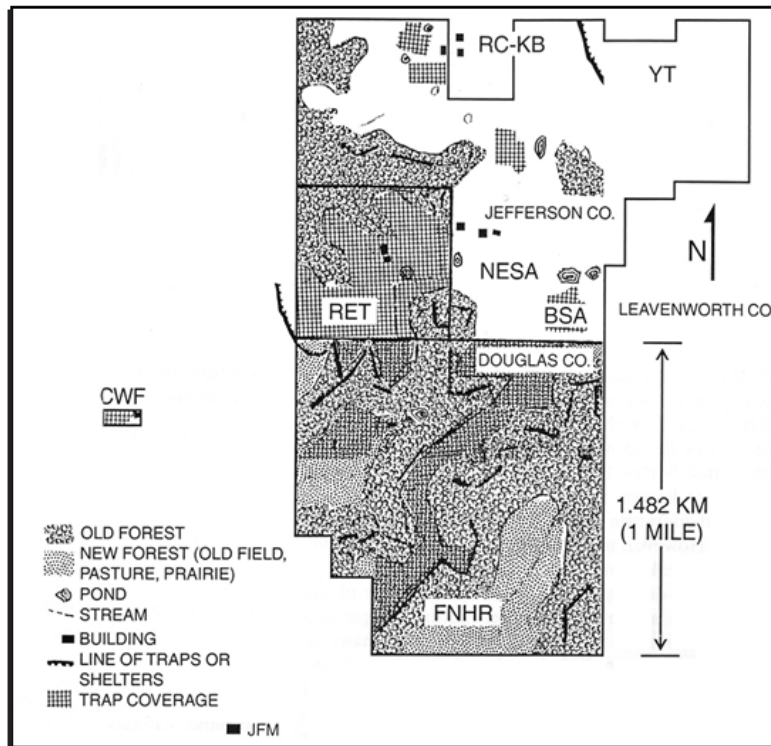


# *JOURNAL OF* KANSAS HERPETOLOGY

NUMBER 5 MARCH 2003



*Published by the Kansas Herpetological Society*



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*Front Cover:* Map of the most ecologically studied site on earth. The tracts comprise the KU Ecological Reserves, where Henry S. Fitch has conducted unprecedented mark-and-recapture studies from 1948 to the present. Reprinted from *A Kansas Snake Community: Composition and Change over 50 Years*, by Henry S. Fitch and published by Krieger Publishing Company, Malabar, Florida (1999).

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## In Memoriam Virginia R. Fitch 1920–2003



Virginia R. Fitch, beloved wife of world-renown herpetologist Henry S. Fitch, died on Monday, December 2nd, 2002, in Lawrence, Kansas, from cancer. Born on November 17th, 1920, in Los Angeles, California, she married Henry in 1946, and together they lived and worked on the University of Kansas Natural History Reservation, recently renamed the Fitch Natural History Reservation. Virginia was Henry's constant companion, and coauthored many papers with him on a variety of subjects, including birds, spiders, and mammals, as well as the herpetofauna of the Reservation. She will be missed so much by all who knew her. Virginia is survived by her husband, daughter Alice Echelle, and sons John H. Fitch and Chester W. Fitch. KHS extends its sympathies to her family and all others who knew and loved Virginia.

### Virginia R. Fitch Memorial Fund

Virginia R. Fitch passed away at home on 2 December 2002, at the *Fitch Natural History Reservation* near Lawrence, Kansas. The Fitch family and the University of Kansas Field Station and Ecological Reserves announce the establishment of the *Virginia R. Fitch Memorial Fund* for the purpose of honoring the memory of Virginia and her contribution to over 50 years of research and teaching at the Reservation. She contributed in many important ways to the field research that was conducted by her husband Dr. Henry S. Fitch, many colleagues, and students. The Reservation itself is named in honor of the entire Fitch Family: Henry, Virginia, John, Alice, and Chester. The *Fitch Nature Trail* is named to specifically honor Henry and now, in memorial to Virginia, an open-sided covered shelter is planned to accommodate visiting classes of public and University students. This structure is to be built on the Reservation to facilitate public education involving nature, natural history, and ecology. This seems particularly appropriate considering Virginia's role not only as a contributor to many diverse research projects, but to the great hospitality she always provided to visitors to the Reservation.

Tax deductible contributions can be made to the Virginia R. Fitch Memorial Fund in care of *The Center for North American Herpetology*, 1502 Medinah Circle, Lawrence, Kansas 66044. Make checks payable to "CNAH Fitch Memorial."

## KHS BUSINESS

### KANSAS HERPETOLOGICAL SOCIETY 2003 SPRING FIELD TRIP

Wilson County (Figure 1) is the site of the 2003 spring KHS field trip to be held on the weekend of 26–27 April. The field trip headquarters will be at Wilson County State Lake just southeast of Buffalo, which offers free primitive camping. Alternatively, modern accommodations can be had at any one of several motels in Fredonia.

The occasion of this field trip will serve to initiate a new program by the KHS, in conducting the first systematic county-wide road survey for new records (see Table 1). 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 initiative 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.

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*  
(address on inside front cover)

#### FREDONIA LODGING

*Cox Motel*  
502 North 5th Street  
Fredonia, Kansas 66736  
(620) 378-4535

*Fredonia Inn*  
R. R. 1  
Fredonia, Kansas 66736  
(620) 378-4419

*Loomis House Bed & Breakfast*  
105 North 5th Street  
Fredonia, Kansas 66736-1218  
(620) 378-3267

*Rocky Ridge Resort*  
4 miles S of Fredonia  
Fredonia, Kansas 66736  
(620) 378-3303



Table 1. Taxa of probable occurrence within Wilson County, but which are currently lacking verifiable records.

Barred Tiger Salamander .....	<i>Ambystoma mavortium</i>
Eastern Tiger Salamander .....	<i>Ambystoma tigrinum</i>
Red River Mudpuppy .....	<i>Necturus louisianensis</i>
Great Plains Toad .....	<i>Bufo cognatus</i>
Woodhouse's Toad .....	<i>Bufo woodhousii</i>
Spotted Chorus Frog .....	<i>Pseudacris clarkii</i>
Northern Crawfish Frog .....	<i>Rana areolata</i>
Alligator Snapping Turtle .....	<i>Macrochelys temminckii</i>
Yellow Mud Turtle .....	<i>Kinosternon flavescens</i>
Smooth Softshell .....	<i>Apalone mutica</i>
Prairie Lizard .....	<i>Sceloporus consobrinus</i>
Coal Skink .....	<i>Eumeces anthracinus</i>
Broadhead Skink .....	<i>Eumeces laticeps</i>
Northern Prairie Skink .....	<i>Eumeces septentrionalis</i>
Western Hognose Snake .....	<i>Heterodon nasicus</i>
Eastern Hognose Snake .....	<i>Heterodon platirhinos</i>
Rough Earth Snake .....	<i>Virginia striatula</i>

Wilson County was organized in 1865. The county seat, and largest city, is Fredonia. This county originally extended to the south line of the state, and was named in honor of Colonel Hiero T. Wilson who lived in Fort Scott in September 1843. He was the first European to settle in the area.

