

College of Science and Technology Newsletter 11-21-13

From the Dean's Desk



As construction progresses on the new Center for the Sciences building, activity is continuing within the College of Science and Technology at a furious pace as we move toward the end of the Fall Semester. In this edition, we spend some time exploring many of the great co-curricular programs that take place each week within CSAT enhancing the Radford University experience for students, faculty and staff alike.

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Society of Physics Students National Director validates and challenges RU physics students

Professional opportunities for physics students and how they can contribute to their local scientific community were among the topics presented by Dr. Toni Sauncy, national director of the [Society of Physics Students](#) (SPS). Dr. Sauncy addressed the RU chapter on Friday, Nov. 8, in Reed 201.

"A thriving chapter like yours is a gateway for your becoming contributing members of the professional community," said Dr. Sauncy in her presentation, "Building Communities and Shaping Culture." She encouraged the 30-member group to transform its initiatives into local action on behalf of themselves, other students, the physics program and Radford University.



The Society of Physics Students (SPS) is a professional association for students. SPS also houses [Sigma Pi Sigma](#), the national physics honor society, and both societies operate within the [American Institute of Physics](#).

"We have a lot more opportunities than I thought," said RU SPS President Alec Frazier. "It is nice to know that the national organization is there with resources and expertise."

Dr. Sauncy briefed the chapter's members on how the national organization can support them individually and as a chapter. To support the full undergraduate physics experience, SPS offers scholarships, internships and professional development opportunities. She also reviewed how SPS can support its local chapters and why strong SPS chapters add value to their universities. Dr. Sauncy said a busy local chapter will help attract students to study physics and help them succeed through graduation by engaging them in fun, challenging activities and providing mutual support.



Physics majors are popular hires in the job market, according to Dr. Sauncy. While research and graduate school are traditional career paths, they are not the only ones. "Physics students are critical thinkers and problem solvers," she said, "but they often don't know how much they know and can't really assess their own value as employable."

Sarah Garza, sophomore physics major from Jacksonville, N.C. was inspired. "It was motivating to hear about what is available to help me as a physics student," she said. "It really sparked me to jump start my undergraduate research aspirations and see what else I can do."

After her presentation, Toni Sauncy, national director of the Society of Physics Students, joined Rhett Herman, chapter advisor, and several members for a conversation on opportunities for professional development and chapter outreach. – *Story by Don Bowman – University Relations*

Radford University Students celebrate National GIS day by mapping campus

Wednesday, November 20, 2013 was the National Geographic Information Systems Day, and the event was celebrated on the RU campus by the continued mapping of the campus. What would normally take months to complete with one or two individuals gathering data, took approximately two hours with more than 40 students, staff and faculty participating. Over 250 new data points were added to the Radford University campus map in a project coordinated by Dr. Andrew Foy of the Department of Geospatial Science.



Participants used their smartphones or other mobile devices to move around campus and gather data by locating various points around campus such as historical spaces and landmarks, handicapped accessible ramps and doors, bike racks and other features. Once identified, users took pictures and uploaded the data to a central location on a GIS Cloud server set up to help facilitate the Radford event. Items identified will make the resultant composite map more useful to many different campus



Britta Sherman, President of Geography Club and Vikki Kirkpatrick, club Secretary, celebrating National GIS Day.

populations. Off-campus areas in East Radford that might be of interest to the University Community are being included as well.

The event was co-sponsored by the RU Geography Club and helped bring awareness to the activities of geographers. "I think it is cool to show the campus what we do" explained club President Britta Sherman. "It's wonderful to involve more people in mapping and capturing this kind of data."

The map is still a work in progress and Dr. Foy along with students will continue to process the information over the next several days to finalize the results of this activity. To view the map in its current form, please visit: <http://viewer.giscloud.com/map/175096/ru-gis-day-event> .

Museum of the Earth Sciences Lecture: Earthquakes in Virginia

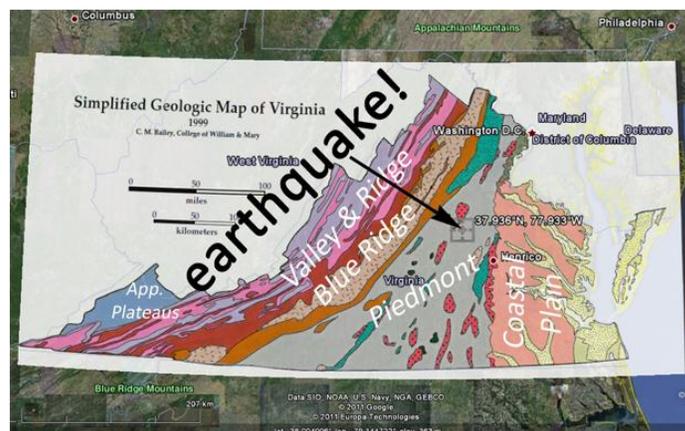
Dr. Christopher “Chuck” Bailey, Chair of the Department of Geology at the College of William and Mary, was the guest lecturer on November 12 in the Hurlburt Auditorium presenting “Earthquakes in Virginia” as a part of the Museum of the Earth Sciences Lecture Series.

Throughout the presentation, Dr. Bailey helped explain the phenomenon as it occurs in Virginia, which was most evident on August 23, 2011 with a 5.9 earthquake centered in Mineral, Virginia. Dr. Bailey was in a pre-semester meeting with his colleagues at William and Mary when the quake began and the incident was caught on video which he shared with the audience.



