



Animal Behavior Bulletin

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February 20th 4:00 PM Registration deadline for CTRD/CISAB Fellowship (Graduate Students)

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New CISAB Members

Faculty member

Dr. Virginia Vitzthum (Pg. 4)

Postdoctoral

Judith C Scarl

Graduate Students

Tom Verhovshek

Mark P. Peterson

James D. Klatt

Peter J. Ermey

Jorge F. Morales

Spring Behavior Speakers

Victor Johnston, New Mexico State University "Facial Beauty and Sexual Selection" Friday, **February 20 @ 2:00 PM** Student Building, room 150

Toni E. Ziegler, University of Wisconsin-Madison "The Neuroendocrine Responsiveness of Male Cooperative Breeding Primates to Pregnancy and Infant Care" Friday, **February 27 @ 2:00 PM** Student Building, room 150

Mark Flinn, University of Missouri-Columbia "TBA" Thursday, **March 05 @ 2:30 PM** - IMU Dogwood Room

Rosemary Knapp, University of Oklahoma (Co-sponsored with EEB) "Behavioral Endocrinology of Alternative Reproductive Tactics in Bluegill: Correlated Characters in Physiological and Evolutionary Time" Friday, **March 20 @ 4:00 PM** - Cleland Room (Jordan Hall), room 248

Steven M. Phelps, University of Florida (Co-sponsored with EEB) "Getting Caught in Peculiar Positions: Variation in the Mechanisms of Monogamy" Friday, **April 03 @ 4:00 PM** Myers Hall, room 130

Christopher Coe, Univ. of Wisc.-Madison (Co-sponsored with Psychological & Brain Sciences) "The Psychological and Social Context of Immune Competence" Monday, **April 27 3:00 PM** - IMU Dogwood Room

Rebecca Knickmeyer, University of North Carolina. "Sex on the Brain: Gonadal Steroids and Genetic Factors in Human Neurodevelopment" Friday, **May 01 @ 2:00 PM** Student Building, room 150

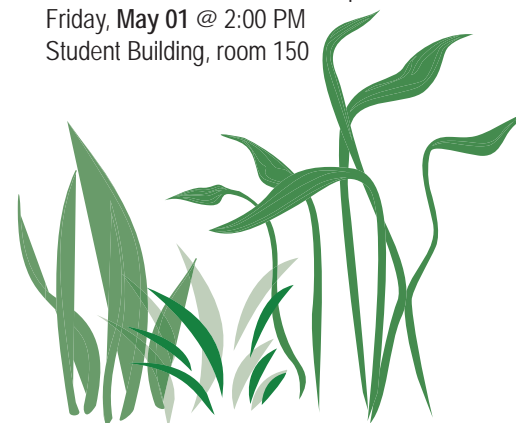
NEWS STORIES IDEAS

IF YOU HAVE NEWS YOU WANT TO SHARE WITH THE CISAB COMMUNITY CONTACT US AT:

cisab@indiana.edu

Or

855-9663



Message From the Director



Happy New Year to the extended IU animal behavior community! I hope everyone had an enjoyable and relaxing holiday break and your spring semesters are off to a good start. Despite all the chaos and craziness in the news this past year, 2008 was a successful year for CISAB.

Our REU summer program was again highly successful and the Annual Animal Behavior Conference had a record number of participants in general and undergraduates in particular. I find this latter record particularly satisfying since, for many labs, undergrads are the engines for much of the research but they don't always get sufficient credit for their efforts. It's nice to see so many undergraduates being encouraged to get involved in animal behavior research at IU.

