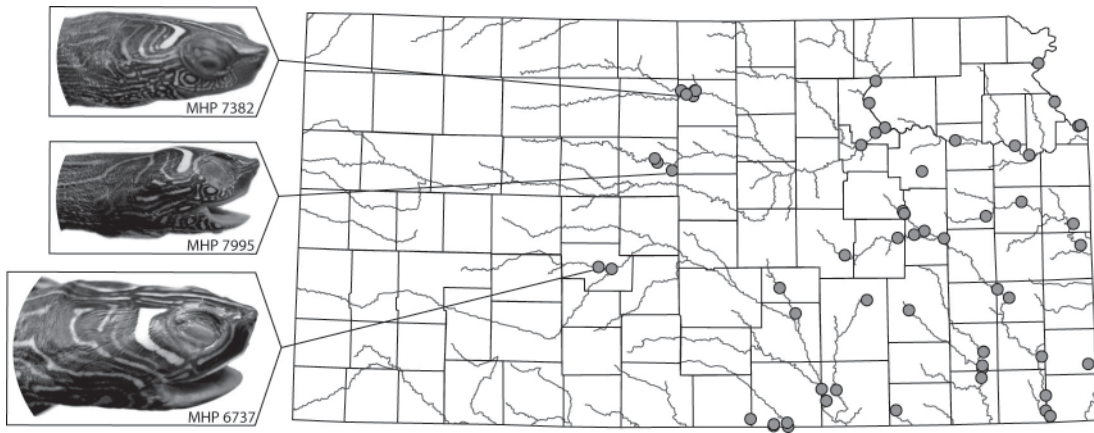


JOURNAL OF KANSAS HERPETOLOGY

NUMBER 9 MARCH 2004



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Kansas Nongame Wildlife Advisory Council
(785-749-3467)

Front Cover: A map of the state of Kansas, showing the exact localities (dark circles) for all members of the turtle genus *Graptemys*. Head patterns of individuals from the three westernmost drainages in which they occur are shown at left of the map. Prepared by Travis W. Taggart, Sternberg Museum of Natural History, Fort Hays State University, Hays, Kansas 67601.

Journal of Kansas Herpetology

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KHS BUSINESS

KANSAS HERPETOLOGICAL SOCIETY 2004 SPRING FIELD TRIP

Logan County (Figure 1) is the site of the 2004 spring KHS field trip to be held on the weekend of 30 April–2 May. The field trip headquarters will be at Logan County State Wildlife Area (#15 on the map; look for the KHS sign), just northwest of Russell Springs (#18 on the map). Logan County State Wildlife Area offers free primitive camping. There is a vault toilet on the west end of the dam, and there are designated camping areas. Alternatively, modern accommodations can be had at any one of several motels in Oakley and Winona (see box to the right). Oakley is approximately 28 miles from Logan County State Wildlife Area. Winona is approximately 15 miles from Logan County State Wildlife Area.

Herpetofaunal counts will officially take place from 9:00 am to 5:00 pm on Saturday, 1 May 2004, and from 9:00 am to noon on Sunday, 2 May 2004. Individuals wishing to participate should be at Logan County State Wildlife Area at those dates and times.

The occasion of this field trip will also provide an opportunity to continue the program by the KHS of conducting a systematic county-wide road survey for new herpetofaunal records (see Table 1 for a list of the 29 species already found in Logan County and the places where they were discovered). Interested attendees will each be given a unique predetermined route across the county. Upon completion of the routes, all participants will reassemble to share their results.

The goals of this program are twofold: 1) the collection of road-killed specimens to serve as scientific vouchers and 2) the instruction of interested members in proper specimen preparation and data collection techniques.

FRS Radio Channel 4 will be monitored. Bring your family and friends, to join us for a fun and educational weekend in southeast Kansas.

