75 Genesis Award	<b>Pelage and Background Matching in <i>Tamias striatus</i></b> T. Webster, P. Freeman - <i>The College of Saint Scholastica</i>
P76 Genesis Award	<b>A quantum jump-yip in chemical communication in the Black-tailed prairie dog</b> C. Weiter(1), B. Schulte(2), S. Dudley(1), C. Back(1), J. Morales(1), R. Cutrell(3), C. Jones(4), E. Peterson(1) - (1) <i>Colorado State University-Pueblo</i> , (2) <i>Western Kentucky University</i> , (3) <i>Forneyer Productions</i> , (4) <i>U.S. Fish and Wildlife Service</i>
P77 Genesis Award	<b>A new vibrational sexual signal in a field cricket</b> A. Wickle(1), R. Tinghitella(2), J. Gallagher(2), E. Broder(1) - (1) <i>St Ambrose University</i> , (2) <i>University of Denver</i>
P78 Genesis Award	<b>Effects of Parental Care on Offspring Behavior in Threespined Stickleback</b> D. Wilkerson-Lindsey, B. Burger, B. Fung, K. Jiang, J. Ritthamel, J. Keagy, A. Bell - <i>University of Illinois</i>
P79 Genesis Award	<b>Correlates of Innovation Success in a Facultatively Social Mammal</b> C. Wu(1,2), D. Williams(1,2), D. Blumstein(1,2) - (1) <i>University of California, Los Angeles</i> , (2) <i>Rocky Mountain Biological Laboratory</i>
P80 Genesis Award	<b>Insensitivity to workload: ordering decisions of a three-choice task in free-ranging Japanese macaques</b> S. Xu(1), K. Yamada(2), M. Nakamichi(2), M. Tomonaga(1) - (1) <i>Primate Research Institute, Kyoto University</i> , (2) <i>Graduate School of Human Sciences, Osaka University</i>
P81 Genesis Award	<b>Sensitivity to workload: prioritizing behavior of a three-choice task in free-ranging Japanese macaques</b> S. Xu(1), K. Yamada(2), M. Nakamichi(2), M. Tomonaga(1) - (1) <i>Primate Research Institute, Kyoto University</i> , (2) <i>Graduate School of Human Sciences, Osaka University</i>
P82 Genesis Award	<b>Offspring phenotypes vary with the length of paternal predation exposure in threespined stickleback</b> C. Zielinski, E. Chen, A. Bell, J. Hellmann - <i>University of Illinois, Urbana-Champaign</i>
P83 Genetics & evolution	<b>Coloration and body size as anti-predatory strategies in toads</b> N. Anderson(1), T. Fuentes(1), X. Bernal(1,2) - (1) <i>Purdue University</i> , (2) <i>Smithsonian Tropical Research Institute</i>
P84 Genetics & evolution	<b>Sensory exploitation may promote the evolution of plumage patterns in Estrilidae</b> A. Mizuno, M. Soma - <i>Hokkaido University</i>
P85 Genetics & evolution	<b>Determining Mating Systems and Paternity in Convict Cichlids Using Microsatellite Markers</b> V. Padilla, P. Torres, J. Gagliardi-Seeley, H. Liu - <i>Metropolitan State University of Denver</i>
P86 Genetics & evolution	<b>How does behavior evolve? Thinking about how genetic changes influence behavior and generate diversity</b> M. Sheehan - <i>Cornell University</i>
P87 Mathematical/ simulation/modeling	<b>Measurement of cephalopod polarization patterns with color video-polarimetry and computer vision tools</b> M. Garcia(1), V. Gruev (1), M. Cummings(2), P. Brady(2) - (1) <i>The University of Illinois at Urbana Champaign</i> , (2) <i>The University of Texas at Austin</i>
P88 Mathematical/ simulation/modeling	<b>Can escape behavior models make predictions on responses to high-speed vehicles?</b> R. Lunn, E. Fernández-Juricic - <i>Purdue University</i>
P89 Mating/breeding systems	<b>Research in progress: reproductive investment in the Neotropical stripe-tailed yellow finch</b> M. de-Carvalho, R. Santos, R. Macedo - <i>University of Brasilia</i>
P90 Mating/breeding systems	<b>Open for business: Some female pouched rats lack a vaginal opening; only those with open vaginas are choosy</b> A. Freeman(1), S. Cheong(1), J. Allen(1), A. Lerer(1), B. Singh(1), B. Blank(1), D. Jeffery(1), D. Lee(1,2), A. Ophir(1) - (1) <i>Cornell University</i> , (2) <i>Southern Illinois University Edwardsville</i>
P91 Mating/breeding systems	<b>A test of the female mimicry hypothesis in Painted Buntings (<i>Passerina ciris</i>)</b> C. Gurley, J. Bednarz, J. Johnson - <i>University of North Texas</i>
P92 Mating/breeding systems	<b>Túngara frog timbre: female preference for harmonic structure in "chucks"</b> E. Knepp(1), N. Anderson(1), H. Leggett(1), J. Lucas(1), X. Bernal(1,2) - (1) <i>Purdue University</i> , (2) <i>Smithsonian Tropical Research Institute</i>

## POSTER SESSION

<b>P93</b> Mating/breeding systems	<b>Costs and benefits of clutch synchronization in joint-female nests</b> B. Landsborough, J. Quinn - <i>McMaster University</i>
<b>P94</b> Mating/breeding systems	<b>Nocturnal incubators in communal nesting cuckoos: Risks and rewards</b> J. Quinn(1), J. Robertson(2) - (1) <i>McMaster University</i> , (2) <i>Trent University</i>
<b>P95</b> Mating/breeding systems	<b>Effects of inbreeding on life history traits and sexual competency in decorated crickets</b> I. Rines(1), J. Oldziej(1), C. Hodges(1), J. Harper(1), K. Hampton(1), K. Duffield(1), J. Hunt(2,3), B. Sadd(1), S. Sakaluk(1) - (1) <i>Illinois State University</i> , (2) <i>Western Sydney University</i> , (3) <i>University of Exeter</i>
<b>P96</b> Mating/breeding systems	<b>Lifetime Variation In The Mate Preference Functions Of Female <i>Enchenopa Binotata</i> Treehoppers</b> B. Speck, K. O'Hara, S. Seidita, R. Rodriguez - <i>University of Wisconsin-Milwaukee</i>
<b>P97</b> Miscellaneous	<b>Can nectar guides deceive the visual perception of pollinators?</b> M. Baek, D. Papaj - <i>University of Arizona</i>
<b>P98</b> Miscellaneous	<b>Oxidative stress as a potential cost of reproduction and breeding in a mouthbrooding cichlid fish</b> P. Dijkstra, J. Sawecki, R. Fialkowski, P. Aufdemberge, E. Miro - <i>Department of Biology, Central Michigan University</i>
<b>P99</b> Miscellaneous	<b>Enrichment Evaluations for Nocturnal Mammals.</b> J. Hamilton, G. Fuller, S. Allard - <i>Detroit Zoological Society</i>
<b>P100</b> Parental care	<b>Repeatable Individual Differences in Maternal Care and Infant Behavior in Wild Baboons</b> S. Clinton(1), M. Zippel(1), E. Archie(2,3), J. Altmann(3,4), S. Alberts(1,3) - (1) <i>Duke University</i> , (2) <i>University of Notre Dame</i> , (3) <i>National Museums of Kenya</i> , (4) <i>Princeton University</i>
<b>P101</b> Parental care	<b>Study Of Maternal Aggression In Sheep Before And After The Weaning</b> F. González(1), R. Ibarra(1), R. Ramirez(1), P. Cano(2), A. Olazabal(2), R. Soto(1) - (1) <i>FES-C, UNAM, Unidad de Investigación multidisciplinaria</i> , (2) <i>Fes-C, UNAM, Centro de Enseñanza Agropecuaria</i>
<b>P102</b> Parental care	<b>The Effect of Resource Quality on the Level of Compensation in a Bi-Parental Beetle</b> S. Murphy, M. Spalla, J. Creighton - <i>Purdue University Northwest</i>
<b>P103</b> Parental care	<b>Sex in Parental Motivation in Virgin California Mice (<i>Peromyscus californicus</i>)</b> C. Nguyen, M. Zhao, W. Saltzman - <i>University of California - Riverside</i>
<b>P104</b> Sexual selection & sexual conflict	<b>Male harassment leads to female fitness costs in bean beetle</b> F. Barbosa, E. Bacon - <i>Lake Forest College</i>
<b>P105</b> Sexual selection & sexual conflict	<b>The effect of conspecific odors on self-grooming behaviors of male meadow voles (<i>Microtus pennsylvanicus</i>)</b> R. Scauzillo, M. Ferkin - <i>University of Memphis</i>
<b>P106</b> Sexual selection & sexual conflict	<b>Do olfactory cues affect female mate choice in prairie voles, <i>Microtus ochrogaster</i>?</b> N. Solomon(1), A. Hayes-Puttfarcken(1), C. Kemmerly(1), J. Oranski(2), B. Keane(3) - (1) <i>Department of Biology, Miami University</i> , (2) <i>Department of Global and Intercultural Studies, Miami University</i> , (3) <i>Department of Biological Sciences, Miami University</i>
<b>P107</b> Sexual selection & sexual conflict	<b>Individual Variation in Multivariate Signal Assessment in Female Gray Treefrogs</b> K. Stratman, G. Hoebel - <i>UW-Milwaukee</i>
<b>P108</b> Sexual selection & sexual conflict	<b>Pheromones signal sexual attractiveness and genetic identity in mate choice of brown rat</b> Y. Zhang, J. Zhang - <i>Institute of Zoology, Chinese Academy of Sciences, Beichen West Road 1-5, Chaoyang District</i>

