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Kansas Herpetological Society

KANSAS HERPETOLOGICAL SOCIETY OFFICERS FOR 2005

Front Cover: Max Stieben (left) and Charlie Stieben examine a Western Slender Glass Lizard *(Ophisaurus attenuatus)* from Ellis County, Kansas. Discoveries such as these at a young age often make a lasting impression and may contribute to an increasing environmental awareness as children grow to adulthood. Photograph by Travis W. Taggart, Hays, Kansas.

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Journal of Kansas Herpetology

NUMBER 13 — MARCH 2005

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KHS BUSINESS

KHS 2005 SPRING FIELD TRIP TO BE HELD IN SHAWNEE COUNTY, KANSAS

The spring field trip of the Kansas Herpetological Society will be held the weekend of 23-24 April 2005 in Shawnee County, Kansas. The main meeting location for the group will be the Shawnee County State Fishing Lake located northwest of Topeka (Sec. 1 & N 1/2 of Sec.12, T10S, R14E). Very primitive camping is available at the lake. Motels, food, and fuel are available in several nearby small towns and of course in Topeka. At least one Bed and Breakfast is located in the area.

Participants can arrive as early as Friday evening (Earth Day). Signs will be up around the lake indicating the main campsite. Weather permitting there will be a campfire at the main campsite. GMRS radio frequency 462.625 will be monitored to assist KHS members that have access to the frequency* (almost all FRS/GMRS radios sold during the past two years have 462.625 as one of the frequencies) and want to contact either Mark Ellis or Larry Miller as they are searching for the campsite. As many of us old timers know, it is not at all uncommon for herpetologists to become completely disoriented (lost) as they attempt to find a herpetological meeting place!

Several activities are being planned for the two day event. First, all interested persons are invited to meet at the main campsite at 9:00 am the morning of Saturday, 23 April 2005 to receive instructions in regard to collecting around the lake. The morning will be spent in the area of the lake. Part of the afternoon will be spent searching some of the Shawnee County roads. Late afternoon and early evening will be spent at Camp Creek Wetlands (for those wishing to travel to the southeast corner of the county) located at Sec.28, T13S, R17E (southeast of Topeka). Sunday morning, 24 April 2005, will be an alien lizard hunt for those wishing to search for Italian Wall Lizards and Western Green Lacertas within the city limits of Topeka. The exact meeting location and time for the alien lizard hunt will be announced at the main campsite. Maps and other information sheets will be available at the main campsite.

Mark your calendars now and plan to attend the first ever KHS field trip to be held in Shawnee County, Kansas. Bring your cameras. Shawnee County is home of some of the most interesting amphibians, reptiles, and turtles in Kansas.

Contact Mark and Larry (inside front cover) with any questions in regard to this field trip. Please send messages to both of their email addresses for the quickest possible response.

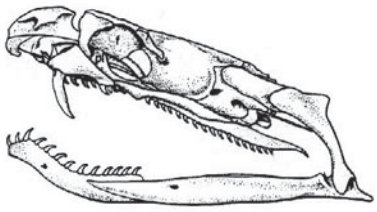
The following motels are available for those that do not wish to camp out.

Super 8 Motel
5968 SW 10th Street
Topeka, Kansas
(785) 273-5100
(rooms start at $45.00 for one person)

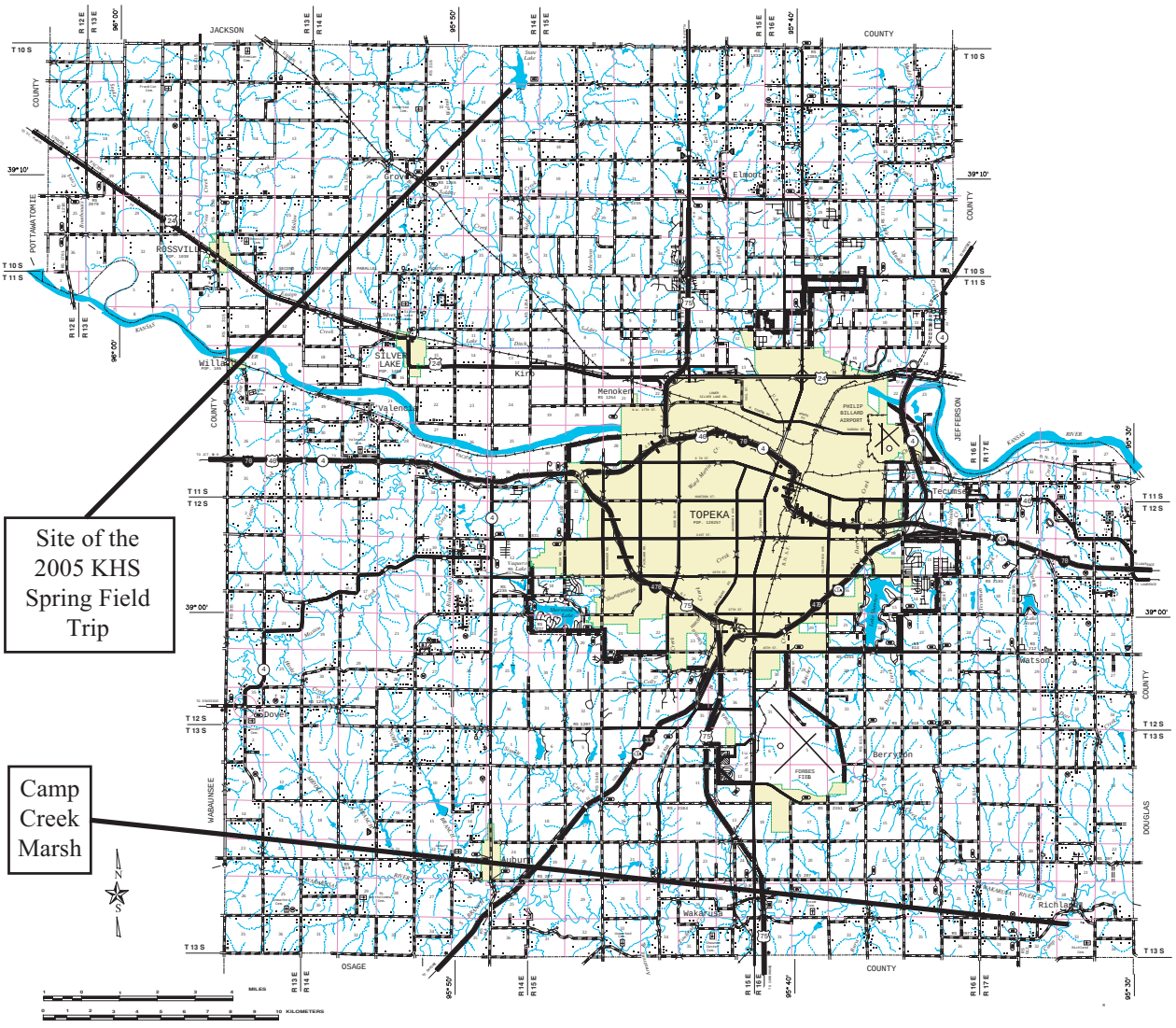
Motel 6
1224 SW Wanamaker Road
Topeka, Kansas
(785) 273-9888
(rooms start at $38.00 for one person)

Best Western Motel
700 SW Fairlawn Road
Topeka, Kansas
(785) 228-2233
(rooms start at $70.00 for one person)

Brickyard Barn Inn B&B
4020 NW 25th Street
Topeka, Kansas
(785) 235-0057
http://www.cjnetworks.com/~umoo2me/
(rooms range from $75.00 to $95.00)



Lateral view of a snake skull



A map of Shawnee County, Kansas, showing the precise location of the 2005 Kansas Herpetological Society Spring Field Trip, to be held on 23–24 April. When you arrive at the lake, follow the KHS signs to the main camp site.

A subadult Smallmouth Salamander *(Ambystoma texanum)* from Linn County, Kansas, one of many species KHS members and friends hope to encounter during the society's spring field trip to Shawnee County, Kansas. Photograph by Suzanne L. Collins.