For more information contact:

Jay Kirk
KHS Field Trip Chairperson
2315 North Crestline Court
Wichita, Kansas 67205
(316) 648-8703
jkir@cox.net

OAKLEY LODGING

1st Travel Inn
708 Center
Oakley, Kansas
(785) 672-3226

Annie Oakley Motel
428 Center
Oakley, Kansas
(785) 672-3223

Free Breakfast Inn
I-70 & Rt. 83 junction
Oakley, Kansas
(785) 672-3141

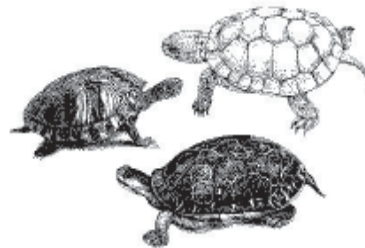
Best Western Golden Plains Motel
U.S. Rt. 40
Oakley, Kansas
(785) 672-3254

First Interstate Inn
I-70 & U.S. Rt. 40
Oakley, Kansas
(785) 672-3203

Kansas Kountry Inn
3538 U.S. Rt. 40
Oakley, Kansas
(785) 672-3131

Smoky River Rendezvous B&B
115 Belview
Winona, Kansas
(785) 846-7785

*There are a number of
restaurants in Oakley*



The main road to the Logan County State Wildlife Area (from the east) is a well-drained gravel/sand road. It is about two and one-half miles off a paved road (Ks. Rt. 25). Other roads around the lake are dirt and can be extremely difficult to travel when wet.

At Logan County State Wildlife Area (#15 on the map), there are a few rocks. The lake is often dry (but is sometimes good for frogs and toads) and many cottonwoods and willows have grown in the bottom and along the margins. The 270 acres around the lake should provide plenty of herpetofaunal opportunities. The major habitats above the lake are short and mid-grass prairie interspersed with soapweed.