Both the Chautauqua Hills and Osage Cuesta physiographic provinces are represented in the western one third and eastern two-thirds of the county respectively. This will provide a unique opportunity to investigate one of the most herpetologically diverse regions of the state. There is also the potential for the discovery of several county records (see table on previous page.)

Public recreation opportunities are available at Wilson State Fishing Lake near Buffalo, and numerous access points to both the Fall River (New Albany, Fredonia, and Neodesha) and Verdigris River (Coyville, Benedict, Altoona, and Neodesha). As always, permission should be obtained from the landowner before entering private lands.

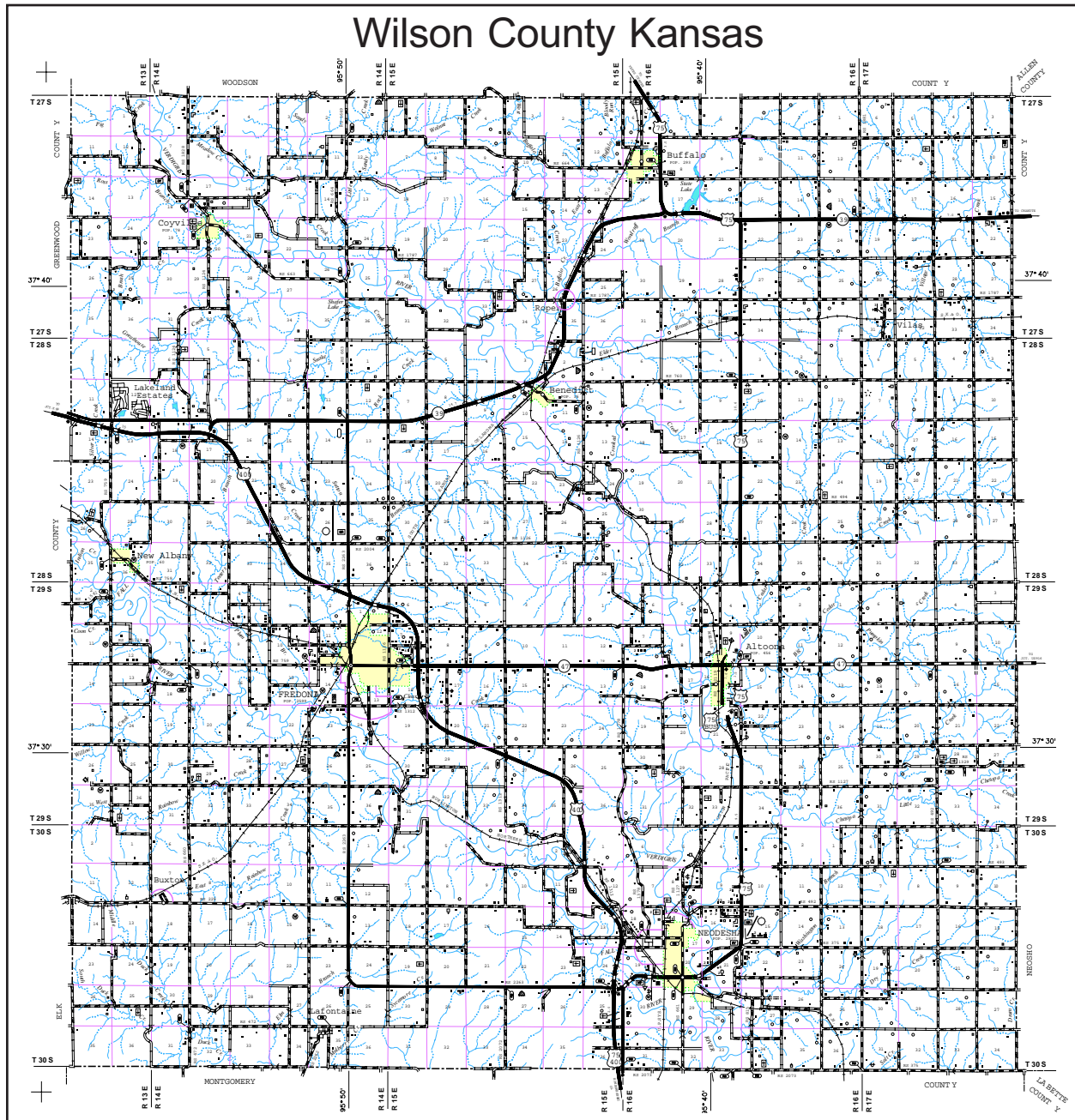


Figure 1. A map of Wilson County, courtesy of the Kansas Department of Transportation.

Kansas Herpetological Society  
Annual Financial Report  
2002

Balance on hand 1 January 2002 ... \$3,640.50

Income

Membership Dues

Regular ..... \$2,245.00

Contributing ..... \$780.00

SubTotal ..... \$3,025.00

Annual Meeting

Registration ..... \$715.00

Auction ..... \$1,207.00

Sale of Newspapers ..... \$17.15

Sale of Totebags ..... \$50.00

SubTotal ..... \$1,989.15

Donations ..... \$5,106.30

Subtotal ..... \$5,106.30

Total Income ..... \$10,120.45

Expenses

Office of the Secretary/Treasurer ..... \$172.26

The Collins Award ..... \$1,000.00

The Kamb Grant ..... \$3,291.70

The Gloyd/Taylor Scholarship ..... \$654.35

Office of the Editor ..... \$943.80

KHS Journals (4 issues) ..... \$1,567.33

Annual Meeting ..... \$1,103.03

Brochures ..... \$60.61

Miscellaneous Expenses ..... \$205.00

Total Expense ..... \$8,998.08

Balance on hand 31 Dec 2002 ..... \$4,762.87

Endowed Funds

Alan H. Kamb Grant ..... \$3,191.70

Gloyd/Taylor Scholarship ..... \$554.35

Total ..... \$3,746.05

TOTAL ASSETS ..... \$8,508.92

Respectfully submitted,

Mary Kate Baldwin, Secretary

Eric Kessler, Treasurer

22 February 2003

KHS Executive Council  
Minutes  
22 February 2003  
Emporia State University  
1:00 pm

Officers attending: Suzanne Collins, Eva Horne, Eric Kessler, Travis Taggart, Greg Sievert (presiding).  
Committee Chairpersons attending: Joseph T. Collins.