### THURSDAY, JULY 25TH - 8:00 PM - 9:30 PM

<b>P109</b> Communication	<b>Diversification In Trophic Morphology Promotes Divergence In Song Structure In Red Crossbills</b> J. Smith(1), C. Porter(2) - (1) <i>Department of Biology Pacific Lutheran University</i> , (2) <i>Department of Zoology and Physiology University of Wyoming</i>
<b>P110</b> Development	<b>Effects of Developmental Exposure to Endocrine Disrupting Compounds on Behavior of Neonatal and Juvenile Rats</b> G. Lange, M. Flattery, E. Hill, C. Shelton, M. Zaky - <i>Saginaw Valley State University, Department of Biology</i>
<b>P111</b> Founders Memorial Poster Paper Award	<b>Song cultural evolution over five decades in a lekking hummingbird</b> M. Araya-Salas(1,2), A. Rico-Guevara(3), T. Wright(4) - (1) <i>Universidad de Costa Rica</i> , (2) <i>Cornell University</i> , (3) <i>University of California Berkeley</i> , (4) <i>New Mexico State University</i>
<b>P112</b> Founders Memorial Poster Paper Award	<b>Effects of Prenatal Stress on Parental Motivation in a Monogamous Rodent (<i>Peromyscus californicus</i>)</b> A. Arquilla, W. Saltzman - <i>University of California, Riverside</i>
<b>P113</b> Founders Memorial Poster Paper Award	<b>To Sing in Two Ways: a 'Tail' of Converging Forms of Acoustic Mating Displays</b> A. Berger, C. Clark - <i>University of California, Riverside</i>
<b>P114</b> Founders Memorial Poster Paper Award	<b>What determines a dog's approach to a stranger? – Sociability in Indian free-ranging dogs</b> D. Bhattacharjee, R. Sarkar, S. Sau, A. Bhadra - <i>Indian Institute of Science Education and Research - Kolkata</i>
<b>P115</b> Founders Memorial Poster Paper Award	<b>Investigating the role of postmating-prezygotic sexual selection in hybridizing swordtails</b> R. Bovio, R. Serafini, G. Rosenthal - <i>Texas A&amp;M University</i>
<b>P116</b> Founders Memorial Poster Paper Award	<b>Neurogenomic insights into paternal care and its relation to territorial aggression</b> S. Bukhari(1,2,5), M. Saul(1), N. James(3), M. Bensky(4), L. Stein(5), R. Trap(5), A. Bell(1,3,4,5) - (1) <i>Carl R. Woese Institute for Genomic Biology, University of Illinois</i> , (2) <i>Illinois Informatics Institute, University of Illinois</i> , (3) <i>Neuroscience Program, University of Illinois</i> , (4) <i>Program in Ecology, Evolution and Conservation Biology, University of Illinois</i> , (5) <i>Department of Animal Biology, University of Illinois</i>
<b>P117</b> Founders Memorial Poster Paper Award	<b>Evidence for heritable variation in song elaboration in Alston's singing mouse</b> T. Burkhard(1), R. Westwick(2), M. Matz(1), S. Phelps(1) - (1) <i>University of Texas</i> , (2) <i>University of Kentucky</i>

## POSTER SESSION

<p><b>P118</b> Founders Memorial Poster Paper Award</p>	<p><b>The pilfering of puffins: kleptoparasitic behaviour by herring gulls</b> K. Busniuk, D. Wilson - <i>Memorial University of Newfoundland</i></p>
<p><b>P119</b> Founders Memorial Poster Paper Award</p>	<p><b>Spatial and Temporal Overlap in a Rodent Community Informs Reintroductions of Endangered Pocket Mice</b> R. Chock(1,2), G. Grether(1), D. Shier(2,1) - (1)<i>University of California Los Angeles</i>, (2)<i>San Diego Zoo Institute for Conservation Research</i></p>
<p><b>P120</b> Founders Memorial Poster Paper Award</p>	<p><b>Weapon damaged males experience increases in offspring production</b> L. Cirino, S. Lenga, C. Miller - <i>University of Florida</i></p>
<p><b>P121</b> Founders Memorial Poster Paper Award</p>	<p><b>Does Black Widow Behavior Differ Between Urban and Desert Lineages.</b> R. Clark(1), J. Johnson(2) - (1)<i>School of Life Sciences, Arizona State University</i>, (2)<i>School of Mathematical &amp; Natural Sciences, Arizona State University - West campus</i></p>
<p><b>P122</b> Founders Memorial Poster Paper Award</p>	<p><b>Brood recognition and embryo development in ants</b> A. de Fouchier(1), A. Khila(2), P. d'Ettorre(1) - (1)<i>Laboratory of Experimental and Comparative Ethology (LEEC), University of Paris 13, Sorbonne Paris Cité</i>, (2)<i>Institut de Génomique Fonctionnelle de Lyon, CNRS, Ecole Normale Supérieure de Lyon, Université Claude Bernard Lyon 1</i></p>
<p><b>P123</b> Founders Memorial Poster Paper Award</p>	<p><b>Song and Syllable Diversity in a Central Illinois Population of Northern House Wrens</b> R. DiSciullo, C. Thompson, S. Sakaluk - <i>Illinois State University</i></p>
<p><b>P124</b> Founders Memorial Poster Paper Award</p>	<p><b>Using fear conditioning to explore the neural correlates of social learning in the Trinidadian guppy</b> R. Fan, S. Reader, J. Sakata - <i>McGill University</i></p>
<p><b>P125</b> Founders Memorial Poster Paper Award</p>	<p><b>Influences of sex and stress hormones on the mating system of Eastern gray treefrogs</b> O. Feagles, G. Hoebel - <i>University of Wisconsin Milwaukee</i></p>
<p><b>P126</b> Founders Memorial Poster Paper Award</p>	<p><b>Frequency dependence shapes the adaptive landscape of imperfect Batesian mimicry</b> S. Finkbeiner(1,6), P. Salazar(2), S. Nogales(3), C. Rush(4), A. Briscoe(5), R. Hill(4), M. Kronforst(1), K. Willmott(2), S. Mullen(6) - (1)<i>University of Chicago</i>, (2)<i>University of Florida</i>, (3)<i>Pontificia Universidad Católica del Ecuador</i>, (4)<i>University of the Pacific</i>, (5)<i>University of California, Irvine</i>, (6)<i>Boston University</i></p>
<p><b>P127</b> Founders Memorial Poster Paper Award</p>	<p><b>Cortisol and Variation in Female Mate-Preference in the Swordtail Fish, <i>Xiphophorus multilineatus</i></b> M. Fitschen-Brown(1), S. Tudor(2), J. Shroyer(1), H. Hamlin(2), M. Morris(1) - (1)<i>Ohio University</i>, (2)<i>University of Maine</i></p>
<p><b>P128</b> Founders Memorial Poster Paper Award</p>	<p><b>Animal personality may mitigate the effects of anthropogenic noise on reproductive success of wild animals</b> T. Fulk, L. Siefferman - <i>Appalachian State University</i></p>
<p><b>P129</b> Founders Memorial Poster Paper Award</p>	<p><b>Sensory Mechanisms Underlying Navigation In The Strawberry Poison Frog <i>Oophaga pumilio</i></b> S. Granados-Martínez(1), . Stynoski(1,2), F. Soley-Guardia(1) - (1)<i>Escuela De Biología, Universidad De Costa Rica</i>, (2)<i>Instituto Clodomiro Picado, Universidad De Costa Rica</i></p>
<p><b>P130</b> Founders Memorial Poster Paper Award</p>	<p><b>Exploration Score Does Not Predict Survival in Black-capped Chickadees (<i>Poecile atricapillus</i>)</b> E. Haave-Audet, C. Littlefair, K. Mathot - <i>University of Alberta</i></p>
<p><b>P131</b> Founders Memorial Poster Paper Award</p>	<p><b>A comparative study of airborne and vibrational signaling in Neotropical katydids</b> J. Hamel(1), A. Iwan(1), C. Kernan(2), S. Martinson(2), L. Symes(3), H. ter Hofstede(2) - (1)<i>Elon University</i>, (2)<i>Dartmouth College</i>, (3)<i>Cornell University</i></p>
<p><b>P132</b> Founders Memorial Poster Paper Award</p>	<p><b>The gut microbiota determines overwintering behaviour in Atlantic salmon, <i>Salmo salar</i></b> C. Heys(1), P. Schaal(1), N. Metcalfe(1), P. McGinnity(2), M. Llewellyn(1) - (1)<i>University of Glasgow</i>, (2)<i>University College Cork</i></p>
<p><b>P133</b> Founders Memorial Poster Paper Award</p>	<p><b>A comparison of behavior and coloration in the seasonally plastic butterfly <i>Junonia coenia</i></b> G. Hirzel, E. Westerman - <i>University of Arkansas</i></p>
<p><b>P134</b> Founders Memorial Poster Paper Award</p>	<p><b>Are higher-ranked monkeys warmer in huddles?</b> S. Ishizuka(1,2) - (1)<i>Primate Research Institute, Kyoto University</i>, (2)<i>Japan Society for the Promotion of Science</i></p>
<p><b>P135</b> Founders Memorial Poster Paper Award</p>	<p><b>Effects of Positive Reinforcement Training on Chimpanzee Cortisol Concentrations</b> A. Johnston, A. Rundus, J. Gibson, T. Potts-Gordon, O. King, N. Helfrick, R. Manzo, R. Burr - <i>West Chester University</i></p>
<p><b>P136</b> Founders Memorial Poster Paper Award</p>	<p><b>Intraspecific variation in the degree of fission-fusion dynamics in Japanese macaques</b> Y. Kaigaishi, K. Yamada, M. Nakamichi - <i>Graduate School of Human Sciences, Osaka University</i></p>
<p><b>P137</b> Founders Memorial Poster Paper Award</p>	<p><b>The oddest of manakins: territoriality in <i>Antilophia galeata</i> (Lichtenstein, 1823) (Passeriformes: Pipridae)</b> L. Kajiki, M. de Carvalho, S. Teixeira, P. Resende, R. Macedo - <i>University of Brasilia</i></p>
<p><b>P138</b> Founders Memorial Poster Paper Award</p>	<p><b>Non-invasive methods assess the stress hormones and health of gentoo penguins</b> J. Karan(1), P. Nolan(2) - (1)<i>University of Charleston, SC</i>, (2)<i>The Citadel</i></p>
<p><b>P139</b> Founders Memorial Poster Paper Award</p>	<p><b>Chimpanzees, but not bonobos, attend more to infant than adult conspecifics</b> Y. Kawaguchi(1), F. Kano(2), M. Tomonaga(1) - (1)<i>Primate Research Institute, Kyoto University</i>, (2)<i>Kumamoto Sanctuary, Kyoto University</i></p>
<p><b>P140</b> Founders Memorial Poster Paper Award</p>	<p><b>The Effects of a Novel Cognitive Enrichment Task on Captive Chimpanzee (<i>Pan Troglodytes</i>) Behavior</b> J. Machado(1), L. Hopper(1), S. Ross(1), F. Clark(2) - (1)<i>Lester E. Fisher Center for the Study and Conservation of Apes, Lincoln Park Zoo</i>, (2)<i>Department of Field Conservation &amp; Science, Bristol Zoological Society</i></p>
<p><b>P141</b> Founders Memorial Poster Paper Award</p>	<p><b>A Comparative Study of Maternal Care by Virgins, Females and Males, in the Fire Ant, <i>Solenopsis invicta</i></b> A. Masnjak, D. Cassill - <i>University of South Florida</i></p>
<p><b>P142</b> Founders Memorial Poster Paper Award</p>	<p><b>Can <i>Dictyostelium</i> rescue free-living <i>Burkholderia</i> from interspecific competition?</b> J. Medina, J. Garcia, J. Strassmann, D. Queller - <i>Washington University in St. Louis</i></p>

