



## GREETINGS FROM THE DEPARTMENT OF BIOLOGY

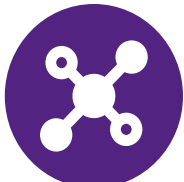
By Dr. Theresa Spradling



It's my pleasure to introduce myself to you as the new head of the Department of Biology. Having completed 10 years of dedicated service as head of the Department, Dr. David Saunders has transitioned to a new role as full-time faculty member in our department. David is enjoying being back to teaching students in his Environmental Physiology

class and in other courses for both biology majors and non-majors. He also is relishing having more time for research, including the work he is doing with his graduate student, Tharuka Pathmaperuma, who is studying how plasma from hibernating bullfrogs may prevent certain human cancer cells from reproducing. Students and faculty of the department are grateful to David for his years of leadership and look forward to working with him in his new capacity as a full-time faculty member.

I've been a member of this department for 21 years, where I've loved teaching Genetics lecture and lab classes to our majors, occasionally teaching Evolutionary Biology classes to undergraduate or graduate students, and working with students in my research lab. Lately, I've gotten to know more of our wonderful students, and from my new vantage point, I am fortunate to hear even more stories about students' successes than ever before. As department head, I now have an even greater appreciation for the energy and passion our faculty pour into their work with students both in and outside of the classroom. I'm happy to have this opportunity to share a few stories about our students and faculty, to bring you up to date on a few of the ways that the department has changed over the last year, and to tell you some of the exciting things we have coming up.



## UPCOMING EVENT: PRAIRIE RENDEZVOUS IN CELEBRATION OF DR. DARYL SMITH

Please join us in celebrating Dr. Daryl Smith as UNI and the Department of Biology dedicate and name the UNI Prairie Preserve in his honor on Saturday, September 14, 2019. We will formally name this preserve the "Daryl Smith Prairie Preserve" in honor of Dr. Smith's extraordinary vision and foresight in creating the Campus Prairie Preserves System.

The Prairie Rendezvous will begin with refreshments at 10 a.m. at the UNI Prairie Preserve on Jennings Drive just east of the Center for Energy and Environmental Education (8106 Jennings Dr., Cedar Falls). The dedication will start at 10:30 a.m. Rain location will be in the rotunda of the CEEE. Stay after the dedication for fellowship and tours of the prairie and a light lunch to be served in the rotunda of the CEEE. There is no charge for lunch, but please RSVP to [fdnevent@uni.edu](mailto:fdnevent@uni.edu) for planning purposes. After this event, guests are invited to the 20th Anniversary Open House at the UNI Tallgrass Prairie Center, located at 2412 W. 27th Street, Cedar Falls.

The UNI preserves serve as important resources for student research and as outdoor classrooms for courses like Wildlife Ecology and Management; Ecology; Restoration Ecology; Mammalogy; and Environment, Technology, and Society. Trails are open to the public year round and are regularly used for walking, running, and cross-country skiing. As a beloved faculty member, former head of the Department of Biology, Iowa Lakeside Lab Instructor, and founding Director of the Tallgrass Prairie Center, Dr. Smith has touched the lives of many students. We hope you will join us to celebrate this happy event with Dr. Smith!

If you would like to recognize Dr. Smith's career and dedication to prairie preservation, you may direct a gift in his honor to the UNI Biological Preserves Fund 22-0162. That fund will help support the maintenance and development of the Daryl Smith Prairie Preserve. To make a gift online, go to <https://www.adv.uni.edu/foundation/pledgeform.aspx?s=100797> and note "UNI Biological Preserves Fund". Or mail your gift using the form found later in this newsletter. For more information, call the Department of Biology at (319) 273-2456.



# Staff and Faculty News

## NEW STAFF



The department has had three new staff members join us this year! First to join us was **Megan Kaisand**, who came from Waverly-Shell

Rock School District. Meg runs the office with efficiency, style, and a sense of humor.



**Jason Parks** joined us next, doing preparations for classes, ordering, and running the departmental supply room. Jason had

experience doing similar work at Grinnell College and is currently a graduate student in the department working with Dr. Berendzen.



**Dee Paulsen** joined us to facilitate office functions. She has a knack for problem solving and for learning new computer software,

as is evidenced by this newsletter, which she has helped create. All these people have been on board for about a year now, and they are welcome members of our team.