*Reports:*

Secretary & Treasurer: Mary Kate Baldwin and Eric Kessler provided an end of year financial report that itemized income and expenses. The report showed total assets of \$8,508.92 with a cash balance of \$4,762.87, an increase from last fiscal year. A total of \$3,746.05 is invested in CDs for the Kamb Grant and the Gloyd/Taylor Scholarship. It was moved and seconded (S. Collins/E. Horne) to accept the Secretary & Treasurer's report as distributed. Motion approved.

*Old Business:*

It was moved and seconded (E. Horne/G. Sievert) that persons eligible for *The Collins Award* must be KHS members when they do the research, when the paper is published, or when the talk is given. Motion approved.

It was moved and seconded (G. Sievert/E. Horne) that the KHS require individuals who present papers to signify they are eligible for *The Collins Award* when they submit the title of the talk to the KHS Meeting Chairperson or just prior to giving the talk at the annual meeting; those individuals that publish a paper that meets the criteria must submit three copies of the published version to the Chair of the KHS Awards Committee in order to be considered for *The Collins Award*. Motion approved.

*New Business:*

Proposed 2003 Budget:

*Journal of Kansas Herpetology:* Travis Taggart reported that in 2002 four issues of the *Journal* had been published and distributed; one issue was 16 pages and three issues were 20 pages.

It was moved and seconded (J. Collins/G. Sievert) to publish and mail four issues of the *Journal of Kansas Herpetology* at a cost of \$2,400; issues will be 20 pages in length with the understanding that the last

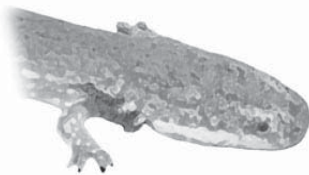
issue might be fewer pages if necessary to stay within the budget. Motion approved.

It was moved and seconded (J. Collins/T. Taggart) that the *Journal of Kansas Herpetology* would be available in PDF format on the KHS web-site one year after the published date. Motion approved.

Annual Meeting: It was moved and seconded (T. Taggart/E. Kessler) that \$1,000.00 be set aside to hold the annual meeting, to include costs of a keynote speaker. Motion approved.

Gloyd/Taylor Scholarship: It was moved and seconded (E. Horne/G. Sievert) that in order to increase the endowment, depending upon availability of funds, up to \$500 from the treasury be deposited into the Gloyd/Taylor Scholarship when the present CD matures. Motion approved.

It was moved and seconded (S. Collins/E. Horne) to adjourn the meeting at 4:00 pm. Motion approved.



## AN APOLOGY

The editors of the *Journal of Kansas Herpetology* extend an apology to Eric M. Rundquist for neglecting to acknowledge his efforts in receiving and compiling the initial, unedited versions of the herpetofaunal counts that appeared in *Journal of Kansas Herpetology* 4 (December 2002). Because of decisions made by the KHS Executive Council in September 2002, the counts were resubmitted by the editors to the respective compilers for approval to be published as individual contributions. On 28 September 2002, the compilers/authors approved same by signature and resubmitted their contributions as original articles to be published in JKH 4; after minor editing, this was done. Again, we deeply appreciate Mr. Rundquist's efforts on behalf of the 2002 herpetofaunal counts.

Future contributors are reminded that herpetofaunal counts made during the upcoming time period of 1 April to 31 May 2003 should be reported directly to the JKH Editors (see inside front cover of this issue for the address). Counts can be made as email text, and this is preferred. The counts will be published in the September 2003 issue (JKH 7).

## PAY YOUR 2003 DUES

Send your calendar 2003 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 the delivery of your *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.



## 2003 KHS ANNUAL MEETING

The entire program for the KHS 30th Annual Meeting will be held at ESU Science Building, *Emporia State University*, Emporia, Kansas, on 8–9 November 2003. Lodging arrangements will not be made by the KHS; program and motels will soon be listed on the KHS web site. An auction will be held at the *Ross Natural History Reservation* on Saturday night. Contact Greg Sievert for more information at [sievertg@emporia.edu](mailto:sievertg@emporia.edu)



## OF INTEREST

### US INVASION: EVERGLADES PYTHONS

Daniel Cabarcos Jr. had gone looking for redfish and snook in a favorite isolated Everglades haunt, cruising a maze of uncharted channels to a tight and twisty creek. He found something else instead—the latest, and scariest, creature to invade the Everglades. A very big Burmese Python.

It crawled from some mangrove roots, head poking up like a scaly pale-yellow periscope in the cola-colored water, body slicing ripples on the glassy surface. Cabarcos, who has fished the back country for more than 40 years, was stunned. He'd seen snakes swim before but nothing like this, a reptile as long and thick as a cypress log.

"This thing was at least half the size of the boat. Ten, maybe 12 feet. The head was huge. I couldn't believe it."

Myths of monster serpents lurking in the Everglades go way back. In his landmark 1898 book, *Across the Everglades*, explorer Hugh Willoughby recorded tales of giant snakes that had been passed on through generations of Indians. Those tall tales have now become a reality in Everglades National Park—and the pet trade is mostly to blame.

Imported snakes such as Boa Constrictors and pythons, which kill by literally squeezing the life out of prey, have been found in the park since at least the 1980s. The snakes, probably abandoned pets, have shown up often enough in the last year or two, particularly Burmese Pythons, that park biologist Skip Snow believes they are no longer just surviving but thriving.

Biologists think most of them were illegally released by owners who no longer wanted them or found them too big, and dangerous, to handle. The state also estimates that some 1,000-plus captive snakes probably escaped into the wild after Hurricane Andrew in 1992.

This year alone, a mower chopped a hefty one into pieces. Cars have reduced a few to roadkill. Rangers have captured several others.

And they're no longer found just near park entrances or convenient dumping points. They've shown up in assorted places—and in assorted sizes, from young two-footers to mature adults like the one Cabarcos encountered a good 20 miles from the nearest road in Flamingo, the park's southernmost outpost.

No one has uncovered eggs yet, but Snow said all that evidence makes a strong case that pythons have

begun breeding, potentially establishing a population that could pose a serious ecological threat.