## POSTER SESSION

<b>P143</b> Founders Memorial Poster Paper Award	<b>Social signaling and foraging in a group-living treehopper</b> S. Michael, R. Cocroft - <i>University of Missouri</i>
<b>P144</b> Founders Memorial Poster Paper Award	<b>Influence of Pre- and Post-Hatching Care on Transmitting Enteric Bacteria in <i>Nicrophorus defodiens</i></b> C. Miller, J. Creighton - <i>Purdue University Northwest</i>
<b>P145</b> Founders Memorial Poster Paper Award	<b>Tap dancers in the wild: field observations of multimodal courtship display in cordon-bleus (<i>Uraeginthus spp.</i>)</b> N. Ota(1,2), M. Gahr(1) - (1) <i>Max Planck Institute for Ornithology</i> , (2) <i>JSPS Overseas Research Fellow</i>
<b>P146</b> Founders Memorial Poster Paper Award	<b>Female reproductive synchrony and male reproductive skew in a seasonally-breeding baboon</b> M. Petersdorf(1), J. Higham(1), A. Burrell(1), A. Weyher(2) - (1) <i>New York University</i> , (2) <i>University of Massachusetts Amherst</i>
<b>P147</b> Founders Memorial Poster Paper Award	<b>Underneath It All: Mapping gene expression of neuronal, endocrine and immune systems onto exploratory behavior</b> M. Pipkin(1,2,5,6), V. Braithwaite(1,2,5,6), J. Caulfield(3,4,5,6), S. Cavigelli(3,4,5,6) - (1) <i>Department of Ecosystem Science and Management, Pennsylvania State University</i> , (2) <i>Intercollege Graduate Degree Program in Ecology, Pennsylvania State University</i> , (3) <i>Department of Biobehavioral Health</i> , (4) <i>Intercollege Graduate Degree Program in Neuroscience, Pennsylvania State University</i> , (5) <i>Center for Brain, Behavior, and Cognition, Pennsylvania State University</i> , (6) <i>Huck Institutes of the Life Sciences, Pennsylvania State University</i>
<b>P148</b> Founders Memorial Poster Paper Award	<b>Mated pairs of swallows with similar personality types share nestling care evenly and achieve higher fitness</b> T. Pyle(1), K. Content(1,2), L. Siefferman(1) - (1) <i>Department of Biology, Appalachian State University</i> , (2) <i>Department of Biology, Indiana University</i>
<b>P149</b> Founders Memorial Poster Paper Award	<b>The effect of an anxiolytic on rat aversion to carbon dioxide</b> A. Ratuski, L. Améndola, D. Weary - <i>University of British Columbia</i>
<b>P150</b> Founders Memorial Poster Paper Award	<b>The effects of paternal deprivation on the stress physiology and sociability of zebra finch offspring</b> A. Riley, J. Grindstaff - <i>Oklahoma State University</i>
<b>P151</b> Founders Memorial Poster Paper Award	<b>Neural Encoding of Species-Specific Song Discrimination in Nestling Passerines</b> K. Schroeder, J. Podos, L. Remage-Healey - <i>University of Massachusetts</i>
<b>P152</b> Founders Memorial Poster Paper Award	<b>The 1<sup>st</sup> dominant male causes subordinates to shorten their distance in triadic interactions of crows</b> A. Seguchi, E. Izawa - <i>Keio University</i>
<b>P153</b> Founders Memorial Poster Paper Award	<b>This Smells.. Familiar? Learning of Chemical Cues in Two Sympatric Species of Amblypygid.</b> L. Segura-Hernández(1), J. Perez(1), D. Wiegmann(2), V. Bingman(2), E. Hebets(1) - (1) <i>University of Nebraska-Lincoln</i> , (2) <i>Bowling Green State University</i>
<b>P154</b> Founders Memorial Poster Paper Award	<b>Alternative Male Reproductive Tactics in a Plural Cooperatively Breeding Bird</b> S. Shah, D. Rubenstein - <i>Columbia University</i>
<b>P155</b> Founders Memorial Poster Paper Award	<b>Behavioral modification of LPS injected ants</b> K. Shoji(1), N. Nagaya(2), R. Fujisawa(3) - (1) <i>Department of Biological Sciences, Graduate School of Science, Tokyo Metropolitan University</i> , (2) <i>Faculty of Information Science &amp; Engineering, Kyoto Sangyo University</i> , (3) <i>Department of Systems Design and Informatics, Kyushu Institute of Technology</i>
<b>P156</b> Founders Memorial Poster Paper Award	<b>Dark-eyed juncos adjust song structure in response to traffic noise</b> K. Shwedack, B. Hennigar, D. Wilson - <i>Memorial University</i>
<b>P157</b> Founders Memorial Poster Paper Award	<b>Social fur-rubbing, contact, and visual access on urinary oxytocin in capuchins (<i>Cebus apella</i>)</b> M. Sosnowski(1,2), M. Benítez(1,2), O. Tomeo(1,2), S. Brosnan(1,2,3) - (1) <i>Department of Psychology, Georgia State University</i> , (2) <i>Language Research Center, Georgia State University</i> , (3) <i>Neuroscience Institute, Georgia State University</i>
<b>P158</b> Founders Memorial Poster Paper Award	<b>Scent marking behavior suggests cryptic sociality in a population of striped hyenas, <i>Hyaena hyaena</i></b> O. Spagnuolo(1,2), B. Low(2), K. Califf(1), G. Roloff(1), A. Wagner(1), K. Holekamp(1) - (1) <i>Michigan State University</i> , (2) <i>University of Michigan</i>
<b>P159</b> Founders Memorial Poster Paper Award	<b>Behavioral Responses to Chemical Cues Associated with a Novel, Invasive Predator</b> D. Stevens II, M. Graham, C. Bardjjs, J. Mason, J. Baker, S. Foster - <i>Clark University</i>
<b>P160</b> Founders Memorial Poster Paper Award	<b>Selection for Distinctiveness in Chinese Opera Masks</b> J. Sung, N. Morehouse - <i>Department of Biological Sciences, University of Cincinnati</i>
<b>P161</b> Founders Memorial Poster Paper Award	<b>Altruistic behavior within pair-bonds is exchanged but skewed to males in captive large-billed crows</b> N. TAKAHASHI, E. Izawa - <i>Keio University</i>
<b>P162</b> Founders Memorial Poster Paper Award	<b>Diet composition and body condition in urban and rural Eurasian red squirrels</b> Y. Takahata(1,2), K. Uchida(3), T. Shimamoto(4), R. Okawa(3), H. Yanagawa(5), K. Shirai(6), K. Tanaka(6), M. Ito(1) - (1) <i>Toyo Univ</i> , (2) <i>SOKENDAI</i> , (3) <i>Hokkaido Univ</i> , (4) <i>NVLU</i> , (5) <i>Obihiro Univ</i> , (6) <i>Univ Tokyo</i>
<b>P163</b> Founders Memorial Poster Paper Award	<b>Influence of <i>Plasmodium</i> infection on the expression of vector-relevant odors in an avian host</b> K. Talbott, E. Ketterson - <i>Indiana University</i>
<b>P164</b> Founders Memorial Poster Paper Award	<b>Fitness Benefits of an Attentive Mom</b> S. Westrick(1), R. Taylor(2), J. Lane(3), S. Boutin(4), A. McAdam(5), B. Dantzer(1) - (1) <i>University of Michigan</i> , (2) <i>End2End Genomics LLC</i> , (3) <i>University of Saskatchewan</i> , (4) <i>University of Alberta</i> , (5) <i>University of Guelph</i>
<b>P165</b> Founders Memorial Poster Paper Award	<b>Why Are Some Animals Thriving in Heat? An Organismal Approach in a Bird Expanding South.</b> M. Woodruff(1), C. Zimmer(2), D. Ardia(3), M. Vitousek(2), K. Rosvall(1) - (1) <i>Indiana University</i> , (2) <i>Cornell University</i> , (3) <i>Franklin &amp; Marshall College</i>
<b>P166</b> Genetics & evolution	<b>Do Eastern Bluebirds exhibit behavior tolerance to infection with resp pathogen <i>Mycoplasma gallisepticum</i>?</b> S. Balenger - <i>University of Mississippi</i>
<b>P167</b> Predation & foraging	<b>The effect of experience and environmental persistence on risk sensitivity in <i>Bombus impatiens</i> bumble bees.</b> R. Brant(1), A. Domhaus(2), A. Dunlap(1) - (1) <i>University of Missouri- Saint Louis</i> , (2) <i>University of Arizona</i>