KANSAS HERPETOLOGICAL SOCIETY
ANNUAL FINANCIAL REPORT
2004

Balance on hand 1 January 2004	$6166.57
Income	
Membership Dues	
Regular	1920.00
Contributing	740.00
Total	2660.00
Annual Meeting	
Registration	900.00
Auction	1735.00
Starting Cash	250.00
Total	2885.00
Donations	
The Collins Award	1000.00
General	310.00
Total	1310.00
Total Income	6855.00
Expenses	
Journal of Kansas Herpetology	2094.90
The Collins Award	1000.00
Annual Meeting	976.81
Office of the Editor	650.00
Office of the Secretary/Treasurer	185.74
Added to Gloyd-Taylor CD	1252.83
Miscellaneous Expenses	729.25
Total Expense	6889.53
Balance on hand 31 December 2004	5982.04
Bank Statement 31 December 2004*	6132.04
Endowed Funds	
Alan H. Kamb Grant	3350.44
Gloyd/Taylor Scholarship	3000.00
Total	6350.44
Total Assets	$12332.48

Respectfully submitted

Mary Kate Baldwin, Secretary
Eric Kessler, Treasurer

**The difference reflects an outstanding check of 150.00*

KHS EXECUTIVE COUNCIL MINUTES
20 February 2005 (noon to 1:20 pm)
Pittsburg, Kansas

Officers attending: David Oldham (presiding), Mary Kate Baldwin, Suzanne L. Collins, Eva Horne, Eric Kessler, and Travis W. Taggart. Committee Chairpersons attending: Joseph T. Collins (Nominating) and Mark Ellis (Field Trips).

Reports

Secretary Mary Kate Baldwin and Treasurer Eric Kessler submitted a final FY 2004 financial report. Eric Kessler reported that KHS had ending assets for the year 2004 of $12,332.48. As directed by the Council, during 2004 a total of $1,252.83 was added to the *Gloyd-Taylor Scholarship* to bring that endowment up to $3,000.00. The *Kamb Grant* fund has a balance of $3,350.44. It was moved and seconded (S. Collins/Taggart) to approve the 2004 financial report. Motion approved unanimously.

Editors: Travis Taggart and Joe Collins reported that the KU Printing Service is being phased out of operation. KUPS has printed the *Journal of Kansas Herpetology* since its inception. The KU Printing Service will print the March issue of the *Journal.* The editors will find another printer for the June issue.

Field Trip: Chairpersons Mark Ellis and Larry Miller selected Shawnee County for the 2005 Spring KHS field trip. Details will be in the March *Journal* and are on the KHS website. Mark Ellis suggested Crawford County for the 2005 KHS Fall field trip. The Council agreed; he and Larry Miller will work out the details.

Historian: Suzanne Collins was unable to locate a KHS archival file at the University of Kansas. She will work with the University Archivist to set up KHS file to be added to the Kansas Collection and housed in the Spencer Museum at KU. David Oldham will contact John Simmons for any materials he has collected.

Annual Meeting

There was discussion of the details for the annual meeting to be held at Pittsburg State University. David Oldham arranged for James R. Triplett to give the meeting welcome. Sarah McCoy has been assigned as staff support to help with meeting arrangements. She will supervise the live exhibit that will be open and

available for photography. KHS President David Oldham gave the Council a tour of the facilities including the auditorium, the live exhibit area, and other areas available for the meeting. He contacted several motels in the area; all blocked some rooms and gave a special discount for KHS members. This information will be added to the KHS website and will be available in the next (June) issue of the *Journal of Kansas Herpetology.*

New Business

Eric Kessler and Mary Kate Baldwin reviewed expenses from the past year and asked that for FY 2005, $1,000 be budgeted for the annual meeting and $2,400 be budgeted for the *Journal of Kansas Herpetology* (four issues including postage). It was moved and seconded (S. Collins/Horne) to approve those two expenditures. Motion approved unanimously.

Joe Collins requested that KHS be a sponsor for the third (revised) edition of *A Checklist of the Vertebrate Animals of Kansas,* to be published by the Sternberg Museum of Natural History. In addition, he asked if the KHS would like to mail a single gratis copy each KHS member. Joe estimated that $275 would be sufficient to cover postage. A note would be included informing members that the booklet was being sent compliments of KHS. It was moved and seconded (Taggart/Baldwin) that KHS to be listed as a sponsor, that up to $275 be allocated for postage to send to members, and that a note be included with the publication. Motion approved unanimously.

Joe Collins mentioned that an upper limit for dues is set by the KHS Constitution. He suggested that the Constitution should be amended to eliminate language that sets the dollar limit. Although current dues are sufficient to support the organization, there should be flexibility for the future. David Oldham asked that Joe draft an amendment to submit to the Council. Such an amendment must be approved by vote of the members.

Respectfully submitted,

Suzanne L. Collins
Historian

Donors

Few tributes are so lasting or honor individuals so well as donations. The *Kansas Herpetological Society* is privileged to carry on the aims and goals of the Society through its awards, grants, and scholarships. This list recognizes donations received through 1 March 2005.

The Alan H. Kamb Grant
for Research on Kansas Snakes

Calvin L. Cink

In Memory of
Richard A. Hayes
Suzanne L. & Joseph T. Collins
Amanda & Curtis Schmidt
Jonathan VanCampen
Jenny & Travis Taggart

The Howard K. Gloyd-Edward H. Taylor
Scholarship

Richard L. Lardie

PAY YOUR 2005 DUES

If you have not already done so, send your calendar 2005 dues ($15.00 regular, $20.00 contributing) to:

Mary Kate Baldwin
KHS Secretary
5438 SW 12th Terrace Apt. 4
Topeka, Kansas 66604

Your attention to this matter will ensure that delivery of the *Journal of Kansas Herpetology* will be uninterrupted.

KHS COMMITTEE CHAIRPERSONS
RE-APPOINTED

KHS President David Oldham re-appointed the following individuals to lead KHS committees for a three-year term:

Robin Oldham
Media & Publicity Committee Chairperson
(serves until 31 December 2007)

Joseph T. Collins
Nominating Committee Chairperson
(serves until 31 December 2007)

OF INTEREST

TYPHLOTRITON TERMINATED

R. M. Bonett and Paul T. Chippindale (2004. Speciation, phylogeography and evolution of life history and morphology in plethodontid salamanders of the *Eurycea multiplicata* complex. Molecular Ecology 13: 1189–1203) synonymized the genus *Typhlotriton* with *Eurycea.* Standard common name for *Eurycea spelaea* remains the Grotto Salamander. The authors further indicated that the Grotto Salamander *(Eurycea spelaea)* as now defined may consist of two or more species. No pdf reprint of this article is available.

NEWT SUBSPECIES SUNK

Caitlin R. Gabor and Chris C. Nice (2004. Genetic variation among populations of Eastern Newts, *Notophthalmus viridescens:* A preliminary analysis based on allozymes. Herpetologica 60: 373–386), using molecular data, demonstrated that the four previously recognized subspecies of the Eastern Newt *(Notophthalmus viridescens)* did not reflect the evolutionary history of the species (i.e., the author's analyses showed an absence of significant differentiation among the subspecies). No pdf reprint of this article is available.

LIZARD GENUS *EUMECES* REVISED

Andreas Schmitz, Patrick Mausfeld, and Dirk Embert (2004 Hamadryad 28: 73–89) analyzed molecular data to demonstrate that the lizard genus *Neoseps* (family Scincidae) should be synonymized with the genus *Eumeces.* They provide additional evidence that *Eumeces obtusirostris* is a species distinct from *E. septentrionalis.* Finally, they propose a new generic name, *Pariocela* Fitzinger (1843) for all North American skinks previously referred to the genus *Eumeces,* although their post-publication research with other colleagues has revealed a name older than *Pariocela,* and that name, *Plestiodon* Dumeril & Bibron 1839, will be offered as an alternative in a future paper (Andreas Schmitz, pers. comm.).

A gratis copy of this paper by Schmitz et al. (2004) may be downloaded (as a pdf or print copy) from the CNAH PDF Library at

http://www.cnah.org/cnah_pdf.asp

COLUBER RESTRICTED TO NEW WORLD

Z. T. Nagy, Robin Lawson, U. Joger and M. Wink recently (2004) published a paper entitled *Molecular systematics of Racers, Whipsnakes and relatives (Reptilia: Colubridae) using Mitochondrial and Nuclear Markers,* in the Journal of Zoological Systematics and Evolutionary Research (Volume 42 pages 223–233).

Their taxonomic recommendations with implications for this North American serpent (taken directly from the published paper) are:

> "We recommend restricting the usage of the name *Coluber* to the New World taxa currently contained within that genus. Whether the closely related *Masticophis* should also be included in *Coluber,* thus reducing the name *Masticophis* to a synonym of *Coluber,* cannot be decided on the basis of our current data."