Logan County Kansas

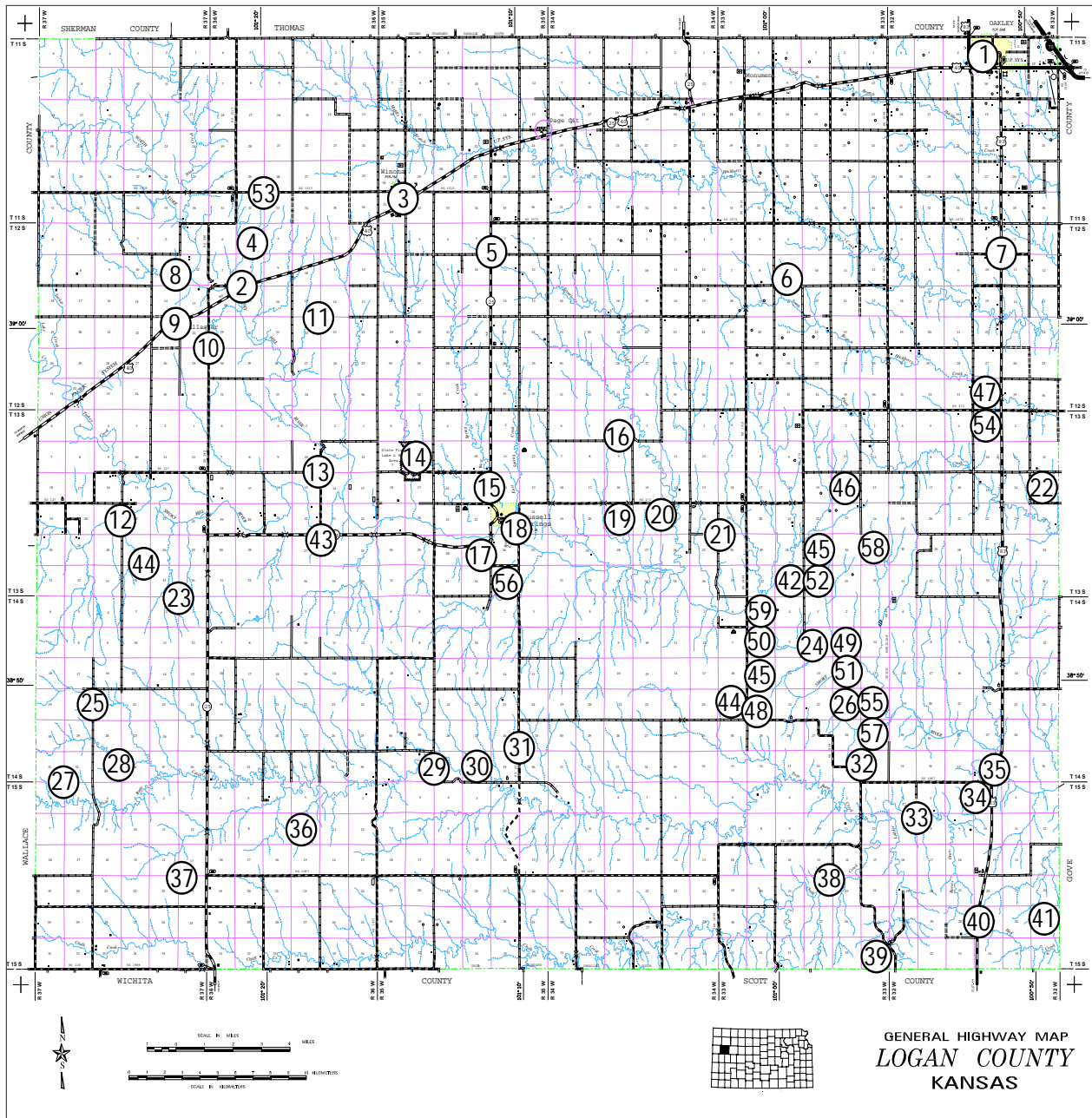


Figure 1. A modified map of Logan County, base map courtesy of the Kansas Department of Transportation. Numbered localities (circled) correspond to the taxa in Table 1.

Table 1. Known localities of taxa within Logan County, Kansas (see map on previous page).

Barred Tiger Salamander <i>Ambystoma mavortium</i>	21, 27, 42
Plains Spadefoot <i>Spea bombifrons</i>	3, 15, 17, 26, 44, 51
Great Plains Toad <i>Bufo cognatus</i>	40
Green Toad <i>Bufo debilis</i>	17, 20, 23, 25, 27, 43, 44
Woodhouse's Toad <i>Bufo woodhousii</i>	10, 14, 21, 22, 33, 35, 44, 45
Northern Cricket Frog <i>Acris crepitans</i>	14, 24, 33
Western Chorus Frog <i>Pseudacris triseriata</i> complex	5, 27
Plains Leopard Frog <i>Rana blairi</i>	2, 8, 14, 21, 33, 35, 37, 40, 50
Common Snapping Turtle <i>Chelydra serpentina</i>	24, 33
Yellow Mud Turtle <i>Kinosternon flavescens</i>	18, 24, 40, 49, 50
Painted Turtle <i>Chrysemys picta</i>	18, 50
Ornate Box Turtle <i>Terrapene ornata</i>	3, 32, 44, 46
Spiny Softshell <i>Apalone spinifera</i>	33
Lesser Earless Lizard <i>Holbrookia maculata</i>	16, 18, 35, 40, 45
Prairie Lizard <i>Sceloporus consobrinus</i>	16, 35, 38, 39, 40, 43, 45, 55
Six-lined Racerunner <i>Aspidoscelis sexlineata</i>	21, 35, 38
Ringneck Snake <i>Diadophis punctatus</i>	29
Western Hognose Snake <i>Heterodon nasicus</i>	7, 9, 12, 21, 33, 47
Eastern Hognose Snake <i>Heterodon platirhinos</i>	39, 48, 49
Plains Blackhead Snake <i>Tantilla nigriceps</i>	14, 17, 32, 56, 57
Eastern Racer <i>Coluber constrictor</i>	21, 29, 45
Common Kingsnake <i>Lampropeltis getula</i>	19, 24, 30, 50
Milk Snake <i>Lampropeltis triangulum</i>	20, 36, 45, 48
Coachwhip <i>Masticophis flagellum</i>	31, 34, 51, 52
Great Plains Rat Snake <i>Pantherophis emoryi</i>	41
Bullsnake <i>Pituophis catenifer</i>	2, 4, 12, 35, 51, 53, 54
Longnose Snake <i>Rhinocheilus lecontei</i>	50
Plains Garter Snake <i>Thamnophis radix</i>	17, 24, 42, 45, 46, 57, 58, 59
Prairie Rattlesnake <i>Crotalus viridis</i>	1, 6, 9, 13, 16, 17, 24, 45, 46

PAY YOUR 2004 DUES

If you have not already done so, send your calendar 2004 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, and will support the KHS and its many fine programs. Also, you will be eligible for KHS awards, grants, and scholarships.

2004 KHS ANNUAL MEETING

The entire program for the KHS 31st Annual Meeting will be held in Ackert Hall, *Kansas State University*, Manhattan, Kansas, on 6–7 November 2004. The program and motels will soon be listed on the KHS web site; lodging arrangements will not be made by the KHS. The social and auction will be held at the *Konza Prairie* on Saturday night.