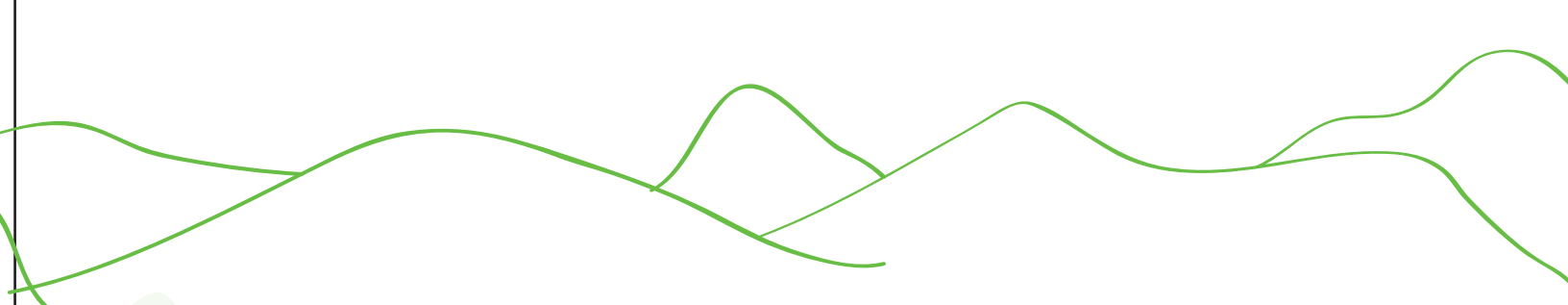
2008 marked the arrival of some young and very special animal behaviorists as well. Congratulations to Rose Stewart and her husband for the arrival of Benjamin Stewart in October and Laura Hurley and Troy Smith for the arrival of Wiley Hurley in November. Rose will be returning to Animal Behavior Lab in February, so feel free to contact her if you have a research project that might benefit from the services offered by the lab.

Please extend a hearty welcome to Margarita (Maggie) Quinchia who joined us from Syracuse, NY this fall as our Graphic and Web Designer. Maggie will produce our AB Bulletin (starting with this issue) and is also in the process of overhauling the CISAB web site, and will coordinate a variety other CISAB projects.

We received "unofficially" good news on the NSF Research Experiences for Undergraduates (REU) grant renewal. The program officer informed us that it was well-received by the panel, so keep your fingers crossed that after all this bailout money is spent by our government that there is something left to keep our grant going. A very grateful "thank you" to Emilia Martins for all her hard work to keep this program funded and to Bill Timberlake and Linda Summers for keeping it running so smoothly. Assuming the news stays positive, we'll be working hard this spring gearing up for this year's REU summer program. As always, Linda will be in touch with everyone later this semester to see who is interested in mentoring students in this program.

Thanks to Troy Smith and Rod Suthers for coordinating a wonderful and intellectually stimulating A501 in Neuroethology during the fall semester.





Michael Muehlenbein from Anthropology is teaching the A501 course on Hormones and Primate Behavior this semester and has lined up an equally stellar slate of speakers sponsored or co-sponsored by CISAB. The seminars themselves are open to everyone so please feel free to attend them.

A reminder to all graduate students, CISAB and CTRD Fellowships will be available for the 2009-2010 academic year. As in years past, the application materials for these fellowships will be available on the CISAB websites (<http://www.indiana.edu/~animal/>). Please be aware the applications are due on February 20th.

CISAB has been awarded funding from Midwest Crossroads Alliance for Graduate Education and the Professoriate (IGEP) to increase student diversity in animal behavior at IU. These funds will allow a few graduate students to serve as CISAB ambassadors and attend conferences sponsored by our sister schools (e.g., CBN, Keck), so please contact us if you are interested in this opportunity.

Planning is underway for the Annual CISAB Animal Behavior Conference, which will take place in Alumni Hall and Solarium in the Indiana Memorial Union on Friday April 10th, so please reserve this date on your calendars! As in year's past, we will have an excellent slate of intellectually stimulating talks from within the IU community, as well as via participants from the Center for Behavioral Neuroscience (CBN) in Atlanta and the Keck Center at North Carolina State University. In addition, we are encouraging students and researchers from nearby universities and colleges to consider attending the meeting, so please alert you friends and colleagues of this event. We had a record number of participants last year and we are looking to top ourselves again this year!

As always, thanks to the hard work and dedication of all the students, post-docs, scientists and staff associated with CISAB; your continued support of CISAB and CISAB-related activities is critical to our continued success.

-Greg Demas



CISAB WELCOMES NEW FACULTY MEMBER...



Virginia J. Vitzthum received her Doctorate in Anthropology from The University of Michigan. As a new CISAB member, she is currently a Professor in the Anthropology Department and a Senior Research Scientist in the Kinsey Institute for Research in Sex, Gender, and Reproduction.