## NEW FACULTY



**Dr. Ai Wen** will begin a tenure-track position with us in August 2019. She earned her PhD at Rutgers University and has

been with the department since Fall 2013 as an adjunct faculty member. She already has an active research program as an ecologist working with UNI undergraduate and graduate students to study pollinators and pollinator habitat on Conservation Reserve Program lands in east-central Iowa, as well as habitat on farmland. Her research activities involve great collaboration with landowners and farmers. Dr. Wen also applies ecological concepts to studies of microbial communities in human bodies to depict the pattern of human infectious diseases from an ecological perspective. We plan for Dr. Wen to teach Organismal Diversity classes to biology majors, Natural World classes to non-majors, and Entomology.



**Dr. Jereme Jackson** will begin a tenure-track position with us in August 2019. He earned his PhD at the University of

Tennessee, Knoxville where he studied the regulation of insect intestinal stem cell proliferation and differentiation. He comes to us from Oklahoma State University, where his postdoctoral research in microbiology and molecular genetics focused on the physiology of bacteria colonized in the mammalian intestine. His research at UNI will focus on the intestinal microbiome of insect models with the aim of identifying molecular mechanisms that pathogenic strains of bacteria use to acquire nutrients and to stably colonize. We think UNI students will love working with Dr. Jackson in the research lab, in his Cell Structure and Function classes for biology majors, and in new courses studying microbiomes and medical microbiology.

## FACULTY PROMOTIONS



This was a year to celebrate accomplishments. **Dr. Pete Berendzen** was promoted to the rank of Professor for his outstanding

achievement in the areas of teaching, scholarship, and service. Dr. Berendzen has taught biology classes called Cell Structure and Function, Field Zoology of the Vertebrates, Evolutionary Biology, and Evolution, Ecology, and the Nature of Science. He has led international trips for students to Taiwan, the Galapagos Islands, and New Zealand (see later in this newsletter). He has mentored 9 MS students through to completion of their theses, and he has had numerous undergraduate students in his lab, with 15 of those students completing senior theses. In addition to all that, Dr. Berendzen is one of the first to volunteer when something needs to be done in the department. His promotion to the highest rank possible for faculty is well deserved.



**Dr. Kenneth Elgersma** joined our faculty in 2013. This year, he earned tenure and was promoted to the rank of Associate

Professor. Dr. Elgersma has taught Biostatistics, Organismal Diversity Lab, Advanced Ecology, Natural World, and Restoration Ecology. He has already published 14 scientific articles in journals and one book chapter. He has been very successful in gaining external support for his research, he has worked with more than a dozen undergraduate researchers, and he has already chaired three MS thesis committees. We are glad to have him tenured in our department.

# May 2019 Study Abroad Trips

**Studying abroad is a transformational learning experience that gives students the opportunity to understand other cultures and societies in the context of their own and gain a more global perspective on issues such as human health and the environment. During May 2019, two study abroad courses were led by Department of Biology faculty members.**

## NEW ZEALAND

Dr. Pete Berendzen lead a capstone course called Environment, Technology and Society to New Zealand. The focus of the course was to learn about native indigenous people, the modern Kiwi society, and the environmental impacts facing the country. During their travels, students experienced the native Maori culture through a workshop in a traditional Whareniui communal house at Auckland University of Technology, zip-lined through the forest canopy in Rotorua to learn about forest conservation and restoration, and observed the unique landscape throughout the country.



## GALAPAGOS ISLANDS

Dr. Steve O’Kane lead a trip to the Galapagos Islands. Students learned a lot, saw and experienced much, and had lots of fun. Some even earned a good sunburn! Through a series of pre-trip lectures and on-site excursions, students explored the geologic history, oceanography, plant and animal life, and human history of the islands, including the impact these beautiful and remote islands had on Charles Darwin’s thinking about the history of life on earth. On mainland Ecuador, the travelers hiked in a tropical forest, boated to an island nature reserve, and saw chocolate made from bean to bar. On the islands, boats were the main mode of travel. Especially interesting was seeing up-close giant tortoises, blue footed boobies, sea turtles, sharks, frigate birds, Darwin’s finches, Galapagos penguins, and marine and terrestrial iguanas. The turquoise waters of the islands were explored through the lens of a snorkeling mask.



