



In This Issue

| | |
|------------------------|----|
| 20th Annual ABC..... | 3 |
| Undergrad Spotlight... | 5 |
| Student Travel..... | 6 |
| CISAB Courses..... | 7 |
| CISAB Awards..... | 8 |
| Lab Renovations..... | 9 |
| 2013 REU Interns..... | 10 |



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ANIMAL BEHAVIOR BULLETIN

SPRING 2013

LETTER FROM THE DIRECTOR



Summer (at least summer session) is here! It has been a busy and exciting spring semester at CISAB.

Tamara Marnell is serving as the editor of this spring's newsletter. Tamara has also continued her amazing efforts in streamlining and updating our website. New additions to the website include tools to streamline registration and surveys for the animal behavior conference; applications for scholarships, travel awards, and the REU program; and online checklists for the undergraduate minor and area certificate. Thanks, Tamara!

Congratulations to Rose and Chad Stewart on the arrival of Reilly Grace Stewart in January! Reilly is thriving and made an appearance at the spring animal behavior conference. Rose has begun returning to direct the CISAB lab and will be busy preparing to move the lab to the third floor of Jordan Hall later this month.

The 20th annual spring Animal Behavior Conference (pp. 3-4) was a huge success and set another record for registration and attendance: more than 200 participants from 38 institutions in 16 states! Frances Champagne delivered an outstanding keynote seminar on the role of epigenetics in regulating behavior. This year's satellite symposium ("Mechanisms Matter") was well attended and featured entertaining talks by both local stars Dale Sengelaub and Kim Rosvall and by the keynote speaker, John Godwin. We are also lucky to have continued our exchange programs with the Keck Center and the Center for Behavioral Neuroscience, and I am grateful that these programs sent ambassadors to present their work at our conference. I want to once again thank all of the graduate student organizers and the CISAB staff for their hard work in making this event an outstanding regional meeting for animal behavior researchers.

The CISAB internship program continues to grow. In this issue, we highlight the work of three students who completed their internships this spring at WildCare (p. 5) this semester. WildCare has been a key partner in our internship program for many years and does excellent work rehabilitating injured wild animals and educating the public on the conservation and care of wildlife. We are expanding the internship program by seeking new partnerships with organizations that work with animals. We have added the Potawatomi Zoo in South Bend, Mad4MyDog training in Ellettsville, and Rising Star Stables in Bloomington as partners in the program this summer.

Letter from the Director, continued

These sites will provide our undergraduates even more opportunities to gain experience in studying animal behavior at organizations that promote outreach, education, and conservation. I would like to thank Charli Taylor, who has worked hard to develop contacts with these and other internship sites. Look for more additions to the internship program over the coming year!

The spring animal behavior seminar course (A501, p. 7) brought outstanding neuroethologists to IU to give seminars and discuss their work with our students. For the first time, CISAB offered Animal Behavior A401, which allowed undergraduate students interested in animal behavior to enroll in the seminar course along with graduate students and to interact with the guest speakers. Ellen Ketterson will teach her very popular Techniques in Reproductive Diversity course as next fall's A501. I will be soliciting proposals for the Spring 2014 A401/A501 courses later this summer.

The renovations of the CISAB core lab are nearly complete (p. 9). The lab will move to a beautiful and newly renovated space on the third floor of Jordan Hall in late May or early June. The new lab will provide even more opportunities for CISAB members to incorporate new techniques into their animal behavior research.

The CISAB travel award program has supported 17 students to travel and present their work at major research conferences this year (p. 6). I will be announcing a few changes to the travel award application procedures later this month.

I wish all of you a happy and productive summer!