As an evolutionary anthropologist, Dr. Vitzthum's research has focused on the determinants of variation in human female reproductive functioning. During the mid-90s at the Bolivian Institute for High Altitude Biology Vitzthum directed Project REPA, a longitudinal study of hormonal variation in highland Bolivian women. Vitzthum found unequivocally that lower hormone levels were normal for Bolivian women. Despite living at a high altitude and consuming an average of only 1800 calories a day, they were able to conceive with lower hormone levels than are considered normal for American women.

Vitzthum's most recent work is focused on the causes of this hormonal variation. In 2006 she studied nomadic Mongolian herders, whose caloric intake is similar to Bolivians but whose consumption of animal fat is closer to that of Americans. She spent last year at the Max Planck Institute for Evolutionary Anthropology in Leipzig, measuring hormone levels in women born in the former East and West Germany, where both diet and activity patterns differed before reunification.

"What we eat and what we do is at the heart of the intersection between biology and culture. Especially important is whether an adult experience of diet and exercise differs dramatically from one experienced in childhood. Who we are as adults is very much a reflection of who we were as children."

Vitzthum sees her work as a bridge to the world of applied health policy such as to contraceptive technology, where less hormonal variation among women and populations is assumed than her research indicates.

Some of Vitzthum's other research interests are the evolutionary adaptations of human female reproduction, contraceptive technology and applied health policy.

Selected Publications

Vitzthum, V.J. (2008). Evolutionary models of women's reproductive functioning. *Annual Review of Anthropology*, 37: 53-73.

Vitzthum, V. J., & Ringheim, K. (2005). Hormonal Contraception and Physiology: A Research-based Theory of Discontinuation Due to Side Effects. *Studies in Family Planning*, 36(1): 13-32.

Vitzthum, V.J., Spielvogel, H., Thornburg, J. (2004). Interpopulational differences in progesterone levels during conception and implantation in humans. *Proceedings of the National Academy of Sciences*, 101(6): 1443-1448.

Vitzthum, V.J. (2001). The home team advantage: reproduction in women indigenous to high altitude. *The Journal of Experimental Biology*, 204: 3141-3150

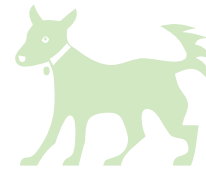


W.M. Keck Center for Behavioral Biology at North Carolina State University, is one of the institutions for the study of behavior with which CISAB has an established partnership. On 2009 the W.M. Keck center held their Tenth Annual Student and Postdoctoral Symposium at the J.C. Raulston Arboretum. This symposium, held on January 24th this year, is designed to give students and postdocs a chance to present their research to an audience of their peers from all of the institutions that participate in the exchange. This year CISAB was represented by two Graduate students from the Dept. of Psychological and Brain Sciences.



Alejandra Rossi

"Intentional behavior in dog-human communication"



In this paper we investigate under what conditions showing behavior (transferring of information in an active way from the dog to the owner) emerges in dogs. In order to study this, the dogs were observed under different experimental conditions where the presence of the humans and/or hidden food was manipulated.

We also analyzed the relation between the owner-dog relationship and the way the dog behaves in the communication task by analyzing video tapes of free playing time. We hypothesize that the owner-dog relationship it will be correlated to the dogs tendency to display more showing behavior.

Jennifer L. Miller

"Vocal learning strategies in brown-headed cowbirds is sensitive to social ecology"



Previous work has found that male cowbird (*Molothrus ater*) housed with adult females, who do not sing, improvised on songs they were tutored with as opposed to tutored males, housed with nonconspecifics, who did not improvise. The present work extends this finding to examine the role of adult versus juvenile female social behavior to stimulate improvisation in males. In this study, we housed juvenile males with adult or juvenile females in large flocks as opposed to pairs or triads in sound attenuating chambers. Over the course of a year, we recorded their song and social behavior. We found in early fall that juvenile males housed with adult females improvised more than males housed with juvenile females. During late fall, the males were switched across female age class conditions. The males switched to the adult female condition increased the number of improvised elements in their vocal repertoires. Analysis of the sequences of female-male social contact reveals juvenile females, but not adult females, interacted indiscriminately with the males. Virtually all male improvisation appeared to originate from contact with adult females. These patterns of female-male interactivity were associated with different song ontogenies.



REU Grant Update!

