WELCOME

New Online Masters Students for Summer 2017:
Sara Adair, CA; Eduardo Aguilar, TX; Carlos Amaro, TX; Aurea Arenas, NE; Douglas Ayega, MN; Gabrielle Bauman, KS; Ntelame Bennam, VA; Carter Cannon, MN; Lynda Carlson, WA; Christopher Castillo, CA; Haley Congdon, MA; Jessica Ferguson, NE; Damaris Follaco, FL; Sarah Grandon, NE; Wendy Gruber, MS; Keri Harper, FL; Katie Heronimus, MN; Bryson Hewins, MD; Daniel Hisong, KS; Alana Hurst, FL; Daynia Lashaway, CO; Qiaoxi Li, MD; Elizabeth Lovern, FL; Linda Mottison, CA; Michael Murphy, NC; Leigh Nicolella, GA; Amanda Noon, CA; Elissa Odgren, Alberta; Scott Petersen, KS; Katrina Poremba, ID; Jessica Rerucha, NE; Faustino Salcido, TX; Julie Schaffer, MO; Richard Scott, NJ; Jerolyn Seaborn, IN; Amanda Snyder, OR; Ruth Stirewalt, NE; Kathryn Thompson, CO; Reyna Valdez, TX; Kevin Van Derveer, FL

New Online Masters Students for Fall 2017:
Christian Abshire, LA; Andrew Agudelo, NJ; Bryan Anderson, TX; David Arrollo, IL; Sarah Ashely, AZ; Meredith Bauserman, VA; Micala Britt, LA; Kaitlin Carlson, NE; Melissa Chaney, FL; Paul Erhart, NE; Jenica Evans, FL; Jordan Feterl, SD; Sarah Gordon, VI; Amanda Graveson, OR; Brittany Grover-Sidler, CA; Bryn Harmer, SC; Matthew Hendricks, NC; Sarah Herrington, MD; Andrea Jacobberger, CO; Neal John, KS; Sarah Krause, NE; Cathy Lahren, CA; Brittany Laney, KS; Janet Lockett, CA; Monique Marshall, TN; Rianne Mashore, CA; Shelby Melfi, FL; Ambar Morales, GA; Heather Murphy-Klassen, MN; Shawn Murray, NC; Jackie Novak, NV; Jessica Nunez, WI; Daniel Olowofela, NE; Ryan Pavlish, NE; Chad Pereira, MA; Edith Perrault, FL; Catherine Pilkington, OK; Alexander Pleitt, IL; Veronica Randall, CO; Candelario Rayleen, CA; Sumbal Raza, TX; Faith Rodriguez, IL; Lauren Simmons, NH; JoAnn Sisodia, KS; Amanda Skingel, OH; Katherine Szostak, NJ; Clarissa Thompson, OH; Dana Trimble, NV; Vanessa Velasquez, TX; Sineah Young, NE; Allison Zyla, AZ

New Online Masters Students for Spring 2018:
Rania Alattar, CA; Cara Allingham, CA; Ashley Blanchard, FL; Terrell Branch, VA; Susan Brown, IA; Michael Buck, NE; David Corbin, PA; Craig Day, CA; Aaron Dixon, VA; Brad Ebner, MN; Bongbong Fernandez, MD; De’Vona Glover, IL; Jasmine Govan, TN; David Grant, IL; Alyssa Hines, Canada; Jesse Hope, FL; Jennifer Huynh, CA; Jeremy Jordan, AR; Laura Kermmoade, NE; Umair Khan, VA; ShereKay Liberman, MO; Melissa Marr, CA; Alexis Morgan, MI; John Morley, NE; Tamara Muldrow, VA; Laura Nelson, CO; Elizabeth Robinson, GA; Cathrena Samodurov, NC; Melissa Sansing, AZ; Jamie Score, MN; Kamber Scott, FL; Whitney Spiehler, AK; Chelsea Steed-O’Neil, GA; Angelika Dampf Stone, UT; Rebecca Thompson, CO; Cheyanne Tran, WA; Rebecca Trillo, AZ; Alison Van Wyk-Irwin, CO; Marianne Velez, NJ
Dr. Nicholas Hobbs joined the UNK Biology Department in the fall of 2017. Prior to arriving at UNK, he was a Postdoctoral Research Associate in the Breedlove Jordan lab at Michigan State University. While there, he conducted research examining how androgen receptors, the protein that binds androgen hormones like testosterone, affects the brain and behavior. Dr. Hobbs completed his Ph.D. at the University of Memphis. As a graduate student, he conducted research on how food availability and food quality affect behaviors that meadow voles, Microtus pennsylvanicus, use to attract and indicate interest in potential mates. His current research interests blend his graduate and postdoctoral work, as he plans to examine the interaction how androgens and food availability and food quality interact and affect olfactory behaviors using a genetic mouse model. He is teaching BIOL 886-01 – Sexual Selection online this spring.