-G. Troy Smith

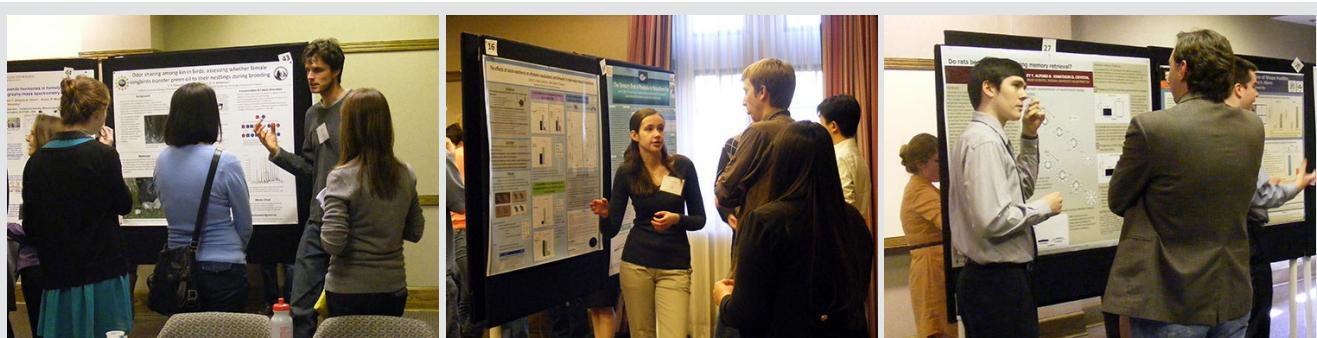


20TH ANNUAL INDIANA UNIVERSITY ANIMAL BEHAVIOR CONFERENCE



We're proud to report that the 20th Annual ABC was bigger and better than ever! The conference, which ran from March 28–30, featured 32 accomplished speakers and 48 poster presenters. Over 200 scientists and students from 16 states registered to attend, and we received enthusiastic feedback from many in the post-conference survey.

The conference kicked off on Thursday night with a poster session in the IMU tree suites and a showing of the film *Ordinary Extraordinary Junco*, by IU's Jonathan Atwell and Ellen Ketterson, at the Radio-TV building. Attendees enjoyed complimentary Aver's pizza while students from across the U.S. South and Midwest presented their research.



Student researchers present posters to conference attendees in the IMU tree suites

On Friday morning, CISAB Director G. Troy Smith delivered welcoming remarks to begin a solid day of talks across many disciplines related to the study animal behavior: psychology, zoology, genetics, neuroscience, and medicine. Following the afternoon awards ceremony (see p. 6), keynote speaker Frances Champagne of Colombia University presented her work on the "Developmental Programming of Behavior via Epigenetic Pathways" to a full house in the IMU Frangipani room.



Dr. Frances Champagne



Dr. Champagne speaks in the IMU Frangipani room

20th Annual Animal Behavior Conference, continued

On Friday night, Troy Smith and Associate Professor of Biology Laura Hurley generously hosted an evening reception in their home. IU graduate students contributed food and drinks for a night of fun and relaxation.

Saturday's Satellite Symposium, "Mechanisms Matter," focused on the relationships between biology and behavior. Invited speakers Dale Sengelaub and Kimberly Rosvall, both of Indiana University, discussed innovative research on the endocrine and neural systems of mice and dark-eyed juncos, respectively. To conclude the symposium, keynote speaker John Godwin of North Carolina State University presented his work on sexual plasticity in the Caribbean bluehead wrasse.

We heartily thank the NCSU Keck Center and the GSU Center for Behavioral Neuroscience for sponsoring the following ABC'13 guests:

John Shorter (NCSU)
Ryan Wong (NCSU)
Allison Brager (Morehouse School of Medicine)
Kate McCann (GSU)
Victoria Templer (Emory University)



Dr. Dale Sengelaub



Dr. Kimberly Rosvall



Dr. John Godwin

A big thank you to the members of the 2013 ABC Student Committee, to Kathleen DeBrota for designing the posters and program covers, and to CISAB staff Linda Summers, Tamara Marnell, and Charli Taylor for organizing a successful conference!



The 2013 ABC Student Committee

UNDERGRADUATE SPOTLIGHT

INTERNSHIPS AT WILDCARE, INC.

CISAB partners with several local organizations to offer undergraduate internships for academic credit. These internships give students the opportunity to gain hands-on experience working with animals and to complete an individualized research, educational, or outreach project. This spring, three undergraduates—**Ashley Batchik**, **Jessie Litzelman** and **Kelly Glass**—interned at WildCare Inc., an organization that provides care to sick, injured, and orphaned native wildlife.

Over the semester, Ashley worked with Artemis, the American Crow Ambassador. For her CISAB project, she updated and revised the program used to educate the public about crows.

Jessie used her time as an intern at WildCare to work directly with rehab animals. She also trained Daisy, the domestic goose used in education programs, and created a comprehensive guide on crows for educators and volunteers.

Kelly's internship at WildCare also incorporated rehabilitation and public outreach. For her CISAB project, she created a Red-tailed Hawk program and updated programs for other animals, like the Broad-winged Hawk the Eastern Cottontail.

Through internship programs like WildCare's, undergraduates gain valuable experiences that will help them in the future with their life goals. If you're interested in doing one of your own, you can see the requirements and review potential sites at www.indiana.edu/~animal/academics/internships.php.



Ashley Batchik with Artemis



Jessie Litzelman with Daisy



Kelly Glass with Hawkeye



UNDERGRADUATE RESEARCH NIGHT

On December 5th of last year, 11 researchers affiliated with the programs in Animal Behavior, Neuroscience, and Cognitive Science presented their work to over 20 undergraduates in the CISAB seminar room. The event gave students the opportunity to talk with actively recruiting faculty and graduate students and

to learn about the ways they can participate in ongoing research at Indiana University.