# Staff and Faculty Transitions

## BILLIE HEMMER, BOTANICAL CENTER & PRESERVES MANAGER RETIRES



On July 1, 2019, Billie Hemmer retired from her position as Botanical Center and Preserves Manager. Billie will be staying in the area, but she will be spending more time traveling and visiting her children and grandchildren. Billie was a key member of the department, working in the Botanical Center for 22 years, and managing the Botanical Center and the biological preserves for 15 years. Anyone who has been in the Botanical Center knows what a beautiful place it is, serving as a living museum with a collection of species representing several biomes. Iowa Gardener magazine recently featured this facility in a six page color spread. The Botanical Center has thrived under Billie's supervision. She guided two major renovations to the facility, one in 2004 and another in 2007-2008. Under Billie's management, the Botanical Center became a key means of university and departmental outreach and engagement with the community. Billie was tireless in her outreach work, teaching Lifelong University, leading tours to civic groups, pre-K through 12 students, and class tours for UNI biology and science education students. She and Botanical Center Staff hosted hundreds of visitors each year on Family Weekend, and tour groups frequently

visit the Botanical Center during new-student orientation events. The annual plant sale run through the Botanical Center for the Student Nature Society has become a much anticipated, highly attended event. In addition to her work in the Botanical Center, Billie managed the UNI Preserves System, creating and maintaining a 5-mile stretch of hard and soft trails that serve nature lovers and runners, providing a valuable resource to the community.

Billie will be missed at UNI. She didn't just manage the Botanical Center and the Preserves; she mentored students. Many of her student workers stayed with her three or four years, creating lifelong relationships. Her students nominated her for "Student Employer of the Year, 2003-2004," and there was an outpouring of love and support in the form of visitors to her retirement party and cards from former students who weren't able to attend. Several former students called their jobs at the greenhouse their favorite job of their lives, and all thanked Billie for her caring guidance and mentorship. Billie has made an enormous and beautiful contribution to UNI, to the community, and to the lives of our students.

Stephanie Witte, who has worked with Billie as Horticulturist for the past 15 years, has taken over the role of Botanical Center and Preserves Manager.

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## DR. DARRELL WIENS RETIRES

In December 2018, Dr. Darrell Wiens retired from the Department of Biology and has moved with his wife, Arleen, to live in Kansas City, MO. Dr. Wiens was an active and highly regarded member of the faculty at UNI for 30 years. His primary teaching activities at UNI were in the areas of cellular and developmental biology and anatomy. His classes were favorites among our students. Dr. Wiens' scholarship resulted in 25 peer-reviewed scientific publications. His achievements in research, teaching, and service were acknowledged at UNI with several awards over the years, including the Iowa Board of Regents' Award for Faculty Excellence in 2001, the Dean's Award for Outstanding Faculty Achievement in 1990, and the Dean's Award for Superior Achievement in Research in 1996. Dr. Wiens' students recognized his exemplary teaching with the Tri-Beta Biological Honor Society Excellence in Teaching Award in 2009.

However, no award likely pleased Dr. Wiens as much as the pleasure he derived from his students' successes, which he has carefully tracked over the years. He mentored 77 undergraduate and graduate student researchers in his lab. Today, these former students include fourteen PhDs (two

MD/PhDs) in research or teaching, twenty-two practicing MDs or DOs, five Dentists, three Veterinarians and a host of other biomedical or biology practitioners. Dr. Wiens clearly cares about each of his former students and the lives they have gone on to lead. The outpouring of support and well wishes coming from past students on the occasion of his retirement makes clear that his patient, caring mentoring and encouragement has enriched their lives and helped make UNI the wonderful institution that it is.

If you would like to honor Dr. Wiens' work we encourage you to direct a gift in his name to the Undergraduate Research Fund, 21-222596, using the form found later in this newsletter. That fund will help support undergraduate student researchers. To make a gift online, go to <https://www.adv.uni.edu/foundation/PledgeForm.aspx> and list the "Biology Undergraduate Research Fund." Or mail your gift to Cassie Luze, UNI Foundation, 205 Commons, Cedar Falls, IA 50614-0282 or contact Cassie at [cassie.luze@uni.edu](mailto:cassie.luze@uni.edu).

