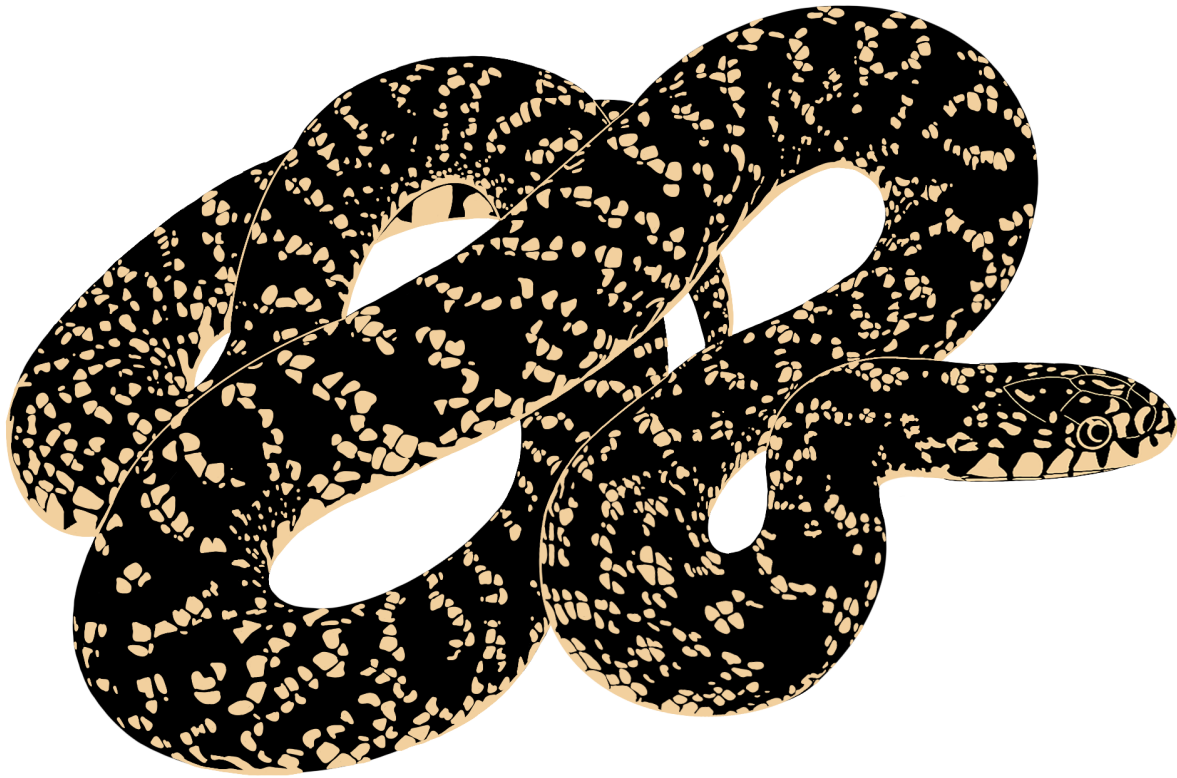


KANSAS HERPETOLOGICAL SOCIETY

49th Annual Meeting • 4-6 November 2022

Missouri Southern State University, Joplin



ksherp.com

Special thanks to:

Missouri Southern chapter of The Wildlife Society



Local Committee: David Penning (Chair), Brenna Jones, Thomas Zapletal, Gabe McClain, Dayle Chasten, and Alyssa Owens

WIFI: MSSU guest

FRIDAY • 4 NOVEMBER 2022

UNOFFICIAL MEETUP:

Hackett's Hotwings
downtown Joplin

6:00 - 10:00 PM

SATURDAY • 5 NOVEMBER 2022

8:00-9:00 AM Registration: **Todd Volkmann** (KHS Secretary) and **Dexter Mardis** (KHS Treasurer) in the Billingsly 3rd floor, BSC Ballroom. Drinks and donuts available. KHS masks will be given away to attendees until the supply is exhausted.

9:00 AM Welcome by Missouri Southern State University, Joplin.
Opening Address by **David Penning**, KHS President, Missouri Southern State University, Joplin.