A gratis downloadable pdf of the paper by Nagy et al. (2004) is available from the CNAH PDF Library at

http://www.cnah.org/cnah_pdf.asp

RHINOCHEILUS RACES REJECTED

Mollie K. Manier (2004. Geographic variation in the Longnose Snake, *Rhinocheilus lecontei* (Colubridae): Beyond the subspecies debate. Biological Journal of the Linnaean Society 83(1): 65-85), using external morphology, concluded that the mainland subspecies of *Rhinocheilus lecontei* did not merit recognition. Here is the abstract:

> Scalation, colour pattern, linear and geometric morphometrics were used to quantify geographical differentiation in the Longnose Snake, *Rhinocheilus lecontei,* and to test the hypothesis that all four subspecies are morphologically distinct. Also investigated were potential associations between morphological (scalation, colour pattern, linear measurements) and environmental variables (climate, vegetation, soil). Sexual dimorphism was weakest for geometric and strongest for linear morphometric variables. Morphological variables differed widely in their ability to differentiate subspecies. Linear mor-

phometric variables achieved the most statistically significant pairwise Mahalanobis distances between subspecies, while geometric morphometrics largely failed to differentiate them. Colour pattern showed the strongest and linear morphometrics the weakest correlation with environment. Several characters varied continuously along latitudinal or longitudinal gradients, such that, in some cases, the clines for closely related traits were discordant. No one subspecies was consistently divergent in all analyses, leading to the conclusion that the three mainland subspecies are not sufficiently distinct to warrant separate subspecies status. The island subspecies, though not always statistically distinct, is geographically separate from other populations and differs in characters related to size. Given the small number of specimens available, a decision regarding its taxonomic status (i.e. elevation to species level) is best deferred until additional specimens can be examined and data on molecular variation can be analysed.

A gratis downloadable pdf of the paper by Mollie Manier is available from the CNAH PDF Library at:

http://www.cnah.org/cnah_pdf.asp

SHED SKINS STATIONED AT STERNBERG

A final consignment of over 300 shed skins from various species of lizards and snakes, the last of a collection temporarily maintained since January 2000 by *The Center for North American Herpetology,* Lawrence, Kansas, has been transferred for permanent storage to the Sternberg Museum of Natural History at Fort Hays State University.

Samples in the collection are from the following North American reptile genera: *Agkistrodon, Arizona, Carphophis, Cemophora, Clonophis, Coniophanes, Crotalus, Diadophis, Drymarchon, Elaphe (= Pantherophis), Farancia, Heterodon, Lampropeltis, Liochlorophis, Masticophis, Nerodia, Opheodrys, Ophisaurus, Pituophis, Regina, Sistrurus, Sonora, Storeria, Tantilla, Thamnophis,* and *Virginia.*

States from which samples are available are Alabama, Arkansas, Colorado, Florida, Indiana, Kentucky, Missouri, New Mexico, North Carolina, Ohio, Oklahoma, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, and Wyoming.

During the collection's tenure at CNAH, samples of *Pantherophis, Lampropeltis,* and *Agkistrodon* were sent to Frank Burbrink at CUNY-Staten Island, samples of *Crotalus horridus* were sent to Paul Moler in Florida, samples of the *Lampropeltis triangulum* complex were sent to George R. Harper at the University of North Carolina, samples of *Sistrurus miliarius* were sent to Gordon W. Schuett at ZooAtlanta, samples of *Agkistrodon, Carphophis,* and *Virginia* were sent to Brian S. Gray, Erie, Pennsylvania, samples of *Pituophis* were sent to Gary Johnson at the Louisville Zoo, samples of *Nerodia rhombifer* were sent to Matt Brandley at the Museum of Vertebrate Zoology, University of California, Berkeley, and samples of *Diadophis* were sent to Frank Fontanella at CUNY-Staten Island.

Anyone wishing to acquire shed skin samples from this collection for DNA research should contact Travis W. Taggart at

ttaggart@fhsu.edu

FOURTH ANNUAL FORT RILEY HERPETOFAUNAL FIELD TRIP

Participants for the fourth annual Fort Riley Herpetofaunal Field trip should assemble in the parking lot of the Conservation Division building (Building 1020) on Fort Riley at 8:00 am on 5 May 2005. In case of poor weather, the alternate date is 12 May at the same time. Building 1020 is the first office building on the right side of Huebner road as you enter on post through Ogden. Be prepared to show a drivers license, vehicle registration, and insurance at the access gate to get on post. If you are asked what is your business in coming on post, state that you have a meeting at the Conservation Division office. Participants will conclude the survey at 3:00 pm by reassembling at the Conservation Division office to tally the numbers.

Please bring a sack lunch and appropriate gear. If you have a digital camera, please bring it along to document all of the great records we are sure to find. Please feel free to bring a guest.

More information is available by calling Gibran Suleiman at 785-239-2537 or contacting him by email at:

gibran.suleiman@riley.army.mil

UPDATED KANSAS THREATENED & ENDANGERED SPECIES LIST

As of January 2005, the following herpetofaunal species are considered ENDANGERED within the boundaries of the state of Kansas:

Cave Salamander, *Eurycea lucifuga*
Many-ribbed Salamander, *Eurycea multiplicata*
Grotto Salamander, *Eurycea spelaea*

As of January 2005, the following herpetofaunal species are considered THREATENED within the boundaries of the state of Kansas:

Eastern Newt, *Notophthalmus viridescens*
Longtail Salamander, *Eurycea longicauda*
Eastern Narrowmouth Toad, *Gastrophryne carolinensis*
Green Frog, *Rana clamitans*
Spring Peeper, *Pseudacris crucifer*
Strecker's Chorus Frog, *Pseudacris streckeri*
Green Toad, *Bufo debilis*
Broadhead Skink, *Eumeces laticeps*
Checkered Garter Snake, *Thamnophis marcianus*
Texas Blind Snake, *Leptotyphlops dulcis*
Redbelly Snake, *Storeria occipitomaculata*
Longnose Snake, *Rhinocheilus lecontei*
Smooth Earth Snake, *Virginia valeriae*
Common Map Turtle, *Graptemys geographica*

For more information, contact Ken Brunson of the Kansas Department of Wildlife & Parks (see inside front cover).

NEW KANSAS VERTEBRATE CHECKLIST

The Sternberg Museum of Natural History announces publication of

A Checklist of the Vertebrate Animals of Kansas
Third (Revised) Edition
vi + 50 pages; March 2005

by George D. Potts & Joseph T. Collins

Seven hundred and ninety-eight kinds of vertebrate animals are now known to occur (or to have once occurred) in Kansas, an increase of fifty-two species (approximately 6.5% of the total fauna) since this list was first published in 1991. This checklist compiles and organizes them all in one booklet to provide ready access to the standard common names and current scientific names of the mammals, birds, reptiles, turtles, amphibians, and fishes found in our state. The checklist is divided into a traditional hierarchy of Classes, Orders, Families, Genera and Species, and features handy indices to both the scientific and common names of the classes, orders, families, and genera recorded from Kansas. Non-native species are clearly noted with an asterisk. Endangered, threatened, and extirpated species are noted with an E, T, or X, respectively. This publication is a must for biology and science teachers (elementary, high school, and college), environmental consultants and their firms, biologists with federal and state wildlife agencies, conservation and wildlife groups, zoo and museum personnel, legislators, outdoor writers and authors, and anyone else needing to know the correct spelling of a scientific name or the standardized common name of any vertebrate animal found in Kansas.

Sponsors: Kansas Department of Wildlife & Parks, Touchstone Energy, Westar Energy, Kansas Ornithological Society, Kansas Herpetological Society, Great Plains Nature Center, George Potts & Associates, JTC Enterprises, The Center for North American Herpetology, & Sternberg Museum of NNatural History, Fort Hays State University.

Single copies are available gratis from the Sternberg Museum of Natural History. Send requests to:

Publications
Sternberg Museum of Natural History
Fort Hays State University
Hays, Kansas 67601

Individual requests only; must include a self-addressed, 6.5 x 9.5 inch envelope with $1.29 postage affixed.

This publication was made possible through the generous financial assistance of

Touchstone Energy
Westar Energy
Kansas Department of Wildlife and Parks

An adult Green Toad *(Bufo debilis).* Photograph by Suzanne L. Collins.

