North Carolina Academy Science Since 1902



Volume 5, Issue 2

November 2016

What's going on in the North Carolina Academy of Science:

- Announcing Yarbrough Winners
- Bryden Grants are now open!
- CANCAS Workshop coming in February

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Annual Meeting Update

Don't miss the 114th annual meeting of the North Carolina Academy of Science at High Point University!

114th Annual Meeting of the North Carolina Academy of Science

HIGH POINT UNIVERSITY

March 24-25, 2017



High Point University is looking forward to hosting the 114th Annual North Carolina Academy of Sciences Annual Meeting on March 24-25, 2017, in High Point, NC. We anticipate diverse groups of students and faculty from both public and private institutions in the state of North Carolina to present their original scholarly research. This conference enables young scientists to establish interdisciplinary networks with biologists, chemists, engineers, physicists, and mathematicians that will continue beyond their undergraduate education and into their graduate school education or future careers.

Our conference theme is Crossing Boundaries: Transforming STEM Research and our keynote speaker, Dr. Karthik Aghoram, Associate Professor of Biological Sciences from Meredith College, will be emulating that theme in his talk,

A spoonful of DNA, a handful of dirt, and a dash of reason: A simple recipe for successful, sustainable food production?

There will also be workshops combining science and art and social media! Learn to use art as a tool in scientific figure making, to design objects utilizing 3D printing methods, "pitch real science" on social media, and of course best practices in applying to professional and graduate schools.

The conference will be held in our Greek Conference Center on Friday night and in our newest showcase building, Cottrell Hall – Home of the Flanagan Center for Student Success. For registration details, visit http://www.highpoint.edu/ncas2017 today!



We look forward to seeing you in March!

NCAS News

Call for Astronomy Days Volunteers

Notice by: Dr. Lisa Kelly, Pembroke University

If you have stardust in your eyes, if you love gazing up at the heavens, or if you enjoy small children and the excitement of discovery, consider volunteering a few hours of your time this coming January. The North Carolina Academy of Science will be hosting an exhibit for Astronomy Days on 28-29 January 2017. This year's theme is "The Sun and Other Stars!" The Academy is looking for energetic volunteers who can contribute one or more two- or three-hour shifts from 8:30 AM until 5:30 PM on Saturday (January 28) and from 11:30 AM until 5:30 PM on Sunday (January 29). If you would like to volunteer or have ideas for simple, inexpensive hands-on science activities, please



contact the Academy's exhibit coordinator, Lisa Kelly, at lisa.kelly@uncp.edu or by phone at 910-521-6377. This would be a great opportunity for Student Academy and Collegiate Academy students and their mentors. No special skills are required, and ideally four or more volunteers will be available during each time slot. The Academy's exhibit at the museum last January was a big hit, drawing crowds of excited children and their parents.

Bugfest

Notice by: Dr. Karen Guzman, Campbell University

Our members are not only active in their professional activities, but also volunteer for many science-related events each year. Earlier this fall, at least two of our members had a table at the North Carolina Museum of Natural Science's Bugfest, which was held on September 17th in Raleigh. Bugfest is an event that is great fun for scientists of all ages, and showcases everything related to bugs, from displays of live spiders, to photos and artwork, to honey for sale, and even what you would call a bug-mobile topped with an anthill and covered in bugs. Let us know what events you have been involved in so we can tell others about the neat opportunities around the state to enjoy science!



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NCAS News

Congratulations to the Yarbrough Grant Winners!

Student Grantee	Institution	Project Title	Faculty Advisor
Georgia Ackerman	Warren Wilson	Soil Compaction by Bos Taurus under two methods of rotational grazing	Robert Hastings
Julieanna Herriven	Catawba	The Effects of Vibrations on Recruitment of Stingless Bees	Sue Calcagni
Elizabeth Howard	Catawba	Can mosquito larvae serve as an effective biosensor for mercury in aquatic systems?	Sue Calcagni
Ashlyn Karre	Lenoir Rhyne	Exploring the antimicrobial properties of common herbs on Gram positive and Gram negative bacterium	Scott Schaefer
Samantha Miller	Catawba	Exploring the effects of commercially available artificial sweeteners on gut-associated microbial community dynamics	Carmony Hart- wig
Jordan Hunt	Catawba	Evaluating effects of temperature on nitrosamine concentration in locally raised and processed meats using HPLC methods	ChaMarra Saner
Charles Hutton	Catawba	Evaluating the optimum lighting and health condition for Maiimo Mass Balls in culture	Jay Balin

Call for Bryden Grant Nominations

We invite applications for the Bryden Grant! One grant is in the NCAS budget for the 2016-17 academic year. Award monies will cover research equipment and/or expenses related to attending scientific conferences. Past recipients are not eligible. Both the applicant and advisor must be at a college or university in NC and members of the NCAS in good standing. Applications are due **February 27, 2017** to Dr. Lei Zhang (zhangl@wssu.edu) and Dr. Mark McCallum (mark.mccallum@pfeiffer.edu). Award recipients are strongly encouraged to present their work at the NCAS 2018 annual meeting. The full application is available at www.ncacadsci.org.