Dr. Melissa Wuellner joined the UNK Biology Department in July 2017. Prior to UNK, she was a faculty member at South Dakota State University in Brookings, SD, where she taught human dimensions courses such as “Wildlife Law and Enforcement” and “Human Dimensions of Wildlife and Fisheries” to undergraduate students. She was also the distance education coordinator for the Department of Natural Resource Management. In this role, she taught undergraduate courses online and mentored new online instructors and was certified as a “Master Online Instructor” at SDSU. Her past and current research interests include fisheries ecology and management, human dimensions, Systems Thinking and Dynamics, and the scholarship of teaching and learning. She will be teaching BIOL 830P – Human Dimensions of Wildlife in spring 2018. The course will also include examples from fisheries, outdoor recreation, and natural resource management.
Biology Professors', Dr. Nate Bickford and Dr. Bryan Drew, research was highlighted by the University of Nebraska Kearney news this past spring and fall.

Below is an excerpt from the article on Dr. Nate Bickford, Associate Professor in the Department of Biology, entitled "Bickford, Bice bringing aquaponics to Nebraska schools". For the full article click on the link: [unknews.unk.edu/2017/04/05/bickford-bice-bringing-aquaponics-to-nebraska-schools/](unknews.unk.edu/2017/04/05/bickford-bice-bringing-aquaponics-to-nebraska-schools/)

Bickford, Bice bringing aquaponics to Nebraska schools

Growing own food helps children make healthier choices

KEARNEY – Two University of Nebraska at Kearney professors and their collaborators are embarking on a research project that could change the way kids think about food.

Nate Bickford, assistant professor of biology, and Matt Bice, assistant professor in the Physical Activity and Wellness Laboratory, are teaming up to teach middle school teachers how to integrate aquaponics systems into their classrooms and curriculum.

“One of the problems with Nebraska is there are so many food deserts,” Bickford said. “We need to relearn where food comes from and how easy it is to grow our own food. One of the things we think aquaponics can do is teach that. That's really really important.”

“If you plant your own food and you see it grow, you learn where food comes from.”

A food desert is an area where nutritious food is difficult to find due to availability, distance, affordability or limited places to shop.

Bice and Bickford hypothesize that growing their own food will teach children how to make healthier choices. Aquaponics is a modern agricultural practice that marries aquaculture – which is the farming of fish and other aquatic organisms – and hydroponics, which is growing plants without soil.

“It's really water efficient. It uses about 3 percent of the water traditional farming uses. For produce production it's wonderful,” Bickford said. “It's something you can do on your desktop for enjoyment, and it can even be used for commercial use.”

Twenty-four teachers representing 18-22 different rural schools across Nebraska will be involved in the project. Teachers have the option of using a 30-gallon tank in the classroom or a 250-gallon tank for the school. Teachers will choose the plants they grow, including bell peppers, lettuce, herbs, lemons, tomatoes or even houseplants.

Bice and Bickford will lead trainings in August, November and May to teach the teachers how to implement aquaponics into the curriculum.
Below is an excerpt from the article on Dr. Bryan Drew, Assistant Professor in the Department of Biology, entitled “Motivated by Mint: Bryan Drew travels world to collect plants, extract DNA”. For the full article click on the link: unknnews.unk.edu/2017/11/19/motivated-by-mint-bryan-drew-travels-world-to-collect-plants-extract-dna/

Motivated by Mint: Bryan Drew travels world to collect plants, extract DNA

Mints.