SYNTHETIC NETTING NABS SERPENTS

On 23 October 2004, my sons (Kodi and Brandon) and I were walking along a trail at the Kansas History Museum in Topeka, Shawnee County, when Kodi discovered some snakes. They were three Common Garter Snakes *(Thamnophis sirtalis)* that were caught in some synthetic erosion control netting. With a pocket knife, we were able to cut the netting and release all three reptiles. One of them was bleeding badly. We were briefly elated because we had rescued the three serpents from certain death, until we discovered there were more. A little further away, we found three more, and then three more, and then four more—all trapped in this netting that dug into and cut their flesh. We observed that the more they struggled, the tighter the netting would ensnare them. Each time I would free a head, the snake would slither further and get more embedded in the netting, and then when I'd disentangle a tail and move to free the rest of the body, the tail would writhe around and get caught again. It was extremely difficult, frustrating, time-consuming work, but in the end more satisfying than any day of herping could ever be because eventually, after two hours of digging out deformed, bleeding, writhing bodies, we saved thirteen active Common Garter Snakes (Figure 1) and freed them in a grassy field far from the dangerous netting. There's no telling how long the reptiles had been there. The webbing appeared to cover at least three ground crevices, so we ripped and tore and cut and rolled the netting up and filled two trash cans with it. And, even though I have no fingernails left, still smell of snake musk, have a snake bite or two, and blood stains on my boots and jeans, I'm pleased the snake population in Topeka was up by thirteen.

Submiited by **JUDY LOW**, 2303 Libra Court, Topeka, Kansas 66605.

Figure 1. Brandon (left) and Kodi Low display the Common Garter Snakes *(Thamnophis sirtalis)* rescued from the synthetic erosion control netting on the grounds of the Kansas History Museum in Topeka, Shawnee County, Kansas. Photograph by Judy Low.

DEIROCHELYS RETICULARIA (Chicken Turtle). Life History: Reproduction. On 6 January 2005, we observed a female *Deirochelys reticularia* deposit eggs and seal the nest. At approximately 1530 hours, we observed a female turtle (approx. 180 mm carapace length) in the early stages of oviposition, the nest having been excavated prior to our arrival at the site. The nest was a conical shape, roughly 125 mm deep. We observed for fifteen minutes as the turtle deposited five elongate oval-shaped eggs into the nest. The turtle then packed the nest opening with sand for thirty additional minutes prior to covering the opening with grass and departing the area, moving in the general direction of a large nearby marsh. The site was on the west side of U.S. Rt. 65 in Franklin County, Florida, approximately eight miles north of the intersection of U.S. Rt. 65 and U.S. Rt. 98. The area where the nest had been excavated was at the base of a slightly raised area of earth; the surrounding ground was saturated due to a recent rainstorm. The air temperature was approximately 65°–70° F and the sky was overcast. The turtle appeared to be old in age, with a scarred shell 172 mm in length, which is 20 mm over the the upper range of average carapace length reported for this species (Conant and Collins, 1998. *Peterson Field Guide to Reptiles and Amphibians of Eastern and Central North America. Third Edition Expanded.* Houghton Mifflin Company, Boston. 616 pp.).

Submitted by **S. ROSS MCNEARNEY**, 11300 Canterbury Court, Leawood, Kansas 66211, **R. ALEX PYRON**, 615 Central Avenue, Demorest, Georgia 30535, **MICHAEL R. ROCHFORD**, 9144 West 131st Street, Overland Park, Kansas 66213, **GINNY N. WEATHERMAN**, 245 Deerfield Lane, Lawrence, Kansas 66049.

GEOGRAPHIC DISTRIBUTION

WOODHOUSE'S TOAD (*Bufo woodhousii*). Miami Co: N°38.57285, W°95.04667. 8 September 2004. Travis W. Taggart & Curtis J. Schmidt. MHP 9476. Verified by Joseph T. Collins. County record (Collins & Collins 1993 *Amphibians and Reptiles in Kansas. Third Edition.* Univ. Press of Kansas, Lawrence. xx + 397 pp.).

Submitted by **TRAVIS W. TAGGART, CURTIS J. SCHMIDT** & **RICHARD S. HAYES**, Sternberg Museum of Natural History, 3000 Sternberg Drive, Hays, Kansas 67601.

BULLFROG (*Rana catesbeiana*). Hodgeman Co: N 38.04914°, W 100.08189°. 13 August 2004. Curtis J. Schmidt & Richard S. Hayes. MHP 9297. Verified by Joseph T. Collins. County record (Collins & Collins 1993 *Amphibians and Reptiles in Kansas. Third Edition.* Univ. Press of Kansas, Lawrence. xx + 397 pp.).

Submitted by **TRAVIS W. TAGGART, CURTIS J. SCHMIDT** & **RICHARD S. HAYES**, Sternberg Museum of Natural History, 3000 Sternberg Drive, Hays, Kansas 67601.

GREAT PLAINS NARROWMOUTH TOAD (*Gastrophryne olivacea*). Rooks Co: N°39.39398, W°99.36186. 8 July 2004. Travis W. Taggart & Richard S. Hayes. MHP 9044. Verified by Joseph T. Collins. County record (Collins & Collins 1993 *Amphibians and Reptiles in Kansas. Third Edition.* Univ. Press of Kansas, Lawrence. xx + 397 pp.).

Submitted by **TRAVIS W. TAGGART, CURTIS J. SCHMIDT** & **RICHARD S. HAYES**, Sternberg Museum of Natural History, 3000 Sternberg Drive, Hays, Kansas 67601.

NORTHERN PAINTED TURTLE (*Chrysemys picta*). Sherman Co: N°39.19957, W°101.72108. 4 August 2004. Curtis J. Schmidt & Richard S. Hayes. MHP 9218. Verified by Joseph T. Collins. County record (Collins & Collins 1993 *Amphibians and Reptiles in Kansas. Third Edition.* Univ. Press of Kansas, Lawrence. xx + 397 pp.).

Submitted by **TRAVIS W. TAGGART, CURTIS J. SCHMIDT** & **RICHARD S. HAYES**, Sternberg Museum of Natural History, 3000 Sternberg Drive, Hays, Kansas 67601.

SPINY SOFTSHELL (*Apalone spinifera*). Clark Co: N°37.30954, W°99.68475. 22 July 2004. Travis W. Taggart & Richard S. Hayes. MHP 9173. Bourbon Co: N°37.8558, W°94.63978. 19 August 2004. Curtis J. Schmidt & Richard S. Hayes. MHP 9332. Both verified by Joseph T. Collins. County record (Collins & Collins 1993 *Amphibians and Reptiles in Kansas. Third Edition.* Univ. Press of Kansas, Lawrence. xx + 397 pp.).

Submitted by **TRAVIS W. TAGGART, CURTIS J. SCHMIDT** & **RICHARD S. HAYES**, Sternberg Museum of Natural History, 3000 Sternberg Drive, Hays, Kansas 67601.

PRAIRIE LIZARD (*Sceloporus consobrinus*). Decatur Co: N°39.76263, W°100.5744. 8 July 2004. Travis W. Taggart & Richard S. Hayes. MHP 9059. Verified by Joseph T. Collins. County record (Collins & Collins 1993 *Amphibians and Reptiles in Kansas. Third Edition.* Univ. Press of Kansas, Lawrence. xx + 397 pp.).

Submitted by **TRAVIS W. TAGGART, CURTIS J. SCHMIDT** & **RICHARD S. HAYES**, Sternberg Museum of Natural History, 3000 Sternberg Drive, Hays, Kansas 67601.

COACHWHIP (*Masticophis flagellum*). Miami Co: N°38.44358, W°94.81539. 8 September 2004. Travis W. Taggart & Curtis J. Schmidt. MHP 9680. Sherman Co: N°39.51004, W°101.58336. 4 August 2004. Curtis J. Schmidt & Richard S. Hayes. MHP 9234. Both verified by Joseph T. Collins. County record (Collins & Collins 1993 *Amphibians and Reptiles in Kansas. Third Edition.* Univ. Press of Kansas, Lawrence. xx + 397 pp.).

Submitted by **TRAVIS W. TAGGART, CURTIS J. SCHMIDT** & **RICHARD S. HAYES**, Sternberg Museum of Natural History, 3000 Sternberg Drive, Hays, Kansas 67601.