Contact KHS President Eva Horne for more information at ehorne@ksu.edu

**Kansas Herpetological Society
2003 Annual Financial Report**

Balance on hand 1 January 2003 ... \$4,766.86

Income

Membership Dues

Regular \$2,175.00

Contributing \$860.00

SubTotal \$3,035.00

Annual Meeting

Registration \$840.00

Auction \$1,543.00

Sale of T-Shirts \$630.00

SubTotal \$3,013.00

Donations \$1,417.65

Interest \$72.35

Total Income \$7,538.00

Expenses

Office of Secy/Treas \$55.99

The Collins Award \$1,000.00

Kamb Grants (2) \$200.00

Gloyd/Taylor Scholarship \$100.00

Office of the Editor \$300.00

Journal Kansas Herp \$1,762.38

Annual Meeting \$904.07

T-Shirts \$502.00

Endowment Gloyd/Taylor \$1,208.69

Endowment Kamb Grant \$105.16

Total Expense \$6,138.29

Balance on hand 31 Dec 2003 \$5,966.57

Bank Statement 31 Dec 2003* \$6,166.57

Endowed Funds

Alan H. Kamb Grant \$3,282.20

Gloyd/Taylor Scholarship \$1,705.05

Total Endowment \$4,987.25

TOTAL ASSETS \$11,153.82

Respectfully submitted,

Mary Kate Baldwin, Secretary

Eric Kessler, Treasurer

28 February 2004

*difference reflects outstanding checks of \$200.00

KHS Executive Council Minutes
28 February 2004 1:30 pm
Kansas State University

Officers attending: Eva Horne (presiding), Mary Kate Baldwin, Eric Kessler, David Oldham, Travis W. Taggart, and Greg Sievert. Committee Chairpersons attending: Joseph T. Collins (Nominating). Others: Suzanne L. Collins (interim Recording Secretary) & Curtis J. Schmidt (KHS member).

Reports:

Financial Report: Mary Kate Baldwin and Eric Kessler provided a financial report that itemized income and expenses for 2003. The report showed total assets of \$11,153.82 with a cash balance of \$6,166.57, an increase from last fiscal year. A total of \$4,987.25 is invested in CDs for the Kamb Grant and Gloyd/Taylor Scholarship. It was moved and seconded (Oldham/Sievert) to accept the Financial Report. Motion approved.

Journal of Kansas Herpetology: Travis Taggart reported that in 2003, four issues of the *Journal* had been published; a total of 88 pages were printed.

New Business:

It was moved and seconded (Horne/Sievert) to publish four issues of the *Journal of Kansas Herpetology* at a cost of \$2,400.00. Motion approved.

Annual Meeting: It was moved and seconded (Oldham/Baldwin) that \$1,000.00 be allocated to hold the KHS annual meeting, to include costs of a keynote speaker. Motion approved.

Because some families have more than one KHS member and don't need multiple copies, it was moved and seconded (Taggart/Kessler) that each KHS member be given the option of not receiving the *Journal of Kansas Herpetology*. Motion passed. (Note: A box will be included on the KHS membership form that can be checked should a member wish to opt out of receiving the *Journal of Kansas Herpetology*.)

After reviewing the budget, it was moved and seconded (Sievert/Taggart) that funds be allocated to increase the *Gloyd/Taylor Scholarship* fund to \$3,000.00. Motion approved.

It was moved and seconded (Horne/Taggart) to investigate developing a KHS speakers bureau made up of volunteers willing to give talks to interested groups. Motion approved.

Suzanne Collins announced that she had scanned over 850 color slides by KHS member Larry Miller and is in the process of identifying people in them. She will make a CD for the KHS historical archives.

It was moved and seconded (Horne/Baldwin) to adjourn the meeting at 4:30 pm. Motion approved.