Scientific Paper Session 1 - Moderator: **Walter Meshaka**, State Museum of Pennsylvania, Harrisburg

9:15 AM *AN INTEGRATED APPROACH TO UNDERSTANDING THE MEDICALLY-IMPORTANT SNAKE.*
Neil R. Balchan and Guinevere O. U. Wogan. Department of Integrative Biology, Oklahoma State University, Stillwater.

9:30 AM *LOST IN THE DESERT: PRELIMINARY DATA ON SHORT DISTANCE TRANSLOCATION OF BLACK-TAILED RATTLESNAKES.*
Joshua J. Mead¹, Jacob A. Coffman², and Jerry D. Johnson¹. ¹The University of Texas at El Paso; ²University of Kentucky, Lexington.

9:45 AM *COMPARISON OF TWO EASTERN MILKSNAKE (LAMPROPELTIS TRIANGULUM) POPULATIONS IN A NATURAL AND URBAN ENVIRONMENT.*
Emeleigh Luckenbaugh¹, Dr. Pablo Delis¹, and Dr. Walter Meshaka, Jr.². ¹Department of Biology, Shippensburg University, Pennsylvania; ²State Museum of Pennsylvania, Harrisburg.

10:00 AM *COVER-BOARD SAMPLING: THE EFFECT OF COVER OBJECT MATERIAL AND SIZE ON NUMBER OF SNAKES CAPTURED.*
Alyssa Owens and Dr. David Penning. Missouri Southern State University, Joplin.

10:15 AM *HIGHWAY TO SHELL: THE ROAD TO DIFFERING DEMOGRAPHICS IN SOUTHWEST MISSOURI HERPS.*
Thomas Zapletal and Dr. David Penning. Missouri Southern State University, Joplin.

BREAK 10:30 to 10:45 AM - Posters

Scientific Paper Session 2 - Moderator: **David Penning**, Missouri Southern State University, Joplin

10:45 AM *Introduction of the KHS Keynote Speaker:*



Dr. Rulon Clark

Professor, Department of Biology
San Diego State University, California

*The feeding ecology and hunting behavior
of free-ranging rattlesnakes*

11:30 PM KHS Group Photograph

LUNCH: 11:45 to 1:00 PM
(Meeting participants are expected to forage independently,
or in large groups if this provides leverage)

Scientific Paper Session 3 - Moderator: **Bill Stark**, Fort Hays State University, Kansas

- 1:00 PM *CONTINUED SURVEY OF THE CHIHUAHUAN GREEN TOAD, ANAXYRUS DEBILIS, IN KANSAS.*
Mackenzie Reh and Dr. William Stark. Department of Biological Sciences, Fort Hays State University, Kansas.
- 1:15 PM *THE RED-SPOTTED TOAD: A NATURAL HISTORY INVESTIGATION IN SOUTHERN KANSAS.*
Elisabeth Russell and William Stark. Department of Biological Sciences, Fort Hays State University, Kansas.
- 1:30 PM *WHAT TIME OF YEAR DOES TERRAPENE ORNATA MATE?*
Daniel F. Hughes¹, Sangai Dukuly¹, Donald F. Becker², Jim Scharosch², Joshua G. Otten³, Samuel Wagner⁴, and Benjamin M. Reed⁴. ¹Department of Biology, Coe College, Cedar Rapids, Iowa; ²HerpMapper, Davenport, Iowa; ³Department of Environmental Sciences, University of Toledo, Ohio; ⁴Department of Biology, Washburn University, Topeka, Kansas.
- 1:45 PM *LIMITS OF PHENOTYPIC PLASTICITY AND IMPLICATIONS FOR COLLATERAL EFFECTS ON FITNESS.*
Stephanie Bristow, Samantha Skerlec, Krista Ward, and Thomas Luhring. Department of Biological Sciences, Wichita State University, Kansas.
- 2:00 PM *SHELLS AND SMELLS: TESTING THE EFFECTS OF BAIT AND TRAP CHARACTERISTICS ON AQUATIC TURTLE CAPTURE RATES.*
Gabriel McClain and David Penning. Missouri Southern State University, Joplin.

