

## FROM THE DEPARTMENT CHAIR



When I was a graduate student, I bought an old Volvo with, among other ailments, a “broken” radio. I say that the radio was broken, because it

would only detect a single station, and that was the university’s NPR affiliate. Prior to owning this car, I was blissfully ignorant of most national and international affairs. I was in grad school to study Biology, and I did so diligently. However, during my months with the broken radio, I became aware of regional, national, and international issues galore. It was the most enlightened I had ever been about such topics. Fast forward a number of years, and I am reminded of that time with the Volvo and its radio due to the expansive TCNJ infrastructure that I was mostly unaware of as a “regular” faculty member. I taught my classes, did my research, advised students, and called it a day. As Chair, I now interact regularly with administrative offices across campus, and I am able to better appreciate the large number of people who are working tirelessly, often in the shadows, to serve our students. From the members of Records and Registration who evaluate courses and audit student records to the various support services (Counseling and Psychological Services, Disability Support Services, *etc.*) and everything in between, there is a small army of a supporting cast that is doing its best to facilitate our students’ growth and achievements. These unsung and mostly anonymous parties deserve recognition for their efforts, and I hope that this column serves to inform them of my newfound appreciation for the work they do. ~ **Keith Pecor, Chair**

## Tasting Biodiversity from the Tree of Life



*Artisanal salami, assorted olives, pickles, kimchi, and sourdough bread from the Better Together meal.*

Roasted crickets, fried frog legs and alligator sausage; breadfruit cakes and star fruit salad. Not typical fare in a college dining hall! But they were among some of the “biologically diverse” menu items on hand at Eickhoff Hall in February when the School of Science joined forces with the College’s dining services in order to explore biodiversity through cuisine.

The event on February 28<sup>th</sup> was a fun, creative and accessible way to “bring the importance, the impact, and the excitement of science to the campus community and to the public,” said Jeffrey Osborn, Dean of the School of Science, preparing to munch on some cheddar insect larvae. The project was the idea of Dean Osborn, a botanist and pollination biologist, and Assistant Professor of Biology Wendy Clement, PhD, who studies plant systematics and evolution – both of whom also enjoy eating a delicious meal.

“Everyone has a relationship with food—and this was an opportunity to help understand the biology of the food on one’s plate and realize that each ingredient has an evolutionary story of its own,” said Professor Clement.

The “Tree of Life” (similar to a family tree displaying close and distant relatives) was in many ways the host of the event, and was prominently featured in order to demonstrate the vast diversity of earth’s organisms across the Tree’s many branches, their inter-connections, and their existence through time. The event utilized 149 edible ingredients from various branches of the Tree, and explored the evolutionary origins of many of the foods.

The event also explored the impact of humans on biodiversity, the genetic diversity of certain foods, and the preservation of the genetic diversity of our food. It also provided samples of many culinary staples and delights from organisms interacting in kitchens, breweries and food processing plants that would never interact naturally, as in fermented foods such as sauerkraut and sourdough bread.

Sampling and enjoying a new food, or a new combination of foods, brought new appreciation and understanding of the concept of biodiversity to students and faculty

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## NEWS BRIEFS

### *Bio Excellence Awards Announced*

Thirteen seniors recently received the 2017 Excellence in Biology awards, based on their achievements as determined by their academic excellence, dedication, and involvement in the college community. The awards were presented at the annual Awards Banquet held at Washington Crossing Inn at the end of the semester, and included a monetary award as well as a certificate.

- ♦ **Katherine Badecker** and **Raagni Kumar** were awarded the Becton Dickinson Award, with **Leyla Karim** and **Nirmiti Borkhetaria** receiving Honorable Mention.
- ♦ The Faculty Award was presented to **Kyle Siegel** and **Margaret Kennedy**, with Honorable Mention going to **Tiffany Yu**.
- ♦ **Sapna Shah** and **Nikita Jhavar** received the Joseph Vena Award, with **Frank Santisi** receiving Honorable Mention.
- ♦ And last but not least, the Susan Uyhazi Award was presented to **Ashley Leto** and **Janis Tumaliuan**, with Honorable Mention being given to **Ariel Moskowitz**.

Our heartiest congratulations go to these seniors on their exceptional achievements. We wish them all the best as they move forward from here.



*Evolutions* is published twice yearly by the Department of Biology at The College of New Jersey.

**Helen Kull, Editor** [biology@tcnj.edu](mailto:biology@tcnj.edu)

## Norvell Joins

### *Drosophila Board*



Biology department prof Amanda Norvell, PhD, has been elected to a three-year term on the *Drosophila* Board of Directors. *Drosophila* is the scientific genus name for fruit flies, which are commonly used as a model organism for biological research, including Dr. Norvell's research.

