With a very large senior class doing research, a nationally-televised Presidential debate on campus, one of the largest classes of new biology majors on record, and multiple club activities, the Department of Biology was an active place during the Fall 2008 semester. In addition to all the activities described in this newsletter, the Fifth Annual Science Undergraduate Research Symposium was held in early December with 24 Biology majors presenting their research in poster format. It was an exciting evening in which younger students talked science with seniors and all those present heard an outstanding presentation from Dr. David Cliffel of Vanderbilt University. The discussions, the camaraderie, and the spirit of accomplishment all embody the best of what the Department of Biology is about. Fall 2008 was a great semester!

Dr. John Niedzwiecki accompanied three students, Will Baugher, Audrey Henson, and Lo Freitas to the SEEPEG 2008 Annual Conference in Eatonton, Georgia. The two senior Biology majors made poster presentations, and Dr. Neidzwiecki made an oral presentation, all on various aspects of their research work with Ambystomatid salamanders. Will focused his work on the ecology of the Streamside Salamander, and Audrey focused on comparative DNA sequences between different populations of the species. Perhaps the most important aspect of the meeting for the students was the ability to interact with graduate students and faculty from large research universities across the south and to learn about graduate school and careers in academic Biology from them.
As part of the “Art of Being Free” theme of Debate08, the Town Hall Presidential Debate sponsored by Belmont, throughout the year a series of speakers was invited to campus to concentrate on the themes of “Energy, Environment, Economy, and Entrepreneurship”. Two of the speakers sponsored by the School of Sciences presented in Fall 2008. On Oct. 10, Dr. Kelly Tiller, Director of External Operations of the Office of Bioenergy Programs at the University of Tennessee, spoke on “The Tennessee Biofuels Initiative”, in which she explained the need for expanded use of biofuels and the initiative leading to a plant for development of biofuels from switchgrass in East Tennessee. On Dec. 4, Dr. David Cliffels from Vanderbilt University spoke on “Plant Power: Electrochemical Energy Conversion Using Photosystem I”, in which he explained the progress of his research on the development of energy cells which derive their energy from plants. This talk was the Keynote Address of the Fifth Annual Science Undergraduate Research Symposium (SURS). Students attended each talk in large numbers and overall understood the relevance of each to current energy demands.

Tennessee Environmental Education Association Annual Conference

Two Biology majors, April Tummins (senior) and Julianna Bejma (sophomore), and Environmental Studies major Lindsay Walker (senior) attended the Tennessee Environmental Education Association Annual Conference in Oak Ridge, TN on September 20, 2008 with Dr. Darlene Panvini. A highlight of the trip was visiting a wind turbine farm in east Tennessee. These three students are interested in pursuing careers involving science education and were able to acquire numerous lesson plans and ideas for teaching environmental topics.

Annual Meeting of Tennessee Academy of Science

The Annual Meeting of the Tennessee Academy of Science was held in Nashville on Nov. 21, 2008. The Department of Biology was well represented by 23 Biology student poster presentations and two faculty oral presentations (Dr. Thomas and Dr. Niedzwiecki). Dr. McGrew also served as a Chair for the Science and Math Teaching Section, and Dr. Murphree continued as Treasurer of the organization. Several students won awards for their posters: April Tummins (first place, botany), Lauren Oeser (first place, zoology), Cy Eaton (second place, microbiology), and Josh Cortopassi (third place [tie], microbiology). Senior Cy Eaton, who did his research on mortality rates of *C. elegans* caused by different strains of *S. aureus*, summarized the importance of the meeting to presenting students: “TAS was a great opportunity for us to practice presenting our research in a more ‘real’ setting, not only to our fellow classmates but also to students from other universities. It is also interesting to see what other Universities are studying.” Three Belmont mathematics majors also made poster presentations, so Belmont’s presence at the TAS Annual meeting continues to grow.

Society for Neuroscience Annual Meeting in Washington, DC

Six Biology majors and two faculty members trekked to Washington, DC for the Annual Meeting of the Society of Neuroscience on Nov. 15-17, 2008. Dr. McGrew’s research students, Roshni Patel, Jackie Hunter, Jeanna Bardin, and Taylor Walter, and Dr. Grammer’s students, Sachin Amin and Christina Inman, all made poster presentations, either in a session of the main meeting (Walter) or in the FUN (Faculty for Undergraduate Neuroscience) session for undergraduates. In addition to their own presentations the students attended sessions on a variety of neuroscience topics and discussed research with the actual researchers in poster sessions of their choosing. Of course, what would a trip to DC be without a stroll down the Mall, at night, in freezing weather, with gale-force winds? Christina’s GPS led us back safely to the Metro and our hotel. Both the scientific and the social networking were excellent!
Biology Undergraduate Research Summer 2008

Summer 2008 was a very active time for senior biology majors who chose to do their research during the summer. These students, thirteen in number, chose to complete their work as members of Summer Scholar Communities (SSC). In this program students work as members of research communities within biology but also meet periodically with research groups from other disciplines, for example, sociology. The purpose of these pizza-filled luncheons is to discuss differences in research between their disciplines as well as particular problems they encounter within their own projects. The summer closes with a celebration dinner in which groups and individuals make oral presentations of their summer’s work. Drs. Ragsdale, McGrew, Niedzwiecki, and Grammer had students who participated in SSC 2008. One student working with Dr. Grammer, Sachin Amin, offered this observation: “While investigating a subject unfamiliar to me—olfactory neuroscience with C. elegans—I came across numerous problems a priori. The Summer Scholars program at Belmont University allowed me to think critically, find answers, apply new methods, tweak existing methods, be practical, and evaluate myself as a problem solver in new situations. This experience helped me gain confidence that I can be successful in tough situations and that I can handle complex tasks effectively. A posteriori, I learned that challenging tasks can be simplified and accomplished.” It should be added that not all the time was spent in research, as the photo of Ocoee rafting trip shows. Congratulations to all SSC students on a summer spent well!

Tri-Beta Plant Sale Fall 2008

Faculty Activities and Recognition

During the Fall 2008 semester Department of Biology faculty were very busy with a host of activities. Elsewhere in this newsletter you will see that Drs. Panvini, Niedzwiecki, McGrew, and Grammer accompanied students to national or regional meetings for presentation of their research. Dr. McGrew made a poster presentation orally at the Annual Meeting of the Society for Neuroscience, while Dr. Niedzwiecki presented at Southeastern Population Ecology and Evolutionary Genetics Annual Conference. In addition, Drs. Thomas and Niedzwiecki made oral presentations at the Tennessee Academy of Science Annual Meeting in Nashville. Congratulations to Dr. McGrew, who applied for and received promotion to Associate Professor as well as tenure, and to Dr. Ragsdale, who received a sabbatical leave for Fall 2009 for a scholarly project.
Contact Us

- Have any comments about the newsletter or the Department?
- An alum with an update on activities?
- Like further information about the Department, its offerings or activities?

Please contact us by one of the following e-mail address or by postal service.

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Belmont Alumni

We want to hear from you! Please take a moment to fill out the information below and send to us.

Alumni Update
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