BREAK 2:15 to 2:30 PM - Posters

Scientific Paper Session 4 - Moderator: **Andrew George**, Pittsburg State University, Kansas

- 2:30 PM *TO GLOW OR NOT TO GLOW: EFFECTIVENESS OF GLOW STICKS AND TRAP METHOD ON THE CAPTURE RATES OF LARVAL AMPHIBIANS.*
Emma M. Buckardt, Christine C. Rega-Brodsky, and Andrew D. George. Pittsburg State University, Kansas.
- 2:45 PM *FUNCTIONAL AND BIOCHEMICAL CHARACTERIZATION OF IN VITRO PRIMARY NEURONS IN THE WESTERN PAINTED TURTLE (CHRYSEMYS PICTA BELLII): AN EMERGENT MODEL FOR NEUROBIOLOGY STUDIES OF ANOXIA-TOLERANT VERTEBRATES.*
Natalia Agostini Schneider, Colton Smith, Mia Warmka, Seth Hofheins, and Daniel E. Warren. Department of Biology, Saint Louis University.
- 3:00 PM *A COMPARISON OF AMPHIBIAN LARVAE POPULATION ESTIMATION TECHNIQUES.*
Jake T. Wright, Krista J. Ward, Emily A. Stybr, Tiffani N. Holman, and Thomas M. Luhring. Wichita State University, Kansas.
- 3:15 PM *RANGE EXPANSION AND DISPERSAL TRAITS OF THE GREEN TREEFROG (HYLA CINEREA).*
Owen Milan Edwards¹, Dale D. Edwards², Sarah I. Duncan³, David Laurencio⁴, and Jeffrey M. Goessling³. ¹Oklahoma State University, Stillwater; ²University of Evansville, Illinois; ³Eckerd College, Saint Petersburg, Florida; ⁴Auburn University, Alabama.
- 3:30 PM *PROPOSED UPDATES TO THE KANSAS HERP REGULATIONS.*
J. Daren Riedle. Kansas Department of Wildlife and Parks, Pratt.

BREAK 3:45 to 4:15 PM - Posters

4:15 PM

KHS General Business Meeting: KHS President **David Penning** presiding:

Introduction of KHS Officers & Committee Chairpersons
KHS Treasurer's Report by **Dexter Mardis**
KHS Secretary's Report by **Todd Volkmann**
KHS Editor's Report by **Darren Riedle**
KHS Historian's Report by **Suzanne L. Collins**
KHS Field Trip Report by **Andrew George/Travis W. Taggart**
KDWP Liaison Report - **Darren Riedle**

Report on plans for the *50th Annual KHS Meeting* on the first weekend in November 2023
by KHS President-Elect **Rafe Brown**, The University of Kansas, Lawrence

Election of KHS Officers for 2022

Lynnette Sievert (ESU, Kansas), the KHS Nominating Committee, offers the following slate of candidates:
For President-Elect • **Kelly Kluthe**, Kansas City, MO and **Bill Stark**, Hays, KS
For Treasurer • **Dexter Mardis**, Wichita, KS
For Secretary • **Jenny Smith**, Wichita, KS and **Keith Geluso**, Kearney, NE

Announcement of the KHS election results by President **David Penning**

DINNER ca. 5:00 to 7:00 PM

(Meeting participants are again expected to forage, this time with greater skill because of their lunch-time experience.)

SATURDAY EVENING • 5 NOVEMBER 2015

North End Zone Facility,
3950 East Newman Road, Joplin

7:00 PM - KHS Awards Ceremony

Moderator: **Daniel D. Fogell**, Southeast Community College, Lincoln, Nebraska.

7:30 PM - KHS Auction

KHS Auctioneers **Daniel D. Fogell**, **Christopher Visser**, **Walter Meshaka**, and **Mary Marine** will offer up many breath-taking items (including **John Lokke** original paintings). The KHS takes cash, credit cards, and checks. Be sure and get a bidding number before the auction commences. Bid vigorously and support the KHS. Light food/hors d'oeuvres will be provided.

