First Endowed Professorship Established in Integrative Biology

The Edward E. and Helen T. Bartlett Foundation in Tulsa recently established the Edward E. Bartlett Professorship of Pedagogy in Integrative Biology Fund. The purpose of the Professorship is to encourage excellence in teaching, research and scholarship in Integrative Biology in the College of Arts and Sciences at Oklahoma State University. The Fund’s spendable amount may be used for expenditures deemed beneficial to the support of the Professorship including salary support, financial support for students, research expenditures, participation in conferences, support for curriculum development, and other activities deemed appropriate to support the Professorship. The Professorship will be awarded for three years at a time. After three years, the professorship will be available for the current holder of the professorship to reapply as well as to other associate or full professors in the department, or it may be provided to a faculty member recruited from outside the University. The Department is very grateful for the support of the Bartlett Foundation and especially Harrison ‘Bart’ Bartlett (trustee, Edward E. and Helen T. Bartlett Foundation), Lynn Fesperman (trustee, Edward E. and Helen T. Bartlett Foundation), and Claudia Bartlett. The photo (right) was taken at the professorship announcement event (left to right: Bart Bartlett, Brooklyn Gisendaner (Integrative Biology student), Lynn Fesperman, and Claudia Bartlett).

Greetings from the Department Head

The Department of Integrative Biology has had a very productive spring semester. Our students, staff, and faculty continue to excel. As you will see in this edition of The Alumnidae, the Spring Awards Banquet was especially enjoyable with our highest student and alumni turn out. Thanks to our donors we had the most student awards and funding that we have ever presented. As noted above, we have our first endowed professorship. We hope to name an individual to that prestigious position in the fall semester. Our undergraduates have several new options to add that can now help define their degrees in Zoology, Physiology, and Biological Science. We also have added three new clinical assistant professor positions to our faculty. Clinical faculty have workload assignments focused on teaching without research responsibilities. They are a terrific and welcome addition to the department. Please read on as space does not permit us to mention all of the changes occuring here.

Loren M. Smith
loren.smith@okstate.edu
Department Head
Integrative Biology
Three Clinical Assistant Professors Join Department

Uriel Buitrago Suarez (right) joined the Department of Integrative Biology as a Visiting Assistant Professor in 2014, and this spring he was hired as one of our three Clinical Assistant Professors. Uriel received his Ph.D. from Southern Illinois in 2005. He is interested in fish biology: systematics and taxonomy of tropical freshwater fishes in South America. For the last few years Uriel has incorporated morphological analysis to establish phylogenetic relationships in some groups of catfishes. He has expanded the scope of his work in several areas, including ecology, with an emphasis in habitat alteration in catfishes such as Astroblepidae inhabiting the Andean Cordilleras in Colombia. An ongoing project includes the estimation of intraspecific variation in *Astroblepus mariae*, a species that dwells in the headwaters of Rio Meta, tributary of the grand Rio Orinoco. Uriel’s future direction is to incorporate DNA analysis under the scope of the Coalescent Theory to assess phylogeographic patterns in *A. mariae* and related species. Uriel has taught Vertebrate Morphology, Introductory Biology, Physiology, and Evolution at OSU.

Dr. Elisa Cabrera-Guzmán (below left) joined the Department of Integrative Biology as a Visiting Assistant Professor in 2015. Dr. Cabrera-Guzmán received her M.S. at the National Autonomous University of Mexico in 2005 and her Ph.D. at the University of Sydney, Australia in 2013. Later she spent a year in Spain doing postdoctoral research. Elisa primarily works with amphibians and reptiles, but she has also worked with different invertebrates and other groups of vertebrates. Elisa is interested in biological interactions (competition, predation, and parasitism) and community structure. Her main research lines have focused on the effects of rainforest fragmentation on amphibian and reptile communities and the effects of invasive species (cane toads and mosquitofish) on native animal species. Elisa’s research has integrated both observational and experimental fieldwork across a variety of environments, and laboratory experiments as well. Elisa has taught Environmental Biology, Introductory Biology, Animal Biology, and General Ecology at OSU.