CISAB considered the research night a resounding success, and we intend to schedule a second next fall. Keep an eye out for an announcement of the date and participants!

STUDENT TRAVEL

KECK CENTER EXCHANGE PROGRAM



Thomas Hall at North Carolina State University
(Photo by the NCSU Facilities Division)

Every spring, CISAB sponsors one or two student volunteers to represent IU at the annual Student and Postdoc Symposium of the W.M. Keck Center for Behavioral Biology. This March, **Alison Ossip-Klein** of the Emilia Martins Lab and **Leah Wilson** of the Jim Goodson Lab traveled to North Carolina State University to present their doctoral research. Here's how they described the experience:

The night before the symposium, several NCSU graduate students treated us to a night on the town that included spirited science discussion. The conference began with the Center Director, Dr. Robert Anholt, giving a warm welcome and speaking about the history of the symposium. There were four sessions of talks by graduate students and postdocs spanning study systems from *Drosophila* to mosquitofish and topics from comparative genetics to sexual signals and ecological performance. There were also five posters from undergraduates, which encompassed a wide range of topics from development and survival in *Drosophila* to sex changes in the prosocial behavior of prairie voles. The Keck Symposium was a wonderful platform for sharing our dissertation research with a broad scientific audience, as well as a great networking experience. This opportunity provided a rich experience for interacting with undergraduates, graduate students, postdocs, and faculty members and for receiving feedback from diverse researchers.

If you're interested in representing CISAB in next year's exchange program, contact Linda Summers at cisab@indiana.edu.

CISAB Travel Awards

In 2012-13, 17 students received CISAB funding to present at conferences around the world.

Jessica Hanson, Sarah Keesom, and Jacquelyn Petzold attended the 10th International Congress of Neuroethology in Maryland.

Alejandra Rossi attended the Canine Science Forum in Barcelona.

Mikus Abolins-Abols, Alison Ossip-Klein, Delia Shelton, Sam Slowinski, and Joe Welklin traveled to the SICB conference in San Francisco.

Lauren Rudolph attended the Society for Neuroscience annual meeting in New Orleans.

Alicia Rich Stout attended the American Association of Physical Anthropologists in Knoxville, Tennessee.

Nikki Rendon attended the Society for Behavioral Neuroendocrinology conference in Atlanta.

Molley Farrell presented at the Neurobiology of Stress Workshop in Philadelphia.

Amy Harris, Caroline Deimel, and Alianne Steffenson attended the annual meeting of the Human Biology Association.

Gregory Kohn will attend the Behavior 2013 conference in Gateshead, England.

CISAB COURSES

Fall '13 A501: Techniques in Reproductive Diversity

This 3-credit course, designed for PhD students in fields related to reproduction and development, will cover essential research skills like gene arrays, immunoassays, gas chromatography and mass spectrometry, evolutionary theory, parentage analysis, bioinformatics, and field methods. Classes will meet Wednesdays from 4:00 to 6:15 pm.

Fall '13 A502: Ethics in the Bio-behavioral Sciences

Dr. Ellen Ketterson will teach this 1-credit course for graduate students on research and professional ethics. Topics will include ethical and legal issues related to publishing, scientific misconduct, data access and ownership, animal rights and care, relationships between students and advisors, the challenges of conducting research in sensitive or politicized areas, and the ethical considerations posed by 21st century technologies. Classes will meet Wednesdays from 1:45 to 3:45 pm.

SPRING 2013 A501/401 SEMINAR

This past semester, CISAB Director G. Troy Smith headed the ABEH A501 seminar, "Neuroethology." For the first time, undergraduates interested in the field of animal behavior had the opportunity to participate side-by-side with graduate students by enrolling in A401.

The seminar featured five distinguished speakers from top American research universities. CISAB members can check out DVDs of their lectures from our [Video Library](#).



Mark Frye

University of California, Los Angeles
"Olfactory Feature Detection in Flies"
(February 8, 2013)



Mark Alkema

University of Massachusetts
"The Neuroethology of *C. elegans* Escape"
(March 1, 2013)



Jeff Riffell

University of Washington
"Neuroecology: The Dynamics of Scent and Search Behavior"
(March 8, 2013)



Frances Champagne

Columbia University
"Developmental Programming of Behavior via Epigenetic Pathways"
(March 29, 2013)



John Godwin

North Carolina State University
"Neuroendocrine Regulation of Sexual Plasticity in Fishes"
(March 30, 2013)

CISAB AWARDS

EXEMPLAR AWARD



Emilia Martins

Emilia Martins is the deserving recipient of the 2013 CISAB Exemplar Award, which recognizes outstanding scientists in the field of animal behavior. Dr. Martins joined Indiana University in 2001 and became a full professor in 2007. During her career, she has published over 50 peer-reviewed articles and book chapters, mentored over 100 students, and dedicated her time to many boards, professional societies, and journals. She served as CISAB Director from 2002 to 2007 and as the director of the REU program from 2009 to 2012. She currently co-directs the Charles H. Turner program, which provides travel funds for undergraduates to attend the annual meeting of the Animal Behavior Society.