SUNDAY • 6 NOVEMBER 2022

8:00-9:00 AM Registration for participants that did not register on Saturday: **Todd Volkmann** (KHS Secretary) and **Dexter Mardis** (KHS Treasurer). Billingsly 3rd floor, BSC Ballroom . Drinks and donuts available.

Scientific Paper Session 5 - Moderator: **Christopher Visser**, Nebraska Nature Service, Lincoln

8:30 AM *WHAT DOES 30 MM BODY SIZE MEAN?*

Walter E. Meshaka, Jr.¹, Emeleigh E. Luckenbaugh², Grace L. Cocanower², and Pablo R. Delis². ¹Section of Zoology and Botany, State Museum of Pennsylvania, Harrisburg; ²Department of Biology, Shippensburg University, Pennsylvania.

8:45 AM *THE HERPETOFAUNAL COMMUNITY OF SAVAGE NECK DUNES PRESERVE, VIRGINIA: THE EXPANDING EMPIRE OF THE EASTERN BLACK RACER, COLUBER CONSTRICTOR.*

Pablo R. Delis¹ and Walter E. Meshaka, Jr.². ¹Department of Biology, Shippensburg University, Pennsylvania; ²Section of Zoology and Botany, State Museum of Pennsylvania, Harrisburg.

9:00 AM *HERPETOLOGICAL CONSERVATION THROUGH REGENERATIVE FARMING.*

Dan Krull. Regen Partners, Kansas City, Missouri.

9:15 AM *TURNING DATA INTO MEANING: EDUCATION IN HERPETOLOGICAL CONSERVATION.*

Monica Macoubrie. Nebraska Game and Parks, Lincoln.

BREAK 9:30 to 9:45 AM

Scientific Paper Session 6 - Moderator: **Alexis Powell**, Emporia State University, Kansas

- 9:45 AM *RIVER TURTLE ASSEMBLAGE AT A AQUATIC BIODIVERSITY HOTSPOT.*
J. Daren Riedle, Sreeparna Dutta, Arunima Singh, Rishika Dubla, and Sailendra Singh. Turtle Survival Alliance (India Program), D 1/317, Sector F, Janakipuram, Lucknow.
- 10:00 AM *ACTIVITY CYCLES OF CENTRAL AMERICAN RIVER TURTLES (DERMATEMYS MAWII) IN BELIZE.*
Cora Dyslin, Denise M. Thompson, Donald T. McKnight, Sean P. Maher, and Day B. Ligon. Department of Biology, Missouri State University; Department of Environment and Genetics, La Trobe University.
- 10:15 AM *POST-RELEASE MOVEMENT PATTERNS AND HABITAT PREFERENCES OF CAPTIVE-BRED CENTRAL AMERICAN RIVER TURTLES (DERMATEMYS MAWII).*
Wesley Smith¹, Cora Dyslin¹, Donald McKnight², Denise M. Thompson¹, Colleen Joseph³, Roman Potts³, Jonathon Dubon⁴, Thomas Pop⁴, Jacob Marlin⁴, Heather Barrett⁴, and Day B. Ligon¹. ¹Department of Biology, Missouri State University, Springfield; ²Department of Environment and Genetics, La Trobe University, Wodonga, Victoria, Australia; ³Spanish Creek Wildlife Sanctuary, Rancho Dolores, Belize; ⁴Belize Foundation for Research and Environmental Education, Punta Gorda.
- 10:30 AM *LIFE HISTORY OF WESTERN CHICKEN TURTLES IN SOUTHEASTERN OKLAHOMA: NESTING ECOLOGY AND LONGEVITY.*
Dylan J. Wichman¹, Ethan C. Hollender², Donald T. McKnight³, Denise M. Thompson¹, and Day B. Ligon¹. ¹Department of Biology, Missouri State University, Springfield; ²Department of Biological Sciences, University of Arkansas, Fayetteville; ³Department of Environment and Genetics, School of Agriculture, Biomedicine, and Environment, La Trobe University, Wodonga, Victoria, Australia.