## POSTER SESSION

- P168** **Do honey bees (*Apis mellifera*L.) perceive flowers in restored prairies as profitable food sources?**  
Predation & foraging  
M. Carr-Markell(1), C. Demler(2), M. Couvillon(3), R. Schuerch(3), M. Spivak(1) - (1)University of Minnesota, (2)Cornell University, (3)Virginia Tech
- P169** **The Sequential Choice Model Evidenced by a Risk-Sensitive Foraging Procedure in a Mammalian Species**  
Predation & foraging  
B. Craft, J. Sevigny, R. Donka - Seattle Pacific University
- P170** **Trade off between large body size and parasitism in juvenile male tree crickets**  
Predation & foraging  
E. Etzler, D. Gwynne - University of Toronto Mississauga
- P171** **Smells like Trouble: Harvestman Chemoreception and the Pheromone Avoidance Hypothesis**  
Predation & foraging  
D. Goldberg, K. Tobin, K. McIntire, R. Bowden, S. Juliano - Illinois State University
- P172** **Fear Not! Siberian Dwarf Hamster Foraging Under Predation Cues**  
Predation & foraging  
L. Kanda - Ithaca College
- P173** **Competitive benefit of thermal tolerance during foraging in desert ants**  
Predation & foraging  
S. Kolay(1), X. Cerda(2), R. Boulay(3), P. d'Etorre(1) - (1)Laboratoire d'Ethologie Experimentale et Comparee, Universite Paris 13, (2)Estacion Biologica de Donana, CSIC, (3)Institut de Recherche sur la Biologie de l'Insecte, Universite de Tours
- P174** **Titmice use the transparency of a barrier blocking access to seed to assess risk**  
Predation & foraging  
S. Kyle - University of Tennessee
- P175** **Diel effects on the antipredator behavior of a terrestrial salamander**  
Predation & foraging  
A. Mathis, J. Baker, S. Mathis - Missouri State University
- P176** **Sex-age Biased Palm Heart (*Euterpe edulis*) Extraction by Black Capuchin Monkeys (*Sapajus nigritus*)**  
Predation & foraging  
O. Mendonça-Furtado(1), M. Tokuda(2), M. Fogaça(3), P. Izar(1) - (1)Departamento de Psicologia Experimental, Instituto de Psicologia, Universidade de São Paulo, (2)Zoológico Municipal Quinzinho de Barros, (3)VetMedUni
- P177** **Meta-analysis of the effectiveness of anti-predator chemical defenses in anuran ontogeny**  
Predation & foraging  
K. Porras-Brenes(1), J. Stynoski(2,3) - (1)Escuela de Ciencias Biológicas, Universidad Nacional de Costa Rica., (2)Instituto Clodomiro Picado, Universidad de Costa Rica, (3)Escuela de Biología, Universidad de Costa Rica
- P178** **Development-related modification of host behavior and transmission in an isopod-acanthocephalan system**  
Predation & foraging  
T. Sparkes, S. Teemer, T. Cronin - DePaul University
- P179** **Characterising waggle dances preceding migration in the giant honey bee, *Apis dorsata***  
Predation & foraging  
S. Vijayan, H. Somanathan - IISER TVM Centre for Research and Education in Ecology and Evolution (ICREEE), School of Biology, Indian Institute of Science Education and Research, Thiruvananthapuram
- P180** **Direct Nest Stealing by Nest-Parasitic Merlins from Nest-Building Fish Crows in a New Zone of Overlap**  
Social behavior  
A. Clark(1), C. Loomis(1), J. Confer(2), K. McGowan(3) - (1)Binghamton University, (2)Ithaca College, (3)Cornell Laboratory of Ornithology
- P181** **Socially-mediated recovery from an acquired high-risk phenotype**  
Social behavior  
A. Crane(1,2), G. Brown(1), M. Ferrari(2) - (1)Concordia University, (2)University of Saskatchewan
- P182** **Differences in Relationships between Female *Alouatta palliata* with and without Infants in Costa Rica**  
Social behavior  
C. Doelling (1,2), L. Bolt(2,3) - (1)School of Professional Studies, Northwestern University, (2)Maderas Rainforest Conservancy, (3)Department of Anthropology, University of Toronto
- P183** **Gene co-expression network analysis confirms signatures of intragenomic conflict in honey bees**  
Social behavior  
R. Ma(1), X. Wu(2), D. Galbraith(1), S. Yi(2), C. Grozinger(1) - (1)Penn State University, (2)Georgia Institute of Technology
- P184** **Understanding asociality in male rhesus macaques (*Macaca mulatta*)**  
Social behavior  
L. Newman(1), B. Hooper(2), R. Petersen(1), L. Brent(2), J. Higham(1) - (1)New York University, (2)University of Exeter
- P185** **Physiological and Behavioral Stress Coping Mechanisms in Long-Tailed Macaques (*Macaca fascicularis*)**  
Social behavior  
N. Parreira, M. Harrison-Lane, K. Johnson, M. Bardi - Randolph-Macon College
- P186** **Fetal Exposure to Maternal Autoantibodies Reduces Pro-Social Motivation in Rats**  
Social behavior  
L. Pedersen, C. Cavarlez, E. Berg, M. Bauman, J. Van De Water, R. Berman - University of California Davis
- P187** ***Polistes dominula* do not use visual status signals during interactions on nests**  
Social behavior  
M. Simons, E. Tibbetts - University of Michigan
- P188** **Secret's in the Sauce: Connecting Hormones and Behavior in *J. marlieri***  
Social behavior  
A. Solla, C. O'Rourke, S. Renn - Reed College
- P189** **Can visual system configuration play a role in individual recognition? Implications for group spacing.**  
Social behavior  
R. Trapp, E. Fernández-Juricic - Purdue University
- P190** **Ranking the Ranking Methods: How to Determine Temporal Stability in Dominance Hierarchies**  
Social behavior  
C. Vilette(1,2), T. R. Bonnell(1,2), L. Barrett(1,2), S. Henzi(1,2) - (1)University of Lethbridge, (2)University of South Africa
- P191** **Pet Dog Attachment within the Family: Dog-Child and Dog-Parent Interactions in the Secure Base Test**  
Social behavior  
S. Wanser, M. MacDonald, M. Udell - Oregon State University
- P192** **Uncovering the Role of Familial Care in the Social Transmission of Aggression in Honey Bees**  
Social behavior  
R. Westwick, C. Rittschof - University of Kentucky
- P193** **Place of cats in French homes : where do we stand?**  
Social evolution  
C. Gomez - Centre Kami
- P194** **Scale matters: Evolution and the Social Brain Hypothesis in New World monkeys (Platyrrhini)**  
Social evolution  
L. Varzinczak, L. Schaedler - Ecology and Conservation Graduate Program, Federal University of Parana (UFPR)

# POSTER SESSION

FRIDAY, JULY 26TH - 8:00 PM - 9:30 PM

<b>P195</b> Applied animal behavior	<b>Case Studies of Stress Behavior in Retired Research Monkeys</b> S. Alger(1), M. Brosi(1,2), B. Cyr(2), K. Hodgeman(1), K. Jones(1), H. Hemmes-Kavanaugh(2) - (1)University of Wisconsin - Stevens Point, (2) Primates Incorporated
<b>P196</b> Applied animal behavior	<b>The Influence of Scent and Owner Presence on Cat Attachment Behaviors</b> A. Behnke, K. Vitale, M. Udell - Oregon State University
<b>P197</b> Applied animal behavior	<b>Development of an Ethogram to Assess Domestic Dog (<i>Canis familiaris</i>) Behavior in Response to Stimuli</b> K. Bezaire(1), C. Loyer(2), R. Foster(2,3) - (1)Volunteer, University of Washington, (2)University of Washington, (3)University of Puget Sound
<b>P198</b> Applied animal behavior	<b>Study Of Maternal Aggressiveness In Goats Before And After Weaning</b> P. Cano(1), P. Zumaya(2), R. Ibarra(2), F. González(2), R. Soto(2) - (1)Facultad de Estudios Superiores Cuautitlán UNAM Centro de Enseñanza Agropecuaria, (2)Facultad de Estudios Superiores Cuautitlán UNAM Unidad de Investigación Multidisciplinaria
<b>P199</b> Applied animal behavior	<b>Treatment of Fear-Related Aggression in a Dog During Veterinary Visits: A Case Study</b> M. Cerone - Canine Behavior Consulting
<b>P200</b> Applied animal behavior	<b>Behavioral Enrichment for Dogs in Permanent Housing</b> C. Coppola(1,2) - (1)University of Arizona, (2)Dog and Company Behavior Consulting
<b>P201</b> Applied animal behavior	<b>Assessing Impact of Evening Zoo Events on Daytime Activity of Nearby Animals</b> C. Cox - Los Angeles Zoo and Botanical Gardens
<b>P202</b> Applied animal behavior	<b>The influence of feeding routines on animal welfare in laboratory mice</b> J. Feige-Diller(1,2), V. Krakenberg(1), S. Kaiser(1,2), N. Sachser(1,2), S. Richter(1,2) - (1)University of Muenster, (2)DFG-Graduiertenkolleg EvoPAD
<b>P203</b> Applied animal behavior	<b>Effects of reinforcer magnitude and method of delivery: Behavioral economics of food reinforcement in dogs</b> E. Feuerbacher(1), C. Stone(2), J. Friedel (3) - (1)Virginia Tech, (2)Carroll College, (3)National Institute for Occupational Health & Safety
<b>P204</b> Applied animal behavior	<b>Pet owner's perception and behavioral assessment of dog's and cat's enjoyment</b> C. FORGES-LAROSE, E. MEHINAGIC, J. ROGUES, C. TOBIE - SPF-DIANA Petfood
<b>P205</b> Applied animal behavior	<b>Domestic dogs may have the ability to discriminate putative human anxiety and stress volatiles.</b> S. Gadbois(1), K. Forrester(1), C. Reeve(1, 2) - (1)Dalhousie University, (2)Queen's University
<b>P206</b> Applied animal behavior	<b>Changes in behavior of Amur tigers (<i>Panthera tigris altaica</i>) following introduction to John Ball Zoo</b> K. Galla, I. Thompson, J. Hunt - Grand Valley State University
<b>P207</b> Applied animal behavior	<b>The Role of Gender in Female Bird Song Research: Women Advancing Studies in Animal Behavior</b> C. Haines(1), E. Rose(1), K. Odum(1,2), K. Omland(1) - (1)University of Maryland, Baltimore County, (2)Cornell Laboratory of Ornithology
<b>P208</b> Applied animal behavior	<b>A plan to reduce and eliminate aggressive behavior towards a poorly introduced cat: a case study</b> M. Huntsberry - Helping Pets Behave, LLC
<b>P209</b> Applied animal behavior	<b>Lateral position preference in feral horses</b> S. Inoue(1), S. Yamamoto(2), M. Ringhofer(2), R. Mendonça(3,4), S. Hirata(1) - (1)Wildlife Research Center, Kyoto university, (2)Institute for Advanced Study, Kyoto University, (3)Centre for Functional Ecology - Science for People & the Planet, Department of Life Sciences, University of Coimbra, (4)Primates Research Institute, Kyoto University
<b>P210</b> Applied animal behavior	<b>Identifying predictive behaviors for a search and rescue career in puppies</b> S. Kane(1,2), J. Essler(1), J. Gillespie(1), P. Kaynaroglu(1), H. Lehman(2), C. Otto(1) - (1)Penn Vet Working Dog Center, University of Pennsylvania School of Veterinary Medicine, (2)Hamilton College
<b>P211</b> Applied animal behavior	<b>Timing is Everything: Exploring the Optimal Timing for Sampling Behavior Data</b> C. Lynch, I. Bespalova, J. Fewell - Arizona State University
<b>P212</b> Applied animal behavior	<b>Effects of Social Isolation and Exercise on Behaviors in Single Mother-Reared Prairie Voles</b> M. Normann, W. Watanasriyakul, S. Ciosek, N. Holzapfel, S. Sujeat, A. Grippo - Northern Illinois University
<b>P213</b> Applied animal behavior	<b>Music for the birds: effects of auditory enrichment on captive bird species</b> L. Robbins(1), S. Margulis(2) - (1)Purdue University, (2)Canisius College
<b>P214</b> Applied animal behavior	<b>"Do that again!" Testing dogs' (<i>Canis lupus familiaris</i>) abilities to repeat recent actions on cue</b> A. Scagel, E. Mercado - University at Buffalo
<b>P215</b> Applied animal behavior	<b>Attachment Behavior in Domestic Dogs: Is the Attachment Style of Pit Bulls Unique?</b> B. Schoville - University of Illinois
<b>P216</b> Applied animal behavior	<b>Training dogs to sniff out antiquities</b> P. Smith(1), J. Essler(1), A. DeAngelo(1), P. Kaynaroglu(1), M. Danti(2), K. Blanchard(3), C. Otto(1) - (1)Penn Vet Working Dog Center, University of Pennsylvania School of Veterinary Medicine, (2)Department of Archaeology, Boston University, (3)Museum of Archaeology and Anthropology, University of Pennsylvania
<b>P217</b> Applied animal behavior	<b>Case Study of Behavior Modification in a Dog with Multiple Issues</b> K. Spaulding - Smart Dog Training and Behavior LLC
<b>P218</b> Applied animal behavior	<b>Risk-factors associated with veterinary-related fear and aggression in owned domestic dogs</b> A. Stellato(1), H. Flint(2), T. Widowski(3), . Niel(1) - (1)Department of Population Medicine, University of Guelph, (2)Department of Comparative Pathobiology, Purdue University College of Veterinary Medicine, (3)Department of Animal Biosciences, University of Guelph
<b>P219</b> Applied animal behavior	<b>Behavior and use of enclosure space by captive felids at the John Ball Zoo</b> I. Thompson, K. Galla, J. Hunt - Grand Valley State University
<b>P220</b> Applied animal behavior	<b>Evaluating the Welfare of Bettongs and Armadillos in Response to Changes in Zoo Exhibit Lighting</b> N. Wierzal, J. Wark, K. Cronin - Lincoln Park Zoo
<b>P221</b> Behavior genetics/ genomics	<b>Exploring the Genetics of Parental Care in the Threespined Stickleback</b> C. Behrens, A. Bell - University of Illinois at Urbana-Champaign
<b>P222</b> Behavior genetics/ genomics	<b>Effect of Serotonin Transporter Deficiency on the Cognitive Judgment Bias of Mice</b> V. Krakenberg(1,2), E. Ossendorf(1), S. Kaiser(1,2), N. Sachser(1,2), S. Richter(1,2) - (1)University of Muenster, (2)Otto Creutzfeldt Center for Cognitive and Behavioral Neuroscience
<b>P223</b> Behavior genetics/ genomics	<b>Social caste determination in honey bees via genome-editing</b> H. Li-Byarlay - Central State University