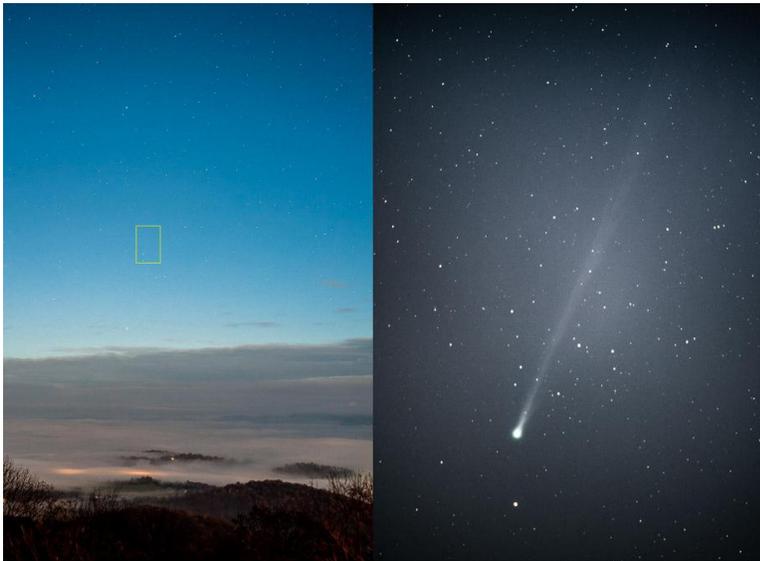
Dr. Chuck Bailey, guest lecturer, and Dr. Steve Lenhart, Director of the Museum of the Earth Sciences.

Dr. Bailey has spent much of his career conducting research regarding the tectonic history of the central and southern Appalachians. Although the Appalachians have been studied for well over a two centuries, many important tectonic questions remain unanswered. His projects in the Blue Ridge and Piedmont area are wide-ranging and integrate structural analysis with petrology, sedimentology, and geochronology. Dr. Bailey utilized this research to showcase how Virginia is far more seismically active than the average person realizes.



Comet ISON studied at the Selu Observatory

Local photographer Jon Beard is working with Dr. Jack Brockway and the Selu Observatory to capture images of Comet ISON (C/2012 S1) as it streaks through the early morning sky. The comet was just discovered on September 21, 2012 by Vitali Nevski and Artyom Novichonok at the Russia-based International Scientific Optical Network (ISON). In addition to his work documenting the comet's journey, Mr. Beard is also capturing some amazing images from the Selu Observatory.



The observatory provides demonstrations to the public every clear Friday approximately an hour after sunset.

<http://www.radford.edu/content/csat/home/observatory.html>



CSAT STEM Club Update

The College of Science and Technology STEM Club has been quite active over the last month with several activities. On November 2, the group participated in a hike on the Cascades National Recreation Trail in nearby Giles County. The two mile trek features a number of interesting geologic formations, culminating in the spectacular 60 foot waterfall.



CSAT STEM Club President Hollyn Lofton on the Cascades National Recreational Trail

The STEM Club currently meets each Monday at 5:30pm in the Stuart Hall Lounge. The spring meeting schedule is currently being established and will be announced soon. Membership is open to any RU student with an interest in supporting science, technology, engineering and math.

For more information, please contact STEM Club president, Hollyn Lofton at hlofton@radford.edu.



Weather on campus has started to turn cooler and, in consideration of those who are less fortunate, club members are staging a warm clothing and sweatshirt drive from November 20-21 and on December 5. Clean articles of clothing, both new and used can be submitted to their table in the Bonnie Hurlburt Student Center.

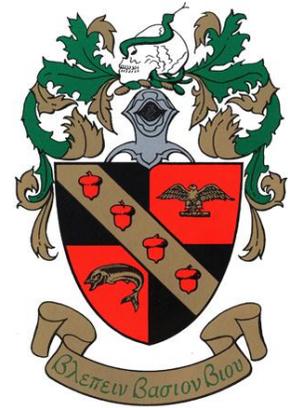
The club is also planning to participate in the "Winter Wonderland" program coordinated by Residential Life on December 9.



CSAT STEM Club Vice President Ryan Skipper with Mattie Hamed and club Secretary James Stratton

Biology faculty panel sponsored by Beta Beta Beta

On Wednesday, November 20, 2013, members of the Department of Biology gathered in Reed Hall 201 to showcase their current and recent research activities and provided an opportunity for students to explore additional upcoming research opportunities. This event was sponsored by the Tri-Beta Club, the National Biological Honor Society.



The Wildlife Society goes behind the scenes at Zoo



The Radford University student chapter of The Wildlife Society recently took a behind-the-scenes tour at Roanoke's very own Mill Mountain Zoo. The students spent several hours learning about zoo animal care and animal husbandry, handling animals used in education programs (ferrets, rabbits, snakes), and learning about the charismatic animals on display at the zoo (red pandas, wolves, snow leopard, and more!). This was an educational experience, providing students

the chance to learn about zoo careers, potential internships, and volunteer opportunities. Several of our wildlife students have taken advantage of this opportunity and have pursued (or are currently taking part in) summer and fall internships, focusing on animal care and maintenance. RUTWS plans to continue this annual trip to Mill Mountain, and offer students this great experience, allowing a peek behind the scenes at our local zoo. – *Story by Dr. Karen Powers – Department of Biology.*



Upcoming events

SEARCHING FOR EL DORADO – GOLD AND DIAMOND PROSPECTING IN GUYANA

Tuesday Dec 3 - 7:00 PM - 8:00 PM - Hurlburt Hall Auditorium

Mr. Ed Blackford, Dreamhole Mining Company

Searching for El Dorado – Gold and Diamond Prospecting in Guyana