BREAK 10:45 to 11:00 AM

Scientific Paper Session 7 - Moderator: **Dan Fogell**, Southeast Community College, Lincoln, Nebraska

- 11:00 AM *TESTUDINE INTRANUCLEAR COCCIDIOUS(TINC) ALDABRA TORTOISE CASE STUDY AND EMERGING DISEASE REVIEW, KEEP YOUR SHELLS ON, THERE'S PICTURES.*
Carolyn Hanish and Mary Drozd, DVM. University of Nebraska Veterinary Diagnostic Center, Lincoln.
- 11:15 AM *OBSERVATIONS OF MOVEMENTS, HOME RANGE SIZE, AND HABITAT USE OF TIMBER RATTLESNAKES (CROTALUS HORRIDUS) IN NORTHERN MISSOURI.*
Calvin H. Schaefer¹, Johan Ludot², Océane da Cunha³, and Chad E. Montgomery². ¹Oklahoma State University Department of Integrative Biology, Stillwater; ²Truman State University Department of Biology, Kirksville, Missouri; ³Department of Biological Sciences, University of Texas at El Paso.
- 11:30 AM *MOVEMENTS AND HABITAT USE BY WESTERN RATSNAKES (PANTHEROPHIS OBSOLETUS) IN A FRAGMENTED MIDWESTERN LANDSCAPE.*
Andrew D. George, Frank R. Thompson III, and John Faaborg. Pittsburg State University, Kansas.

Presentation of the George Toland Award by KHS Awards Chair, **Daniel D. Fogell**
Closing remarks by **David Penning**

2022 KHS ANNUAL MEETING POSTERS

The *Meshaka Award* for the best poster on the Ecology of North American Amphibians and Reptiles will be awarded prior to the Saturday evening auction. Abstracts available here: <http://ksherp.com/annual-meeting-presentation-submission/>

Characterization of squamate microbiomes. **Jainee Cowen**, Zach McAdams, Aaron Ericsson, and Craig Franklin. *University of Missouri College of Veterinary Medicine, MU Metagenomics Center, Columbia.*

Spatial ecology of Black Rat Snakes (Pantherophis obsoletus) at Oklahoma City Zoo and Botanical Gardens. **Alan Jones** and Dr. Vicki Jackson. *University of Central Oklahoma, Edmund.*

Phenotypic adaptations that promote invasion success in Cane Toads (Rhinella marina). **Sydney Turner**, Crystal Kelehear-Graham, and Thornton Larson. *Sul Ross State University, Alpine, Texas.*

Getting to the root of the noot: Larval occupancy patterns of Eastern Newts. **Sara A. Scholes**, Emma M. Buckardt, Christine C. Rega-Brodsky, and Andrew D. George. *Department of Biology, Pittsburg State University, Kansas.*

Drying and refilling of wetland soil alters larval anuran growth rates, survival, and metamorphosis. Krista J. Ward, **Shania E. M. Burkhead**, Emily A. Burrus, and Thomas M. Luhring. *Wichita State University, Kansas.*

Reproduction in Smilisca fodiens, a burrowing treefrog from Mexico. **Trisan South**, Daniel B. Wylie, and Daniel F. Hughes. *University of Illinois Museum of Natural History, Urbana.*

Bite performance of captive Alligator Snapping Turtles (Macrochelys temminckii) improves after reintroduction. **David Penning**¹, Ashley Gagnon², Aaron White³, Kerry Graves³, Ralph Simmons³, and Day Ligon². ¹Missouri Southern State University, Joplin, ²Missouri State University, Springfield, ³US Fish and Wildlife Service.

Rattled and frazzled: Behavioral response to rattling with captive animals. **Joshua J. Mead**¹, Océane Da Cunha¹, L. Miles Horne¹, Allyson D. Benson-Pedraza¹, Vicente Mata-Silva¹, Carrie E. Trudeau², and Jerry D. Johnson¹. ¹The University of Texas at El Paso; ²El Paso Zoo, Texas.