LINED SNAKE (*Tropidoclonion lineatum*). Logan Co: N°38.78168, W°100.86217. 18 September 2004. Travis W. Taggart. MHP 9535. Verified by Joseph T. Collins. County record (Collins & Collins 1993 *Amphibians and Reptiles in Kansas. Third Edition.* Univ. Press of Kansas, Lawrence. xx + 397 pp.).

Submitted by **TRAVIS W. TAGGART, CURTIS J. SCHMIDT** & **RICHARD S. HAYES**, Sternberg Museum of Natural History, 3000 Sternberg Drive, Hays, Kansas 67601.

NOTES

OBSERVATIONS ON WANDERING OF JUVENILE SNAKES IN NORTHEASTERN KANSAS

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During my 55-year study of snakes on the University of Kansas Fitch Natural History Reservation in northeastern Kansas, I have recaptured many hundreds of individually marked adults of each of the common species. I have been able to obtain many records of movements (distances between capture points), but obtaining such records from recaptured first-year snakes was a relative rarity. Young snakes differ from adults in habits and are far more inconspicuous and secretive. Details of life histories, still incompletely known, affect the frequency of capture, and each species is somewhat unique in this regard. In this paper, I present hitherto unpublished records of the movements of immature snakes of four common species, the Western Rat Snake *(Pantherophis obsoletus),* Common Garter Snake *(Thamnophis sirtalis),* Eastern Racer *(Coluber constrictor),* and Copperhead *(Agkistrodon contortrix).* Each species has its unique life history and contrasts with the others in the extent and timing of juvenile movements.

The Western Rat Snake was the most notable species. Sixteen clutches of Western Rat Snake eggs were incubated and hatched in the laboratory, and 143 hatchlings were individually marked by scale clipping and then released near the females' capture points. It is notable that none of these marked hatchlings was ever recaptured. The most plausible explanation is that they promptly left the incubation area and traveled extensively. A total of 19 young that had been marked in the field were recaptured; most were in their second year, but four were believed to be third year and four others were thought to be first-year. Their movements were surprisingly long, up to 2527 meters (averaging 384 meters), contrasted with the mean movement of 128 recaptured adults, which was only 56 meters. Some adult Western Rat Snakes in local habitats producing a food surfeit (Bank Swallow colony, poultry yard) were found to be extremely sedentary, showing that the species is adaptable and quick to exploit local surpluses.

The Common Garter Snake had the most records of young recaptured (total 72). For nearly all of them, both the original capture and the recapture were in the first year of life. Their average movement was 121 meters, contrasted with 173 meters for 170 adult males and 185 meters for 358 adult females (Fitch, 1999). These snakes proved to have home ranges that were somewhat ephemeral. In each local area where they were studied, there was a steady inflow of new individuals and compensatory emigration of those that had been caught and marked, so the ratio of marked individuals to the total was always less than 30%. Change in food habits was perhaps one cause for change in habitat preference. First-year young fed almost entirely on earthworms and required a moist habitat where these were available. As the snakes grew, amphibians became more prominent in the diet, and the largest Common Garter Snakes (adult females) preyed mostly upon small mammals locally, especially the Prairie Vole *(Microtus ochrogaster).* The home range of Common Garter Snakes is thought to be relatively small in hatchlings, expanding gradually as the young serpent grows and becomes familiar with its surroundings.

In adult Eastern Racers, day to day movements within a home range were found to average 180 meters. Fifteen recaptured first-year young averaged movements of 143 meters, suggesting that the range expands somewhat as the snake matures. Hatchling Eastern Racers may make migratory movements. In the House Field area of the Reservation, Eastern Racer habitat deteriorated as shrubby plants and trees invaded the grassland where these snakes had been common, and by the 1990s the species had disappeared. But each year in late summer, one or more hatchlings was found in small patches of relict grassland. Since adults were no longer encountered, it seemed that these young must have set out soon after hatching and traveled to the grassy patches from nests hundreds of meters away, and they probably crossed wooded areas of unsuitable habitat while en route.

Gravid female Copperheads did not disperse widely from their hibernacula, and they tended to cease feeding. Around midsummer, they moved back to rocky outcrops in the vicinity of their hibernacula, and small groups of them congregated to use the same shelter (hole, rock crevice, hollow log) to avoid unfavorable weather and predators. There was little or no feeding during the latter half of pregnancy. Young

Copperheads born at the end of summer or early fall find themselves in a habitat different from that occupied by adult males and non-reproductive females. In spring, after emergence from hibernation, when adult males and nonpregnant females migrate to more open grassland or edge habitat, these young did not wander far from the birthing site. For ten young that were recaptured, the average movement was 42.5 meters in an average of 136 days. Average movements for adult males was 70.5 meters, and for adult females 77.5 meters. Thus, the adults moved about twice as far and ranged over an area several times as large as those of first-year young.

Acknowledgements: My daughter, Alice F. Echelle, read the manuscript and offered suggestions for improvement.

Literature Cited

Fitch, Henry S. 1999. A Kansas Snake Community. Composition and Changes Over 50 Years. Krieger Publishing Company, Malabar, Florida. xi + 165 pp.

EGG LAYING AND HATCHING IN A CAPTIVE SLIDER (*TRACHEMYS SCRIPTA*) FROM KANSAS

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A female Slider *(Trachemys scripta)* discovered on a country road in Osage County laid ten eggs in June 2004 while in captivity. During the time the eggs were laid, the turtle was kept in a large washtub containing about a foot of water and rocks available for a dry basking area. The eggs were laid in the water sporadically over a period of approximately three weeks. (Unfortunately, the female refused to lay her eggs during the time I had soil instead of water in the washtub.) Although all eggs were removed from the water as soon as discovered, they were nonetheless submerged for periods as long as about twelve hours. Six of these eggs were initially recovered and incubated. Later, four additional eggs were discovered in the water behind the female and were removed from the washtub, but were not measured because of uncertainty over whether they would eventually hatch.

The initial six eggs were given to a colleague, who proceeded to incubate them in a moist mixture of sand and peat. I chose to incubate the final four eggs in moist sand on 28 June. I incubated these eggs at an average temperature between 68°F and 70°F. In late October 2004, I observed the eggs beginning to wither. On 27 October, I slit open one of the eggs and discovered it contained a live full-term embryo. I then left the opened egg alone, and three days later the young turtle emerged from the egg without further assistance. Upon the emergence of this neonate, I slit open two more eggs. A fully developed embryo was observed in one of the eggs, while an incompletely developed embryo surrounded by much fluid was found in the other egg. I did not bother the remaining egg, and a young turtle soon hatched out of that egg. The premature turtle never emerged completely from its egg and soon died, and the turtle in the other egg slit open did emerge from its egg but also subsequently died. I measured the length of the carapace in each turtle just after it hatched or died (Table 1).

The total length of time involved in incubating these four eggs was 3 months and 16 days. The temperatures at which the eggs were incubated may account for the fact that this length of time is significantly longer than the incubation period of two to two and a half months reported for this species by Collins (1993). None of the initial six eggs incubated by my colleague ever hatched. These eggs were all opened in late October, and no signs of embryonic development were observed in any of them.

References

Collins, Joseph T. 1993. *Amphibians and Reptiles in Kansas.* Third Edition. University Press of Kansas, Lawrence, Kansas. xx + 397 pp.

Table 1. Measurements of four hatchling Sliders *(Trachemys scripta)* from Osage County, Kansas.

Hatchling Turtle	Carapace Length (cm)
First to hatch	3.1
Premature turtle	2.6
Second to hatch	2.9
Turtle from unopened egg	2.7

ARTICLES

NEW RECORDS OF AMPHIBIANS, TURTLES, AND REPTILES IN KANSAS FOR 2004

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The twenty-one new county records and six maximum size records listed below are those accumulated or brought to my attention since the publication of records for 2003 (Collins, 2004). Publication of these new records permits me to give credit and express my appreciation to the many individuals who collected or obtained specimens and donated them to me for deposition in an institutional collection. Further, recipients of this list are permitted an opportunity to update the range maps and size maxima sections in *Amphibians and Reptiles in Kansas Third Edition* (Collins, 1993). Finally, these new records represent information that greatly increases our knowledge of the distribution and physical proportions of these creatures in Kansas, and thus gives us a better understanding of their biology. This report is my 30th in a series that has appeared annually since 1976, and the data contained herein eventually will be incorporated into my new forthcoming book, *Amphibians, Turtles, and Reptiles in Kansas.*

The Kansas specimens listed below represent the first records for a given county based on a preserved, cataloged voucher specimen in an institutional collection, or represent size maxima larger than those listed in Collins (1993). Any information of this nature not backed by a voucher specimen is an unverifiable observation. All new records listed here are presented in the following standardized format: standard common and current scientific name, county, specific locality, date of collection, collector(s), and place of deposition and catalog number. New size maxima are presented with the size limits expressed in both metric and English units. Common names are those now standardized for North America, as compiled by Collins and Taggart (2002), and are given at the species level only. I no longer recognize subspecies as a taxonomic entity (they are evolutionarily uninformative).