The following articles are from a few of Dr. Wiens' students in celebration of his career and the lives he touched:

# The Difference he made - quotes on Dr. Wiens

## **Peter Lwigale, Ph.D.** **1995 UNI Graduate**

"It is with great pleasure that I write this note in celebration of Dr. Darrell Wiens' retirement. Darrell launched the careers of numerous successful scientists and served as an informal mentor to countless others. I had the good fortune to work as an undergraduate/graduate research assistant in Darrell's lab from 1994-1997. Unlike most scientists of his stature, Darrell took the time to be a real and supportive mentor to his students and former trainees. He maintained bench space in the lab and conducted experiments with all his students. His passion for research, determination, and enthusiasm were highly infectious. His encouragement ensured that I pressed on even as I encountered technical obstacles.

Through Darrell's mentorship, I had a very positive and highly productive undergraduate and graduate experience. At the completion of my Master's thesis, I had a peer-reviewed publication. In addition, Darrell introduced me to Dr. Gary Conrad at Kansas State University, with whom I also had a wonderful and successful PhD thesis that propelled me to my postdoctoral fellowship with Dr. Marianne Bronner, a leading neuroscientist at Caltech. Please note that I first learned about neural crest cells when I joined Darrell's lab and I ended up as a postdoc in the leading lab on neural crest studies both the national and international levels. Little did I know that would happen when I joined Darrell's lab. He provided me with the best foundation that made it possible.

Darrell's mentorship contributed significantly to my success as a scientist and as an Associate Professor mentoring my research group at Rice University. I always use my experience as an undergraduate and graduate student in Darrell's lab when I give motivation talks to the future

generation of young scientists."

*\*Peter is now an Associate Professor of Biochemistry and Cell Biology in the Department of BioSciences MS-140 at Rice University in Houston, Texas.*

## **Nan Liang** **2015 UNI Graduate**

"I'm happy to know that our school is celebrating the retirement of Dr. Wiens who was a wonderful mentor of mine. I studied at the Wiens Lab from 2013-2015 as an undergraduate at UNI. Initially, I joined his lab because I was very interested about development, but I soon realized how lucky I was to work with someone as kind as Dr. Wiens. As an international student, studying far away from home wasn't that easy. But Dr. Wiens provided warmth to my life. I still remember the great dinners we had at his home during the holidays, we played games and got to know his cats.

Although I left Wiens Lab and studied in different labs, schools, and even countries for years now, I still most appreciate the time I spent at his lab. It is where I started my dream and learned how to be a patient scientist. After I graduated from UNI, I earned a Master in Bioengineering from University of North Carolina at Chapel Hill. My study back then was on genetic therapy.

Currently, I'm working at Peking University. Our lab integrates CRISPR high-throughput screening and other techniques to interrogate the dynamics of the human genome in various processes such as development and cancer. I'm planning to start pursuing a Ph.D. here in Genomics next year."

*\*Nan is now working in the State Key Laboratory of Protein and Gene Research, Center for Bioinformatics, School of Life Sciences at Peking University, Beijing, China.*

## **Jill Jasper, M.D.** **1993 UNI Graduate**

"It seems like just yesterday I was a UNI freshman wondering if I had I done the right thing going to UNI, and if I wanted to go to medical school... then I met Dr. Wiens.

He was my biology teacher and I was interested in doing some research. He taught me so much and guided me all the way to NASA. By the time I was a junior, Dr. Wiens had helped me get a NASA stipend to help pay for school and we even had a project flown on the Space Shuttle. It was an amazing time for me and I give him so much credit for that amazing opportunity. He helped me see the possibilities. He proved to me that I was capable of anything in science and in life.

I applied to medical school and I am now a Pediatric Emergency Medicine Physician and have worked in major children's hospitals around the country. And yet when someone looks at my resume they still ask me about the experiment that was flown on the shuttle over 20 years ago. When I think of my academic career at UNI, I always think of Dr. Wiens and the chance he took on me and how that changed my life."