Elevation grade preferences of whiptail lizards from poorly documented Christmas Mountains in Brewster County, Texas. **Derek Dacus**, Brandon Ramirez, Thornton Larson. *Sul Ross State University, Alpine, Texas.*

Cameras traps and 3D-printed turtles: Is it time to rethink clay models in predation studies? **Cameron Kolthoff** and Daniel F. Hughes. *Coe College, Cedar Rapids, Iowa.*

Multiyear repeatability of behavior in Ornate Box Turtles (Terrapene ornata) from Iowa. **Sangai Dukuly**¹, Farah Suboh¹, Aubrey Gauntt¹, Abby Trautman¹, Benjamin Reed², and Daniel F. Hughes¹. ¹Department of Biology, Coe College, Cedar Rapids, Iowa; ²Department of Biology, Washburn University, Topeka, Kansas.

50 shades of clay: The effect of color, size, and posture on predation of model snakes. **Jerod Thomas**, **Jesse Grooms**, Brenna Jones, and David Penning. *Missouri Southern State University, Joplin.*

Reproductive ecology of Terrapene ornata in western Nebraska. **Katie Brighton**, Keetan Munsell, Aubrey Gauntt, Timothy Speer, Abigail Trautman, Patience Wagner, Brianna Wilson, and Benjamin Reed. *Washburn University, Topeka, Kansas.*

Movement ecology of two sympatric box turtle species in northeastern Kansas. **Layne Hodge**, Kaylyn Hobelman, Samuel Wagner, Amelia Weller, Emma Loesing, and Benjamin Reed. *Washburn University, Topeka, Kansas.*

Evaluation of the AHDriFT camera trap system for long-term herpetofauna monitoring on reclaimed mined lands. **James Loomis**, Christine Rega-Brodsky, and Andrew George. *Pittsburg State University, Kansas.*

Relationship between learning and behavioral type in ornate box turtles (Terrapene ornata). **Brianna Wilson**, Patience Wagner, Katie Brighton, Mason Chanay, Aubrey Gauntt, Keetan Munsell, Abby Trautman, Timothy Speer, Samuel Wagner, and Benjamin Reed. *Washburn University, Topeka, Kansas.*