The snake Cabarcos encountered amounted to a pip-squeak, relatively speaking. The Burmese Python commonly reaches 20 feet and nearly 200 pounds, topping out at around 26 feet. But George Dalrymple, a Homestead biologist and reptile expert, and other biologists believe the 'Glades snakes pose minimal threat to humans. Certainly no more than Alligators, Diamondback Rattlers or any other Everglades predator.

Despite their fearsome reputation, pythons won't be stalking tourists and anglers and yanking them off boardwalks or boats, said Joe Wasilewski, a Homestead biologist and veteran snake handler who once wrangled a 20-footer out from under a Kendall, Florida home. They're more likely to avoid people unless someone stumbles across them, perhaps eliciting a reaction strike, he said.

The biggest concern is the same one biologists have about dozens of exotic animals, plants, insects and fish that have crept into the Everglades. The snakes certainly munch native wildlife, anything from rodents to birds to deer, and may be competing for food with other predators like the rare Eastern Indigo Snake. But unlike other invading species, Snow said there's nothing in the Everglades known to prey on pythons, particularly larger ones.

The snakes remain scarce, "They aren't lined up on the road or anything," Snow said, but sightings have grown frequent enough that the park has just begun a formal assessment of the python problem and intends to issue exotic snake alert fliers to visitors.

"The interesting thing about these snakes is they do adapt to a fairly wide range of habitat conditions," Snow said. "What we will probably find is that they're quite capable of making a go at it."

They're adept climbers and swimmers, capable of staying under water as long as a half-hour. And while they prefer dry land, vital for laying eggs, some have shown what Dalrymple called "a remarkable adaptation that may give them a leg up."

The snakes lay eggs, as many as 100, then wrap themselves around the clutch, regularly constricting their bodies to keep the incubating brood warm and dry.

Still, Dalrymple isn't convinced they're breeding in the Glades. He hasn't seen enough young ones. And Wasilewski suspects that a serious cold snap might kill many, as it does some exotic fish species.

Snow's biggest concern is that other snake owners will hear about the pythons in the Everglades and add to the population. Besides being illegal, it's a bad idea, he says. If the snake is caught, as many are, it will wind up dead.

For now, rangers are taking any snakes they capture to the Everglades Outpost, a wildlife rehab center in Homestead. Outpost director Albert Killian has several he's fattening up, to serve his king cobras, which sometimes eat the big snakes in the wild.

Since sighting the python, Cabarcos has added snake hunting to his weekly outings into Whitewater Bay and points farther north. The Miami high-tech executive is still laughing at his reaction to the big snake.

He was so shocked he let go of the wheel and dove into the cabin to grab a camera. The boat promptly drifted into the mangroves in the narrow channel and the snake disappeared into a tangle of mangroves.

"I'm gonna find that damned thing," he said, "and maybe next time I'll jump on it."

*By Curtis Morgan, Miami (Florida) Herald*

#### **KANSAS ANNUAL MEETING AT PITTSBURG**

The 135th Annual Meeting of the Kansas Academy of Science will be held 11–12 April 2003 concomitant with the Centennial of Pittsburg State University and sponsored by the Department of Biology

The guest speaker is Dr. James Duke, world authority in ethnobotany. Dr. Duke has numerous scientific and technical papers as well as many books on the topic of ethnobotany. He has wide experience in the tropics and will share his insight and technical knowledge in the Friday evening public lecture and Saturday morning technical plenary session.

Meeting highlights:

- Friday evening banquet
- Friday afternoon tour
- Friday night public lecture with Dr. James Duke
- Saturday luncheon
- Saturday morning plenary lecture with Dr. Duke
- Saturday Paleontology Symposium
- Oral and poster presentations
- Dehner Award for best student oral paper
- Poster Award for best student poster paper

Meeting co-chairpersons: Jim Triplett and Joe Arruda, Department of Biology, Pittsburg State University, Pittsburg, Kansas 66762. For more information:

<http://www.pittstate.edu/biol/kas135/>

#### **SWAN 50TH ANNIVERSARY MEETING**

The Local Committee is pleased to invite you to the 50th Anniversary Meeting of the Southwestern Association of Naturalists, to be held on the main campus of the University of Oklahoma in Norman, Oklahoma, on April 17–19, 2003. This international meeting, lasting a full two days and three nights, will celebrate the founding of SWAN 50 years ago at the OU Biological Station, with a focus on special recognition of original participants at the first meeting, a 50th Anniversary Symposium on SWAN and the natural history of the Southwestern United States and Mexico, a symposium on plants of the Red River Basin, and important new opportunities for graduate students.

The meeting will be held at the Thurman J. White Forum Building at the University of Oklahoma College of Continuing Education (OCCE), located in immediate proximity to the Sooner Hotel and Suites where there are a variety of housing options reserved for participants, and in easy walking distance of the Sam Noble Oklahoma Museum of Natural History.

Highlights of the meeting will include Thursday afternoon field trips, a Thursday evening reception (7–10 PM) at the museum with galleries open for all participants, student Wilks Award (oral) and Clark Hubbs Poster Award competitions, a Friday night Barbeque with live music, a silent auction to benefit graduate student funding, and the 50th Anniversary Banquet on Saturday night.

You are invited to submit your abstracts, in either English or Spanish, for oral or poster presentations for the 50th Annual Meeting of the Southwestern Association of Naturalists. Additional information on travel, accommodations, and the Norman area in general can be found at the SWAN meeting web site and the SWAN homepage at:

<http://www.emporia.edu/swan/swaneng.htm>

#### **DEADLINE**

**PREREGISTRATION:** There is no deadline for preregistration, but you are asked to register early!



## NEBRASKA BANS COMMERCIAL TAKE

Governor Mike Johanns signed into law new rules promulgated by the state Game & Parks Commission that ban the commercial exploitation of Nebraska's 62 species of amphibians, turtles, and reptiles. The new regulations outlawed the capture and sale of tens of thousands of amphibians, turtles, and reptiles. It ended the business of a small number of individuals who sold these animals on-line to pet stores and out-of-state dealers. Knowledgeable herpetologists, who supported the regulations, said that many species of turtles and reptiles could not reproduce quickly enough to withstand the pressure applied by commercial collectors and dealers.

## PANTHEROPHIS REPLACES ELAPHE

Utiger, Helfenberger, Schatti, Schmidt, Ruf & Ziswiler (2002 Russian Journal of Herpetology 9(2): 105-124), using mtDNA, presented evidence that New World Rat Snakes of the genus *Elaphe* are a monophyletic lineage different from Old World members of the genus, and resurrected the available name *Pantherophis* Fitzinger for all North American taxa.

