



#### JUNE/JULY 2013 • Official newsletter of the LSU College of Science

### **NEWS/EVENTS**







Photo: James Eaton / Bird tour Asia)



# LSU Welcomes New President and Chancellor

New LSU President and Chancellor **F. King Alexander** began his tenure at LSU on Monday, June 24. He comes to LSU from California State University Long Beach -- a university and a state facing similar challenges to those that LSU and Louisiana are currently tackling.

# LPB Presents STEM Status: Science, Technology, Engineering and Math in Louisiana

**Guillermo Ferreyra**, interim dean of the College of Science, and **Isiah Warner**, LSU System Boyd Professor and vice chancellor for strategic initiatives, participated in a Louisiana Public Square taping of *STEM Status*. The LPB program focuses on Louisiana's growing STEM workforce and what the state is doing to prepare educators to teach STEM courses and encourage students to pursue STEM careers.

# LSU Contributes to Discovery of New Bird Species

Scientists with the Wildlife Conservation Society, BirdLife International, LSU, the University of Kansas and the Sam Veasna Centre have discovered a new species of bird in Phnom Penh, the urbanized capital of Cambodia. Known as the Cambodian tailorbird (*Orthotomus chaktomuk*), the species is one of only two found solely in Cambodia. LSU and the University of Kansas did the DNA analysis necessary to declare the species new to science. **Fred Sheldon**, George H. Lowery Jr. Professor of Biological Sciences and director of the LSU Museum of Natural Science, was one of the scientists who described the bird in a special online early-view issue of the Oriental Bird Club's journal *Forktail*. Other authors include: Simon Mahood, Ashish John, Hong Chamnan, and Colin Poole of the Wildlife Conservation Society; Jonathan Eames of BirdLife International; Carl Oliveros and Robert Moyle of University of Kansas; and Howie Nielsen of the Sam Veasna Centre.

## **College Prepares for 2013 Boot Camps**

The College of Science is preparing for its 2013 pre-college boot camp to be held August 11-16. **The deadline to apply is July 15.** 

The boot camps have been held annually for eight years, with over 1,800 participants. To date, nearly 30 institutions across the U.S. have replicated or plan to replicate the program.

Read Success Replicated: LSU Boot Camps Trending Nationwide

2013 Boot Camps web page

**KUDOS** 



**Susanne Brenner**, Michael F. and Roberta Nesbit McDonald Professor of Mathematics, has been invited to deliver a plenary address at the Sectional Meeting of the American Mathematical Society at the University of North Carolina, Greensboro, November 8-9, 2014.



John Caprio, George C. Kent Professor of Biological Sciences, met with the president of Kogoshima University in Japan June 7. Caprio began a collaborative investigation at the university in 1984 with Kogoshima University professors Sadao Kiyohara and Shuitsu Harada concerning the physiology of the taste of the sea catfish *Plotosus japonicus*.



The Goldschmidt International Geochemistry Conference, sponsored by the European Association of Geochemistry and the Geochemical Society, interviewed **Barb Dutrow**, Adolph G. Gueymard Professor of Geology, for its *Outstanding Woman in Science* video.

View video



**Brian Smith**, post-doctoral researcher in the lab of Robb Brumfield, curator of genetic resources at the LSU Museum of Natural Science and associate professor of biological sciences, will be joining the Department of Ornithology at the American Museum of Natural History as an assistant curator. This position is one of the most coveted jobs in ornithology.

#### **NEW FUNDING**



# LSU Geologist Receives NASA MDAP Award to Explore Chemical Provinces on Mars

NASA's Mars Data Analysis Program (MDAP) recently awarded LSU geologist **Suniti Karunatillake** a three-year \$253,000 grant to develop geologic evolution models for regions of Mars. These regions, known as "chemical provinces," appear striking due to unusual chemical compositions.

"My dream of discovering life beyond Earth motivates me to explore Mars across several areas of planetary geoscience," says Karuntillake. "Longer term, I hope to develop collaborations across

exobiology and Europa research communities."

The MDAP award, a collaborative effort with colleagues at Rider University and Stony Brook University, will support Karunatillake's Planetary Science Laboratory (PSL) in the Department of Geology & Geophysics. The PSL models the geological evolution of planetary bodies with a focus on Mars by synthesizing in situ and orbital data using computational methods. LSU's geology and geophysics community, particularly faculty researchers involved in sedimentary and solid Earth processes, provide terrestrial analog expertise for the PSL research projects. The laboratory also enables collaborations across disciplines in physics and astronomy and life sciences.

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Two undergraduate students received funding to conduct research in Professor of Biological Science Kenneth Brown's laboratory this summer. **Mitch Borgan** will receive \$2,500 through the Sea Grant Undergraduate Research Opportunities Program to study the "Effect of Deep Horizon Oil Spill on Oyster Reef Commensal Communities." **Bridget Rogers** will receive \$4,500 through the Board of Regents/EPSCoR SURE program to study the "Effects of Deep Horizon Oil Spill and Predation on Oyster Reproduction and Recruitment."

#### **FACULTY PROFILE**



**Maheshi Dassanayake,** assistant professor of biological sciences, joined the LSU faculty in January, along with her spouse Suniti Karunatillake, assistant professor of Geology and Geophysics. Dassanayake is a native of Colombo, Sri Lanka. She earned a bachelors of science from the University of Colombo in Sri Lanka and a PhD from the University of Illinois, Urbana-Champaign. She currently teaches Evolution (BIOL 3040).

"What attracted me to LSU was the diverse and welcoming research environment in Life Sciences," says

Dassanyake. Her current research focuses on understanding how to interpret complex and fascinating messages embedded in genomes.

