

The Alumnidae

Spring 2011

The Alumnidae

Department of Zoology, Life Sciences West 501
<http://zoology.okstate.edu>
405-744-5555

Dr. Edwin Chappabitty Pledges Native American Scholarship



Edwin Chappabitty, Jr. M.D. has pledged an annual \$1000 Scholarship for the next 10 years in the Zoology Department. Students must have pre-health interests in one of the majors in zoology (Zoology, Physiology, Biology). They must have at least a 3.0 grade point average and be Native American (1/4 CDIB). Dr. Chappabitty had a long distinguished career in medicine and today is active not only in promoting health education among Native Americans but in the establishment of the Native American Veterans Memorial in Lawton. He received his B.S. in Zoology at OSU in 1967 and his M.D. from the University of Colorado. Dr. Chappabitty is a Vietnam veteran and served five years as a Field Artillery officer with the Army. He has received numerous awards for valor, was named "Physician of the Year" by the Association of American Indian Physicians, and received the "Hero Award" of the Journal of Minority Medical Students. Dr. Chappabitty was featured in the spring 2010 edition of *The Alumnidae*.

Greetings from the Department Head

I am writing this just after our spring departmental awards banquet. It was a tremendous event and we filled the parlor of the newly renovated Murray Hall on campus. If you have not seen it, the parlor is a beautiful setting for a banquet. As usual Gertie Mulder, Mylissa Minyard, Marsha Flasch, Audrey Bridgers, Karen Smith, and Dr. Meredith Hamilton did a wonderful job in putting this together. In addition to the scholarships and awards we have given out over the past few years, we awarded two new scholarships, one to an undergraduate and one to a graduate student, in honor of Dr. Bryan P. Glass. These students work in the Collection of Vertebrates. A complete list of all award winners is on page 5 of the newsletter. Zoology also had a very productive year, we were tied for the highest undergraduate enrollment out of the 24 College of Arts and Sciences departments, at 430. Our faculty also advised 58 graduate students in the fall as well as brought in over \$2.2 million in external grants! In addition, site preparation has begun for the new Zoology Field Research building on Zoology land west of town. The building is scheduled to be completed in August but you never know about those schedules. Finally, I want to thank Dr. Meredith Hamilton for assuming the duties as the new *Alumnidae* editor.

Mark your calendars:

*The 2012 Zoology Awards Banquet will be held on 31 March 2012.
Venue details will be announced in our fall newsletter.*

Faculty Highlights

Dr. Monica Papeş

Monica (Mona) recently joined the Zoology Department as an Assistant Professor. She received her Ph.D. from the University of Kansas in 2009. Prior to coming to OSU Mona completed a postdoctoral position in the Center for Limnology at the University of Wisconsin-Madison. Her research interests include the interplay between species' environmental and spatial occurrence patterns, and how such interactions are manifested in species' distributions in the context of current and future climates under increasing anthropogenic influences. Mona's research covers both theoretical and applied aspects of these questions of distributional biology, including issues such as remote sensing applications to mapping biodiversity, predicting areas at risk of invasive species, conservation of data-deficient species, and seasonal variation of species' distributions. The main drivers of her current research are: 1) to understand distributional patterns for individual species across broad spatial scales, using empirical ecological niche modeling tools, and 2) to derive local-scale ecological models that take into account seasonal variation of vegetation and its effects on animal distributions.



Zoology Professor Receives \$740,000 Army Grant

Dr. Alex Ophir has been awarded a research grant for \$740,000 from the Army Research Office at the Department of Defense. This study will focus on behavioral and genetic variation in African giant pouched rats, a species that offers great potential value to the U.S. military because it has been used effectively to detect explosives. Analyses of behavior of rats in the wild and the laboratory will be used to identify animals with a predisposition for detecting explosives. The term 'personality' is traditionally reserved for humans. However, non-human animals demonstrate consistent behavioral differences that could be loosely described as 'animal personality'. Understanding the differences in individual behavior is of scientific importance because it can reveal much about the evolution of social dynamics, alternative behavioral tactics, and personality (and personality disorders). This research will examine the behavior of African giant pouched rats in the wild and evaluate individual differences in behavior in the laboratory. This will aid in effectively identifying animals that are predisposed toward detecting explosives. This research will also investigate the genetic variation that is associated with behaviors involved in enhanced explosives detection and ideally identify genetic signatures that can be used for animal screening. Profiling the behavior of this species and identifying genetic markers that can predict behavior will not only enhance the selection and utilization of these animals as efficient explosives biodetectors, but will offer insight into the source and expression of individual differences in behavior in general.

Loren Smith Receives the 2011 National Wetlands Award for Science Research

Dr. Loren Smith, Regents Professor and Head of the Zoology Department, will be honored on 4 May 2011 in Washington, D.C. by the Environmental Law Institute when he is presented with the 2011 National Wetlands Award for Science Research. Award recipients are chosen by a committee of wetland experts representing federal and state agencies, academia, conservation organizations, and the private sector. Dr. Smith is one of the top authorities on playa wetlands and a leading scholar on wetland ecosystem science. His non-traditional approach to wetland ecology embraces knowledge from multiple scientific disciplines in tackling wetland research issues.