Those aromatic plants that brighten mojitos, tabbouleh and chewing gum, comprise one of the largest families of plants in the world. The mint family, known by its scientific name Lamiaceae, has about 7,000 members; they are found on all continents except Antarctica. And they often are found in exceptionally scenic areas, or maybe in your backyard garden.

This widespread abundance of Lamiaceae is a big reason the plants are of intense interest to the horticulture industry. And they attract botanists such as Bryan Drew, assistant professor of biology at the University of Nebraska at Kearney.

Drew says, somewhat in jest but also with more than a whiff of seriousness, that his love of travel pushed him to choose the mint family for intense research. And his focus on one genus, Salvia, has led him worldwide in searching out its 1,000 members. That search has taken him all over the United States, Mexico, South America, and in the summer of 2017, Turkey, southeastern Europe and China.

Lamiaceae are known for their square stalks and simple, opposite leaves. Most have showy flowers and many have fragrant volatile oils prized for culinary or medicinal uses. Culinary herbs include mint, basil, rosemary, sage, oregano, thyme and lavender. Other members of the family are grown for their beauty, such as Coleus, Monarda, Salvia and Ajuga. Salvia yields edible seeds – chia. Even catnip is a member of this large family.

Drew, however, is interested in the plants’ backstory – the story of how and why they evolved and dispersed worldwide. Of the 250,000 or so known plant types worldwide, two percent are in the Lamiaceae family, which is the sixth largest plant family. Drew is interested in radiations of Lamiaceae – why and how this huge family diversified and created new species. Scientists know that Lamiaceae began to diversify about 66 million years ago after the KT (Cretaceous-Tertiary) extinction, when all of earth’s large animals such as dinosaurs, and many plants, went extinct, virtually overnight.

CONGRATULATIONS

Awards:

Associate Professor, Dr. Nate Bickford was accepted to the prestigious Fulbright Specialist Program which sends U.S. faculty and professionals to serve as short-term experts at academic institutions abroad. Dr. Bickford will travel to Turku University of Applied Sciences in Finland this spring.

To read more please visit: unknews.unk.edu/2017/11/17/nate-bickford-to-travel-to-finland-as-fulbright-specialist/

Professor and Assistant Chair of Biology, Dr. Kim Carlson received the Pratt-Heins Faculty Award for Outstanding Teaching. She was honored at the Faculty/Staff Fall Convocation on August 18th. (pictured left)

To read more about this award please visit: unknews.unk.edu/2017/08/23/biggs-darveau-carlson-receive-pratt-heins-awards-for-outstanding-contributions/

Rhea (Chelle) Gillan, current distance student, won an AAUW Career Development Grant in July. AAUW is one of the world’s largest educational funding programs for women. The grants assist women who are preparing to advance or change their career or to re-enter the workforce. (pictured right)

May 2017 Graduates:

**July 2017 Graduates:**

Melissa Karau, Caleb Bomske, Matthew Ridgway, Amanda Fashano, Ting (Jimmy) Lin, Michael Doersam, Erin Huddleston, Helmut Handszer, Brett Markey, Rebecca McClay, Jolina Rice

**December 2017 Graduates:**

Brittany Adams (Thesis), Jessica Bellizio, Maire Rose Bieck, Kerri Bostrom, Heather Brewer, Breeana Caldera, Kaeley Chesney, Jacqueline Clifford, Jordnn Cogan, Angela Consani, Mallori DeShon, Heather DeVille, Victoria DiGregorio-Frist, Courtney Dodson, Lisa Duncan, Daniel Fairfield, Kevin Fandrich, Somilez Francis, Michael Hanson, Rebecca Hyde, Marcus Jorgensen, Jeanine Mc Donnell, Kateri McKinney, Ricardo Pontifis, Lauren Prince, Maria Raquepas, James Rowland, Heather Schmuki, Kendra Smith, Phylicia Spivey, Monika Sukhmangal, Kelsey Svagera, Kelly Ugrinov, Dallas Vitito

Five graduates were able to make the journey to Kearney for the UNK Fall Commencement ceremony on December 15th held in the Health and Sports Center. Over 30 guests including graduates, their families, and Biology faculty, attended the Department breakfast before the ceremony to honor our graduates.