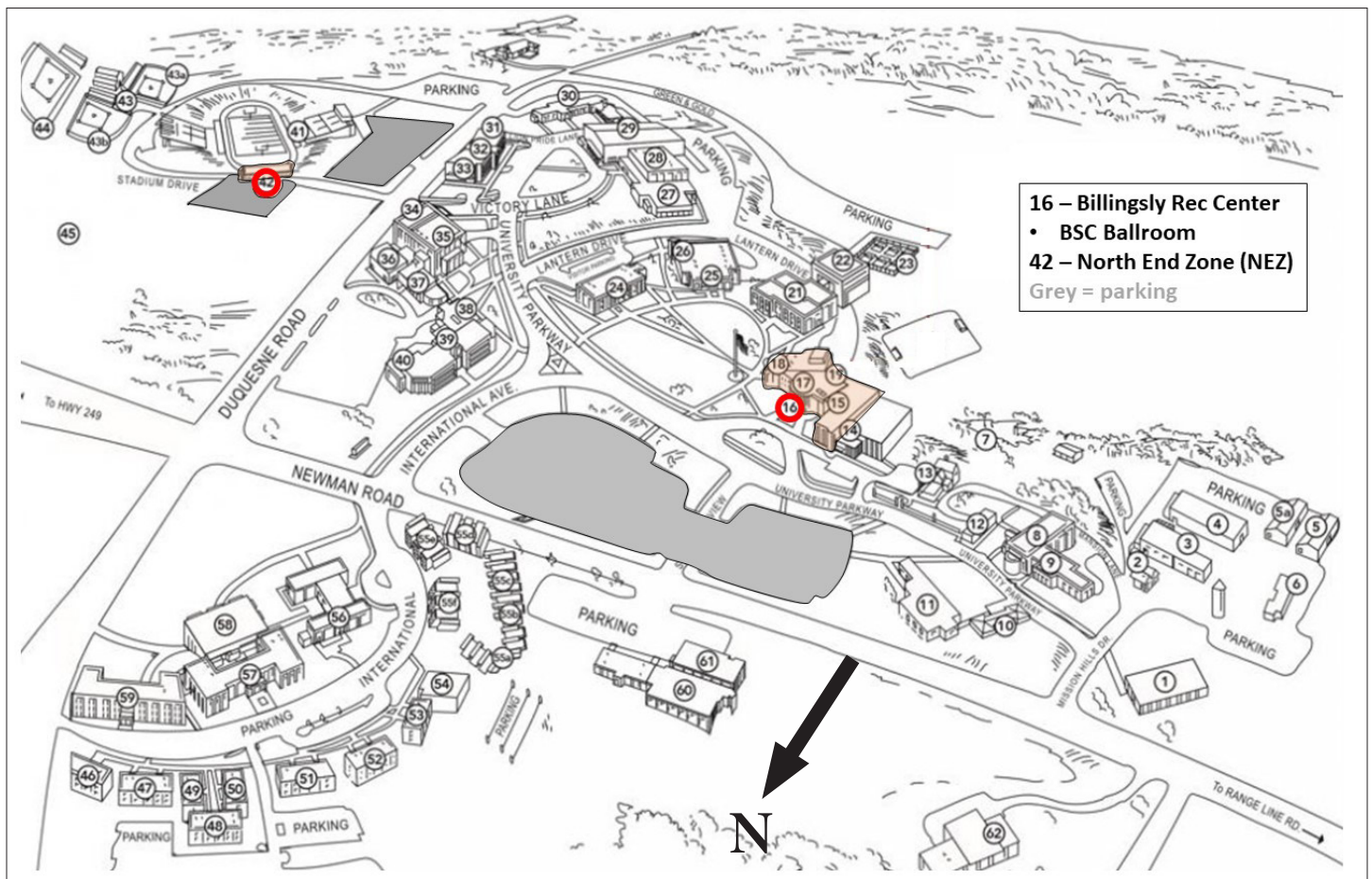
The relationship between pull strength, sex and age in different populations of Ornate Box Turtles. **Abby Trautman**, Logan Stock, Benjamin Reed, Paul Wagner and Tracy Wagner. *Washburn University, Topeka, Kansas.*

Local adaptations of a lizard in development time, heart rate, and their thermal sensitivity reveal countergradient variation across a latitudinal thermal gradient. **Tiffany Hegdahl**, Ben Haussmann, and Travis R. Robbins. *University of Nebraska Omaha.*

Home Range Size and Philopatry in Terrapene ornata. **Mark Lewis**, Kaylyn Hobelman, Ruthline Pierre, Anthony Hoad, Timothy Canfield, Irene Sans Gistau, and Benjamin Reed. *Washburn University, Topeka, Kansas.*

Won't You Be My Neighbor: A Nearest Neighbor Discussion for Plethodon albagula. Perhaps a new Kansas species? **Kyle Marrett** and David Penning. *Missouri Southern State University, Joplin.*

Switch in foraging behaviors by Nerodia at a drying pond, and other interesting observations of snakes feeding in southern Kansas. **Keith Geluso**¹, Joe Paysen¹, and Carter Kruse². ¹University of Nebraska at Kearney; ²Turner Institute of Ecoagriculture, Bozeman, Montana.



Nearby Food Options

- **Sami's Family Restaurant**
Diner with various burgers, sandwiches, wraps; ca. 3 minutes S of campus
- **Gusano's Chicago Style Pizzeria**
ca. 3 minutes S of campus
- **Del Rio Bordertown Café**
Large capacity Mexican restaurant; ca. 5 minutes N of campus
- **Tokyo Japanese Steakhouse**
Hibachi, lunch trays, sushi; ca. 3 minutes E of campus
- **Pizza Hut Express, Tropical Smoothie Café, Qdoba**
Just off of 7th street; 6 minutes away
- **20+ chain restaurants available if you head South on Rangeline Road**