## MOUNTAIN YELLOW-LEGGED FROG LISTED AS FEDERALLY ENDANGERED

The Mountain Yellow-legged Frog has been officially listed as a Federally endangered species, effective 1 August 2002. See the U.S. Federal Register Volume 67, Number 127, for details. Check out the CNAH web site (<http://www.cnah.org>) for a photograph of this amphibian by Robert W. Hansen.

## NEW NORTH AMERICAN ACCOUNTS IN THE SSAR CATALOGUE

The *Catalogue of American Amphibians and Reptiles*, sponsored by the Society for the Study of Amphibians and Reptiles, recently issued twenty new accounts for 2002, four of which pertain to North America (north of Mexico), and two of which are of particular interest to Kansans. The four are:

*Plethodon idahoensis* Coeur d'Alene Salamander, by Wilson & Ohanjanian CAAR 741.1-4.

*Regina* Crayfish Snakes, by Ernst, Gibbons, & Dorcas CAAR 756.1-4.

*Regina septemvittata* Queen Snake, by Ernst CAAR 757.1-5.

*Storeria occipitomaculata* Redbelly Snake, by Ernst CAAR 759.1-8.

Copies can be ordered from the SSAR Publications Secretary, P.O. Box 58517, Salt Lake City, Utah 84158.

## SECOND ANNUAL FORT RILEY HERPETOFAUNAL COUNT

The second annual Fort Riley herpetofaunal count will take place on 7 May 2003 from 8:00 am to 3:00 pm. Participants are also welcome to stay overnight and assist Fort Riley staff making additional herpetofaunal observations on 8 May. Participants will meet in the Conservation Division parking lot, BLDG 1020, Huebner Road. BLDG 1020 is the first building on the right side of the road when you enter Fort Riley through the Ogden gate.

More information is available by contacting Gibran Suleiman at 785-239-8575 or email at

[suleimang@riley.army.mil](mailto:suleimang@riley.army.mil)

Gibran Suleiman  
Wildlife Biologist  
DES Conservation  
Fort Riley, Kansas

## CHRYSEMYS NOW TWO SPECIES

Starkey, David E., H. Bradley Shaffer, Russell L. Burke, Michael R. J. Forstner, John B. Iverson, Fredric J. Janzen, Anders G. J. Rhodin, and Gordon R. Ultsch [2003 Molecular systematics, phylogeography, and the effects of Pleistocene glaciation in the Painted Turtle (*Chrysemys picta*) complex. *Evolution* 57(1): 119-128] recognized two evolutionary lineages within the genus *Chrysemys*: *C. dorsalis* in the southern Mississippi drainage, and *C. picta* from the rest of the range of the genus. They find no support for subspecific designations in the genus.

## DEFENSE POSTURE OF *CONTIA TENUIS*

An adult Sharptail Snake (*Contia tenuis*) from El Dorado County, California, in a defense posture. Specimen was made available through the courtesy of Greg Pauly, University of Texas, Austin. Photograph submitted by Suzanne L. Collins, CNAH.



## GEOGRAPHIC DISTRIBUTION

Refer to *Journal of Kansas Herpetology* 3: 13 (2002) for instructions on how to submit to this section and style requirements.

**NECTURUS LOUISIANENSIS** (Red River Mudpuppy). KANSAS: WOODSON Co: Neosho River, below the overflow dam at Neosho Falls (Figure 1). 22 February 2003. Travis W. Taggart.. Sternberg Museum of Natural History, Fort Hays State University (MHP 7492–94; Figure 2). Verified by Curtis Schmidt. New county record (Collins 1993. *Amphibians and Reptiles in Kansas*. Third Edition. Univ. Press of Kansas, Lawrence, xx + 397 pp.).

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



Figure 1. A view of the overflow dam at Neosho Falls, Woodson County, Kansas, where Red River Mudpuppies (MHP 7492–94) were collected. Photograph by Travis W. Taggart, Sternberg Museum of Natural History.

**CARPHOPIUS VERMIS** (Western Worm Snake). KANSAS: BROWN Co: SE corner Sabetha Pony Creek Lake. 17 May 2002. John Lokke. Sternberg Museum of Natural History, Fort Hays State University (MHP 7432–33). Verified by Joseph T. Collins. New county record. (Collins 1993. *Amphibians and Reptiles in Kansas*. Third Edition. Univ. Press of Kansas, Lawrence. xx + 397 pp.).

Submitted by **JOHN LOKKE**, 835 Spaulding, Wichita, Kansas 67203.

**SEMINATRIX PYGAEA** (Black Swamp Snake). FLORIDA: FRANKLIN Co: Little St. George Island (Cape St. George) Lighthouse marsh. N29.59001, W85.04975. 10 January 2003. Curtis J. Schmidt and Joseph T. Collins. Sternberg Museum of Natural History, Fort Hays State University (MHP 7424). Verified by John Stoklosa. First specimen recorded from Island.

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



Figure 2. Series of Red River Mudpuppies (MHP 7492–94) from Woodson County, Kansas, illustrating variation of ventral shading and spotting. The leftmost specimen is a female demonstrating the white, spotless belly considered diagnostic of this taxon. The other two specimens (males) show a substantial lessening of mid-ventral lightening. Investigations are in progress, concerning the taxonomic status of this salamander in Kansas. Photograph by Travis W. Taggart.

### RARE REDBELLY SNAKE FROM WYOMING

An adult Black Hills Redbelly Snake (*Storeria occipitomaculata pahasapae*) from Crook County, Wyoming. Photograph submitted by Suzanne L. Collins.



# NOTES

## FORT RILEY HERPETOFAUNAL COUNT

Gibran Suleiman  
*Conservation Division*  
 Fort Riley Directorate of Environment and Safety  
 Fort Riley, Kansas

On 9 May 2002, the Fort Riley Directorate of Environment and Safety (DES) Conservation Division sponsored a reptilian, chelonian, and amphibian survey. Fort Riley was divided into eight sections. Participants were divided into groups and assigned a section. Each group actively collected and observed for approximately 5.5 hours. The primary objective of this effort was to find as many different species during the time allotted as possible. Specific emphasis was placed on trying to find species that have not been previously recorded at Fort Riley. Specific locations of rare or uncommon species such as the Texas Horned Lizard were noted.