(pictured from left to right: Dr. Julie Shaffer, Biology Department Chair; Dr. Janet Steele, Professor & Associate Dean, College of Graduate Studies and Research; Victoria DiGregorio-Frist; Kerri Bostrom; Jordnn Cogan; Heather Brewer; and Dr. Paul Twigg, Professor and Graduate Program Chair)
Grants


Meetings


Publications


Continue to send us updates on any meetings, publications, grants, or awards that you have been involved with. Please email details to msbiology@unk.edu.

**Director’s Desk from Dr. Letty Reichart**

Happy New Year and best wishes for a successful spring semester!

Positive changes and student accomplishments kept us busy this Fall, and I am happy to report our exciting news! First, many of you are already aware of a curriculum change in the online biology program implemented beginning Fall 2017. The six-credit, independent research series (Biol 831A-F), is no longer required for our online biology masters students. Students that began their online masters degree this fall will not be required to take Biol 831A-F; however, students interested in conducting independent research with a faculty mentor will be able to choose the six-credit sequence of Biol 831 as elective coursework. Students who began their online masters degree prior to Fall 2017 have the option of switching to the current graduate catalog if they wish to follow the revised curriculum. Please contact the graduate coordinators and we would be happy to help you switch to the new graduate catalog.

Second, we welcomed two new faculty members to our department this Fall, Dr. Nicholas Hobbs and Dr. Melissa Wuellner. We are excited to have these folks join our biology faculty and you can all look forward to some new exciting course offerings in physiology and wildlife biology.

Next, I would like to congratulate 33 online masters students, who graduated with their Master of Science degree in Biology in December 2017. This was the largest graduating class in the history of our program! We look forward to future updates from our December graduates regarding career changes and successes after having completed their online masters degrees.
Finally, I had the opportunity to attend the 2017 National Association of Biology Teachers Professional Development meeting that was held in St. Louis, MO. The UNK Biology Online Program hosted an exhibit booth at the meeting where we had a drawing to win materials to teach an evolution simulation lab using Legos®. In addition, one of my favorite experiences from the meeting was that I was able to meet several alumni and several current students from our online masters in biology program. Chatting with our former and current students about their positive experiences as online masters students at UNK was a fun opportunity!

In closing, I look forward to positive changes for Spring 2018 and celebrate the accomplishments for the December class of 2017. Please let me know if you have any concerns or questions about the new changes in our curriculum, I am happy to discuss these with you. You can contact me by email at reichartlm@unk.edu or call me at 308-865-8568. I look forward to hearing from you and best wishes for Spring 2018! ---Dr. Letty Reichart

Faculty News

Austin Nuxoll, Assistant Professor, and his wife, Jenny, welcomed Cora Elizabeth on January 9th. She weighed 9lbs 10oz and was 21½ in long.

Letty Reichart, Associate Professor and Director MS Biology Online Program, got married on Sept 23rd to Dale Long. The wedding was held at Yanney Park here in Kearney.
Pedro Bento (December 2011 graduate) was recently promoted to Global Director of Quality for Systech.

Jennifer Cain (May 2017 graduate) is in the Veterinary Science PhD program at the University of Kentucky.

Angela Consani (December 2017 graduate) is now full-time faculty at Kansas City Kansas Community College and the Coordinator of the new STEM+ program.

Kimberly Gonzalez (May 2017 graduate) started a new full-time position as an Assistant Professor of Biology at Middlesex Community College in Bedford, MA; as well as began a PhD in Educational Leadership program at the University of Massachusetts Lowell in September 2017. She also finished co-authoring four biology ebooks with her former professor from UMass Lowell, Dr. Thomas Shea. They are published through the TruBooks platform and are called “Life on this Rock”.