The records listed below are deposited in the herpetological collection of the Sternberg Museum of Natural History, Fort Hays State University, Hays, Kansas (MHP). I am most grateful to the members of the Kansas Herpetological Society, and to staff members of the Kansas Department of Wildlife and Parks, the Kansas Biological Survey, and the Sternberg Museum of Natural History, Fort Hays State University, who spent many hours in search of some of the specimens reported herein. Some of the records contained herein resulted from field studies sponsored by funds from the Kansas Department of Wildlife and Parks' Chickadee Checkoff Program. Travis W. Taggart, Associate Curator of Herpetology, and Curtis Schmidt, Associate Curator of Herpetology, Sternberg Museum of Natural History, Fort Hays State University, diligently assigned catalog numbers to the specimens listed below, and to them I am most indebted.

NEW COUNTY RECORDS

WOODHOUSE'S TOAD *(Bufo woodhousii).* KANSAS: MONTGOMERY CO: 2 mi N & 3 mi E Elk City, 37.32412°N, 95.85557°W. 24 March 2004. Travis W. Taggart & Curtis J. Schmidt. MHP 8215. Reported by Taggart (2004a).

GRAY TREEFROG *(Hyla chrysoscelis-Hyla versicolor).* KANSAS: WASHINGTON CO: 39.84246°N, 97.29412°W. 17 June 2004. Curtis J. Schmidt & Brian C. Bartels. MHP 8890. Reported by Schmidt (2004e).

STRECKER'S CHORUS FROG *(Pseudacris streckeri).* KANSAS: Kingman Co: 1 mi N & 1.3 mi W Nashville, 37.45391°N, 98.44633°W. 6 April 2004. Curtis J. Schmidt & Travis W. Taggart. MHP 8259. Reported by Davis & Taggart (2004).

STRECKER'S CHORUS FROG *(Pseudacris streckeri).* KANSAS: Pratt Co: 0.2 mi N & 2.2 mi E Isabel, 37.47086°N, 98.51404°W. 27 March 2004. Travis W. Taggart. MHP 8224. Reported by Davis et al. (2004).

COMMON SNAPPING TURTLE *(Chelydra serpentina).* KANSAS: Jewell Co: Sec. 23, T3S, R7W. 8 July 2004. Marla Gubanyi. MHP Color Slide 9463. Reported by Gubanyi (2004).

COMMON SNAPPING TURTLE *(Chelydra serpentina).* KANSAS: Ness Co: Forrester Creek, 4.8 mi N & 2 mi W Ness County line, 38.54227°N, 99.99168°W. 27 April 2004. Curtis J. Schmidt & Brian Bartels. MHP 8357.Reported by Schmidt (2004a).

YELLOW MUD TURTLE *(Kinosternon flavescens).* KANSAS: Stanton Co: NW 1/4 Sec. 9, T29S, R41W. 27 April 1974. J. R. Ward. MHP 8093. Reported by Taggart (2004b).

PAINTED TURTLE *(Chrysemys picta).* KANSAS: Finney Co: Concannon Wildlife Area (SE 1/4 Sec.12, T23S, R30W), 38.0679°N, 100.5595°W. 28 March 2004. Curtis J. Schmidt. MHP 8209. Reported by Schmidt (2004b).

SLIDER *(Trachemys scripta).* KANSAS: Finney Co: Concannon Wildlife Area (SE 1/4 Sec.12, T23S, R30W), 38.0679°N, 100.5595°W. 28 March 2004. Curtis J. Schmidt. MHP 8210. Reported by Schmidt (2004c).

SPINY SOFTSHELL *(Apalone spinifera).* KANSAS: Jefferson Co: 39.87951°N, 95.19492°W. 14 July 2004. Curtis J. Schmidt & Richard S. Hayes. MHP 9088. Reported by Schmidt (2004g).

GROUND SKINK *(Scincella lateralis).* KANSAS: Kiowa Co: 37.50471°N, 99.18341°W. 11 May 2004. Travis W. Taggart. MHP 8524. Reported by Taggart (2004e).

ITALIAN WALL LIZARD *(Podarcis sicula).* KANSAS: Ellis Co: within city limits of Hays, Fort Hays State University campus 38.8723°N, 99.3407°W. 4 April 2004. Erik Bartholomew. MHP 8342–8343. Reported by Taggart (2004c).

WESTERN SLENDER GLASS LIZARD *(Ophisaurus attenuatus).* KANSAS: Harper Co: 37.00211°N, 97.63654°W. 11 May 2004. Travis W. Taggart. MHP 8539. Reported by Taggart (2004f).

WESTERN SLENDER GLASS LIZARD *(Ophisaurus attenuatus).* KANSAS: Kiowa Co: 37.50471°N, 99.18341°W. 19 May 2004. Curtis J. Schmidt & Brian C. Bartels. MHP 8612. Reported by Schmidt (2004h).

GREAT PLAINS RAT SNAKE *(Pantherophis emoryi).* KANSAS: Stanton Co: 37.52106°N, 102.01349°W. 28 April 2004. Travis W. Taggart. MHP 8434–35. Reported by Taggart (2004g).

GOPHER SNAKE *(Pituophis catenifer).* KANSAS: Linn Co: 3 mi S Parker. 38.28434°N, 94.98875°W. 6 May 2004. Curtis J. Schmidt & Brian C. Bartels. MHP 8508. Reported by Schmidt (2004i).

GOPHER SNAKE *(Pituophis catenifer).* KANSAS: Thomas Co: Sec. 10, T10S, R32W, 39.19711°N, 100.87819°W. 2 August 2004. Joseph T. Collins & Suzanne L. Collins. MHP 9201. Reported by Collins (2004).

BROWN SNAKE *(Storeria dekayi).* KANSAS: Kiowa Co: 37.50471°N, 99.18341°W. 18 May 2004. Curtis J. Schmidt & Brian C. Bartels. MHP 8584. Reported by Schmidt (2004j).

BROWN SNAKE *(Storeria dekayi).* KANSAS: Osborne Co: Sec. 7, T9S, R14W, 39.16.903°N, 98.48.632°W. 3 October 2004. Joseph T. Collins & Suzanne L. Collins. MHP 9598. Reported by Collins (2004c).

WESTERN RIBBON SNAKE *(Thamnophis proximus).* KANSAS: Wyandotte Co: Sec. 24, T10S, R24E. 6 June 2004. Dan Murrow. MHP 9109. Reported by Murrow (2004).

COMMON GARTER SNAKE *(Thamnophis sirtalis).* KANSAS: Seward Co: 37.1505°N, 100.74812°W. 30 June 2004. Curtis J. Schmidt & Brian C. Bartels. MHP 9089. Reported by Schmidt (2004k).

NEW MAXIMUM SIZE RECORDS

RED RIVER MUDPUPPY (*Necturus louisianensis*) KANSAS: Allen Co: Neosho River at Iola. 22

February 2003. Collector: Travis W. Taggart. MHP 7496. Total length 12 inches (307 mm). Male. Reported by Taggart (2004d).

COPE'S GRAY TREEFROG (*Hyla chrysoscelis*)
KANSAS: Miami Co: N 1/3 Sec. 20, T17S, R25E. 20 March 2004. Collector: Keith Coleman. MHP 8430. S-V length 2 1/8 inches (54 mm). Female. Reported by Coleman (2004).

PLAINS LEOPARD FROG (*Rana blairi*)
KANSAS: Montgomery Co: 2.75 mi W & 0.25 mi N Coffeyville. 15 April 1966. L. S. Oborny. MHP 3131. S-V length 4 1/4 inches (107 mm). Sex undetermined. Reported by Schmidt and Taggart (2004b).

GREAT PLAINS NARROWMOUTH TOAD (*Gastrophryne olivacea*)
KANSAS: Lincoln Co: 39.07944°N, 98.15089°W. 13 July 2004. Curtis J. Schmidt & Richard Hayes. MHP 9099. S-V length 1 11/16 inches (43 mm). Female. Reported by Schmidt and Hayes (2004).