ROWLAND MENTORING AWARD



G. Troy Smith, Dave Civitello's student
Brad Lufkin, and Liz Carlton

On Friday, March 29, the 2013 Rowland Mentoring Award was presented to two outstanding doctoral candidates: **Dave Civitello** and **Liz Carlton**. Dave was nominated by his PI, Spencer Hall, for his extensive work with undergraduate and high school students. In his seven years at IU, he has worked side-by-side with 11 student researchers and co-authored papers with 2. He also counsels teens in the Holland Summer Enrichment and Lilly Scholars programs. Liz was nominated by former CISAB Director Greg Demas. She has mentored several undergraduates in his lab, as well as young researchers in the REU programs at IU and at Mountain Lake Biological Station.

HANNA KOLODZIEJSKI AWARD



G. Troy Smith and Liz Carlton

Liz Carlton received this year's Hanna Kolodziejski Award for her exemplary commitment to research, teaching, and community service. Since joining the Demas Lab in 2009, she has presented two oral presentations and three posters at national meetings and published a first-authored review in *Hormones and Behavior*. In her free time, she mentors undergraduates in the Women in STM thematic community, serves on the summer camp planning committee for Girl's Inc., and volunteers in numerous charitable programs through First United Methodist Church.

2013 CISAB FELLOWSHIPS

Graduate Scholars

Aubrey Kelly (Goodson Lab)
Gregory Kohn (West/King Lab)
Alison Ossip-Klein (Martins Lab)

CTR D Trainees

Liz Carlton (Demas lab)
Jacquelyn Petzold (Smith lab)
Lauren Rudolph (Sengelaub lab)

Support these awards by donating to CISAB funds at www.indiana.edu/~animal/donate/

LAB RENOVATIONS

Construction is almost complete on a new research facility that will house the CISAB Lab! The newly renovated space, located in Jordan Hall 348, has a large central laboratory bench capable of seating 10–12 individuals and ample countertop space around the perimeter to house research equipment. Other features include two state-of-the-art chemical safety hoods, a dedicated microscopy room, and a lab manager's office. The space was designed to maximize efficient workflow and to allow flexibility for both everyday research use and specialized lab training courses.

We anticipate that the new space will be available in mid to late May. During that time, short-term (1–2 day) outages of certain equipment items will be necessary while items are packed and moved. Once we have a firm moving date, you will receive more specific information in a CISAB-wide email message about these temporary disruptions. If you are planning any time-sensitive work in the CISAB Lab in mid-May to early June, please contact Rose Stewart (stewarra@indiana.edu) as soon as possible so we can plan accordingly.

Please also keep an eye on your inbox for an invitation to an Open House to celebrate the new facility. We look forward to seeing you there!



(Photo by Rose Stewart)



(Photo by Greg Demas)

2013 REU INTERNS

We are excited to welcome 10 talented exchange students for this year's Summer Research Experience for Undergraduates program in Animal Behavior.

Beginning May 20th, the interns will work with CISAB faculty and graduate researchers on individualized projects for presentation in late July. They will also attend topical seminars and workshops, participate in hands-on training in field and laboratory techniques, and take a trip behind the scenes at the Indianapolis Zoo.

Thank you to REU Director Laura Hurley, CISAB Administrative Assistant Linda Summers, the National Science Foundation, and all of the participating faculty members for making this program possible!

2013 INTERNS

Alexis Alcaraz

Loyola Marymount University in Los Angeles, CA
Mentor: Ken Mackie

Chima Amadi

Cornell University in Ithaca, NY
Mentors: Greg Demas, Laura Hurley, Nikki Rendon, and Sarah Keesom

Nicolas Berry

MiraCosta Community College in Oceanside, CA
Mentors: Emilia Martins and Alison Ossip-Klein

Domonique Jackson

Syracuse University in Syracuse, NY
Mentors: Curt Lively and Sam Slowinski

Ashlyn Mannery

Washington & Jefferson College in New Salem, PA
Mentor: Jon Crystal

Matthew Mendoza

University of North Texas in Denton, TX
Mentor: Troy Smith

Kelly Moench

Carthage College in Kenosha, WI
Mentor: Cara Wellman

Alexandra Myhal

University of Minnesota in Morris, MN
Mentor: Farrah Bashey-Visser

Karen Ocasio

Universidad del Turabo in Caguas, Puerto Rico
Mentors: Emilia Martins and Delia Shelton

Michael Rivera

University of Arizona in Tucson, AZ
Mentor: Jeff Alberts



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