Who is the NC Academy of Science? ... YOU!

Thanks for being a member! We hope you will tell us how we can better serve you.

Karen Guzman, Chair of Publications (guzman@campbell.edu) Francie Cuffney, President (cuffneyf@meredith.edu)

Job Alert!

Methodist University is seeking an **Assistant Professor of Biology**. Apply online today at: https://www.paycomonline.net/v4/ats/index.php?/job/apply&clientkey=24375BA29C8AE0EA98AC3A9FD8D2FDCE&job=9144&jpt=)

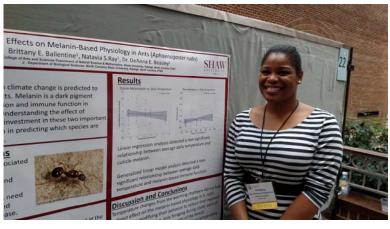
NC Wesleyan College is seeking an **Assistant Professor of Biology**. Apply online today at: http://ncwc.edu/community/careers/full-time-faculty-positions/

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Featured Scientist

Report by: Dr. Daniel Stovall, NC Wesleyan College

The NC Academy of Science highly values the remarkable young scientists it seeks to nurture and promote. Brittany Ballentine is one such undergraduate scientist at Shaw University. Originally intending to pursue a career in medicine, Brittany discovered her passion for scientific research at Shaw. She reflects how instrumental her professors have been in cultivating her research skills and interests: "The entire Shaw University biology department has pushed me since the day I arrived as a biology major. Shaw was not the first school that I attended and at my previous school I had



been discouraged from being a biology major. At Shaw I was able to form a relationship with my professors which has really helped me as far as succeeding in my chosen major."

Brittany discovered her passion for scientific research in zoology courses and independent projects with her mentors. In her work with Dr. Eric Butler, who Brittany says "helped me get started in research and ... make connections within the scientific community," Brittany studied how butterfly and moth specimens appeared different in normal and ultraviolet light. In this project, Brittany designed protocols for taking the photos and was responsible for ensuring that the photos taken could be usefully compared. In a separate research project with Dr. De Anna Beasley, Brittany investigated the relationship between levels of the melanin pigment in ants and fungal infection. Brittany notes how inspirational Dr. Beasley has been as a successful African-American woman in ecology.

Brittany presented both of her research projects at the 2016 NCAS annual meeting, which was very impactful to her as a young scientist. At the meeting, Brittany was "able to see other research and gain tips on how to structure [her] own research and presentations." Additionally, she appreciated the networking opportunities the meeting afforded her; those she met "helped [her] to figure out how to accomplish [her] goals."

From her coursework and research involvement at Shaw, to her outreach and teaching work at the Walnut Creek Wetland Center, Brittany has cultivated deep passions in zoology and ecology. In the future, she intends to apply to graduate schools to study wildlife conservation biology. In the long-term, she wants to "involve low-income minority children in outdoor science education programs." The Academy is glad to feature this excellent young scientist, from whom we can all expect great things!

CANCAS Undergraduate Workshop

A regular Fall event is the CANCAS Undergraduate Career & Research Workshop which gives students a chance to learn skills, not only to help them do undergraduate research, but also skills to help them reach their career goals. The schedule this academic year, however, is a bit different. The Workshop will be held in the Spring. Stay tuned for more details as they become available.

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North Carolina Academy Science

Since 1902

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Check us out on the web! http://www.ncacadsci.org/home.html

The **objective** of the North Carolina Academy of Science is to "encourage the advancement of science within the state of North Carolina by promotion of scientific research and by the fostering of education in the sciences". The North Carolina Academy of Science meets these objectives by...

- Publishing a peer reviewed scholarly journal, the *Journal of the North Carolina Academy of Science*.
- Fostering and encouraging student involvement in the sciences through support of the Collegiate (CANCAS) and Student Academies (NCSAS).
- Promoting interactions among scientists and students throughout North Carolina.
- Providing a forum for exchange of ideas for solving issues important to North Carolina.

The Academy members include individuals from academia, industry, government, and all others who support the objectives and goals of the Academy.

North Carolina Academy of Science

Our Mission

The North Carolina Academy of Science promotes public appreciation of science, science education, scientific research and a meaningful role for science in public policy.

Our Goals:

Promote public appreciation of science

- Partnership with Science Centers
- Public Lecture Series
- Newsletter

Promote science education

- NCAS Webpage
- Academic Lecture Series
- NCAS Publications: Journal, Educational Publications
- Student Academy Middle & High School

Promote scientific research

- Yarbrough and Bryden Research Grants
- CANCAS Undergraduate Research Workshop
- Presentation Opportunities at Annual Meetings
- Journal of the North Carolina Academy of Science

Promote science in public policy

- Symposia
- News Releases
- Position Statements
- Interactions with Public Officials





