

MILLSAPS COLLEGE

BIOLOGY NOTES



Volume 1, Issue 2

Spring 2011

Faculty

- [Dr. Debora Mann](#)—chair
601-974 -1415
- [Prof Bob Nevins](#)
601-974 -1412
- [Dr Jim McKeown](#)
601-974 -1410
- [Dr Sarah Lea Anglin](#)
601-974 -1414
- [Dr Markus Tellkamp](#)
601-974 -1095
- [Dr Brent Hendrixson](#)
601-974 -1413
- [Dr Naila Mamoon](#)
601-974 -1283

RECEPTION honoring Dr. McKeown

April 25, 2011

Students, alumni, and other members of the Millsaps community are invited to a reception in the Leggett Center on the Millsaps campus from 2 to 4 PM.

Inside this issue:

Douglas Aquarium	2
Yucatan Program	2
New Species of Millipede	2
Fungal Researchers	3
Brown Elementary	3
Base Pair	3
Retirement	4

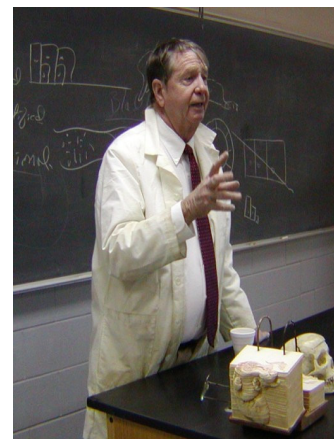
Celebrating Dr. Jim McKeown's 49 Years

After forty-nine years of service to the College, Dr. Jim McKeown has announced that he will retire at the end of the 2010-2011 academic year. We will surely miss Jim's wise counsel, his passion for teaching, and his dedication to the ideals of a liberal arts education that have been so important in shaping the Biology Department and Millsaps College. At the same time, we know that Jim is looking forward to having more time for gardening, golf, travel, and for visiting children and grandchildren. And so, in appreciation of his service and accomplishments, we invite you to join us in celebrating Jim's retirement.

Since joining the Millsaps faculty in 1962, Jim has

served under seven Deans and nine Presidents and interim Presidents. Over the years he has seen many changes in the College. For example, he recounts a time when the young women in his zoology lab arrived wearing raincoats even on sunny days. Upon inquiring about this puzzling choice of attire, he was told that beneath their raincoats the women were wearing shorts because they had no time to change clothes between zoology lab and P.E. class. In those days, women were not to be seen wearing shorts on campus.

Jim has made major contributions to the governance of the College, having served on nearly every faculty committee and as Chair of the Biology Department (1977-1992), Chair of the Division of Natu-

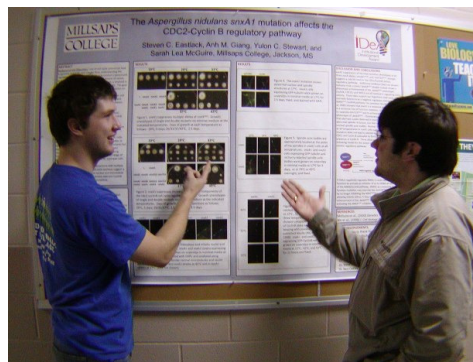


ral Sciences (1988-1992) and Associate Dean of Sciences (1992-1994). In recognition of his teaching, scholarship and service to the College, Jim was named Millsaps' Outstanding Professor in 1992.

Among his many accomplishments, it is for his teaching that Jim is most renowned.

Continued on page 4

2011 Millsaps' Research Symposium



First Place for an oral presentation:

James Thompson (Chemistry) for "A COMPARISON OF LA-ICP-MS, LIQUID ICP-MS, AND XRF ANALYTICAL TECHNIQUES IN IRON AND COPPER ORE PROVENANCE"

Second Place for an oral presentation:

Stephen Eastlack (Biology) for "USING WESTERN BLOTTING TO DETERMINE CELL CYCLE REGULATORY PROTEIN CONCENTRATIONS IN SNXA1 MUTANTS OF *ASPERGILLUS NIDULANS*"

pictured at left

The Rosco and Bobbie Douglas Aquarium

As some of you might remember, I have tried to maintain a saltwater aquarium in the department since the 63-64 academic year with varying degrees of success. The aquarium at that time was the only saltwater aquarium north of the coast. The problem then as it is now was proper filtration, water flow, and the lighting system. In the 70's the Smithsonian Natural History Museum devised a way to deal with all of these problems. All of the very large aquaria across the country exist because of these breakthroughs.

The rationale for the expense of a saltwater tank has always been to provide students the chance to observe living members of all the major phyla they study in General Zoology.

This goal has finally been achieved and the 120 gallon reef tank now contains representatives of all the major phyla from poriferians to chordates. The tank is a wonderful living example of one of the major ecosystems in the world—a reef.

This has been made possible because of the generous gift by Mark, Kevin, Jeff, and Stacy Douglas in honor of their mother and father, Rosco and Bobbie Douglas. To all of them I say thank you! You have made a dream of mine come true after all these years.
Jim McKeown



Dr. Tellkamp at Conservation Consortium; Yucatan

Dr. Tellkamp and James Callaghan represented Millsaps College and Kaxil Kiuic at a meeting of Alianza Itzincab, Yucatan. Alianza Itzincab is an important consortium of non-governmental and governmental organizations that resulted from The Nature Conservancy's Forest Fragments of the Yucatan Program



The meeting dealt with the implications of the REDD+ program for the Yucatan Peninsula. REDD+ is the United Nations collaborative program on reducing (greenhouse gas) emissions from deforestation and forest degradation in developing countries.