OF INTEREST

PSEUDACRIS REVISED

Moriarty and Cannatella (2004. Phylogenetic relationships of the North American Chorus Frogs (*Pseudacris*: Hylidae). *Molecular Phylogenetics and Evolution*. 30: pp. 409-420) demonstrated that the current arrangement of Chorus Frogs of the genus *Pseudacris* in the eastern United States does not reflect the evolutionary history of the group. Future papers will determine the number and distribution of species to be recognized; the paper referenced above also recommends that the remaining two subspecies in the complex, *Pseudacris crucifer bartramiana* and *Pseudacris nigrita verrucosa*, be synonymized. For Kansas, the standard common name remains the Spring Peeper (*Pseudacris crucifer*).

NEW BOOK: *FACES OF THE GREAT PLAINS*

An excellent pictorial compilation of Great Plains wildlife, with photography by Bob Gress and text by Paul A. Johnsgard. Although primarily about mammals and birds, contains nineteen stunning images of Great Plains amphibians, turtles, and reptiles, all of which are labelled using standard common names. Highly recommended for those with an interest in the Great Plains fauna.

Gress, Bob. 2003. University Press of Kansas, Lawrence. xiv + 170 pp. ISBN 0-7006-1265-3. \$34.95.

THIRD FORT RILEY HERPETOFAUNAL SURVEY

KHS members and friends are invited to participate in the third annual Fort Riley Herpetofaunal Survey. Interested individuals should meet at Building 1020 at 8:00 am on Thursday, 6 May 2004. If bad weather occurs, Tuesday, 11 May at 8:00 am, will be the backup date.

Last year there was a little drop in attendance, so everyone is encouraged to do some recruiting and bring out some new faces.

When coming on Fort Riley, please make sure you have an ID and the vehicle driver has proof of insurance and registration handy. If anyone has any questions or needs directions, please e-mail or call 785-239-2537.

Gibran Suleiman
gibran.suleiman@us.army.mil

ESU HERPETOLOGY COURSE— SUMMER 2004

Herpetology 844 will be offered as a 3 credit hour summer course at Emporia State University from June 7–July 2, 2004 from 8:00–10:00 am Monday through Friday. The instructor is Dr. Lynnette Sievertl

<http://academic.emporia.edu/sievertl/>

She can be reached at

sievertl@emporia.edu

This course will cover mainly amphibians and reptiles of the United States with an emphasis on those of the Great Plains. The course will consist of both lecture and lab work. In the lab, students will work with both live and preserved specimens from across the U.S. Field trips will depend on the weather.

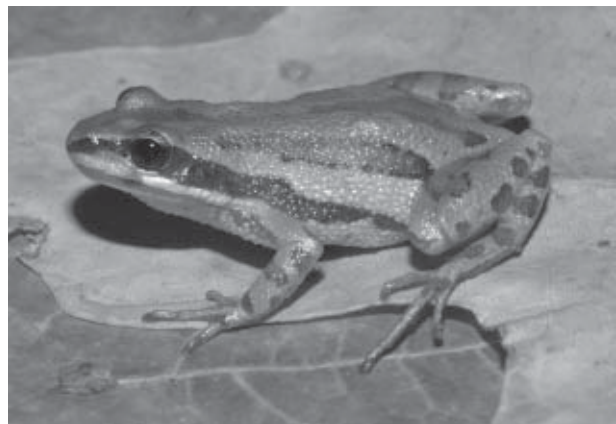
For more information about Herpetology at ESU, please visit the main web page for this course at:

<http://academic.emporia.edu/sievertl/herp.htm>

The herpetology syllabus web page is:

<http://academic.emporia.edu/sievertl/herpsyl.htm>

For information about enrolling in summer courses contact the ESU Admissions office (620) 341-5465. For more information about the summer classes in Biology contact the Department of Biological Sciences at (620) 341-5311. For information about the summer masters program in biology contact Derek Zelmer (620) 341-5849 or zelmerde@emporia.edu.



A Western Chorus Frog (*Pseudacris triseriata* complex), found during the 2003 KHS fall field trip to Leavenworth County, Kansas. Photograph by Suzanne L. Collins.

GEOGRAPHIC DISTRIBUTION

DIADOPHIS PUNCTATUS (Ringneck Snake). FLORIDA: GULF Co: near St. Joe Bay State Buffer Preserve across from Treasure Bay Lodge. Travis W. Taggart. 4 January 2004. MHP 8150. Verified by Curtis Schmidt. First record for county (Ashton & Ashton 1988. Handbook of Reptiles and Amphibians of Florida. Part I. The Snakes. Second Edition. 176 pp.).