Twenty-four individual participated in the count, as follows: William Busby, Thomas Duckworth, Doug Eifler, Melinda Emmert, Andy Forbes, Phil Gipson, Max Good, Eva Horne, Alan Hynek, Jeff Keating, Greg Kramos, Troy Livingston, Chris Mammolitti, Kirk Mammolitti, Adam Martin, Michele McNulty, Ed Miller, Dan Mulhern, Mark Neely, Chris Newell, Stanley Roth, Shawn Stratton, Gibran Suleiman and Vernon Tabor.

These are the species observed on 9 May 2002.

Species .....	Number
Woodhouse's Toad .....	1
Northern Cricket Frog .....	+54
Cope's Gray Treefrog .....	1
Western Chorus Frog .....	+14
Bullfrog .....	+28
Plains Leopard Frog .....	+26
Great Plains Narrowmouth Toad .....	49
Eastern Collard Lizard .....	13
Texas Horned Lizard .....	1
Prairie Lizard .....	3
Great Plains Skink .....	33
Ground Skink .....	4
Six-lined Racerunner .....	30
Ringneck Snake .....	174
Flathead Snake .....	6

Eastern Racer .....	3
Great Plains Rat Snake .....	4
Western Rat Snake .....	3
Milk Snake .....	6
Gopher Snake .....	1
Plainbelly Water Snake .....	2
Northern Water Snake .....	10
Common Garter Snake .....	6
Lined Snake .....	2
Copperhead .....	5
Total = 25 species .....	±479 specimens

Also, from 10 May 2002 to 10 September 2002, additional amphibian, chelonian, and reptilian species encountered by seven DES personnel were recorded. This included limited active collecting, thirteen trap nights of turtle trapping and recording road kills.

The following individuals made contributions to this effort: Alan Hynek, Jeff Keating, Carin Richardson, Chad Richardson, Gibran Suleiman, and Mica Tice.

Specimens observed from 10 May 2002 to 10 September 2002:

Species .....	Number
Northern Cricket Frog .....	10
Bullfrog .....	5
Plains Leopard Frog .....	3
Great Plains Narrowmouth Toad .....	10
Common Snapping Turtle .....	4
Painted Turtle .....	1
False Map Turtle .....	18
Ornate Box Turtle .....	3
Slider .....	12
Smooth Softshell .....	3
Eastern Collard Lizard .....	3
Great Plains Skink .....	3
Six-lined Racerunner .....	10
Western Slender Glass Lizard .....	1

Ringneck Snake .....	22
Flathead Snake .....	10
Eastern Racer .....	2
Great Plains Rat Snake .....	2
Western Rat Snake .....	2
Common Kingsnake .....	1
Milk Snake .....	3
Gopher Snake .....	2
Northern Water Snake .....	3
Brown Snake .....	1
Lined Snake .....	1
Copperhead .....	3
Total = 26 species .....	141 specimens

*Conclusions*

All findings during the spring and summer of 2002 were consistent with previous findings for the area (Busby et al. 1996).

Species that have been previously found on Fort Riley that were not found during sampling efforts in 2002 are: Barred Tiger Salamander, Plains Spadefoot, Plains Blackhead Snake, Prairie Kingsnake, Western Ribbon Snake, Western Hognose Snake and Eastern Hognose Snake. The Barred Tiger Salamander, Western Hognose Snake, and Plains Spadefoot would likely need to be specifically targeted in order to find them.

It is likely that there are some species inhabiting Fort Riley that have yet to be documented. The following species are possibilities for Fort Riley: American Toad, Great Plains Toad, Five-lined Skink, Northern Prairie Skink, Western Worm Snake, Eastern Hognose Snake, Diamondback Water Snake, Brown Snake, Plains Garter Snake, Redbelly Snake, Smooth Earth Snake, Timber Rattlesnake, and Massasauga.

Sampling efforts on Fort Riley will continue into the future. A "roundup" type event with at least twenty people involved should be completed at least one day a year. Furthermore, a special project such as setting drift fences or turtle trapping should occur at least once every three years.

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**LAMPROPELTIS CALLIGASTER** (Prairie Kingsnake): **WINTER ACTIVITY.**

On 17 December 2002, I was driving into Topeka from my home in SE Shawnee County when I saw three crows gathered around some sort of road kill. I stopped and found a still writhing, recently hit Prairie Kingsnake in the middle of the blacktop road. The snake, which measured 1009 mm total length, died shortly thereafter. I called the weather bureau and found that the air temperature at the time I found the snake was 57°F. The three previous days had experienced morning lows of 19°, 24° and 32°F and daily highs of 59°, 70° and the 60s respectively. It would appear the warm spell may have drawn the snake back out of winter inactivity.

Submitted by **BRUCE WOLHUTER**, 6320 SE Stubbs Road, Berryton, Kansas 66409 (email: sixdogs@inlandnet.net).

**PANTHEROPHIS EMORYI WINTER ACTIVITY**

Winter activity in the Great Plains Rat Snake (*Pantherophis emoryi*) has not been documented in Kansas. On 19 January 2003, an adult Great Plains Rat Snake was observed basking in direct sunlight, on a pile of discarded lumber in a pit adjacent to a well which is a known brumacula in southern Ellis County, Kansas. The air temperature was 61°F, following a high that day of 69°F. When disturbed, the snake rapidly crawled to the bottom of the pit and disappeared into the tube towards the well.

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



NEW RECORDS OF AMPHIBIANS, TURTLES, AND REPTILES  
IN KANSAS FOR 2002

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The twelve new county records and three maximum size records listed below are those accumulated or brought to my attention since the publication of records for 2001 (Collins, 2002). 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 compiled by Collins & Taggart (2002), and are given at the species level only.

The records listed below are deposited in the herpetological collections of the Sternberg Museum

of Natural History, Fort Hays State University, Hays, Kansas (MHP), and Natural History Museum, The University of Kansas, Lawrence (KU). I am most grateful to the members of the Kansas Herpetological Society, and to the staff of the Kansas Department of Wildlife and Parks and the Kansas Biological Survey, 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. John E. Simmons, Collection Manager for the Division of Herpetology, Natural History Museum, The University of Kansas, and Travis W. Taggart, Adjunct Curator of Herpetology, and Curtis Schmidt, Research Associate, 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

COPE'S GRAY TREEFROG (*Hyla chrysoscelis*)

**SUMNER CO:** Sec. 6, T35S, R2W. 5 September 2002. Collector: Quinci Leighton Ward. KU Color Slide 11888. Recorded by Miller (2002).