As a member of the "Fly Board" as it is unofficially known, Dr. Norvell will be involved in advocating for the *Drosophila* research community to funding agencies, *Drosophila* stock centers, other scientific groups and the general public; participating in planning for the annual *Drosophila* Research Conference; and administering a variety of awards issued by the organization.

We're pleased to have one of our faculty members named to this board position. Congrats, Dr. Norvell!

## A Better Nectar

The Department of Biology, the School of Science, and the Center for the Arts at TCNJ shared in hosting a speaker and multi-sensory exhibit earlier this spring which celebrated the junction of science and art.

The speaker, Dr. Anne Leonard of the University of Nevada at Reno, is a behavioral biologist who studies the complexities of a bee's perceptions of flowers in space, and how it affects their behavior.

Dr. Leonard's research has informed and inspired the artist Jessica Rath to render the sensory world of bees into forms and experiences in human terms, resulting in a fascinating exhibit of sculptural forms, lights and sounds featured at the Art Gallery. Visitors could experience a portion of the bee's world at a human scale, and hear human interpretations of bee communication. Ms. Rath's exhibit remained on view through April 9.

## Tasting the Tree of Life (continued from page 1)

alike who otherwise would never give it a thought over lunch.

"Each meal connected to a scientific message, many of which discussed how the process of evolution has and continues to shape the food we eat and what impact humans have had on food past and present," said Professor Clement.

The event also included a keynote lecture by Nyree Zerega, PhD, a botanist at Northwestern University, and director of the Graduate Program in Plant Biology and Conservation at the Chicago Botanic Garden. Dr. Zerega provided some history on the many ways humans interact with food, and how that activity has impacted the evolution of food.

"It was great to spread knowledge of biology, and to come together over the love of food," said senior Raagni Kumar, a member of the planning committee.

Such a unique, creative and delicious experience would not have been possible without the passion and dedication of many people on campus,

including Dr. KT Elliott, also of the Biology Department, the members of the Tasting the Tree of Life Scientific Planning Committee; the work of the TCNJ Dining Services partners; web and graphic design contributors; communications and photography contributors, and the "field guides" - our own Biology students! - providing information and background for inquisitive guests at the event.

More information about the event itself, and the biodiversity in our food, can be found on the event website, <http://tastingtreeoflife.pages.tcnj.edu/>

### *Enjoying candied insect larvae*

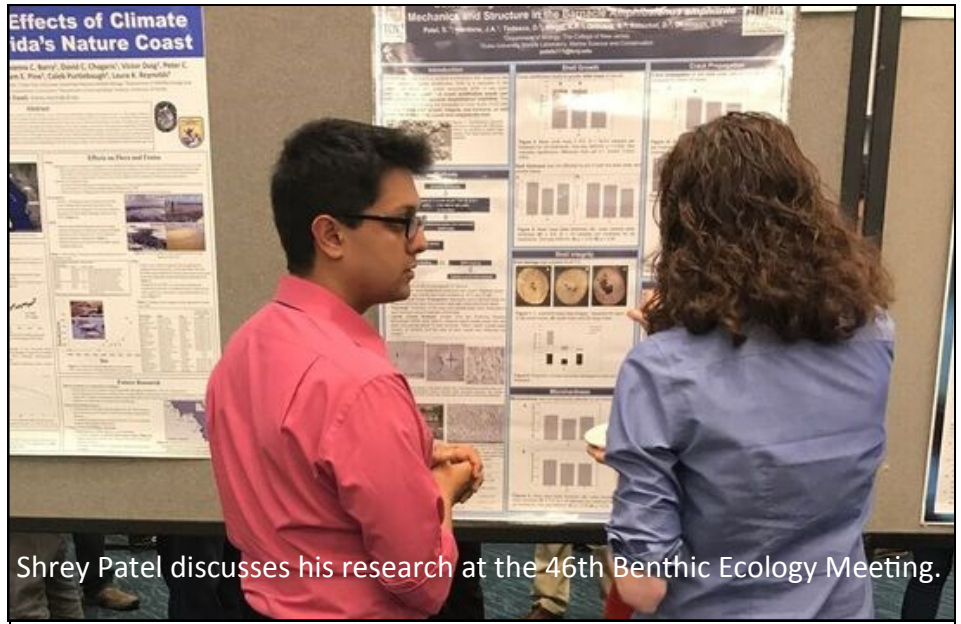




# SCHOLARSHIP

## Research Presentations:

Four TCNJ Biology students, **Kyle Siegel**, **Shrey Patel**, **Trina Salvador**, and **Dana Tedesco**, accompanied by Dickinson Lab Research Technician **Jessica Nardone '15** and **Gary Dickinson, PhD**, presented research at the 46<sup>th</sup> Benthic Ecology Meeting in April in Myrtle Beach, SC. Ms. Salvador and Mr. Patel presented posters, and the rest gave talks. The topics of their research presentations dealt mainly with the effects of temperature, salinity and ocean acidification on barnacle structure and function.



