

Carnivore Ecology from Across Northeastern Madagascar

On Wednesday, December 7th, Zach Farris gave a seminar entitled, “Carnivore Ecology Across Northeastern Madagascar.” Zach is currently a third year doctoral student in the Department of Wildlife Sciences at Virginia Tech University in Blacksburg, Virginia. He received a BS from the University of Central Arkansas in 2003 and earned his MS from the University of Arkansas at Little Rock in 2006. While at UCA he majored in biology, being advised by Dr. Don Culwell, and became fascinated with wildlife in courses such as animal behavior, vertebrate zoology, evolution, and ecology. As an undergraduate he set his sights on the fascinating wildlife and culture of Madagascar and received an amazing opportunity to spend *(continued)*

Alumna Focus: Dr. Mary Good Class of 1950



Mary Good was born in Grapevine, TX and was raised in northern Arkansas. She received her B.S. from the University of Central Arkansas (Arkansas State Teachers College at the time) in 1950 and was a contemporary of Dr. Jeff Farris, Jr. a former President of UCA. She was chosen as the 1990 UCA distinguished alumna. She completed her Ph.D. in Chemistry at the University of Arkansas, Fayetteville in 1955 and began a career in academia in the Louisiana State University system first at LSU, Baton Rouge and later at LSU, New Orleans. She was a professor of chemistry and materials science, ultimately being named a Boyd Professor, the University’s highest professional rank. In 2011, she retired as the founding Dean of the George W. Donaghey College of Engineering and Information Technology at UALR.

Dr. Good left academics in 1980 for an industrial position. She served as senior vice-president of technology at Allied Signal, Inc., *(continued)*

Save the Date!

UCA Reopens
Wednesday, Jan. 4

Spring Classes Begin
Thursday, Jan. 12

Last Day to Register/Add Classes
Friday, Jan. 13

Martin Luther King, Jr. Holiday
Monday, Jan. 16



(Mary Good continued)
where she was responsible for the centralized research and technology organizations with facilities in Morristown, NJ; Buffalo, NY; and Des Plaines, IL. She was a member of the Management Committee

and responsible for technology transfer and commercialization support for new technologies. This position followed assignments as President of Allied Signal's Engineered Material Research Center, Director of the UOP Research Center, and President of the Signal Research Center. She has also served on the board at Biogen, the biotech company, IDEXX Laboratories and the Lockheed Martin Company. She currently serves on the board at Axiom Corp.

Dr. Good began a career in public service when President Carter appointed her in 1980 to the National Science Board, reappointed by President Reagan, serving as Chairman of the Board from 1988-1991. She served four years as the Under Secretary for Technology for the Technology Administration in the Department of Commerce in the Bush administration. The Technology Administration is the focal point in the federal government for assisting U.S. industry to improve its productivity, technology and innovation in order to compete more effectively in global markets. In particular, the Administration works with industry to eliminate legislative and regulatory barriers to technology commercialization and to encourage adoption of modern technology management practices. The Technology Administration is comprised of the National Institute of Standards and Technology, the National Technical Information Service, the Office of the Assistant Secretary for Technology Policy, and the Office of Air and Space Commercialization. In addition to her role as Under

Secretary for Technology, Dr. Good chaired the National Science and Technology Council's Committee on Technological Innovation (NSTC/CTI), and served on the NSTC Committee on National Security.

Dr. Good is a member of the National Academy of Engineering, a past president of the American Chemical Society, a Fellow of the American Association for the Advancement of Science, and a member of the American Institute of Chemists and the Royal Society of Chemistry. She has been active on the boards of directors of such groups as the Industrial Research Institute, Oak Ridge Associated Universities, and the National Institute for Petroleum and Energy Research. She has also served on advisory panels for the National Research Council, the National Bureau of Standards, the National Science Foundation Chemistry Section, the National Institute of Health, NASA, and on the executive committee for the International Union of Pure and Applied Chemistry.

In 1969, Mary received the Agnes Fay Morgan Research Award from the Iota Sigma Pi honorary society for women in chemistry. She was awarded the Francis P. Garvan–John M. Olin Medal presented by the American Chemical Society for distinguished service to chemistry by women chemists 1973. She was the 1983 recipient of the American Institute of Chemists Gold Medal, the highest award given by the American Institute of Chemists. In 1996, she received the Glenn T. Seaborg Medal honoring “persons who have made exceptional scientific contributions in the fields of chemistry or biochemistry.” She was the 1997 recipient of the Priestley Medal, the highest honor conferred by the American Chemical Society. The Vannevar Bush Award was presented to her in 2004 for her “contribution toward the welfare of mankind and the Nation through public service activities in science and technology.”





(Madagascar Ecology continued) four months working on a research project studying Milne-Edwards Sifakas in southeastern Madagascar.

