

The Natural Inquirer



FORT HAYS STATE UNIVERSITY DEPARTMENT OF BIOLOGICAL SCIENCES

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Lighthouse Award

Sonja Brandt (M.S., 2024) was awarded FHSU's prestigious Lighthouse Award for 2023-24. The Lighthouse Award, established in 2018, honors exceptional students completing their graduate studies.

Sonja graduated from Concordia University with dual bachelor's degrees in biology and studio art. She combined her love of birds and passion for photography, achieving notable success at FHSU. With her hands-on research projects and fieldwork, she mentored nature enthusiasts of all ages. Sonja maintained a 4.0 GPA, while fulfilling numerous professional obligations, including bringing a new chapter of Audubon, *Sunflower*, to FHSU. Audubon is a non-profit environmental agency dedicated to conserving birds and their habitats.



Sonja attended several professional conferences, including one in Canada representing FHSU to scientists from around the world. In April, she defended her thesis, "Relationships between environmental stressors and Cliff Swallow (*Petrochelidon pyrrhonota*) feather coloration, morphological characteristics, and colony size". To complete her research, Sonja supervised and trained nine assistants to help with her extensive lab and fieldwork.

"Sonja is a bright and capable student who, in a very short career, has demonstrated creativity and dedication to the conservation of natural resources, and birds in particular, as well as a passion for sharing her talents and ideas with the public at large," said Dr. William Stark, one of Sonja's nominators.

"As a biologist and artist, I didn't know if I'd be able to find somewhere that would allow me to combine my two passions, and I've been more than impressed with the opportunities the grad program at Fort Hays State has given me," Sonja said.



Congratulations Sonja!

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Meetings and Presentations

22nd annual Kansas IDeA Network of Biomedical Research Excellence (K-INBRE) Symposium, January 13-14, 2024, Manhattan, KS.

Greving, C., and E. T. Gillock. "Distribution of the 2-micron Plasmid in Various Strains of *Saccharomyces cerevisiae*" (Star Trainee presentation).

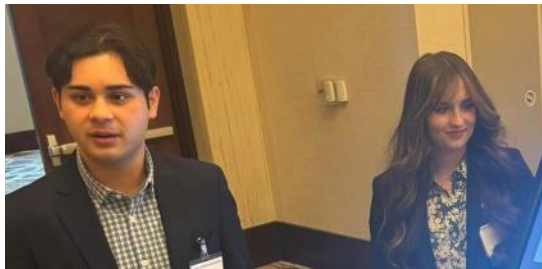


Mattick, P., and E. T. Gillock. "Screening Environmental Soil Samples for Antibiotic Production"(poster).

Rueschhoff, G., and T. Phelps-Durr. "CRISPR Analysis of the MYB Domain Transcription Factor Asymmetric Leaves 1" (poster).



Rymer, A., G. Rymer, J. Ferguson, C. Da Silva Carvalho, B. Schaffer, J. Sekavec, and C. McCullough. "An Analysis of Presence of Antibiotic-Resistant Bacteria in Wastewater Systems: A Strategy to Assess Population Health in Kansas Counties" (poster).



Cesur, R., and E. T. Gillock. "Presence of PERV-C among Feral Pigs in Eastern Kansas" (poster).

Gruenstaeudl, M., P. E. Mongkhovilay, G. Smith, and K. Rowley. "Developing bioinformatic tools for the data mining of archived organellar genomes – A productive setting for online student-led research" (poster).

Kennemer, B., and E. T. Gillock. "Antifungal Bacteria in Soil" (poster).

Odoi, I., and E. T. Gillock. "Presence of Porcine Endogenous Retrovirus Class C in Domestic pigs in selected areas in Kansas" (poster).



Okyere-Addo, K., and C. DaSilva Carvalho. "Assessing the Incidence of Methicillin-Resistant (MRSA) and Methicillin-Susceptible *Staphylococcus aureus* (MSSA) in Pigs at the FHSU Animal Farm's Swine Unit" (poster).

Smith, L., N. Stewart, A. DeCandia, and L. Patrick. "Methylation Patterns Across Tissue Type and Time in *Peromyscus leucopus*: A Targeted Museum Study" (poster).

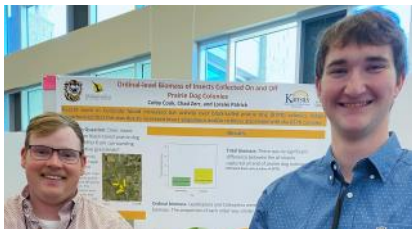
Meetings and Presentations (continued)

Welton, A., and E. T. Gillock. "Presence of Porcine Endogenous Retrovirus C in Domestic Pig Populations" (poster).

**FHSU K-INBRE
attendees:**



**17th annual Kansas Natural Resources Conference, February 8-9, 2024,
Manhattan, KS.**



Cook, C., C. Zerr, and L. Patrick. "Ordinal-level biomass of insects collected on and off prairie dog colonies" (poster).