Dr. Árpád (Arpi) Nyári (right) received his M.S. in 2005 and his Ph.D. in 2011 from the University of Kansas in Lawrence. Upon completing his graduate studies, he received a postdoctoral fellowship at Loyola University in Chicago. Arpi’s research focuses on avian systematics, diversification, and evolution, especially in the regions of Australo-Papua and SE Asia. One of his main groups of interest are the honeyeaters (Aves: Meliphagidae), for which he is working to gain a better understanding of how and when different lineages have radiated and adapted to heterogeneous ecosystems such as the deserts of Australia, the montane tropical forests of New Guinea, and the insular systems in Oceania. Since joining OSU as a Visiting Assistant Professor in 2012, Arpi has been teaching Introductory Biology, Animal Biology, Ecology, Embryology, and more recently, Ornithology.

Dr. Kristen A. Baum receives A&S Mentor Award

Dr. Kristen A. Baum was recently awarded the 2016 A & S Faculty Mentor Award. This award is given annually by the College of Arts and Sciences to a full-time faculty member who shares their time and expertise outside the classroom to provide information and advice to undergraduates in relation to both academic and professional success, serves as a role model in the discipline, and involves students in research and other creative activities. Applicants are picked based on student nominations. Dr. Baum has been a critical component of the department’s NSF S-STEM and URM programs, working with more than 30 students. She has also mentored more than 50 undergraduate students on research projects and she organizes the departmentally sponsored biannual Karen L. Smith Undergraduate Research Symposium which provides the opportunity for students to present their research in a professional setting.
The Alumnidae

New Degree Options for Undergraduates in Integrative Biology

The Department of Integrative Biology is excited to offer several new degree options beginning in the fall of 2016. Our 3 base degrees will remain – Biological Science, Physiology, and Zoology, but we have added options in each degree that focus on pre-health/pre-med, pre-vet, and conservation/ecology. Options include the following: Biological Science: Environmental Biology, Biological Science: Pre-Healthcare, and Biological Science: Secondary Teacher Certification; Physiology: Pre-Medical Sciences; Zoology: Ecology and Conservation Biology, Zoology: Pre-Medical Sciences, and Zoology: Pre-Veterinary Science. The new options provide students with clear direction to meet their goals by outlining the specific courses that will best suit their future career plans. Career readiness is key in the success of college coursework, and students will leave with not only a degree, but the skills and knowledge base to further their education or find employment in their field of choice.

Dr. Polly Campbell Receives NSF Award

The National Science Foundation has awarded a four year $720,000 grant to Dr. Polly Campbell, Integrative Biology. The project seeks to understand the role of imprinted genes in the development and regulation of three defining mammalian features: the placenta, maternal care, and the development of a complex brain. Imprinted genes are defined by their 'parent-of-origin' pattern of expression: some are expressed only from the maternally inherited copy and others only from the paternally inherited copy. Because imprinted genes are essential to both placental function and brain development, they are uniquely positioned to affect mother-offspring interactions, during both gestation and lactation, with lasting effects on adult brain function and behavior. In collaboration with Dr. Jennifer Grindstaff (Integrative Biology), and Dr. Charles Chen (Biochemistry), Campbell’s lab group will use whole genome expression and DNA methylation profiling, together with hormonal and behavioral assays, to explore the consequences of disrupted imprinting for mothers and their offspring. Two species of mice will be used for the project: Mus spretus (left), the Algerian mouse and Mus domesticus, the house mouse. In collaboration with Dr. Julie Angle (College of Education) the Campbell lab will provide hands-on research experience for preservice and in-service teachers; trainees will develop lesson plans that will translate their experiences into classroom practice, with the long-term goal of enhancing scientific literacy and engagement in Oklahoma public schools.

Karen L. Smith Undergraduate Research Symposium

On 21 April 2016 the Integrative Biology Department held the 8th Karen L. Smith Undergraduate Research Symposium. Karen, who passed away on 2 November 2012 was the senior academic counselor in the department. The symposium was established in November 2012 in recognition of Karen’s tireless efforts to enhance the undergraduate experience - especially those in the Department of Integrative Biology. The symposium provides professional development opportunities for undergraduates in the department. For the Spring symposium there were 10 poster presentations by undergraduates working in the Integrative Biology Department and 1 poster from the Natural Resource Ecology and Management Department. Sierra Nollen (right), a senior zoology major, is the recipient of the Karen L. Smith Undergraduate Research Excellence Award for her research with Lynne Beaty and Dr. Barney Luttbeg on “Frog social behavior during the non-breeding season: keep males at a distance.” This award given for the best student presentation at the symposium includes $250 and is made possible by the Karen L. Smith Undergraduate Research Symposium Fund.
The 2016 Annual Integrative Biology Awards Celebration was held in Click Hall at the Conoco Phillips Alumni Center on 21 April 2016. The banquet, our largest turn out yet, was attended by our generous donors, award winners, and department members and their families. Award winners are listed below and on the following page.