YELLOW MUD TURTLE (*Kinosternon flavescens*)
KANSAS: Rooks Co: along Robbers Roost Creek, 4.3 mi S Stockton, 39.37635°N, 99.2727821°W. 3 October 2004. Chad Whitney. MHP 9661. Carapace length 5 3/4 inches (146 mm). Sex undetermined. Reported by Whitney et al. (2004).

PRAIRIE RATTLESNAKE (*Crotalus viridis*)
KANSAS: Hamilton Co: 3 mi N Kendall, Sec. 12, T24S, R39W (37.97990°N, 101.54400°W). 28 April 2004. Dick Grusing. MHP 8564. Total length 57 1/8 inches (1454 mm). Male. Reported by Taggart and Schmidt (2004).

LITERATURE CITED

Collins, Joseph T. 2004. New Records of Amphibians and Reptiles in Kansas for 2003. Journal of Kansas Herpetology 9: 13–16.

Collins, Joseph T. 1993. *Amphibians and Reptiles in Kansas. Third Edition.* Univ. Press of Kansas, Lawrence. xx + 397 pp.

Collins, Joseph T. and Travis W. Taggart 2002. *Standard Common and Current Scientific Names for North American Amphibians, Turtles, and Reptiles. Fifth Edition.* Publication of The Center for North American Herpetology, Lawrence. iv + 44 pp.

BIBLIOGRAPHY

The publications listed below are those with direct references to amphibians and reptiles in Kansas that have been published or brought to my attention since the up-date of county records by Collins (2004).

Bennett, Rick. 2004. Life History. *Crotalus viridis.* Prairie Rattlesnake. Behavior. Journal of Kansas Herpetology 12: 18.

Bonett, R. M. & P. T. Chippindale. 2004. Speciation, phylogeography and evolution of life history and morphology in plethodontid salamanders of the *Eurycea multiplicata* complex. Molecular Ecology. 13(5): pp. 1189-1203.

Coleman, Keith. 2004. Life History. *Hyla chrysoscelis.* Cope's Gray Treefrog. New Kansas Maximum Size. Journal of Kansas Herpetology 10: 11.

Collins, Joseph T. 2004a. New records of amphibians, turtles, and reptiles in Kansas for 2003. Journal of Kansas Herpetology 9: 8–11.

Collins, Joseph T. 2004b. Marais des Cygnes Herp Count. Journal of Kansas Herpetology 11: 11.

Collins, Joseph T. 2004c. Geographic Distribution. *Storeria dekayi.* Kansas. Journal of Kansas Herpetology 12: 17.

Collins, Suzanne L. 2004. Geographic Distribution. *Pituophis catenifer.* Kansas. Journal of Kansas Herpetology 11: 14.

Collins, Suzanne L. & Joseph T. Collins 2004. Life History. *Storeria dekayi.* Brown Snake. Reproduction. Journal of Kansas Herpetology 12: 18.

Daniel, James Kent. 2004. Cherokee County Herp Count. Journal of Kansas Herpetology 11: 10.

Davis, Nate & Travis W. Taggart. 2004. Geographic Distribution. *Pseudacris streckeri.* Kansas. Journal of Kansas Herpetology 10: 10.

Davis, Nate, Travis W. Taggart & Curtis J. Schmidt. 2004. Geographic Distribution. *Pseudacris streckeri.* Kansas. Journal of Kansas Herpetology 10: 10.

Edgren, Richard A. 2004. *Heterodon kennerlyi* revisited. Journal of Kansas Herpetology 11: 16–17.

Ellis, Mark & Kathy Ellis. 2004. Wakarusa Herp Count. Journal of Kansas Herpetology 11: 12.

Fitch, Henry S. 2004. The effect of female size on number of eggs or young in snakes. Journal of Kansas Herpetology 9: 11–12.

Fitch, Henry S. 2004. Food surplus and body size in local populations of snakes. Journal of Kansas Herpetology 10: 14–16.

Fitch, Henry S. 2004. Observations on Ringneck Snakes *(Diadophis punctatus).* Journal of Kansas Herpetology 12: 19.

Fitch, Henry S. 2004. Observations on Osage Copperheads in northeastern Kansas. Journal of Kansas Herpetology 12: 20.

Fitch, Henry S., George R. Pisani, Harry W. Greene, Alice F. Echelle, & Michael Zerwekh. 2004. A field study of the Timber Rattlesnake in Leavenworth County, Kansas. Journal of Kansas Herpetology 11: 18–24.

Fuerst, Gregory S. & Christopher C. Austin. 2004. Population genetic structure of the Prairie Skink *(Eumeces septentrionalis):* Nested clade analysis of Post Pleistocene populations. Journal of Herpetology 38(2): 257–268.

Gubanyi, James. 2004. Osage County Herp Count. Journal of Kansas Herpetology 11: 11.
Gubanyi, James. 2004. Wilson County Herp Count. Journal of Kansas Herpetology 11: 12.
Gubanyi, Marla A. 2004. Geographic Distribution. *Chelydra serpentina.* Kansas. Journal of Kansas Herpetology 12: 17.
LaForce, Rusell W. 2004. Life History. *Nerodia sipedon.* Northern Water Snake. Diet. Journal of Kansas Herpetology 10: 11.
McNearney, Ross. 2004. Life History. *Diadophis punctatus.* Ringneck Snake. Albino. Journal of Kansas Herpetology 10: 11.
Miller, Larry L. 2004. Life History. *Podarcis sicula.* Italian Wall Lizard. Winter Activity. Journal of Kansas Herpetology 10: 11.
Miller, Larry L. 2004. Notes on Strecker's Chorus Frog activity in Kansas. Journal of Kansas Herpetology 10: 13.
Miller, Larry L. 2004. Sumner County Herp Count. Journal of Kansas Herpetology 11: 11–12.
Miller, Larry L. 2004. Life History. *Lampropeltis triangulum.* Milk Snake. Reproduction. Journal of Kansas Herpetology 12: 17.
Moriarty, Emily C. and David C. Cannatella. 2004. Phylogenetic relationships of the North American Chorus Frogs (*Pseudacris:* Hylidae). Molecular Phylogenetics and Evolution. 30: pp. 409-420.
Murrow, Daniel G. 2004. Geographic Distribution. *Thamnophis proximus.* Kansas. Journal of Kansas Herpetology 11: 14.
Pauly, Gregory B., David M. Hillis & David C. Cannatella. 2004. The history of a Nearctic colonization: Molecular phylogenetics and biogeography of the Nearctic toads *(Bufo).* Evolution 58(11): 2517–2535.
Pilch, James A., II. 2004. *Lampropeltis calligater.* Prairie Kingsnake. Winter activity. Journal of Kansas Herpetology 9: 7.
Pisani, George R. 2004. Life History. *Chelydra serpentina.* Mating Behavior. Journal of Kansas Herpetology 11: 15.
Rehmeier, Ryan L. & Raymond S. Matlack. 2004. Life History. *Thamnophis sirtalis.* Diet. Journal of Kansas Herpetology 11: 15.
Schmidt, Curtis J. 2004a. Geographic Distribution. *Chelydra serpentina.* Kansas. Journal of Kansas Herpetology 10: 10.
Schmidt, Curtis J. 2004b. Geographic Distribution. *Chrysemys picta.* Kansas. Journal of Kansas Herpetology 10: 10.
Schmidt, Curtis J. 2004c. Geographic Distribution. *Trachemys scripta.* Kansas. Journal of Kansas Herpetology 10: 10.
Schmidt, Curtis J. 2004d. Attempted predation on a hatchling Texas Horned Lizard *(Phrynosoma cornutum)* by an adult Plains Leopard Frog *(Rana blairi).* Journal of Kansas Herpetology 10: 12.
Schmidt, Curtis J. 2004e. Geographic Distribution. *Hyla chrysoscelis/Hyla versicolor.* Kansas. Journal of Kansas Herpetology 11: 13.
Schmidt, Curtis J. 2004f. Geographic Distribution. *Bufo cognatus.* Kansas. Journal of Kansas Herpetology 11: 13.
Schmidt, Curtis J. 2004g. Geographic Distribution. *Apalone spinifera.* Kansas. Journal of Kansas Herpetology 11: 13.
Schmidt, Curtis J. 2004h. Geographic Distribution. *Ophisaurus attenuatus.* Kansas. Journal of Kansas Herpetology 11: 13.
Schmidt, Curtis J. 2004i. Geographic Distribution. *Pituophis catenifer.* Kansas. Journal of Kansas Herpetology 11: 14.
Schmidt, Curtis J. 2004j. Geographic Distribution. *Storeria dekayi.* Kansas. Journal of Kansas Herpetology 11: 14.
Schmidt, Curtis J. 2004k. Geographic Distribution. *Thamnophis sirtalis.* Kansas. Journal of Kansas Herpetology 11: 14.
Schmidt, Curtis J. & Richard Hayes. 2004. Life History. *Gastrophryne olivacea.* New Maximum Length. Journal of Kansas Herpetology 11: 15.
Schmidt, Curtis J. & Travis W. Taggart. 2004a. *Kinosternon flavescens.* Yellow Mud Turtle. Abnormal characteristic. Journal of Kansas Herpetology 9: 7.
Schmidt, Curtis J. & Travis W. Taggart. 2004b. Life History. *Rana blairi.* Plains Leopard Frog. New State Maximum Length. Journal of Kansas Herpetology 12: 17.
Taggart, Travis W. 2004a. Geographic Distribution. *Bufo woodhousii.* Kansas. Journal of Kansas Herpetology 10: 10.
Taggart, Travis W. 2004b. Geographic Distribution. *Kinosternon flavescens.* Kansas. Journal of Kansas Herpetology 10: 10.
Taggart, Travis W. 2004c. Geographic Distribution. *Podarcis sicula.* Kansas. Journal of Kansas Herpetology 10: 10.
Travis W. Taggart. 2004d. Life History. *Necturus louisianensis.* Red River Mudpuppy. New Maximum Length for Entire Range. Journal of Kansas Herpetology 10: 11.
Taggart, Travis W. 2004e. Geographic Distribution. *Scincella lateralis.* Kansas. Journal of Kansas Herpetology 11: 13.
Taggart, Travis W. 2004f. Geographic Distribution. *Ophisaurus attenuatus.* Kansas. Journal of Kansas Herpetology 11: 13.
Taggart, Travis W. 2004g. Geographic Distribution. *Pantherophis emoryi.* Kansas. Journal of Kansas Herpetology 11: 14.
Taggart, Travis W. (editor) 2004. Results of the KHS 2004 Fall Field Trip Kansas. Journal of Kansas Herpetology 12: 15–16.
Travis W. Taggart & Curtis J. Schmidt. 2004. Life History. *Crotalus viridis.* Prairie Rattlesnake. New Maximum Size for Entire Range. Journal of Kansas Herpetology 12: 18.
Volkmann, Al. 2004. Cowley County Herp Count. Journal of Kansas Herpetology 11: 10.
Washburne, Michael. 2004. Ellsworth County Herp Count. Journal of Kansas Herpetology 11: 10.
Whitney, Chad, Curtis J. Schmidt & Travis W. Taggart. 2004. Life History. *Kinosternon flavescens.* Yellow Mud Turtle. New State Maximum Length. Journal of Kansas Herpetology 12: 17.