WESTERN CHORUS FROG (*Pseudacris triseriata*)

**KINGMAN CO:** Sec. 3, T27S, R8W. 14 June 2002. Collector: Keith Coleman. MHP 7250. Recorded by Coleman (2002).

GREAT PLAINS NARROWMOUTH TOAD (*Gastrophryne olivacea*)

**PAWNEE CO:** Sec. 32, T21S, R17W. 24 May 1998. Collectors: Curtis Schmidt & Mark Van Doren. MHP 6730. Recorded by Schmidt & Taggart (2002a).

SLIDER (*Trachemys scripta*)

**PAWNEE CO:** Sec. 32, T21S, R17W. 27 September 1998. Collectors: Curtis Schmidt & Mark Van Doren. MHP 67336. Recorded by Schmidt & Taggart (2002b).

EASTERN COLLARED LIZARD (*Crotaphytus collaris*)

**WASHINGTON CO:** Sec. 32, T4S, R5E. 28 September 2002. Collectors: Russell Toepfer & Evan Mielke. MHP 7365. Recorded by Mielke (2002).

TEXAS HORNED LIZARD (*Phrynosoma cornutum*)

**STEVENS CO:** Sec. 6, T34S, R37W. 30 May 2002. Collectors: Suzanne L. Collins & Joseph T. Collins. MHP 7203. Recorded by Collins et al. (2002a).

PRAIRIE LIZARD (*Sceloporus consobrinus*)

**SHAWNEE CO:** Sec. 29, T10S, R16E. 27 April 2002. Collector: Megan Williams. MHP 7249. Recorded by Miller and Williams (2002).

EASTERN RACER (*Coluber constrictor*)

**STEVENS CO:** Sec. 1, T34S, R35W. 31 May 2002. Collectors: Travis W. Taggart & Curtis J. Schmidt. MHP 7197. Recorded by Taggart & Schmidt (2002a).

PRAIRIE KING SNAKE (*Lampropeltis calligaster*)

**SEWARD CO:** Sec. 7, T35S, R31W. 2 June 2002. Collector: Eric Kessler. KU Color Slide 11876. Recorded by Collins et al. (2002b).

COMMON KING SNAKE (*Lampropeltis getula*)

**WASHINGTON CO:** Sec. 29, T1S, R3E. 1 October 2002. Collector: Travis W. Taggart. MHP 7355. Recorded by Taggart (2002b).

TEXAS LONGNOSE SNAKE (*Rhinocheilus lecontei*)

**LOGAN CO:** Sec. 8, T14S, R33W. 10 July 2001. Collector: Curtis Schmidt. MHP 6864. Recorded by Taggart et al. (2002).

PLAINS GARTER SNAKE (*Thamnophis radix*)

**CLAY CO:** Sec. 17, T6S, R3E. 27 September 2002. Collectors: Suzanne L. Collins & Joseph T. Collins. MHP 7342. Recorded by Collins (2002b).

NEW MAXIMUM SIZE RECORDS

WESTERN GREEN LACERTA (*Lacerta bilineata*)

**SHAWNEE CO:** Topeka, 23rd Street & Burnett Road. 4 September 1999. Collector: James Gubanyi. MHP 7248. Total length 8 7/8 inches (sex undetermined).

EASTERN GLOSSY SNAKE (*Arizona elegans*)

**MORTON CO:** Sec. 35, T33S, R42W. 1 June 2002. Collector: Phillip Cass. MHP 7244. Total length 46 1/4 inches (female).

WESTERN RIBBON SNAKE (*Thamnophis proximus*)

**EDWARDS CO:** Sec. 5, T24S, R18W. 2 June 2002. Collectors: James Gubanyi & Keith Coleman. MHP 7243. Total length 39 1/2 inches (female).

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## COMMUNAL BRUMACULUM

On 19 January 2003, we visited a covered well (Figure 1) in southern Ellis County, Kansas, known locally to harbor many brumating snakes each winter. The well was covered by a poured concrete slab with numerous holes at its base that provided access to it. A 4' x 6', four-foot deep pit was adjacent to the west of the well and was connected to it by a small pipe, which also served as access to the well from the outside. The well was lined by flat rocks into which the overwintering snakes wedged themselves. The depth of the well was undetermined; it contained water.

Six Great Plains Rat Snakes (*Pantherophis emoryi*) [large adults to yearlings] and seven Eastern Racers (*Coluber constrictor*) [all adults] were observed within the well. The well has been visited annually since 1991 by one of us (TWT) and the number of individuals observed for these two taxa has ranged from 4 to 28 for the Great Plains Rat Snake, and 0 to 8 for the Eastern Racer. The only other taxon observed in the well during that period was an adult Plains Garter Snake (*Thamnophis radix*) in 1992.

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Figure 1. A known brumaculum in southern Ellis County, Kansas. This abandoned well has served as an overwintering site for Great Plains Rat Snakes and Eastern Racers since at least 1992. The well (right) is connected to the pit on the left by a pipe at a depth of four feet.

## ARTICLES

### THE TAXONOMIC STATUS OF THE MEXICAN HOGNOSE SNAKE *HETERODON KENNERLYI* KENNICOTT (1860)

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*Abstract:* Data on geographic variation of azygous and loreal scales in 389 specimens of *Heterodon n. nasicus* and *H. n. kennerlyi* indicate that these taxa are properly regarded as separate species: *H. kennerlyi* (97% with 8 or fewer azygous scales, and 93% with 2 or fewer total loreals) and *H. nasicus* (1% and 17% respectively)

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The nominal species *Heterodon kennerlyi* Kennicott (1860) has been accepted as valid at species or subspecies rank or as a synonym of *H. nasicus* Baird and Girard (1853), by various workers from the time of its description until 1939, after which the combination *H. nasicus kennerlyi* has been consistently used.

Actually, the earliest use of the currently accepted combination appeared in Bocourt (1886), and was followed by Cope (1900). The last usage of the name at the species rank was in Garman (1884a, b). However, Boulenger (1894) placed the name as an unrecognized junior synonym of *Heterodon nasicus*.

In spite of Cope's (1900) intervening use of the trinomial *Heterodon n. kennerlyi*, the three earliest Stejneger and Barbour checklists (1917, 1923, 1933) followed Boulenger's (1894) disposition of the name. In the fourth edition, however (Stejneger and Barbour, 1939), the name was admitted as a trinomial, presumably under the influence of Dunkle and Smith's (1937) resurrection of the name. The recent works by Boundy et al. (2000), Dixon (2000), Eckerman (1996), Walley and Eckerman (1999), Webb and Eckerman (1998), and Werler and Dixon (2000) have maintained that usage, as have all others.