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P224 Behavior genetics/ genomics	<b>Does Differential Expression of Ion Channels Contribute to Sexually Dimorphic Communication in Electric Fish?</b> M. Proffitt, G. Smith - <i>Indiana University</i>
P225 Behavioral plasticity	<b>Parallel plasticity of mating songs and preferences in the field cricket <i>Gryllus rubens</i></b> O. Beckers(1), K. Murphey(1,2), J. Pease(1), N. Norman(1) - (1) <i>Murray State University</i> , (2) <i>University of Missouri</i>
P226 Behavioral plasticity	<b>Direct Effects of Prolonged Exposure to Cues of Predator Presence in <i>Gryllodes sigillatus</i></b> J. Dalos, N. Dochtermann - <i>North Dakota State University</i>
P227 Behavioral plasticity	<b>Evidence of animal personality in strawberry poison frogs</b> C. Esquivel(1), A. Vega Hidalgo(1), A. Garita(1), H. Pröhl(2) - (1) <i>Universidad Nacional</i> , (2) <i>Institute of Zoology, University of Veterinary Medicine</i>
P228 Behavioral plasticity	<b>Smart Nest Boxes: Remotely Collecting Avian Data Utilizing Unique Resources within Community Colleges</b> D. Smith(1), M. Bates(1), L. Sokol(1), T. Kutalu(1), K. Kreizel(1), E. Ewing(1), J. Grooms(1), A. Espino(1), A. Espino(1), A. Koch(1), L. Gillespie(1), S. Heinisch(1), N. Grandgenett(2) - (1) <i>Central Community College</i> , (2) <i>Central Community College</i> , (3) <i>Central Community College</i> , (4) <i>Central Community College</i> , (5) <i>Central Community College</i> , (6) <i>Central Community College</i> , (7) <i>Central Community College</i> , (8) <i>Central Community College</i> , (9) <i>Central Community College</i> , (10) <i>Central Community College</i> , (11) <i>Central Community College</i> , (12) <i>Central Community College</i> , (13) <i>University of Nebraska-Omaha</i>
P229 Behavioral plasticity	<b>Enhanced sensitivity for olfactory cues allows adult zebrafish to compensate for poor visual conditions</b> P. Suriyampola(1), M. Lopez(1), B. Ellsworth(1), D. Daniel(2), T. Roy(1), A. Bhat(2), E. Martins(1) - (1) <i>Arizona State University</i> , (2) <i>India Institute of Science Education and Research</i>
P230 Behavioral plasticity	<b>Natal habitat preference induction and the habitat choices of the coyote, an urban adapter</b> E. Zepeda(1), E. Payne(1), A. Sih(1), S. Gehrt(2) - (1) <i>University of California Davis</i> , (2) <i>Ohio State University</i>
P231 Communication	<b>Parasite infection and signaling behavior: A communication network perspective</b> X. Bernal(1,2), I. Meuche(1), R. Schares(3), C. Hemingway(4), K. Hunter(5) - (1) <i>Purdue University</i> , (2) <i>Smithsonian Tropical Research Institute</i> , (3) <i>University of Trier</i> , (4) <i>University of Texas</i> , (5) <i>Salisbury University</i>
P232 Communication	<b>The Sexually Dimorphic Eyes of a Band-winged Grasshopper: Females See Finer Details</b> N. Brandley, S. Garcia - <i>College of Wooster</i>
P233 Communication	<b>Long-range regulation of worker reproduction in the arboreal, polydomous Weaver Ant, <i>Oecophylla smaragdina</i></b> J. Ebie(1), J. Millar(2), S. Robson(3,4), J. Liebig(1), B. Hölldobler(1,5) - (1) <i>Arizona State University</i> , (2) <i>University of California</i> , (3) <i>The University of Sydney</i> , (4) <i>Central Queensland University</i> , (5) <i>Universität Würzburg</i>
P234 Communication	<b>Chemical Communication in Gray Squirrels: Using Camera Traps to Uncover Patterns in Scent Marking Behavior</b> S. Ewing, M. Sullivan, J. Van Niel - <i>Finger Lakes Community College</i>
P235 Communication	<b>Social Context Modulates Sex-Specific Electrocommunication and Steroid Levels in an Apterodontid Fish</b> M. Freiler, G. Smith - <i>Indiana University</i>
P236 Communication	<b>When a stranger calls (who cares?): social variables shape spotted-hyena response to distant whoops</b> A. Gersick(1), F. Jensen(2), A. Strandburg-Peshkin(3), K. Lehmann(4), K. Holekamp(4) - (1) <i>Princeton University</i> , (2) <i>Woods Hole Oceanographic Institution</i> , (3) <i>University of Konstanz</i> , (4) <i>Michigan State University</i>
P237 Communication	<b>Vocal Development in Grasshopper Sparrow Nestlings</b> R. Hill, B. Lohr - <i>University of Maryland, Baltimore County</i>
P238 Communication	<b>The effects of urbanization on the song of a vocal mimic, the gray catbird (<i>Dumetella carolinensis</i>)</b> M. Hussey(1), J. To(1), T. Ryder(2), D. Moseley(1,2) - (1) <i>James Madison University</i> , (2) <i>Smithsonian Conservation Biology Institute</i>
P239 Communication	<b>Structurally Complex song of Female House Finches</b> A. Kornreich, M. Youngblood, P. Mundinger, D. Lahti - <i>City University of New York</i>
P240 Communication	<b>Assessing the relative impacts of eavesdropping enemies and male-male competition on signal dynamics</b> B. Leavell(1), G. McNickle(2,3), X. Bernal(1,4) - (1) <i>Department of Biological Sciences, Purdue University</i> , (2) <i>Department of Botany and Plant Pathology, Purdue University</i> , (3) <i>Center for Plant Biology, Purdue University</i> , (4) <i>Smithsonian Tropical Research Institute</i>
P241 Communication	<b>Precociousness of function in the song of Grasshopper Sparrows</b> B. Lohr, R. Hill, S. Hulse - <i>University of Maryland, Baltimore County</i>
P242 Communication	<b>Atlantic Forest birds and their acoustic responses to urban noises</b> L. Manica(1), E. Brandt(1,2) - (1) <i>Departamento de Zoologia, Universidade Federal do Paraná</i> , (2) <i>Programa de Pós-graduação em Zoologia, Universidade Federal do Paraná</i>
P243 Communication	<b>The Geography of Song Type Repertoires</b> P. Mower, S. Krause, D. Logue - <i>University of Lethbridge</i>
P244 Communication	<b>Are cuticular hydrocarbons used for species recognition by <i>Gryllus veletis</i> and <i>G. pennsylvanicus</i>?</b> A. Neimeyer(1), N. Boaz(2), C. Mitra(1) - (1) <i>Biology, North Central College</i> , (2) <i>Chemistry, North Central College</i>
P245 Communication	<b>The investigation of vocalization in free-ranging groups of horses (<i>Equus caballus</i>) by using machine learning</b> S. Ochi, S. Hirata - <i>Wildlife Research Center</i>
P246 Communication	<b>Chemical signaling investment in the gumleaf skeletonizer moth <i>Uraba lugens</i> Walker</b> H. Pham(1,2), K. McNamara(1), M. Elgar(1) - (1) <i>The University of Melbourne</i> , (2) <i>Vietnam National University of Agriculture</i>
P247 Communication	<b>Do Barbary macaques avoid negative social information as they age?</b> E. Rathke, J. Fischer - <i>German Primate Center</i>
P248 Communication	<b>How does courtship display complexity affect attention to female feedback?</b> B. Samons, L. Sullivan-Beckers - <i>Murray State University</i>
P249 Communication	<b>Meaning, Cost and Convention: How Signaling Costs Can Shape the Meaning of Signals</b> K. Seehafer, D. Stephens - <i>University of Minnesota</i>
P250 Communication	<b>Impacts of Communication via Facial Expression on Variation in Muscles around the Eye in Domesticated Canids</b> C. Sexton - <i>The George Washington University</i>
P251 Communication	<b>Examining the links between host genotype, symbiotic bacterial communities, and chemical signals in a songbird</b> J. Slade(1), A. Winters(2), H. Soini(3), C. Lambert(3), M. Novotny(3), K. Theis(2), D. Whittaker(1) - (1) <i>Michigan State University - BEACON Center for the Study of Evolution in Action</i> , (2) <i>Wayne State University</i> , (3) <i>Indiana University</i>
P252 Communication	<b>Auditory processing of distance-degraded songs by songbirds: linking mechanism and behavior</b> A. Strauss(1), L. Ramage-Healey(1,2,3), J. Podos(1,4) - (1) <i>University of Massachusetts, Graduate Program in Organismic and Evolutionary Biology</i> , (2) <i>University of Massachusetts, Department of Psychological and Brain Sciences</i> , (3) <i>University of Massachusetts, Center for Neuroendocrine Studies</i> , (4) <i>University of Massachusetts, Department of Biology</i>