Although we have not yet heard the final word, it looks very likely that NSF will renew CISAB's program providing summer Research Experiences for Undergraduates in animal behavior (REU). As evidenced by the glowing reviews of the proposal, ours is one of the longest-lasting and most successful of REU programs. Over the last 14 years, we have together hosted 135 students from 94 institutions, and more than 80% of these students report that the program made them more likely to pursue graduate study in the sciences. The NSF reviews emphasize our considerable success at recruiting and training students from underrepresented minority groups, and suggests that the CISAB-REU be used as a role model for other REU programs. From a more local perspective, the REU is an important component of our broader efforts to retain a strong international reputation and to bring outstanding future students, postdocs and other researchers to our behavior group.

The CISAB-REU is clearly a group effort, so CONGRATULATIONS and THANK YOU!!! We could not have done any of this without your help in advertising the program to prospective students, giving talks as part of the introductory sessions, and most of all, for hosting and mentoring REU students. We look forward to five more years of working together on this important initiative.

Emilia P. Martins
REU Program Director

AGEP Grant Awarded!

The Proposal "Increasing Student Diversity In Animal Behavior at IU", submitted through the National Science Foundation's Midwest Crossroads Alliance for Graduate Education and the Professoriate (AGEP) program and Indiana University Bloomington was approved by this advisory committee. This grant will support diverse undergraduate students to attend the CISAB conference at IU Bloomington and for graduate students to serve as CISAB Ambassadors as recruiters at annual meetings.

the **Animal Behavior** conference Organizational Committee



Front Row: Karen Bohorquez, Andrea Gillman, Jacqueline Ho, Ben Miller
Second Row: Jennifer Miller, Saul Nava, Tim Greives, Aaron Wilber, Adam Walker, Tom Verhovshek, Rob Bowers
Back Row: Winnie Ho, Shely Ferguson, Mayte Ruiz, Kristal Cain, Dawn O'Neal

(Not Pictured: Emily Chester, Ian Hall, Alejandra Rossi, Christy Bergeon, James Klatt, Katy Smith, Mollee Farrell, Yaniv Brandvain, Maggie Hirschauer, Grant Goodrich and Brandon Hill)



Thank you Students!

The 16th ANIMAL BEHAVIOR CONFERENCE



■ FRIDAY, APRIL 10th 2009

■ Indiana Memorial Union, Alumni Hall/Solarium
8:00AM - 5:30PM

■ Bloomington, Indiana



■ Registration & Abstract Deadline - MARCH 13

<http://www.indiana.edu/~animal/symposium>

■ Plenary Speaker: DARCY B. KELLEY, Columbia Univ.

Indiana University



IU Graduate Student Presentations

by **Stephen Friesen** (Sassafras Audubon Society-
Newsletter Vol. 2009 No. 1)

Beginning this semester, SAS will host graduate student presentations about bird biology and/or conservation, bringing together the local birding community and IU's research body. The public is encouraged to attend. Below is a summary, prepared by the presenter. Dates, times, and locations for the talk will be announced on the SAS Web site and SAS Friends e-mail list.



February: **Dustin Reichard** (Ketterson and Nolan's Lab - CISAB Member)

Northern Mockingbirds lack a species-specific song and instead amass large song repertoires through mimicking the songs of other species and sounds from their environment. This provides a unique problem for mockingbirds in recognizing members of their own species by song, especially in cases where their geographic ranges overlap with other species of mimics, such as the Brown Thrasher and Gray Catbird. My research investigates the vocal cues that mockingbirds use to differentiate between their own song and Brown Thrasher song. To do this, I record normal mockingbird song and then alter it using computer software to make it more similar to Brown Thrasher song. I then play these altered songs to territorial mockingbirds and see how strongly they respond, which indicates how likely they are to recognize the altered song as mockingbird or thrasher.

Upcoming... Behavior Related Meetings

Cognitive Neuroscience Society Conference

Hyatt Regency San Francisco

March 21 - 24, 2009



Animal Behavior Conference

Bloomington, IN

April 10, 2009

Animal Behavior Society

Pirenopolis, Brazil

June 22-26, 2009



Society of Behavioral Neuroendocrinology

Michigan State

June 25-27, 2009

International Society for Applied Ethology Congress

Cairs, Australia

July 6-10, 2009



CogSci 2009

Free University, Amsterdam

July 3- Aug 1, 2009

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