Submitted by **TRAVIS W. TAGGART**, Sternberg Museum of Natural History, Fort Hays State University, Hays, Kansas

RHADINAEA FLAVILATA (Pine Woods Snake). FLORIDA: GULF Co: within Mexico Beach city limits. Alex Pyron. 23 December 2002. MHP 7423. Verified by Joseph T. Collins. First record for county (Ashton & Ashton 1988. Handbook of Reptiles and Amphibians of Florida. Part One. The Snakes. Second Edition. 176 pp.).

Submitted by **ALEX PYRON**, Department of Biology, Piedmont College, P. O. Box 10, Demorest, Georgia 30535.

LIFE HISTORY NOTES

LAMPROPELTIS CALLIGASTER (Prairie King-snake). Winter Activity. A freshly-killed specimen was discovered by the author on a diagonal road just north of Lone Star Lake Dam, Douglas County, Kansas, on 27 December 2003. Specimen was ca. 1 meter in total length and the temperature was ca. 45°F.

Submitted by **JAMES A. PILCH II**, Tertiary Oil Recovery Project, University of Kansas, Lawrence, Kansas 66045.

KINOSTERNON FLAVESCENS (Yellow Mud Turtle) Abnormal Characteristic: On 8 May 2001, while conducting a survey of the Smoky Valley Ranch, a shortgrass prairie preserve located in southeast Logan County, Kansas, I encountered a rather unique Yellow Mud Turtle (*Kinosternon flavescens*). This specimen was of particular interest because it possessed abnormal numbers of digits on both its forelimbs. The left manus possessed eight digits, including claws, while the right manus possessed seven clawed digits (Fig. 1). After inspection of 45 specimens deposited in the Fort Hays State University collection at the Museum of the High Plains (MHP), Sternberg Museum of Natural History, the normal number of digits appears to be five on each forelimb.

The turtle was captured in a small, ephemeral pool along a tributary of the Smoky Hill River. This particular pool was shallow with a silt substrate and contained no emergent vegetation and little shoreline vegetation, the preferred habitat of this species (Collins, 1993 Amphibians and Reptiles in Kansas. Third edition. University Press of Kansas, Lawrence, Kansas. 397 pp.). The pool was frequently used by

cattle as a watering hole. Although this particular pool dried up later in the year, a nearby pool retained water year-round.

This specimen is housed in the collection at the Sternberg Museum of Natural History (MHP) with the following information: *Kinosternon flavescens*. MHP 6844. USA: Kansas: Logan Co: 3.5 mi S & 8.5 mi E Russell Springs (Sec. 5, T14S, R33W), Smoky Valley Ranch. Date: 8 May 2001. Collector: Curtis J. Schmidt.

Submitted by **CURTIS J. SCHMIDT** and **TRAVIS W. TAGGART**, Sternberg Museum of Natural History, Fort Hays State University, Hays, Kansas 67601.



Figure 1. A specimen (MHP 6844) of the Yellow Mud Turtle (*Kinosternon flavescens*) from Logan County, Kansas, showing the abnormally large number of digits. Photograph by Curtis J. Schmidt.

NOTES

NEW RECORDS OF AMPHIBIANS, TURTLES, AND REPTILES IN KANSAS FOR 2003

JOSEPH T. COLLINS

Adjunct Herpetologist
Kansas Biological Survey
University of Kansas
2021 Constant Avenue
Lawrence, Kansas 66047

Adjunct Curator of Herpetology
Sternberg Museum of Natural History
Fort Hays State University
Hays, Kansas 67601

The thirteen new county records and single maximum size record listed below are those accumulated or brought to my attention since the publication of records for 2002 (Collins, 2003). 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 28th 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 the 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 com-

plied by Collins & Taggart (2002), and are given at the species level only.

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, to the staff of the Kansas Department of Wildlife and Parks, and to the staff of the Kansas Biological Survey, who spent many hours in search of some of the specimens reported herein. Some of the records reported here resulted from field studies sponsored by funding from the Kansas Department of Wildlife and Parks' *Chickadee Checkoff Program*. Travis W. Taggart and Curtis Schmidt, Curators 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 grateful.