MILLER ART DISPLAYED IN ZOOLOGY

Zoology Emeritus Professor and internationally acclaimed artist Rudy Miller and his wife Helen visited Life Sciences West in April to view some of Dr. Miller's artwork on display. The art work, which was donated by Dr. Miller, is on loan from the OSU library collection and consists of landscapes as well as fish paintings. All are originals and the fish plates are from Dr. Miller's seminal book "Fishes of Oklahoma". The fish plates are in one of the new conference rooms, Life Sciences West 509. The pictures transform the room and make it an excellent meeting venue with a true 'zoology' aura. Along with numerous current Zoology faculty, emeritus professors Drs. Herb Bruneau and Jerry Wilhm were present for the event. Zoology hopes to continue to rotate out Miller's art in the conference room and main office with other of his pieces from the library collection on a regular basis. We welcome alumni to stop by and view Dr. Miller's art in Life Sciences West.

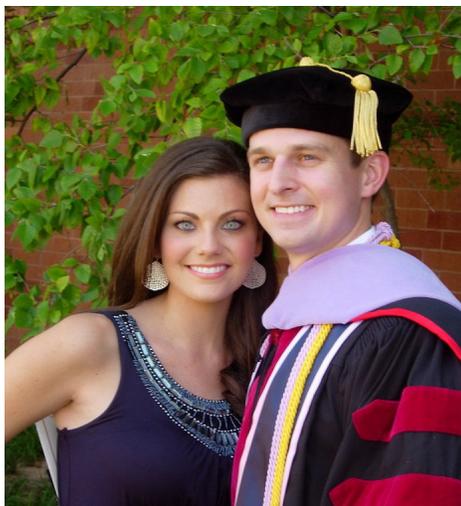


Rudy and Helen Miller along side one of Rudy's paintings from the "Fishes of Oklahoma".

Alumni Highlights

Biology Alumnus Wins Teaching Excellence Award

Nancy Freeman (Biology 1982) recently received the prestigious 2010 Northrop Grumman Award for Teaching Excellence. This honor, which comes with a \$1000 award, is generally given to faculty members in STEM (Science, Engineering and Math) fields at four-year universities. Freeman, who is currently a faculty member at El Camino College in Torrance, California, represents the first community college professor to receive the award. Prior to joining the El Camino College faculty in 2005, Freeman taught middle school science and high school biology for 23 years. She is known for making biology interesting for her students through a combination of demonstrations, lectures, computer interaction, discussions, and demonstrations. Freeman is active also in the Math and Science Teaching Initiative to help recruit future teachers into the field of biology.



Zoology Alumnus Completes Advanced Education in General Dentistry Program

Christopher M. Leslie, Outstanding Physiology Senior and Zoology graduate in 2006, received his Doctorate of Dental Surgery from the University of Oklahoma's College of Dentistry in June 2010. Graduating with Distinction, he was the recipient of the Academy of Operative Dentistry Award, the American Association of Endodontists Student Achievement Award, the Fixed Prosthodontics Department Award, the Parnam Mohanna DDS Award for Excellence in Removable Prosthodontics, and the Southwest Academy of Restorative Dentistry Award and was inducted into the Omicron Kappa Upsilon National Dental Honor Society. Chris was one of only five graduates to be invited to participate in OU's Advanced Education in General Dentistry Program, which he will complete in June 2011 and enter private practice in Yukon. He and his wife Rachel Ebert (OSU Graphic Design 2006) and their 7-month-old son, Cooper, live in Oklahoma City.

Staff Highlights



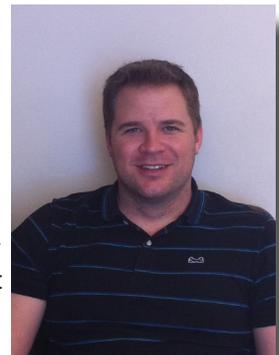
Moria Harmon (shown at left with Elvis) recently received a College of Arts and Sciences Staff Award at the Fall Convocation. Moria has served as the Biology 1114 Coordinator for the past 6 years. Biology 1114 has one of the largest course enrollments on campus and she is key to our success with this course and the integral operation of the Learning Resource Center. Moria handles the week-to-week logistics of the course and maintains the supplies needed for laboratories as well as the Learning Resource Center.

Karen Smith recently joined the Zoology Department as our Senior Academic Counselor. Karen, who previously served as a Student Academic Counselor for Arts and Sciences Student Academic Services from 2002 - 2010, replaces Melissa Gentry.