Geyer, P., Z. Buffington, and L. Patrick. "Vigilance and foraging behaviors of two sciurid species between college campuses and urban environments" (poster).



Zimmerman, S., and L. Patrick. "Boeing bats baseline survey in Wichita, KS" (poster).

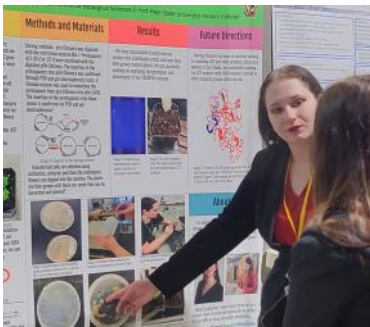
Meetings and Presentations (continued)

Undergraduate Research Day at the Capitol, March 1st, 2024, Topeka, KS.



Chen, K., C. Shippy, and T. Phelps-Durr. "CRISPR analysis of HIRA in plants" (poster).

National Council of Undergraduate Research (NCUR) Conference, April 8-10th, 2024, Long Beach, CA.



Rueschhoff, E., and T. Phelps-Durr. "CRISPR Mutations in the Asymmetric Leaves 1 Gene of Arabidopsis" (poster).



Dr. Claudia Carvalho, Ella Rueschhoff, and Dr. Tara Phelps-Durr attending the NCUR conference in Long Beach, CA.

Faculty Women of Color in the Academy (FWCA) Conference, April 13-14th, 2024, Arlington, VA.



Dr. Medhavi Ambardar and Dr. Claudia Carvalho were members of a panel discussion entitled, "Sisterhood as a Survival Mechanism for Women of Color at a Rural PWI".

Meetings and Presentations (continued)

**19th annual John Heinrichs Scholarly and Creative Activity Days (SACAD),
May 1st, 2024.**

Cook, C., C. Zerr, and L. Patrick. "Ordinal-level biomass of insects collected on and off prairie dog colonies" (poster).

Geyer, P., Z. Buffington, and L. Patrick. "Vigilance and foraging behaviors of two sciurid species between college campuses and urban environments" (poster).

Mattick, P., and E. T. Gillock. "Screening environmental soil samples for antibiotic production" (poster).



Redding, E., and L. Patrick. "Anything but another essay: Understanding undergraduate STEM student perceptions of creative, project-based learning" (poster).



Walters, M., and E. T. Gillock. "TY4 retrotransposon presence in yeast strains" (poster).

Zimmerman, S., and L. Patrick. "Boeing bats baseline survey in Wichita, KS" (poster).



*Eclipse
Day*



Several classes took a short break at 1:45 pm on April 8th to go outside and view a **partial solar eclipse** (with eye protection). The clouds cleared enough to see an 85% eclipsed sun, and some crescent shadows on the ground!



Grad Student News:

Congratulations to the following students, who completed their master's degree this semester!

Kyle Abrahamson

Sonja Brandt (*Relationships between environmental stressors and Cliff Swallow (Petrochelidon pyrrhonota) feather coloration, morphological characteristics, and colony size*).

Robin Cesur

Brendon Mason

Kofi Okyere-Addo

Avery Welton

Congratulations to these students, who have been accepted to professional programs:

Robin Cesur (M.S., 2024): accepted into the PhD program at Virginia Tech.

Grace Hankins (B.S., 2024): accepted into Emporia State University's forensic science master's program.

Brendon Kennemer (B.S., 2024): accepted into the Biology/Chemistry master's program at FHSU.

Rose Reilly (B.S., 2024): accepted into dental school at UMKC.

Garret Rymer (B.S., 2023): accepted into the Kansas City University School of Osteopathic Medicine.

Sierra Smith (B.S., 2024): accepted into the Kansas City University School of Dentistry.

And congratulations to these students, who accepted employment offers:

Loryn Smith (M.S., 2023) has accepted a position as a laboratory technician at the Oklahoma Medical Research Foundation.

Ella Rueschhoff (B.S., 2024) has accepted a position as a Forensics Scientist Trainee with the Kansas Bureau of Investigations.

Alumni news:

Chloe Champney (M.S., 2023): Biology teacher at Miltonvale High School, Miltonvale, KS.

Sierra Eichman (B.S., 2021): Earned a Doctorate of Occupational Therapy from the University of Saint Mary.

Zach Nelson (M.S., 2022): USDA Biological Sciences Technician, Manhattan, KS.

Dr. Nick Shiew (B.S., 2020): Completed his MD degree at the University of Kansas Medical School, Salina, KS.