NEW COUNTY RECORDS

BARRED TIGER SALAMANDER

(*Ambystoma mavortium*)

SALINE CO: 1 mi S & 4 mi W Falun, Smoky Hill Air National Guard Weapons Range, Sec. 14, T16S, R5W. 5 June 2003. Collectors: Curtis Schmidt & Richard Hayes. MHP 7798. Reported by Schmidt (2003c).

EASTERN NEWT (*Notophthalmus viridescens*)

BOURBON CO: 2.2 mi S & 0.4 mi W Marmaton, SW 1/4 Sec. 7, T26S, R24E. 26 October 2003.

Collectors: Joshua L. Jagels, Travis W. Taggart, Curtis J. Schmidt, Suzanne L. Collins & Joseph T. Collins. MHP 7958-7959. Reported by Jagels (2003).

RED RIVER MUDPUPPY (*Necturus louisianensis*)
WOODSON CO: Neosho River below the overflow dam at Neosho Falls. 22 February 2003. Collector: Travis W. Taggart. MHP 7492-7494. Reported by Taggart (2003a).

WOODHOUSE'S TOAD (*Bufo woodhousii*)
ELK CO: within Elk Falls city limits, Sec. 10, T31S, R11E. 25 April 2003. Collector: Mike Washburne. MHP 7615. Reported by Washburne and Washburne (2003).

CRAWFISH FROG (*Rana areolata*)
COFFEY CO: DOR on Rt. 57, 1.5 mi E Rt. 75, Sec. 36, T22S, R15E. 30 April 2003. Collector: Andy Burr. MHP 7621. Reported by Burr and Burr (2003).

NORTHERN PRAIRIE SKINK
(*Eumeces septentrionalis*)
ELK CO: 1 mi NW Elk Falls. 29 March 2003. Collector: Mike Washburne. MHP 7654. Reported by Michael Washburne (2003).

NORTHERN PRAIRIE SKINK
(*Eumeces septentrionalis*)
SALINE CO: 7.4 mi S & 1 mi E Brookville, Smoky Hill Air National Guard Weapons Range, Sec. 14, T16S, R5W. 6 June 2003. Collectors: Curtis Schmidt & Richard Hayes. MHP 7759. Reported by Schmidt (2003d).

NORTHERN PRAIRIE SKINK
(*Eumeces septentrionalis*)
WILSON CO: Wilson County State Lake, SE 1/4 Sec. 17, T27S, R16E. 26 April 2003. Collector: Tanner Gravenstein. MHP 7654. Reported by Gravenstein and Gravenstein (2003).

WESTERN WORM SNAKE (*Carphophis vermis*)
BROWN CO: near SE corner of Sabetha Pony Creek Lake. 17 May 2002. Collector: John Lokke. MHP 7432-7433. Reported by Lokke (2003).

MILK SNAKE (*Lampropeltis triangulum*)
SALINE CO: 3 mi N & 2.2 mi W Falun, Smoky Hill Air National Guard Weapons Range, Sec. 30, T15S, R4W. 6 June 2003. Collectors: Travis W.

Taggart, Curtis Schmidt & Richard Hayes. MHP 7767. Reported by Taggart (2003e).

PLAINBELLY WATER SNAKE
(*Nerodia erythrogaster*)
SALINE CO: 4.1 mi S Brookville, Smoky Hill Air National Guard Weapons Range, Spring Creek, Sec. 34, T15S, R5W. 29 May 2003. Collectors: Curtis Schmidt and Richard Hayes. MHP 7727. Reported by Schmidt (2003a).

GRAHAM'S CRAYFISH SNAKE (*Regina grahamii*)
SALINE CO: 4.1 mi S Brookville, Smoky Hill Air National Guard Weapons Range, Spring Creek, Sec. 34, T15S, R5W. 8 May 2003. Collectors: Curtis Schmidt. MHP 7724. Reported by Schmidt (2003b).

MASSASAUGA (*Sistrurus catenatus*)
ELK CO: 0.5 mi N & 3 mi W Busby, Sec. 33, T29S, R12E. 26 April 2003. Collectors: Mike Washburne & Jeremy Washburne. MHP 7621. Reported by Jeremy Washburne (2003).

NEW MAXIMUM SIZE RECORDS

WESTERN GREEN LACERTA (*Lacerta bilineata*)
SHAWNEE CO: within Topeka city limits, 21st Street & Gage Boulevard. 22 April 2002. Collector: James E. Gubanyi & Carl Michaels. MHP 7927. Total length 12 5/8 inches (320 mm); SVL 105 mm. Sex undetermined. Reported by Gubanyi (2003e).