Shrey Patel discusses his research at the 46th Benthic Ecology Meeting.

Seven TCNJ students attended the Tri Beta Northeast District Convention held at Moravian College in March. Of ten honors awarded to student presenters, TCNJ students received five of them. In the Poster Division, **Ashley Leto** and **Janis Tumaliuan** received Honorable Mention for their research presentation; **Raagni Kumar** received 3rd place; and **Madhu Gundlapally** received 2nd place. In the Oral Presentation Division, **Katie Bellissimo** received 3rd place, and **Michael Wolek** received 2nd place..



TCNJ Biology students also attended the Lehigh Valley Ecology and Evolution Symposium held in Allentown, PA in April. Howard Reinert's research students **Sonia Bhutra** and **Amanda Blandford** presented their research on snakes along with dozens of other undergraduate and graduate students from colleges and universities, as did **Ashley Leto** and **Janis Tumaliuan**, whose poster, **Invasive *Boa constrictor* diet in an island habitat: a 16-year study**, garnered first place for the Best Undergraduate Poster.

## Newly Published:

**Figueroa MA, \*Schablik JD, \*Mastroberte M, \*Singh LJ, and Dickinson GH.** The effect of hydrophobic alkyl silane self-assembled monolayers on adult barnacle adhesion. *Marine Technology Society (MTS) Journal*. In press. (\* indicates TCNJ student authors)

**Neves LT, Douglass S, Spreafico R, Venkataramanan S, Kress TL and Johnson TL (2017).** The histone variant H2A.Z promotes efficient cotranscriptional splicing in *S. cerevisiae*. *Genes and Development*, Apr 1; 31(7):702-717. doi: 10.1101/gad.295188.116.

**Veerapandiyan A, Takahashi JH, Odenigbo N, Segal D, Pecor K, and Ming X 2017.** Use of head CT in the pediatric emergency room in the evaluation of children with first afebrile seizure. *American Academy of Neurology*. Boston MA. (presentation)

**Pecor KW and Batko KA. 2017.** Phenology: from natural history to climate change. *American Biology Teacher* 79:412-415.

**Kornitzer JM, Horenstein D, Pecor KW, and Ming X. 2017.** Gluten-  
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free/casein-free diet improves behavior in a subset of children with an autism spectrum disorder. *Journal of Nature and Science* 3:e300.

**Pecor K, Wang X, and Ming X. 2017.** Gender and sleep health in high school students: a cross-cultural study. *Global Journal of Health Science* 9:124-130.

**Pecor K, Sarris T, Shaffer J, and Thom E. 2016.** Responses to injured conspecifics and heterospecifics by the water flea *Chydorus sphaericus*. *Marine and Freshwater Behavior and Physiology* 49:415-419.

**Marshall CA and Wund MA 2017.** The evolution of correlations between behavioral and morphological defense in Alaskan threespine stickleback fish (*Gasterosteus aculeatus*): evidence for trait compensation and cospecialization. *Evolutionary Ecology Research*, 18, 305-322.



Department of Biology  
PO Box 7718  
Ewing, NJ 08628-00718



## Upcoming EVENTS

### COMMENCEMENT 2017!

**Biology Department Ceremony**  
Thursday, May 18, 9 am in Kendall Hall

**Main (College-Wide) Ceremony**  
Thursday, May 18 at 3 pm in Lions  
Stadium (or indoor venues if necessary)

More information at  
<http://commencement.tcnj.edu/>

### MUSE!

The 2017 Mentored Undergraduate Summer Experience (MUSE) runs campus-wide June 5 -July 28. This year, 5 labs will be filled with over a dozen research students gaining critical research skills, and contributing to work at TCNJ.

## FACULTY SKETCH



### Janet Morrison, Ph.D

Professor, Plant Ecologist, and  
Barbara Meyers Pelson '59 Chair

in Faculty-Student Engagement, 2015-2018  
20 Years at TCNJ

BA, Biology, Oberlin College

PhD, Ecology and Evolution, The State University of NY at Stony Brook

*Favorite science course as an undergraduate:* Plant Systemics and Evolution

*Favorite non-science course as an undergrad:* Feminine Literary Criticism

*Research interests:* plant ecology, including the ecology of suburban forests, the interactions of invasive plants and white-tailed deer, and plant-pathogen interactions

*Other interests:* Politics and social justice, travel, hiking, biking, appreciating all kinds of music from opera to bluegrass, and reading great novels