*\*Jill is now working as an Attending Physician in Pediatric Emergency Medicine at Blank Children's Hospital in Des Moines, Iowa. She is also an Adjunct Professor in Pediatrics at the University of Iowa College of Medicine in Iowa City, Iowa.*

# Outreach and Alumni

## NEW HAMPTON HIGH SCHOOL STUDENTS VISIT THE ANATOMY LAB



The New Hampton High School class of Ms. Amy Leistikow visited the UNI Department of Biology in January. They worked with our disarticulated skeletons and our synthetic cadavers. Several other high schools have visited us this year as well, including Cedar Falls and Hudson High Schools. We always love hosting visitors who are excited about biology!

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## PURPLE AND GOLD AWARD RECIPIENT: CODY WELCHER

Cody Welch received the Purple and Old Gold Award from the Department of Biology this year. Cody has 6 years experience in the U.S. Navy as a Fleet Marine Force Corpsman; during this period he served as a senior line corpsman, earned several medals for meritorious achievement in the performance of his duties, and then moved on to serve as a Hospital Corpsman at Walter Reed National Military Medical Center. At UNI, Cody did undergraduate research with Drs. Ai Wen and Kenneth Elgersma. He was mentioned by several of his professors as being a great example of someone who works really hard, selflessly helps his peers when he sees they could use a hand, and who influences others in a positive way. Cody was described by one faculty member as “a man on a mission”.

Cody plans on attending Des Moines University College of Osteopathic Medicine starting in July 2019. We thank Cody and all of our outstanding graduates for the time they spent with us and wish them all a happy future!



# Would you like to support a Biology student and/or the Department of Biology?

If so, please fill out the form below and return it to:

UNI Foundation Financial Services  
121 Commons  
Cedar Falls, IA 50614-0239

If you would like to start your own scholarship, contact Cassie Luze: [cassie.luze@uni.edu](mailto:cassie.luze@uni.edu) / 319-273-6360

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Email \_\_\_\_\_ Phone \_\_\_\_\_

Please check if new address, phone or email

## I/we would like to support the following fund(s):

\$\_\_\_\_\_ Biology Undergraduate Research Fund, including support of research in honor of Dr. Darrell Wiens (21-222596)

\$\_\_\_\_\_ Biological Preserves Fund, in support of the Daryl Smith Prairie Preserve and the campus preserves system (21-220162)

\$\_\_\_\_\_ Biology Department Fund, which includes Dr. David Swanson Research Award (21-221607)

\$\_\_\_\_\_ Scholarship for biology students with financial need and merit, Caroline Czarnecki Biological Sciences Scholarship (21-212250)

\$\_\_\_\_\_ Scholarship for Biology Teaching majors, Bear and Sandy Stevens Family Endowed Biology Education Scholarship (30-212241)

\$\_\_\_\_\_ Scholarship for students planning a career in field biology or natural history, John R. Miller & Mary Lou Mammaing Miller Endowed Biology Scholarship (30-213062)

\$\_\_\_\_\_ Myrna & Gary Floyd Undergraduate Research Assistantship and Summer Research Fellowship (21-222165) or Floyd Endowed Scholarship in Biology for students with merit and financial need (30-213166)

\$\_\_\_\_\_ Dr. Robert and Brenda Good Summer Research Fellowship (21-222342)

\$\_\_\_\_\_ Total

**Online** Go to the online pledge form at [www.uni-foundation.org/](http://www.uni-foundation.org/) and click on "Make an online gift". You will need to enter the specific name(s) of the Biology projects in the "Other" box near the bottom of the web form.

**Matching Gifts** My (or my spouse's) company, \_\_\_\_\_ (name) will match my gift. Please contact your HR office for details and the matching gift form to be submitted with your payment.

**Check** Check enclosed, payable to the UNI Foundation

**Credit Card** Please charge my card \$ \_\_\_\_\_ beginning (mo/yr) \_\_\_\_\_/\_\_\_\_\_

*Credit Card information will not be kept on file.*

Please charge my: Visa / MasterCard / Discover / American Express (please circle one)

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(required for credit card gifts)

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**Department of Biology**  
University of Northern Iowa  
Cedar Falls, IA 50614-0421

## Alumni info request - Let us hear from you

Let us know what you have been up to. You can email us at: [theresa.spradling@uni.edu](mailto:theresa.spradling@uni.edu).



### Contact info:

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