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THE EFFECT OF FEMALE SIZE ON NUMBER OF EGGS OR YOUNG IN SNAKES

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Female snakes that are large and robust tend to produce more eggs per clutch or more young per litter than conspecifics that are smaller (usually younger). In my book on the snake community of the KU Natural History Reservation (Fitch, 1999), a recurring theme was the greater productivity of the females that were larger and older representatives of their species. However, other factors also affect size of brood. In several species, I was able to show substantial change in average size of brood from year to year. Obviously, weather was important. Changes in the amount and distribution of heat and moisture affects not only the snakes themselves but also their associates (including prey species) to the extent that they may range from abundant to rare, and in different years a surfeit or unavailability of food for reproductive females may have drastic effects on clutch or litter size.

The purpose of this note is to show correlation of clutch (or litter) size with female size in four common species, to compare trends between species, and to observe the extent to which other factors alter these trends. Massive samples are available from my 56 seasons of field work on the Reservation. Counts were obtained mainly by palpating oviductal eggs or embryos in female abdomens. For *Agkistrodon contortrix*, records of 116 litters from within the interval September 16, 1970 to May 5, 1989 were used. For *Diadophis punctatus*, 144 records from May 26, 1990 to June 28, 2002 were used, and for *Thamnophis*

sirtalis, 133 litters from March 31, 1990 to October 17, 1995 were used.

Table 1 summarizes these records. For each of the four species, an attempt was made to divide the females into size groups that corresponded approximately with annual age classes. In general, there was an obvious trend for each successively larger and older group to increase its clutch or litter size. But normal mortality rapidly reduces the number of survivors from year to year in each sample, so that regardless of the total number, the oldest groups have few individuals. Perhaps because of these small series, there were several instances of deviation from the trend of increase. In Copperheads, litters decreased from the highest mean of 6.3 in fifth year females to 5.0 in sixth year females. In Ringneck Snakes, there was decrease from 6.6 in fifth year females to 6.0 in sixth year females, and Common Garter Snake litters changed from 21.3 (fifth year) to 18.7 (sixth). Perhaps senility takes its toll. In the oldest snakes, parasite loads, accumulated injuries and loss of youthful vigor may combine to bring about reduction in size of clutch or litter. Better evidence of reduction in senile snakes is needed.

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Table 1. Increasing litter and clutch sizes with increasing snout-vent length of females in four common snake species

Probable age (years)	Mean Litter Size	N	SE	Female SVL (mm)
<i>Agkistrodon contortrix</i>				
3	04.314	35	0.1280	536–578
4	04.909	44	0.1480	581–635
5	06.316	19	0.2650	637–636
6	05.056	18	1.8910	672–694
7	07.840	9	0.4710	718–750
<i>Coluber constrictor</i>				
2	08.091	12	0.5130	600–700
3	10.885	26	0.5640	760–901
4	14.550	6	1.6680	925–990
5	15.000	6	1.6850	1032–1111
<i>Diadophis punctatus</i>				
2	03.375	29	0.1720	221–265
3	04.333	37	0.2280	266–288
4	05.928	38	1.5500	290–300
5	06.600	13	0.5260	303–315
6	06.071	16	0.4650	316–323
7	07.143	14	0.4180	327–336
<i>Thamnophis sirtalis</i>				
2	13.703	49	0.5040	485–596
3	16.244	67	0.5909	600–690
4	21.270	35	1.2390	695–765
5	18.750	13	1.4930	774–820
6	23.077	4	1.0030	840–908

Many thanks to our 2004 Donors
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Alan H. Kamb Grant
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(as of 29 February 2004)

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.

Membership

All interested persons are invited to become members in the Society. Membership dues per calendar year are \$15.00 (U.S., Regular), \$20.00 (*outside* North America, Regular), and \$20.00 (Contributing) payable to the KHS. Send all dues to: KHS Treasurer (see inside front cover). All members are entitled to participate in Society functions, have voting privileges, and are eligible for Society grants and scholarships. They receive copies of the *Journal of Kansas Herpetology*, as well as other publications co-sponsored by the Society, either gratis or at a discount.

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).

The Howard K. Gloyd-Edward H. Taylor Scholarship

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.

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