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P253 Communication	<b>Role of the Lateral Line System During Male-Male Territorial Interactions in Fathead Minnow</b> H. TerMarsch(1), J. Ward(2) - (1)Ball State University, (2)Ball State University
P254 Communication	<b>Signaling in mixed-species groups: Heterospecific neighbor call type, density, and eavesdropper attraction</b> P. Trillo, B. Ruether, T. Derick - Gettysburg College
P255 Communication	<b>Code of Silence? Crow Responses Vary with Changes in the Pattern of Pauses during Collective Cawing</b> D. Wacker, I. Rodriguez, J. Slattery, A. Bilotta - University of Washington Bothell
P256 Conservation	<b>Prairie Butterfly Flower Visits: Proportional Or Preferential?</b> T. Burk(1,2), A. Robinson(1,2) - (1)Biology Department, Creighton University, (2)Environmental Science Program, Creighton University
P257 Conservation	<b>The Effects of Symbiote Ostracods on Invasive Crayfish Behaviour</b> A. Fontes (1), G. Bucciarelli(2), L. Kats (1) - (1)Pepperdine University, (2)University of California, Los Angeles
P258 Conservation	<b>Photo identification of the Eastern hellbender (<i>Cryptobranchus alleganiensis</i>) using i3S Spot</b> S. Jinez, R. Foster - Canisius College
P259 Conservation	<b>Male Cassin's Sparrow vegetation preferences for territory establishment</b> N. Kauffman(1), C. Dowd(1), C. Jones(2), C. Ramos(1) - (1)Colorado State University - Pueblo, (2)Colorado Fish and Wildlife
P260 Conservation	<b>Habitat-dependent changes in Red-crowned Crane vigilance behavior influenced by bird watching activities</b> D. Li(1,2), Y. Liu(3), H. Lloyd(4), Z. Zhang(3), M. E. Hauber(2) - (1)Liaoning University, (2)University of Illinois at Urbana-Champaign, (3)Beijing Normal University, (4)Manchester Metropolitan University
P261 Development	<b>Growing pains: developmental growth and behavior in captive-reared Wood Ducks (<i>Aix sponsa</i>)</b> M. Hinton(1), H. Coates(1), T. Stair(1), B. Lyon(2), J. Eadie(1) - (1)University of California, Davis, (2)University of California, Santa Cruz
P262 Development	<b>The Role of Conspecifics in Socio-Sexual Behavior Development in Belugas Under Human Care</b> M. Lilley(1,2), H. Hill(3) - (1)Texas A&M University- San Antonio, (2)The University of Southern Mississippi, (3)St. Mary's University
P263 Development	<b>Neonate Behavioral Development in Beluga Whales and Pacific White-sided Dolphins at One Zoological Facility</b> K. Smith(1), L. Miller (2) - (1)University of Southern Mississippi, (2)Chicago Zoological Society-Brookfield Zoo
P264 Development	<b>The effects of maternal presence, rank and investment on offspring muscle development in wild chimpanzees</b> P. Tkaczynski(1), L. Samuni(1,2), T. Deschner(1), T. Löhrrich(3,4), P. Fedurek(1,5), R. Wittig(1,2), C. Crockford(1,2) - (1)Max Planck Institute for Evolutionary Anthropology, (2)Tai Chimpanzee Project, Centre Suisse de Recherches Scientifiques, (3)World Wide Fund for Nature, Dzanga Sangha Protected Areas, (4)Epidemiology of Highly Pathogenic Microorganisms, Robert Koch Institute, (5)Department of Psychology, University of Stirling
P265 Development	<b>Do behavioral differences predict levels of fluctuating asymmetry in the dimorphic sand cricket?</b> A. Worthington, K. Chang, M. Whalen, G. Rivera - Creighton University
P266 Ecological effects	<b>Gelada mothers spend less time feeding during pregnancy if birth is timed to peak</b> S. Carrera(1), A. Lu(2), J. Beehner(1) - (1)University of Michigan, (2)Stony Brook University
P267 Ecological effects	<b>Taste the rainbow: plasma carotenoids and rectal flange color in urban, rural, and captive nestlings</b> R. Fox, C. Lee - Transylvania University
P268 Ecological effects	<b>Is allopreening a stimulus-driven defense against ectoparasites?</b> G. Goodman, S. Conner, S. Bush, D. Clayton - University of Utah
P269 Ecological effects	<b>Robots, burlap, and LiDAR: environmental influences on courtship and social information flow on the lek.</b> R. Logsdon(1), A. Pery(1), A. Krakauer(1), J. Forbey(2), G. Patricelli(1) - (1)University of California, Davis, (2)Boise State University
P270 Ecological effects	<b>Variation in Visual and Chemical Sensing in the Threespine Stickleback</b> R. Mobley, J. Boughman - Michigan State University
P271 Ecological effects	<b>Impact of forest type and disturbance on sifaka (<i>Propithecus tattersalli</i>) social cohesion and ranging behavior</b> M. Semel(1), J. Ratovoson(2), I. Moore(1) - (1)Virginia Tech, (2)University of Antananarivo
P272 Ecological effects	<b>A Short Period of Nutritional Deprivation Has Long-Term Effects on Reproductive Success</b> D. Wilner, G. Greenway, L. Cirino, C. Miller - University of Florida
P273 Education	<b>NSF is 'Growing Pathways to STEM': expanding opportunities for rural community college students</b> L. Gillespie(1), S. Heinisch(1), N. Grandgenett(2) - (1)Central Community College, (2)University of Nebraska Omaha
P274 Education	<b>Domestic cat dissection vs. models in secondary school education: student attitudes and outcomes.</b> E. Grigg, L. Hart - University of California, Davis, School of Vet. Med.
P275 Education	<b>Shaking it up in the classroom: Coupling biotremology and active learning pedagogy to promote discovery</b> C. Hall, D. Howard - University of New Hampshire
P276 Education	<b>Animal Behavior, Science Fair, and Teacher Training: Outcomes of an ABS Education Grant</b> S. Margulis - Canisius College
P277 Education	<b>Using Goldfish to Teach Psychology of Learning Principles</b> L. Mehrkam, C. Singletary-Eskridge, L. Swinyer - Monmouth University
P278 Education	<b>The Integrative Nature of the Study of Animal Behavior</b> S. Renn, E. Zornik - Reed College Biology Department
P279 Education	<b>Science Friday: Modelling the scientific method using inquiry-based experiments in a 7<sup>th</sup> grade classroom</b> B. Woelber, C. Hall - University of New Hampshire
P280 Education	<b>Wild Side of Science - STEM Education for Girl Scouts</b> H. Zimble-DeLorenzo - Alfred University
P281 Neuro/endocrine and physiological mechanisms	<b>Neuronal morphology related to vasotocin and isotocin of gobiid fish with different mating systems</b> K. Fukuda(1), T. Mukuda(2), M. Kawaguchi(3), N. Yamamoto(1) - (1)Laboratory of Fish Biology, Graduate School of Bioagricultural Sciences, Nagoya University, (2)Department of Anatomy, Faculty of Medicine, Tottori University, (3)Department of Anatomy and Neuroscience, Graduate School of Medicine and Pharmaceutical Sciences, University of Toyama
P282 Neuro/endocrine and physiological mechanisms	<b>The influence of tyrosine hydroxylase neurons on pair-bonding behaviors of a socially monogamous rodent</b> J. Lichter(1), M. McMurray(2), B. Keane(3), N. Solomon(1) - (1)Department of Biology, Miami University, (2)Department of Psychology, Miami University, (3)Department of Biological Sciences, Miami University

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Branch, Carrie L	WED	5:45 PM	Mating/Breeding Systems 1
Brandt, Erin E.	THU	4:30 PM	Allee Symposium 3
Briffa, Mark	WED	10:30 AM	Presidential Symposia 1
Brightwell, Kristy K.	WED	6:15 PM	Social Behavior 3
Broder, E Dale	FRI	2:30 PM	The When, Why and How of New Animal Conversations Symposium 1
Brown, Beri	FRI	2:30 PM	Development 1
Browne, Jessica H.	FRI	4:15 PM	Sexual Selection & Sexual Conflict 3
Burchill, Andrew T.	FRI	10:45 AM	Social Behavior 7
Burghardt, Gordon M.	THU	12:15 PM	Cognition & Learning 2
Burns, Madeline P.	FRI	4:15 PM	Cognition & Learning 7
Burns-Cusato, Melissa	SAT	10:45 AM	Applied Animal Behavior 4
Bush, Jordan	WED	9:30 AM	Social Behavior 1
Byosiere, Sarah-Elizabeth	FRI	4:15 PM	Social Behavior 9
Calisi Rodr'iguez, Rebecca	THU	3:00 PM	Proximate Mechanisms Of Complex Sociality Symposium 2
Campbell, Matthew W.	FRI	4:30 PM	Social Behavior 9
Carlson, Nora V	FRI	11:00 AM	Communication 7
Carter, Gerald	FRI	2:00 PM	Social Behavior 8
Caspers, Barbara A.	THU	11:00 AM	Communication 4
Cassill, Deby L.	SAT	11:00 AM	Social Evolution 1
Cauchard, Laure	FRI	11:15 AM	Cognition & Learning 5
Cauchard, Laure	WED	11:30 AM	Behavioural Plasticity Symposium 1
Caves, Eleanor M	SAT	10:45 AM	Miscellaneous 1
Chakraborty, Bidisha	WED	9:45 AM	Social Behavior 1
Chang, Terrence	WED	9:30 AM	Neuro/Endocrine and Physiological Mechanisms 1
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Charbonneau, Daniel	FRI	5:15 PM	Social Behavior 9
Chelini, Marie-Claire	THU	10:45 AM	Ecological Effects 4
Chertoff, Sydney	THU	4:30 PM	Cognition & Learning 4
Chiari, Ylenia	WED	9:30 AM	Communication 1
Choi, Noori	WED	4:00 PM	Communication 3
Church, Kathleen	FRI	10:45 AM	Applied Animal Behavior 2
Cianci, Brenna	WED	9:45 AM	Predation & Foraging 1
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Classen-Rodriguez, Leticia M.	WED	5:30 PM	Predation & Foraging 4
Clucas, Barbara	WED	1:30 PM	Conservation 1
Compitus, Katherine	THU	4:30 PM	Applied Animal Behavior 1
Cones, Alexandra G.	SAT	2:15 PM	Parental Care 2
Congdon, Elizabeth R.	SAT	12:15 PM	Applied Animal Behavior 4
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Coomes, Casey	WED	4:15 PM	Communication 3
Coppinger, Brittany A.	FRI	4:30 PM	Communication 9
Costa-Pereira, R	WED	4:00 PM	Predation & Foraging 3