"Novel genomes allow novel ways of discovering and interpreting the genetic mechanisms underlying physiological and evolutionary processes," says Dassanayake. "Insight gained from such processes will be needed in the development of crops for sustainable agriculture and effective conservation strategies, especially in the face of climate change, overpopulation, and increasing demand for food and bioenergy crops."

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#### **ALUMNI UPDATE**



Jenna Carpenter, 1989 PhD graduate in mathematics, was elected the first vice president of the Mathematical Association of America. Her term will last from February 2014 though January 2016. Carpenter is currently the Wayne and Juanita Spinks Professor of Mathematics at Louisiana Tech University. She is also the associate dean of administration and strategic initiatives, and director of the Office of Women in Science and Engineering.

#### **STAR SCHOLARS**



## Medical Physics Student Receives Fulbright Scholarship

Medical physics student **Lydia Wilson** realizes a long-time dream as she is named LSU's most recent Fulbright Scholar. Wilson will be spending a year in Croatia studying disparities in radiotherapy cancer treatment as part of the Fulbright U.S. Student Program, which offers fellowships for U.S graduating college seniors, graduate students, young professionals and artists to study abroad for one academic year. The scholar will be observing medical physicists and therapists at five radiotherapy centers in Croatia, with most of her time spent at the Zagreb Cancer Clinic in the country's capital city. Her research will focus on treatments for the five most common cancers: breast, prostate, lung, colorectal and anal.

Photo (left to right): Director of LSU Medical Physics Program Wayne Newhauser, Fulbright Scholar Lydia Wilson, and LSU Provost Stuart Bell

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**Nicholas Speller**, a PhD student in chemistry and Louis Stokes Louisiana Alliance for Minority Participation Bridge to the Doctorate Program scholar, was one of five LSU students recognized by the National Science Foundation with Graduate Research Fellowships. The fellowships provide a three-year annual stipend of \$30,000 along with at \$10,500 cost of education allowance for tuition and fees, international research and professional development opportunities, and research opportunities at any accredited U.S. institution of graduate education of choice.

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#### **ALUMNI & DEVELOPMENT**



## Alum Remembers the Professor He Never Had

My name is John Hall and I graduated in 1982 with a BS in microbiology from what was then known as the College of Arts and Sciences. Since then, I've been lucky and have had a great career! I didn't graduate with any distinction, I'm not wealthy and not on anybody's board of directors, but I couldn't have asked to be more fortunate. The education I received from LSU has been so incredibly valuable, and I still refer to some of my old textbooks from 30 years ago!

I want to write about some of the professors that were mentioned in the latest issue of The Pursuit. I was one of the 12,700 students who had Dr. Socolofsky for freshman biology class. Doing well in his class gave me confidence that I could succeed in college. I also had Dr. Jerry Draayer for physics. He was a great guy, but his tests were tough! One professor I never had was Dr. William A. Pryor. Dr. Pryor. He seemed to me to be the highly energetic "science guy," and I would never be able to understand his lectures or pass his tests. So for organic chemistry, I signed up for Dr. Kendall Houk's class. In contrast to Dr. Pryor, Houk was a laid back, very cool sort of guy. I thought my chances of passing the class were better with Dr. Houk. One day in the middle of the semester, Houk didn't show up for class. Instead, Dr. Pryor came in and said he was going to be our substitute professor that day because Houk was sick. I remember thinking to myself that I was going to be lost and I wouldn't understand Pryor's lecture. Pryor started off talking about sp orbitals in the style unique only to him. I remember wondering why he was talking about sp orbitals when we already covered that earlier in the semester. After about 5 minutes of that, he transitioned into an introduction of free radicals. He talked about their formation and highly reactive properties. After just a few minutes of that, he stepped away from the chalkboard, faced the class, and said one of the main sources of free radicals that people are exposed to comes from cigarette smoke. From that point on, and for the next 45 minutes, Dr. Pryor made an emotional, very passionate plea to everyone in our class to please never start smoking and for those students that already had, to please stop. He talked about how free radicals in the tobacco smoke can damage the body's cells, and how that damage can be reversed simply by quitting smoking. He continued his passionate plea all the way to the end of the period. I left the classroom a little bewildered, because nothing related to the course material was covered in his class.

It took me more than a few years to figure out that Dr. Pryor must have planned this. He knew that he was probably never going to get any more than that one hour of being Dr. Houk's substitute, and would never see most of those students again. So, he took his one hour of opportunity to try to do what he could to save people's lives by practically begging them to avoid cigarettes. With all due respect to all my professors at LSU, Dr. Pryor's passionate plea is the only lecture I can remember from start to finish 30 years after graduation. *So, this is my tribute to Dr. William A. Pryor....the best professor I never had!* 

I hope you have a great day, and as always, Geaux Tigers!

John

**About the author:** LSU alum John Hall has spent 25 years working in biotechnology. He has worked at some of the world's major biotechnology companies, including the Chiron Corporation and Novartis. He has also contributed to some of the very first recombinant HIV vaccine candidates and to early work on the HPV vaccine known today as Gardasil.



## ExxonMobil, its Employees and Retirees Give More than \$1.2 Million to LSU Foundation

ExxonMobil presented a check for \$886,774 to the LSU Foundation as part of the ExxonMobil Foundation's 2012 Educational Matching Gift Program.

The gift represents the ExxonMobil Foundation match of 2012 employee, retiree and surviving spouse donations of \$319,115 to LSU, the LSU AgCenter, and the LSU Paul M. Hebert Law Center. With the ExxonMobil Foundation match, the total commitment from ExxonMobil, its employees and retirees was \$1,205,889, and continues the company's longstanding support for LSU. The LSU College of Science is among the LSU colleges and units supported.

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