Graduate and Undergraduate Student Accomplishments

Zoology Graduate Student Receives Prestigious Grant

Justin Lack, a Ph.D. student in the Zoology Department received a National Science Foundation Doctoral Dissertation Improvement Grant for the study titled “Comparative phylogeography of *Rattus rattus* and *Rattus norvegicus* in the U.S. and dispersal potential of rat-borne pathogens”. Justin will examine the ability of invasive rats to act as carriers of the hepatitis E virus (HEV) in the U.S., as well as their potential role in spreading HEV to humans. The mortality rate of HEV infection ranges from 1-4% in the general public, but is as high as 20% in pregnant women and is therefore a pathogen of concern. Invasive rats are arguably the most destructive invasive species on the planet, carrying an array of pathogens that have been responsible for some of the most devastating epidemics in human history. Through their close relationship with humans, rats have spread to every continent and can reach high numbers in densely populated urban areas, making them effective vectors for the spread of infectious disease. HEV infections have been detected at a high frequency in humans from urban areas in the U.S., but the transmission pathways traditionally thought to be responsible for HEV spread are not present. Invasive rats have been shown to have high HEV infection rates in the U.S. (>40%) and are competent hosts of human HEV. In the proposed work, invasive rats collected from across the United States will be examined for HEV infection, providing information concerning infection rate and the rate with which rats are spreading HEV across the country. Justin’s major professor is Dr. Ron Van Den Bussche.



In addition to their awards highlighted on page 5, Priyanka Roy Chowdhury (shown left with Drs. Loren Smith and Stan Fox) and Rosalina M. Yorks (shown right with Dr. Loren Smith) received presentation awards associated with the 22nd Annual OSU Research Symposium. Priyanka won 1st prize in the Graduate Student Oral presentation category and Rosalina won 1st prize in the Undergraduate Student Poster presentation category.



*Student and Faculty Award Winners
2011 Annual Zoology Awards*

Undergraduate Students

*Outstanding Zoology Sophomore: Megan A. Reidy
Outstanding Zoology Junior: Rosalina M. Yorks
Outstanding Zoology Senior: Amanda L. Neujahr
Outstanding Physiology Senior: Josiah J. Craig
Outstanding Biological Sciences Senior: Samantha R. Caudle
Dr. G. Michael Steelman Scholarship: Edwin Villert
Bryan P. Glass Undergraduate Scholarship: Wyatt V. Sharber*



Left to right: Dr. Loren Smith and Josiah J. Craig. Josiah received the Outstanding Physiology Senior award.

Graduate Students

*Outstanding Zoology Masters Student: Craig E. Stanley, Jr.
Outstanding Zoology Doctoral Student: Chad J. Boeckman
Outstanding Wilhm Teaching Assistant-Masters: Lindsey D. Carter
Outstanding Wilhm Teaching Assistant-Doctoral: Michael R. Schwemm
S. L. "Bud" Burks Memorial Graduate Research Award: Priyanka Roy Chowdhury
Waters Grant-in-Aid of Research: Shella Swain
Bob and Julia Bollinger Field Research Grant: Bart J. Kensinger
Bryan P. Glass Graduate Scholarship: Matthew L. Anderson
Departmental Travel Grant: Justin B. Lack
Zoology Graduate Student Society Outstanding Masters Student: Craig E. Stanley, Jr.
Zoology Graduate Student Society Outstanding Doctoral Student: Chad J. Boeckman
Zoology Graduate Student Society Best Lunchtime Seminar Presentation:
Fall - Matthew L. Anderson
Spring - Angie Reisch*

Faculty

Zoology Graduate Student Society Outstanding Graduate Mentor: Dr. Meredith Hamilton



Left to right: Julia Bollinger, Bob Bollinger, Bart Kensinger and Dr. Stan Fox. Bart received the Bob and Julia Bollinger Field Research Grant.

The Alumnidae

DEPARTMENT OF ZOOLOGY
Oklahoma State University
Life Sciences West 501
Stillwater, OK 74078

Nonprofit Organization
U.S. Postage Paid
Permit No. 191
Stillwater, OK 74078

Phone: 405-744-5555

<http://zoology.okstate.edu>

Keep in Touch and Help Us Grow Stronger

We hope you enjoy *The Alumnidae*, and we hope to hear from you about future issues. To be sure that you continue to receive the newsletter, please update address and email information with the OSU Alumni Association at:

<http://www.orangeconnection.org/ng/update>.

If you have comments, questions, or contributions for *The Alumnidae* send them directly to meredith.hamilton@okstate.edu

YES! I want to support the ZOOLOGY DEPARTMENT at Oklahoma State University!

1. DESIGNATION

- Zoology Excellence Fund (223750)
- Wilhm Teaching Assistant Award (228230)
- Scholarship for Zoology Students (224550)
- Burks Student Award (223590)
- Dr. Michael Steelman Scholarship (229830)
- Bryan P. Glass Scholarships (223750)
- Chappabitty Scholarship (228855)
- Collection of Vertebrates
- Other _____

2. AMOUNT _____

3. OPTIONS

Check - Please make payable to the OSU Foundation

Credit card # _____

Expiration date: _____

Cardholder's Signature:

4. CONTACT INFORMATION

Name: _____

Address: _____

City/State/Zip: _____

Please contact me regarding additional gift opportunities

Please complete and mail to OSU Foundation,
PO Box 1749, Stillwater, OK 74076

Or log onto our website to make a gift:
www.osugiving.com