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Cunningham, Kristen M.	SAT	2:15 PM	Applied Animal Behavior 5
Curry, Robert L.	WED	10:00 AM	Social Behavior 1
Cushing, Bruce	THU	2:30 PM	Proximate Mechanisms Of Complex Sociality Symposium 2
Cusick, Jessica A.	THU	11:15 AM	Allee Symposium 1
da Silva, Diego P.	WED	9:45 AM	Neuro/Endocrine and Physiological Mechanisms 1
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Darwish, Zachary L.	WED	2:00 PM	Social Behavior 2
Dasari, Mauna	FRI	4:45 PM	Genetics & Evolution 2
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Dickerson, Ashton L.	WED	2:00 PM	Ecological Effects 1
Dlez-LeÚn, Marla	FRI	11:00 AM	Applied Animal Behavior 2
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Dixon, M. May	WED	2:00 PM	Predation & Foraging 2
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Fernandez-Juricic, Esteban	WED	1:45 PM	Conservation 1
Fialko, Kristina Y.	WED	1:45 PM	Communication 2
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Fisher, David	SAT	3:00 PM	Embracing The Complexity Of Animal Social Systems Using Multilayer Network Analysis Symposium 2
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Gering, Eben	WED	2:15 PM	Ecological Effects 1
Gershman, Susan N.	SAT	11:15 AM	Sexual Selection & Sexual Conflict 4
Giaquinto, Percilia C.	SAT	11:30 AM	Sexual Selection & Sexual Conflict 4
Gillespie, Jordan A.	THU	6:15 PM	Applied Animal Behavior 1
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Guo, Xiaohui	THU	10:45 AM	Social Behavior 4
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Koch Adrian, Rebecca	WED	11:00 AM	Presidential Symposia 1
Kohda, Masanori	FRI	11:45 AM	Cognition & Learning 5
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Krause, Samantha W	FRI	5:00 PM	Communication 9
Krieger, Jakob	WED	6:15 PM	Cognition & Learning 1
Kroner, Andria L	FRI	3:00 PM	Communication 8
Kuijper, Abraham	WED	2:30 PM	Behavioural Plasticity Symposium 2
Kuzawa, Christopher	FRI	4:45 PM	Cross-taxa Perspectives On Behavior And Developmental Origins Symposium 3
Kwapich, Christina L.	THU	3:30 PM	Social Behavior 5
LaBarbera, Katie	THU	11:15 AM	Social Behavior 4
Lackey, Alycia C.R.	THU	3:15 PM	Sexual Selection & Sexual Conflict 2
LaDage, Lara D.	WED	10:15 AM	Neuro/Endocrine and Physiological Mechanisms 1
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Lamka, Gina F	THU	11:00 AM	Behavioral Plasticity 1
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le Roux, Aliza	FRI	5:15 PM	Cognition & Learning 7
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Sampaio, Eduardo	THU	3:15 PM	Cognition & Learning 3
Sanchez, Karina	THU	12:15 PM	Ecological Effects 4
Sankey, Daniel W	SAT	3:30 PM	Social Behavior 10
Sasaki, Takao	SAT	12:00 PM	Miscellaneous 1
Sasson, Daniel A.	SAT	12:15 PM	Sexual Selection & Sexual Conflict 4
Scharf, Hannah M.	WED	11:15 AM	Neuro/Endocrine and Physiological Mechanisms 1
Schell, Christopher	SAT	12:30 PM	Applied Animal Behavior 4
Schoenberg, Daniel	WED	4:45 PM	Sexual Selection & Sexual Conflict 1
Schuelke, Oliver	FRI	11:45 AM	Cross-taxa Perspectives On Behavior And Developmental Origins Symposium 1
Schul, Johannes	WED	11:00 AM	Communication 1
Schulte, Bruce A.	WED	2:45 PM	Conservation 1
Schwob, Natalie	FRI	12:15 PM	Cognition & Learning 5
Sergi, Clint	THU	11:45 AM	Behavioral Plasticity 1
Seymoure, Brett	FRI	4:15 PM	The When, Why and How of New Animal Conversations Symposium 2
Shirali, Yasmin	SAT	3:15 PM	Sexual Selection & Sexual Conflict 5
Shoenberger, William	THU	5:45 PM	Social Behavior 6
Shogren, Elsie H.	SAT	12:30 PM	Sexual Selection & Sexual Conflict 4
Shoot, Tanya T.	SAT	3:45 PM	Mating/Breeding Systems 2
Siefferman, Lynn	WED	4:45 PM	Neuro/Endocrine and Physiological Mechanisms 2
Sih, Andrew	FRI	12:15 PM	Behavioral Plasticity 4
Silk, Matthew	THU	12:30 PM	Ecological Effects 4
Silk Et Al, Matthew	SAT	3:00 PM	Embracing The Complexity Of Animal Social Systems Using Multilayer Network Analysis Symposium 2
Simpson, Richard K.	THU	3:45 PM	Sexual Selection & Sexual Conflict 2
SINGH, RICHA	WED	4:45 PM	Ecological Effects 2
Smith, Jennifer E.	WED	11:15 AM	Social Behavior 1
Smith, Matthew/A	WED	11:45 AM	Neuro/Endocrine and Physiological Mechanisms 1
Smith, Nathan	FRI	12:15 PM	Social Behavior 7
Smith, Rebecca K.	THU	6:00 PM	Applied Animal Behavior 1
Smith-Aguilar, Sandra E	SAT	11:15 AM	Embracing The Complexity Of Animal Social Systems Using Multilayer Network Analysis Symposium 1
Smith-Vidaurre, Grace	FRI	3:45 PM	Communication 8
Snyder-Mackler, Noah	WED	11:15 AM	Behavior Genetics/Genomics
Sol, Daniel	WED	11:00 AM	Behavioural Plasticity Symposium 1
Soley, Fernando G.	SAT	11:45 AM	Predation & Foraging 5
Somjee, Ummat	FRI	5:15 PM	Sexual Selection & Sexual Conflict 3
Sonnenberg, Ben	WED	3:00 PM	Ecological Effects 1
Spikes, Montraï A	SAT	3:30 PM	Mating/Breeding Systems 2
Sridhar, Vivek H	WED	6:00 PM	Social Behavior 3
St. John, Michelle	SAT	11:45 AM	Applied Animal Behavior 4
Stahlmann Roeder, Clara A.	WED	11:30 AM	Social Behavior 1
Stair, Tez F.	WED	3:15 PM	Social Behavior 2

## TALK INDEX

Stamps, Judy	WED	4:00 PM	Behavioural Plasticity Symposium 3
Stanton, Lauren	FRI	12:30 PM	Behavioral Plasticity 4
Steele, Elliott P	FRI	3:15 PM	Social Behavior 8
Stein, Laura R	THU	12:00 PM	Behavioral Plasticity 1
Stewart, Kasey L.	WED	3:00 PM	Conservation 1
Still, Meghan B.	THU	12:00 PM	Communication 4
Stiver, Kelly A	FRI	3:30 PM	Social Behavior 8
Stockmaier, Sebastian	WED	11:45 AM	Social Behavior 1
Stoffer, Brent	THU	2:45 PM	Behavioral Plasticity 2
Strandburg-Peshkin, Ariana	FRI	12:15 PM	Communication 7
Strauss, Eli	THU	2:30 PM	Allee Symposium 2
Stynoski, Jennifer L.	SAT	3:00 PM	Parental Care 2
Sullivan, Elinor	FRI	3:00 PM	Cross-taxa Perspectives On Behavior And Developmental Origins Symposium 2
Sullivan-Beckers, Laura	THU	3:15 PM	Communication 5
Swaddle, John	SAT	9:00 AM	Plenary Session: John Swaddle
Taff, Conor	THU	6:00 PM	Social Behavior 6
Takeuchi, Tsuyoshi	SAT	3:30 PM	Sexual Selection & Sexual Conflict 5
Templeton, Christopher N	WED	11:15 AM	Communication 1
Tenger-Trolander, Ayse	FRI	5:30 PM	Genetics & Evolution 2
Tennessen, Jennifer B.	SAT	12:00 PM	Predation & Foraging 5
Thielke, Lauren E.	SAT	2:45 PM	Applied Animal Behavior 5
Tibbetts, Elizabeth	SAT	12:15 PM	Miscellaneous 1
Tinghitella, Robin	FRI	5:15 PM	The When, Why and How of New Animal Conversations Symposium 2
Toni, Pauline	THU	5:45 PM	Behavioral Plasticity 3
Torcivia, Catherine A	FRI	3:15 PM	Applied Animal Behavior 3
Torres, Patricia	SAT	12:15 PM	Predation & Foraging 5
Toth, Amy	SAT	8:00 AM	Plenary Session: Amy Toth
Tremblay, Donovan	THU	12:15 PM	Communication 4
Tuliozi, Beniamino	FRI	3:45 PM	Social Behavior 8
Tumulty, James P	THU	12:15 PM	Allee Symposium 1
Tung, Jenny	THU	11:15 AM	Proximate Mechanisms Of Complex Sociality Symposium 1
Tyndel, Stephen A.	THU	6:00 PM	Communication 6
Udell, Monique A. R.	SAT	3:00 PM	Applied Animal Behavior 5
Uetz, George	THU	6:15 PM	Communication 6
Unnikrishnan, Sruthi	THU	12:15 PM	Social Behavior 4
Uy, Floria M.K.	WED	11:30 AM	Behavior Genetics/Genomics
Vagell, Raymond	FRI	12:15 PM	Applied Animal Behavior 2
Valdes, Leah	THU	12:15 PM	Behavioral Plasticity 1
Valentini, Gabriele	FRI	5:30 PM	Communication 9
van der Marel, Anne Marie	WED	6:00 PM	Predation & Foraging 4
Vanhooland, Lisa-Claire	FRI	3:30 PM	Cognition & Learning 6
Vargas-Salinas, Fernando	WED	6:15 PM	Parental Care 1
Varian Ramos, Claire W.	WED	6:30 PM	Mating/Breeding Systems 1
Velilla, Estefania	WED	2:45 PM	Communication 2
Verjat, AurÉlie	FRI	3:45 PM	Development 1