New Species of Millipede

Assistant Professor of Biology, Dr. Brent E. Hendrixson, was recently honored with the name of a brand new species of millipede from the Southern Appalachian Mountains.

This multi-legged arthropod, dubbed "Hendrixson's mimic millipede" or *Brachoria hendrixsoni*, displays distinct warning coloration and produces cyanide as a defense mechanism. Hendrixson

first discovered this species while searching for trapdoor spiders in the Blue Ridge Mountains of eastern Tennessee. "I am flattered to have this species named after me," Hendrixson says. "Science is constantly changing but a species name lasts forever. This is an incredible honor."

More information on this millipede and its relatives can be found in: Marek, P.E. 2010. A revision of the Appalachian millipede ge-

nus *Brachoria* Chamberlin, 1939 (Polydesmida: Xystodesmidae: Apheloriini). *Zoological Journal of the Linnean Society*, 159: 817-889.



Fungal Researchers are Fun Guys!

Steven Eastlack and Clifford Coile have been performing research in Dr. Sarah Lea Anglin's laboratory to characterize cell cycle mutants in the fungus *Aspergillus nidulans*. They successfully defended their honors theses in November and are continuing to work in the lab "Just because it is fun!" Steven spent two years and two summers working to generate strains with fluorescently labelled proteins for use in microscopic localization; he also performed biochemical analyses to determine if various protein levels were affected by mutation of the lab's favorite gene, *snxA*. Steven and Dr. Anglin travelled to a national conference in Washington, D.C. in July, 2010, where his

poster was selected as one of the best posters in the cancer biology section...in competition with post-doctoral students and graduate students from large universities across the nation!

Clifford used strains generated during the summer (while he was galloping around the Yucatan with Dr. Tellkamp!) to characterize the effects of *snxA* on localization of another cell cycle control protein. His work showed that there are very specific (and interesting!) effects of mutation of *snxA* on the localization of cell cycle proteins, laying the foundation for

further studies that will help demonstrate the importance of *snxA* in cell cycle control. Their work will be presented at the International Fungal Genetics Conference over spring break.



Brown Elementary—Adopt a School



As part of the [Adopt-A-School effort at Brown Elementary](#), Millsaps students surprised first graders with their own interactive presentation, "Spying on Spiders." Professor Brent Hendrixson's students, who are taking his class, Biology of Terrestrial Arthropods, created four learning centers. Each center featured engaging visuals and hands-on specimens collected by Millsaps students.



Dominique Benson recently won 1st place overall in the Region 2, MS Science and Engineering Fair held at JSU. Her research topic was Epigenetic Regulation of the Serotonergic System during Neuronal Cell Differentiation

BASE PAIR

Millsaps College, UMMC and the Jackson Public School District have recently partnered in a biomedical research mentorship program, the Base Pair program, made possible by a grant from HHMI to Drs. Robin Rockhold and Donna Sullivan at UMMC.

Currently, Dominique Benson is "paired" with Dr. Naila Mamoon. A hard working and conscientious student, Dominique is a senior at Murrah High School and is completing her one and a half year mentor-mentee partnership this summer.



Dr Mamoon and Dominique

Jim's retirement continued...

The traditional "Last Lecture" will be presented April 14, 2011 by Dr McKeown. This tradition (now in its 5th year) is based on "The Last Lecture", a prize-winning book (& lecture) by Randy Pausch at Carnegie-Mellon University in 2007. The illustrious series at Millsaps has featured Sandy Zale, James Bowley, Ted Ammon, Prof. Nevins and now Dr McKeown.



Generations of students have found the world of vertebrate evolution come alive in his comparative vertebrate morphology course. Senior Marie Thomas, who took Jim's comparative vertebrate morphology class says, "Despite his classes being some of the toughest I've taken at Millsaps, Dr. McKeown's passion for teaching and dedication to students have helped inspire me to continue my education in graduate school." Marie's father, William (Trey) O. Thomas III, M.D. also studied under Dr. McKeown when he was at Millsaps. Says Dr. Thomas, "Dr. McKeown is an extremely intelligent and talented educator. It has been my distinct honor to have been taught by someone who made medical school a breeze." Another father-daughter pair who have taken Jim's courses are Steven C. Brandon, M.D. and senior Emily Brandon. Says Dr. Brandon, "Dr. McKeown's attitude was always 'Tough, just learn it!' I don't think that I would have made it through school at Millsaps if it hadn't been for that philosophy. Most people don't do things until someone makes you sit down and do it for yourself. Dr. McKeown made me take the time to learn on my own and I'm thankful for that attitude." Emily says, "I think Dr. McKeown is one of those professors who truly wants you to learn what he is teaching; he wants you to ask questions so that you will understand what he is saying. He has his tricky tendencies that make you ask yourself 'Why am I taking this class?!' but in the end you know why you're taking his class. You take his classes to challenge yourself and because you know you are learning things that will stick with you for the rest of your life. He is definitely the best professor I've had the privilege of encountering and I'm grateful that I had the opportunity of taking his classes."

Biology Department
c/o Debora Mann
Box 150307
Millsaps College
1701 North State Street
Jackson MS 39210-0001