**Integrative Biology Department Undergraduate Student Awards:**

Dr. Ron and Sharion Austin Scholarship in Rural Dentistry: Thomas J. Lawlis  
Dr. G. Michael Steelman Scholarship: Rachel Renee Reisch  
Dr. Raymond Dixon Scholarship: Maggie E. Pearce  
Dr. Raymond Dixon Scholarship in Rural Health: Katie L. Taylor  
Edwin Chappabitty, Jr. M.D. Scholarship: Bradley Mark Smiling  
Outstanding Sophomore: Sam E. Kimbrough  
Outstanding Junior: Eric W. Bates  
Outstanding Biological Science Senior: Mylissa Stover  
Outstanding Physiology Senior: Kelsey Lynn Anderson  
Outstanding Zoology Senior: Alexandra Marie Oppenborn

**Integrative Biology Department Graduate Student Awards:**

Outstanding Integrative Biology Masters Student: Ryan Shannon  
Outstanding Integrative Biology Doctoral Student: Kyle Gustafson  
Wilhm Teaching Assistant - Masters: Cassandra Bratcher  
Wilhm Teaching Assistant - Doctoral: Denise Thompson  
Waters Grant-in-Aid of Research: Danielle Perryman  
Wilhm Graduate Student Travel Award:  
  Xiao Feng & Madeleine Naylor  
S. L. “Bud” Burks Memorial Graduate Research Award: Adam Simpson  
Bryan P. Glass Fellowship: Enrique Santoyo-Brito

Left to right (above): Maggie Pearce and Dr. Kristen Baum, chair of the Undergraduate Committee. Maggie was awarded the Dr. Raymond Dixon Scholarship.

Left to right (above): Thomas Lawlis and Dr. Kristen Baum, chair of the Undergraduate Committee. Thomas was awarded the Dr. Ron and Sharion Austin Scholarship in Rural Dentistry.

Left to right: Bradley Smiling and Edwin Chappabitty, Jr. M.D. Bradley received the Edwin Chappabitty, Jr. M.D. Scholarship.
Student and Faculty Award Winners
2016 Annual Integrative Biology Awards

Zoology Graduate Student Society Awards:

Best Lunchtime Seminar Presentation:
   Fall - Christina Anya
   Spring - Lynne Beaty

Margaret S. Ewing Outstanding Mentor Award:
   Dr. Barney Luttbeg

ZoGGS Travel Awards:
   Kelsey Deal, Cody Barnes, and Kendall Scarlett

Left to right: Luann Waters and Danielle Perryman. Danielle, a Masters student advised by Dr. Jennifer Grindstaff received the Waters Grant-in-Aid of Research Award.

Left to right: Ryan Shannon and his Advisor, Dr. Matt Bolek. Ryan received the Outstanding Integrative Biology Masters Student Award.

Left to right: Dr. Jerry Wilhm and Denise Thompson. Denise, a Ph.D. student, received the Wilhm Teaching Assistant Award.

Ph.D. Students Receive Prestigious NSF Fellowships

Four graduate students from the Department of Integrative Biology were recognized by the National Science Foundation’s Graduate Research Fellowship program. This year over 17,000 applications were received and 2,000 fellowships were awarded; an additional 1,000 applicants received honorable mention. Jimmy Lovett (Ph.D. student, McBee lab) and Ana Chicas-Mosier (Ph.D. student, Abramson lab) received the prestigious fellowship, which will support their graduate research and education for 3 years. Justin Agan (Ph.D. student, Fox Lab) and Meelyn Pandit (M.S. student, Grindstaff lab) were recognized for their outstanding proposals with an honorable mention. The graduate students develop NSF GRFP proposals as part of the Department’s Graduate Orientation course during their first year of graduate school. Congratulations Jimmy, Ana, Justin, and Meelyn!
# The Alumnidae

**DEPARTMENT OF INTEGRATIVE BIOLOGY**  
Oklahoma State University  
Life Sciences West 501  
Stillwater, OK 74078  

**Phone:** 405-744-5555  

http://integrativebiology.okstate.edu

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- [ ] Within Graduate Student Travel Award 225-013003
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