Vernasco, Ben J.	THU	3:00 PM	Allee Symposium 2
Vila Pouca, Catarina	WED	5:00 PM	Ecological Effects 2
Vitale, Kristyn R.	SAT	3:15 PM	Applied Animal Behavior 5
Walczewski Searle, Karli	THU	3:30 PM	Cognition & Learning 3
Waldman, Bruce	WED	11:30 AM	Communication 1
Walsh, Carolyn J	SAT	3:45 PM	Social Behavior 10
Walton, Alexander	THU	2:00 PM	Proximate Mechanisms Of Complex Sociality Symposium 2
Ward, Jessica L.	WED	4:45 PM	Predation & Foraging 3
Wark, Jason D.	FRI	3:30 PM	Applied Animal Behavior 3
Watanasriyakul, W. Tang	SAT	3:15 PM	Parental Care 2
Watowich, Marina	THU	12:00 PM	Cognition & Learning 2
Webster, Mike M	WED	6:15 PM	Predation & Foraging 4
Weibel, Chelsea	WED	4:45 PM	Genetics & Evolution 1
Weiss, Emily	SAT	12:30 PM	Miscellaneous 1
Welklin, Joseph F	FRI	5:30 PM	Sexual Selection & Sexual Conflict 3
Wenig, Katharina	THU	12:30 PM	Social Behavior 4
Westerman, Erica L.	FRI	12:30 PM	Cognition & Learning 5
Westneat, David F.	THU	3:00 PM	Behavioral Plasticity 2
Whiley, Rebecca E.	WED	3:15 PM	Ecological Effects 1
Whiteside, Mark	SAT	12:00 PM	Applied Animal Behavior 4
Whittaker, Danielle J.	FRI	12:30 PM	Communication 7
Wice, Eric W.	SAT	12:30 PM	Social Evolution 1
Wiegmann, Daniel D.	WED	6:00 PM	Cognition & Learning 1
Williams, Dana M.	THU	12:30 PM	Cognition & Learning 2
Williams-Simon, Patricka	WED	5:00 PM	Genetics & Evolution 1
Williamson, Rachel E.	THU	6:00 PM	Behavioral Plasticity 3
Wilson, David R.	WED	3:15 PM	Conservation 1
Winters, Sandra	SAT	3:30 PM	Miscellaneous 2
Wolf, Sarah E	SAT	3:30 PM	Parental Care 2
Woods, Jocelyn M.	SAT	3:30 PM	Applied Animal Behavior 5
Wright, Timothy F.	WED	3:00 PM	Communication 2
Wund, Matthew A.	WED	11:30 AM	Predation & Foraging 1
Xu, Mingzi	WED	11:45 AM	Behavior Genetics/Genomics
Young, Allison M.	FRI	3:45 PM	Cognition & Learning 6
Young, Anna M.	WED	3:15 PM	Communication 2
Young, Julie	THU	5:00 PM	Animal Behaviour On An Urbanized Planet Symposium 1
Yukilevich, Roman	WED	5:00 PM	Sexual Selection & Sexual Conflict 1
Ziadi, Paula	THU	3:30 PM	Communication 5
Zimmermann, Tobias D.	THU	6:15 PM	Behavioral Plasticity 3
Zipple, Matthew N.	SAT	3:45 PM	Parental Care 2

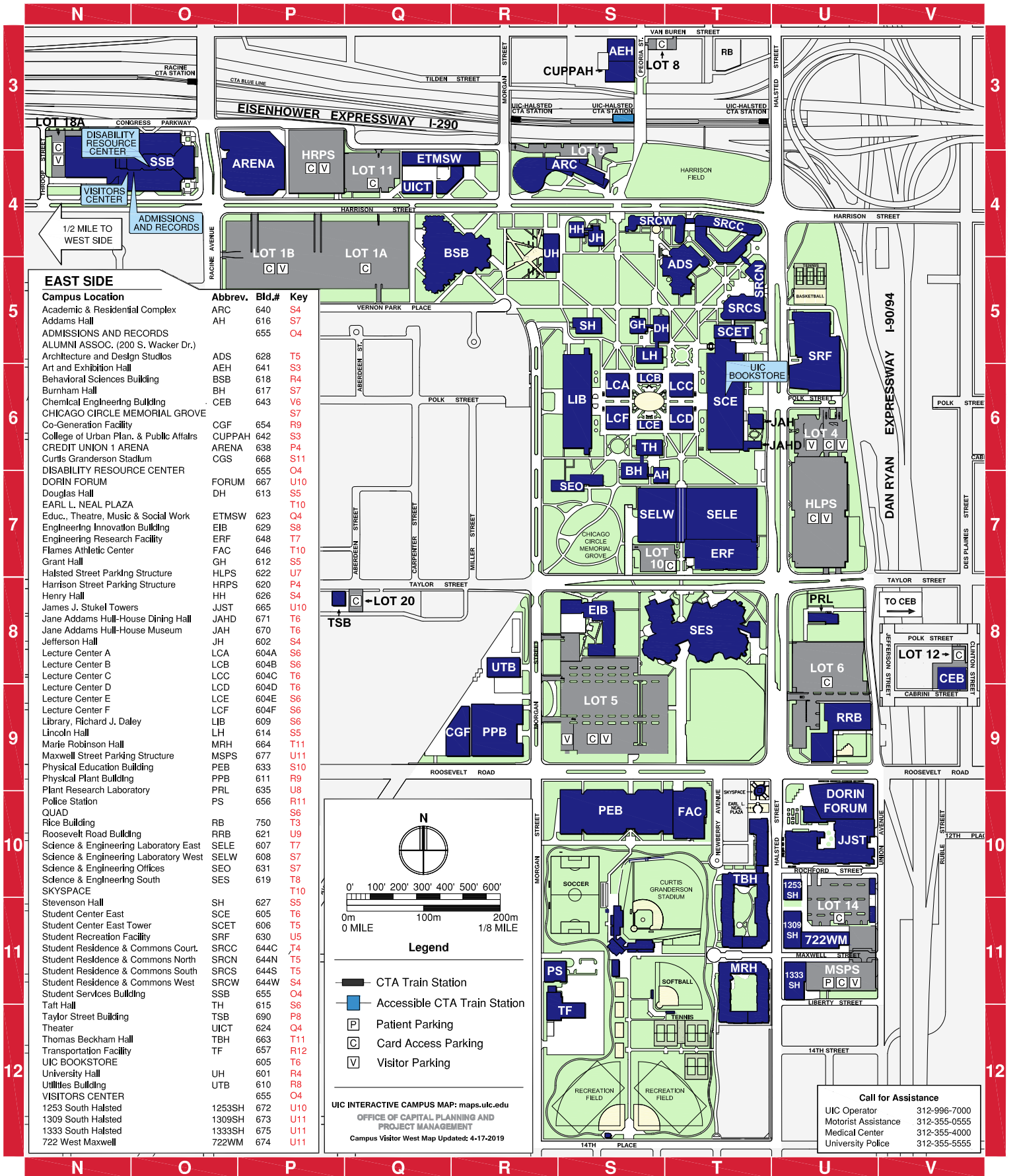




## EXHIBITORS &amp; SPONSORS



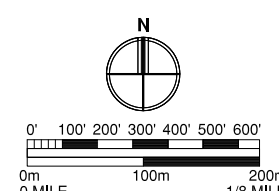
# EAST SIDE VISITOR MAP



## EAST SIDE

### Campus Location

Abbrev.	Bld.#	Key
ARC	640	S4
AH	616	S7
655		O4
ADS	628	T5
AEH	641	S3
BSB	618	F4
BH	617	S7
CEB	643	V6
CGF	654	R9
CUPPAH	642	S3
ARENA	638	P4
CGS	668	S11
655		O4
FORUM	667	U10
DH	613	S5
		T10
ETMSW	623	O4
EIB	629	S8
ERF	648	T7
FAC	646	T10
GH	612	S5
HLPS	622	U7
HRPS	620	P4
HH	626	S4
JUST	665	U10
JAHD	671	T6
JAH	670	T6
JH	602	S4
LCA	604A	S6
LCB	604B	S6
LCC	604C	T6
LCD	604D	T6
LCE	604E	S6
LCF	604F	S6
LIB	609	S6
LH	614	S5
MRH	664	T11
MSPS	677	U11
PEB	633	S10
PPB	611	R9
PRL	635	U8
PS	656	R11
		S6
RB	750	T3
RRB	621	U9
SELE	607	T7
SELW	608	S7
SEO	631	S7
SES	619	T8
		T10
SH	627	S5
SCE	605	T6
SCET	606	T5
SRF	630	U5
SRCC	644C	T4
SRCN	644N	T5
SRCS	644S	T5
SRCW	644W	S4
SSB	655	O4
TH	615	S6
TSB	690	P8
UJCT	624	Q4
TBH	663	T11
TF	657	R12
605		T6
UH	601	R4
UTB	610	R8
655		O4
1253SH	672	U10
1309SH	673	U11
1333SH	675	U11
722WM	674	U11



- Legend**
- CTA Train Station
  - Accessible CTA Train Station
  - Patient Parking
  - Card Access Parking
  - Visitor Parking

UIC INTERACTIVE CAMPUS MAP: [maps.uic.edu](http://maps.uic.edu)  
 OFFICE OF CAPITAL PLANNING AND PROJECT MANAGEMENT  
 Campus Visitor West Map Updated: 4-17-2019

**Call for Assistance**

- UIC Operator 312-996-7000
- Motorist Assistance 312-355-0555
- Medical Center 312-355-4000
- University Police 312-355-5555