The Kansas Herpetological Society

The *Kansas Herpetological Society* is a non-profit organization established in 1974 and designed to encourage education and dissemination of scientific information through the facilities of the Society; to encourage conservation of wildlife in general and of amphibians, turtles and reptiles in Kansas in particular; and to achieve closer cooperation and understanding between herpetologists, so that they may work together in common cause.

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Editorial Policy

The *Journal of Kansas Herpetology*, issued quarterly, publishes peer-reviewed manuscripts and notes dealing with the biology of amphibians, turtles and reptiles. Manuscripts should be submitted to the Editor no later than the 10th of the month prior to the month of issuance. All manuscripts become the sole possession of the Society, and will not be returned unless arrangements are made with the Editor. Pen and ink illustrations and photographs are also welcomed. Illustrations and photographs will be returned to the author only upon request. The *Journal of Kansas Herpetology* uses the common names standardized nationwide by Collins & Taggart (2002).

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The Gloyd-Taylor Scholarship is presented annually by the Kansas Herpetological Society to an outstanding herpetology student. Nominations for this award are open to any KHS member enrolled in an accredited educational institution in Kansas or any KHS member enrolled in any accredited educational institution outside of Kansas. The scholarship is $100.00 and is awarded on the basis of potential for contributing to the science of herpetology. Students from grade school through university are eligible.

Nominations should include typewritten details of the nominee's qualifications, plus name and address of the nominee and nominator. Self-nomination is encouraged. If self-nominated, a letter of reference from an academician is required.

Nominations should include, but are not limited to, academic record, herpetological activities, and future plans in herpetology. Academic record should address schools attended and an indication of academic performance in each (e.g., grade point average, teacher evaluations, courses completed). Herpetological activities should include a brief narrative that details experiences and activities that demonstrate a long-term interest in herpetology, and documents accomplishments in herpetological study. Future plans in herpetology should include a statement, not to exceed one-page, written by the student about his/her future interests and plans.

Applicants may include an optional appendix with photographs, awards, newspaper articles, reports written by the student, or other documents relevant to herpetological activities.

Nominations should be sent to the KHS Awards Committee Chair, and must be postmarked by 15 September. The scholarship winner will be announced at the annual meeting in November. New applications will be accepted after 1 January of the following year.

The Alan H. Kamb Grant for Research on Kansas Snakes

KHS members only are eligible to apply for The Alan H. Kamb Grant for Research on Kansas Snakes. The recipient of the grant (minimally $100.00) will be selected by the KHS Awards Committee. If no qualified proposals are submitted, no award will be made for that year.

The KHS Awards Committee will entertain proposals for research on Kansas snakes. The proposal must be limited to ten typed pages, and should include, but not be limited to the following: title, name of researcher, contact information, abstract, introduction and justification, objectives or hypotheses, materials and methods, significance of research and possible results, literature cited, timetable, and proposed budget. The research must be conducted on one or more native Kansas snake species. Additionally, a majority of the field work or observations must be proposed to occur in Kansas, or the data must be proposed to be collected, at least in part, on Kansas specimens.

Proposals should be sent to the KHS Awards Committee Chair, and must be postmarked by 15 September. The grant recipient will be announced at the annual meeting in November. New applications will be accepted after 1 January of the following year.

The Suzanne L. & Joseph T. Collins Award for Excellence in Kansas Herpetology

Conditions and Stipulations: The Award shall be known, presented, and portrayed as the *Suzanne L. & Joseph T. Collins Award for Excellence in Kansas Herpetology* and may not be changed for any reason, nor added to or merged with any other award, prize, or gift. The Award is established in recognition of the scientific and photographic achievements of Suzanne L. Collins and Joseph T. Collins, whose life-long study and conservation of the native amphibians, turtles, and reptiles of Kansas is amply demonstrated in their extensive and excellent writings and photography, both academic and popular, about these animals.

The Collins Award shall be presented no more than once each year. The Award may not be divided, but must be presented in full to a single individual. The Award consists of a trust-in-perpetuity, owned and invested by the *The Center for North American Herpetology*, and part of the interest from the trust is annually forwarded to the *Kansas Herpetological Society*, should they choose to make an award in that year.

Recipients of *The Collins Award* are chosen by the *Kansas Herpetological Society Awards Committee.*

In even-numbered years, the Award is bestowed upon an individual who, in the *preceding* two calendar years, had published a paper of academic excellence on the systematics, ecology, or conservation of a native species of Kansas amphibian, turtle, and/or reptile in the *Journal of Kansas Herpetology*, *Transactions of the Kansas Academy of Science*, *Herpetological Review*, or the *Journal of Herpetology*, and/or presented a lecture of excellence on the systematics, ecology, or conservation of a native species of Kansas amphibian, turtle, and/or reptile at the KHS Annual Meeting. To qualify for the Award, a portion of the field work or observations must have occurred in Kansas, or the systematic data must have been based in part on Kansas specimens. *In odd-numbered years*, the Award is bestowed upon an individual who was chosen the best in a juried competition featuring the art of photography in portraying amphibians, turtles, and/or reptiles, said competition to take place under the auspices and on the occasion of the annual meeting of the *Kansas Herpetological Society.* To qualify for the Award, the art work must portray a species native to Kansas.

The Collins Award is minimally $1000.00, and is neither a grant nor a scholarship. No nominations or applications can be made for it.

KHS Web Site: http://www.ku.edu/~khs/

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