He returned to Madagascar for his master's research in which he studied the rare, elusive, and exceptionally bizarre aye-aye, Madagascar's most puzzling primate. During this time he had the great privilege to work with the BBC and actress Miranda Richardson on a documentary that highlights the uniqueness and conservation plight of this enigmatic lemur.

It was not long after finishing his master's degree that he was presented with an amazing opportunity from researchers at the Wildlife Conservation Society and Virginia Tech University to continue this pursuit of studying Madagascar's elusive and unknown wildlife while earning his doctorate. This

project, a dream come true, is the first ever to investigate carnivore ecology across rainforest habitat in Madagascar. He has spent the last three years using non-invasive techniques to provide the first population parameter estimates on these endemic and endangered carnivores. Additionally, he is investigating how invasive pressures such as fragmentation, invasive species, poaching, and human encroachment are influencing these carnivore populations across Madagascar's largest protected area complex.



Computer Science Faculty Publish Paper with former student Vincent Yip

Drs. Sinan Kockara and Chenyi Hu from Computer Science Department conducted a follow-up research project with graduate student, Mr. Vincent Yip. Their research paper "Efficient Calculation of Structural Similarity Threshold for the SCAN Network Clustering Algorithm" is published in IEEE International Conference on Bioinformatics and Biomedicine and was presented by Dr. Kockara in November 2011. In the paper, a new and improved version of The Structural Clustering Algorithm for Network (SCAN) is developed. SCAN is a community detection algorithm that is capable of detecting hubs and outliers, in addition to cluster members. Community detection algorithms play an important role in discovering knowledge in networks especially in biomedical and social networks.

In May 2010, Vincent Yip (right in the picture) defended his Master's thesis "Concept Discovery for Pathology Reports using an N-gram Model" directed by Dr. Kockara. Vincent Yip is now pursuing his Ph.D. in the Computer and Information Science Department at the University of Oregon and he is also lecturer at Department of Computer Information Systems, Umpqua Community College, Roseburg, Oregon.



Left: Dr. Sinan Kockara, Right: Mr. Vincent Yip

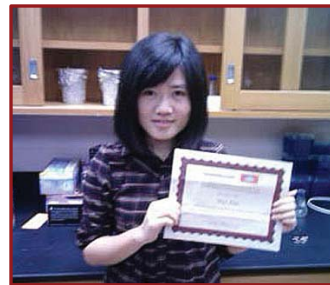


Biology Student Wins Award at Arkansas INBRE Conference 2011

Lynn Nguyen and Wei Xia, biology undergraduate students from the laboratory of Dr. Bhupinder Vohra, presented their research work at the Arkansas INBRE Research Conference 2011 held at the University of Arkansas at Fayetteville. Lynn Nguyen's research work describing the mechanism of peripheral neuropathies was awarded third place in the undergraduate posters category. This research, has provided evidence that early apoptotic pathways like phosphatidylserine translocation and late executioner pathways in the form serine protease activation are activated in wallerian degeneration. This research is going to provide a new direction in understanding the mechanism of axon degeneration in injury and neurodegenerative disorders.



Biology Student Wins First Prize at 2011 Annual Meeting of Arkansas Chapter Society for Neuroscience



Wei Xia, a undergraduate biology student from the laboratory of Dr. Bhupinder Vohra, presented her research work at the 2011 Annual Meeting of

Arkansas Chapter of the Society for Neuroscience held at University of Arkansas for Medical Sciences (UAMS). Neuroscientist from all the major institutes in Arkansas including UAMS and National Center for Toxicological Research (NCTR) participated in this meeting. Wei Xia received the best research poster award for an undergraduate student at this meeting (Please see more information at ar-neuro.org). In this research, Wei Xia modeled a human neurological disorder by introducing a human mutant gene in the primary cultured neurons from the embryonic mice. This work described the sequence of events in neuronal degeneration due to the mutation responsible for Charcot-Marie-Tooth disease (CMT) type 2A, a dominantly inherited disease characterized by degeneration of peripheral sensory and motor axons.





Environmental Education

This fall, members of Laurie Warren's Environmental Theory and Application class were certified in the Wet and Wild Education program as part of the course. They were also required to put their knowledge into practice with the Boys and Girls Club after school program in Mayflower, conducting a variety of wildlife and aquatic education activities with elementary and middle school students. The students did a great job working with the kids, teaching them about their environment and how to protect it. The kids also enjoyed the activities and hanging out with college students; it was a fun, productive afternoon for all involved. Thanks to Catherine Santoro with the Boys and Girls Club (and a UCA Environmental Science major) for help coordinating the activity.



Arkansas Envirothon 2011



The Arkansas State Envirothon was held at UCA on November 20 and 21, sponsored by the College of Natural Sciences and Mathematics (CNSM).