Alex Lovern (current distance student) accepted a new position with the Florida Fish and Wildlife Conservation Commission in October 2017.

Elysia Mbuja (July 2009 graduate) was awarded tenure at Pierce College Fort Steilacoom in Lakewood, Washington in spring 2017.

Sam Murray (July 2010 graduate) works for the FDA as a Medical Device Investigator and is also an Adjunct Assistant Professor at the University of Maryland University College. His brother, Robert (December 2013 graduate), graduated in December with his PhD in Animal Science from the University of Maryland (pictured left).

Curtis Reese (July 2015 graduate) was highlighted in his local newspaper and received a $500 classroom grant by the Norfolk Public Schools Foundation to buy equipment to add more hands-on learning opportunities for students in his environmental science class. norfolkdailynews.com/news/biology-teacher-incorporates-new-research-into-classes-after-puerto-rico/article_6521149e-1e6c-11e5-b142-832e28af54f2.html

Jolina Rice (July 2017 graduate) accepted a new position in May working as Technical Editor at Johns Hopkins Bloomberg School of Public Health in their Center for Teaching and Learning. In this role, she primarily edits text and visuals to help develop streamlined, accessible PowerPoint lectures.
Dorothy Salinas (December 2014 graduate) welcomed her daughter, Ellie, on June 12, 2017. Ellie weighed in at 7 lbs 15 oz and 21.5 inches long when she was born. (pictured left)

Timothy Tisdale (July 2017 graduate) was accepted into the Physician Assistant program at the University of South Alabama for the class of 2020. He and his wife, Emily, also welcomed their first baby, Ella, on June 18, 2017 (Father’s Day). (pictured right)

Holly Trimble (December 2016 graduate) developed a seventh six-week online course this year for a company called Ed2go. This course is titled, Medical Terminology II: A Focus on Human Disease. Her other courses include Human Anatomy and Physiology I, Human Anatomy and Physiology II, Teaching Science: Grades 4 to 6, Introduction to Chemistry, and Become a Physical Therapy Aide. Her courses also include a three to six-month career development course for physical therapy aides. In addition to facilitating these courses, she teaches anatomy and physiology for the Lone Star College System in Houston, Texas.

Please let us know what is going on in your lives; email us your news at msbiology@unk.edu.

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Office Space

**Spring 2018 Deadlines:**

January 8th—Spring classes begin
January 12th—Last day to add/drop class on MyBlue with no penalty
January 15th – Martin Luther King Jr. Holiday, all classes dismissed
January 18th—E-bill notifications sent to Lopermail account
February 1st—Last day to apply for May graduation
February 8th—Tuition & Fees due in full
March 9th–Last day to drop a course (no refund at this time)
March 18th - 25th – Spring break, all classes dismissed
March 30th—Comprehensive Exams (for graduating students) must be returned to the Biology Dept
April 2nd—Early Registration for Summer and Fall 2018 classes begins for all currently enrolled students
April 23rd—General Registration for Summer and Fall 2018 classes begins for all admitted students
April 30th-May 3rd – Finals Week
May 4th—Spring Commencement at 10:00 am in the Health and Sports Center
May 7th—Summer 2018 semester begins
May 8th—Deadline for faculty to submit final grades for spring classes
Students planning to graduate this May 2018 must apply for graduation on MyBlue. Even if you do not plan to attend ceremony you must apply in order to receive your degree. The deadline to apply for May graduation is February 1st. There is a $25 application fee which can be paid on-line during the application process. Commencement ceremony will take place at 10:00 am on May 4th in the Health and Sports Center. Please consider making the trip to Kearney to walk in graduation and if you do, please let the Biology Department know so we can plan some special events for you.

All classes will now be in Canvas. You may have already had a class in Summer or Fall 2017 in Canvas as faculty were given the option of using either Blackboard or Canvas for their classes. Beginning Spring 2018 all classes will be in the Canvas courseware. You can access Canvas the same as you did for Blackboard by using your EASI username and password. You can find a link to Canvas at the bottom of the UNK homepage, through EASI, or by going to canvas.unk.edu.