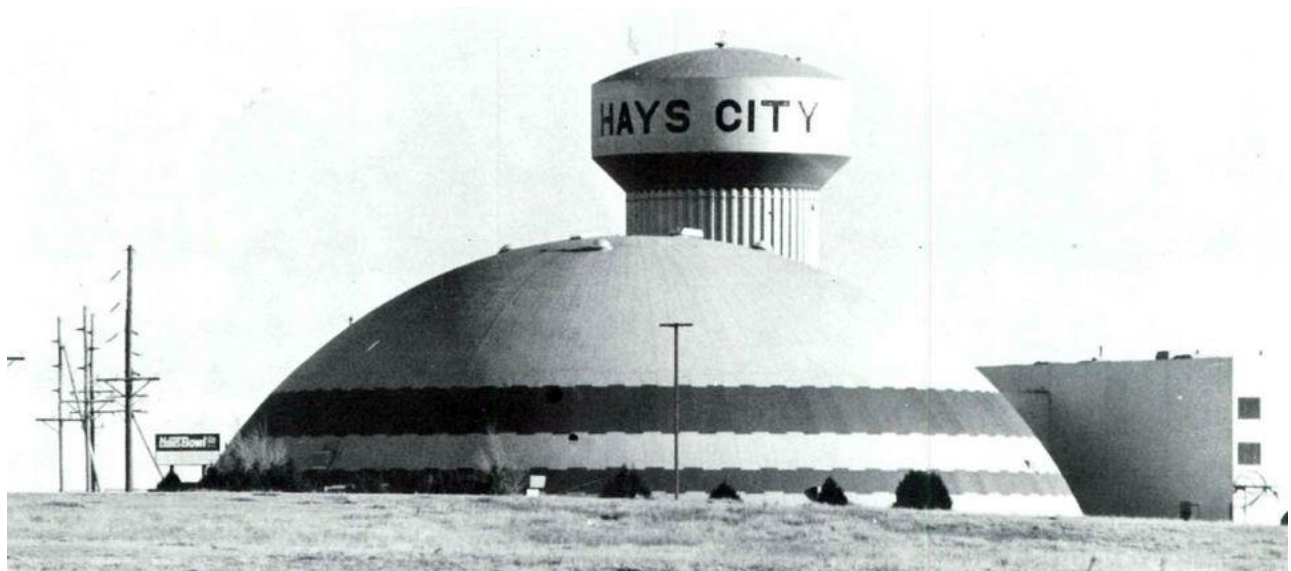
Michaela Sielaff (M.S., 2022): Acoustic Bat biologist with Stantec in Overland Park, KS.

Mario Rodriguez (M.S., 2023) Biology teacher at Washington High School in Kansas City, KS.



Sternberg Museum of Natural History celebrated its 25th anniversary with a “Home Under the Dome” celebration on March 15th, 2024. Special events included live animal feedings, collection tours, and unlocking a time capsule.

On March 15th, 1999, the Sternberg Museum of Natural History opened its doors in the dome just south of I-70. This momentous occasion brought together two museums on campus into the Sternberg Museum of Natural History. Over 1 million visitors have passed through these doors since the opening.



Pictures from Dr. Bill Stark's 2024 herpetology field trip



Herpetology field trip pictures, continued:



Herpetology field trip pictures, continued:



The Biology Club's 2nd annual **Elementary Education Science Day** was held on April 19th. Seventy-two third graders from area schools gathered in the 3rd floor labs to participate in 9 different activity stations, including Paper Plate Cell, Fact or Myth, and Strawberry DNA.



Dr. Eric Gillock presented, “Endogenous retroviruses: hidden hitchhikers and how they spread”, at the Science Café on April 29th.



Nana-Esi Hanson and **Parker Jones** set up nest boxes for their House Wren research this summer (and caught a few herps along the way)



A sugar maple tree was planted east of Albertson Hall on May 7th as a rededication memorial for former Biology graduate student Margaret Kritsch Anderson (M.S., 2003). In 2012, Margaret was killed in the line of duty while working as a Park Ranger at Mount Rainier National Park (see Natural Inquirer Vol. 10, issue 2 for more details).

Three “generations” of academic lineage



Pictured above (l-r) is Dr. Eric Gillock, who was advisor to Dr. Claudia Carvalho (M.S. 2009), who was advisor to Kofi Okyere-Addo (M.S. 2024).

Dr. Sarah Elzay’s wildlife management students participate in a prescribed burn activity in April, and work on woody encroachment management at the Connie Achterberg Wildlife-Friendly Demonstration Farm.





Bird activity at Cheyenne Bottoms:

Courtesy of <https://www.facebook.com/wetlandscenter>

Spring migration is happening despite the limited water in the wetlands. Ducks are the predominant bird group to see on the area, with Blue-winged Teal and Northern Shovelers the most abundant, but shorebird numbers and diversity are on the rise with Avocets, Black-necked Stilts, White-faced Ibis, Yellowlegs, Willets, Godwits, Dowitchers, Sandpipers, and Killdeer being relatively common. Birds are using all areas with standing water.

Canada Geese, Coots, Ring-billed Gulls, American White Pelicans, Double-crested Cormorants, and Great-blue Herons are all relatively commonly seen during most trips. Spring migrant songbirds are also arriving, including Tree Swallows, Yellow-headed blackbirds, Say's Pheobe, and several sparrow species.



Double-crested Cormorants



Willet

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