Although temperatures were unusually warm and humid,

organizers were glad the heavy rain held off for the field-testing in the Jewel Moore Nature Reserve and BBQ dinner at Toad Suck Park. Dr. Laurie Warren, Biology faculty and current vice-president of the Arkansas Envirothon Committee coordinates the state contest. Dr. Ginny Adams (Coordinator, Environmental Science program), Dr. Marc Hirrel (Biology Dept), and Leigh Ann DenHartog (Biology Program Coordinator) serve as additional members



of the host committee. Eight graduate students from the Biology Department and about 50 Environmental Science and Biology undergraduates also served as much needed volunteers; making this another successful contest.

The Envirothon competition gives high school Envirothon teams the chance to demonstrate their knowledge of forestry, aquatics, soils, wildlife and current environmental issues. Teams are *(continued)*



(*Envirothon continued*) scored on a combination of field station testing and an oral presentation during which possible solutions to a current environmental issue (this year, Nonpoint Source Pollution and Low Impact Development) are addressed. By participating in the Envirothon program, students learn about problems, solutions, and conservation of Arkansas' natural resources, helping them to become knowledgeable citizens.

Eighteen teams from Central, West Central, and Northwestern conservation districts participated in this year's competition.

Congratulations to Little Rock Central Team B as the overall winner of the 2011 Arkansas Envirothon. In July they will travel to Susquehanna University in Pennsylvania to represent Arkansas at the North American Competition. Rounding out the top five winners were Little Rock Central Team A (2nd place), Marshall Team B (3rd), Mills University High School Team B (4th), and Mills University High School Team A (5th).

Many thanks to: CNSM, AR Natural Resources Commission, AR Association of Conservation Districts, Southwestern Energy, and Walmart for their financial support as major sponsors of the competition. To learn more about the Envirothon program, please contact Dr. Laurie Warren (lauriew@uca.edu) or visit <http://www.uaex.edu/envirothon/>.





PrivacyStar Announces Partnership with UCA's EPIC Residential College

PrivacyStar, maker of the smartphone application that enables users to manage their mobile device with industry leading privacy features, has announced its participation in the Entrepreneurship, Public Scholarship, Innovation, & Community Engagement (EPIC) Residential College program at University of Central Arkansas (UCA).

PrivacyStar will serve as a catalyst to a growing entrepreneurial climate at UCA and has already been instrumental in providing input into the guiding principles, feasibility and real world goals of this residential student community.

The EPIC program (www.uca.edu/epic) at UCA fundamentally changes and enriches the student living and learning experience at the University. It is designed to be the most unique and transformative residential learning community in the entire nation for undergraduates. Students from various disciplines including science and technology, business and the fine arts will collaboratively live, work and tackle real-world challenges that will have both commercial and community impact.

"Our unique program provides students with the tools to engage entities outside of the University like they never have before," said Dr. Steven Runge, Dean of the College of Natural Sciences and Mathematics at UCA. "Students who participate in the EPIC program will partake in learning and problem solving while tackling real world challenges that exist in the community."

PrivacyStar strongly supports the EPIC program and believes it will evolve into a thriving incubator of new businesses while also producing graduates who will become effective business and community leaders. The company will participate in the program serving as a full cycle use case and coordinate directly with the faculty to provide both project and instructional opportunities. To further the incubation

of new businesses and non-profit entities from the program, PrivacyStar will also be working as a liaison with outside communities such as state government agencies and investment firms.

EPIC's emphasis on radical collaboration and cutting-edge programming outside the classroom offers students an experience and opportunity not found at other schools. UCA is positioning itself to be the first-choice for students interested in developing skills in creativity, innovation and public engagement. Through collaborative thinking and innovative projects, its students will discover how to become the big thinkers and leaders of today and tomorrow.

"We have been working closely with UCA sharing our thoughts on the required expertise and knowledge necessary for new hires coming straight out of college," said Josh Smith, COO of PrivacyStar. "We are very excited that the EPIC program has been launched. EPIC will offer students the collaborative and entrepreneurial skills required to succeed in the work place and we look forward to participating and driving further innovations in this program."

About University of Central Arkansas

Founded in 1907, University of Central Arkansas strives to provide strong academic programs to meet the diverse needs of those it serves. UCA is committed to the intellectual, social, and personal development of its students; the advancement of knowledge through excellence in teaching and research; and service to the community. UCA ranks 23rd in the category of "Top Public Schools" among regional universities in the South in the 2012 U.S. News & World Report's annual rankings of universities and colleges. For more information on UCA please visit <http://www.uca.edu/>.
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(PrivacyStar continued)

About PrivacyStar

PrivacyStar, a smartphone application, provides consumers with the top of the line in phone privacy, protection and preference. Based in Conway, Arkansas, PrivacyStar has years of regulatory experience working with both Federal and State bodies to define and understand all aspects of consumer protection laws and regulations, and has patented numerous privacy and preference solutions.

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Biology Department has the Spirit of the Holidays