Despite this apparent stability over the past 65 years, an undercurrent of uncertainty of rank has recently become apparent. Eckerman (1996), in his revision of the species, found no distinctive differences of *Heterodon kennerlyi* from *H. nasicus*, other than numbers of azygous and loreal scales. Nevertheless, he noted that he could not prove that *H. kennerlyi* was not a distinct species.

On the contrary, Boundy et al. (2000: 62) stated that the "nominal races in *Heterodon nasicus* undoubtedly represent arbitrarily delimited sections of continuous variation."

Platt (1969) concluded that, on grounds of clinal variation, the validity of *Heterodon n. gloydi* Edgren (1952) is questionable. Walley and Eckerman (1999), based on Eckerman (1996), placed *H. gloydi* as a junior synonym of *H. n. nasicus*, and we accept that conclusion. However, the range depicted for that subspecies in Werler and Dixon (2000) is, contrary to previous concepts (e.g. Dixon, 2000), limited to a dichopatric area in eastern Texas. With that range concept, *H. n. gloydi* should be re-evaluated and may be valid.

*Heterodon n. kennerlyi*, however, has long been regarded as distinctive from the rest of its species on the basis of having 6 or fewer azygous scales, the other subspecies having 9 or more. If confirmed, the difference is categorical.

Eckerman's data (1996), however, show that the hiatus in azygous counts does not exist, although it is nearly categorical. Another difference in loreal counts is very strong. For *Heterodon kennerlyi*, the azygous scale counts range 2–11 (M=3.1, N=152), of which only 3% of individuals have 9 or more, and the total loreal count is 0–6 (M=2.1, N=152), of which only 7% are 3 or more. In *H. nasicus*, the azygous scales range 8–27 (M=13.6, N=237), 99% of which are 9 or more, and the total loreals 2–9 (M=4.1, N=227), 83% 3 or more.

From these calculations we have excluded three old specimens (nos. 1253, 1285, 4860) in the USNM

from "Arizona," with "110," 14 and 20 azygous scales and 4–5 total loreals, supposedly within the geographic range of *H. kennerlyi* but with scale counts outside the known range in that taxon. Similarly, we have excluded two specimens supposedly from within the geographic range of *H. nasicus*, but with characters outside the known range of that taxon; all are early USNM specimens, no. 1265, "Montana," with one azygous scale and 2 total loreals, and 1276, "Nebraska," with 0 azygous scales and 2 total loreals. All of the above are regarded as having erroneous locality data.

The five *Heterodon kennerlyi* with 9 or more azygous scales are from Coahuila (1 with 10, in 11), southeastern Arizona (3 with 10–11, in 75), and one from Zacatecas (the only one of the subspecies with 9, in 2). All but the latter are from near the zone of parapatry between the two taxa, and are best interpreted as hybrids, not intergrades.

Among the three *Heterodon nasicus* with 8 azygous scales, two are from Colorado, and one from eastern Texas (Colorado Co.). All are far from the geographic range for *H. kennerlyi*, hence cannot be regarded as either intergrades or hybrids; they are extreme variants of the taxon.

To verify the impressions created by the analyses reported above, we conducted several regressions using STATVIEW. The overall goal of the regressions was to quantify the relationship between latitude and scale counts, and to separate linear from nonlinear components of the relationship. It is our contention that a linear relationship reflects clinal variation, whereas a significant nonlinear (i.e., quadratic) component reflects an element of variation that cannot be explained by clinal effects, and may therefore be taken as justification for taxonomic differentiation.

To accomplish these statistical analyses, we selected 150 specimens in the following manner. At each of 10 latitudes (from 27° to 45° in steps of two degrees) we randomly selected an average of 15 specimens, using as our criteria for inclusion that the specimen must have unambiguous data on azygous scale counts and unambiguous data on loreal counts (bilaterally). This procedure was followed, as opposed to selecting 150 specimens at random from our total set of 359, because the latter procedure would oversample the midlatitudes, where most specimens come from and would undersample the more extreme northern and southern latitudes from which we have fewer specimens.

After selecting our 150 specimens, a linear regression was executed, treating latitude as the predictor and number of azygous scales as the dependent variable. Then a polynomial regression was executed on the same dependent variable, but

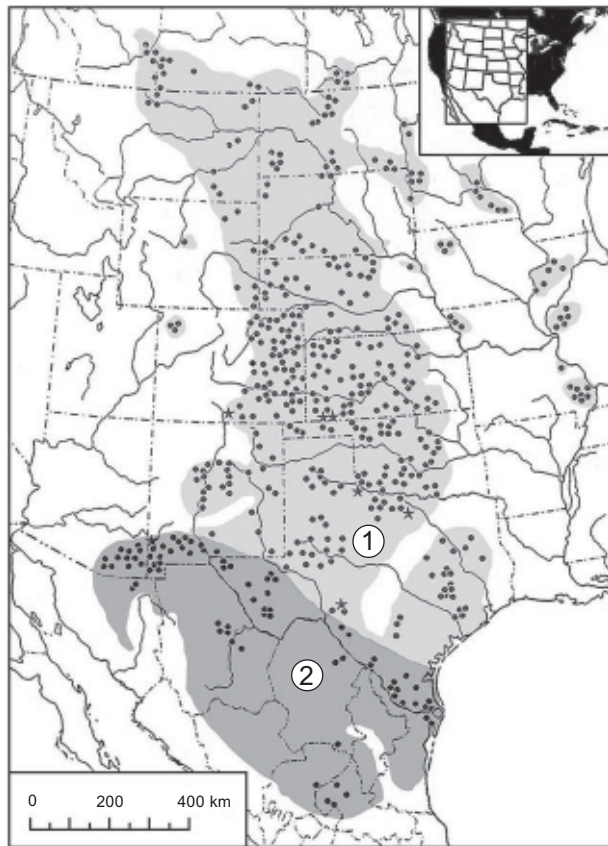


Figure 1. Distribution of *Heterodon nasicus* and its subspecies *H. n. nasicus* (1) and *H. n. kennerlyi* (2) as depicted in Walley and Eckerman (1999), courtesy SSAR and the authors stated. Stars indicate fossil sites, and the hollow circle the restricted (from "Rio Grande and Sonora") type locality (Smith and Taylor, 1950. Brownsville; Schmidt, 1953. mouth of the Pecos River) of *H. kennerlyi*. The type locality "Texas" of *H. nasicus* was restricted to Amarillo by Edgren (1952) and is not indicated.

including both the linear and quadratic effects of latitude. The  $R^2$  for the linear regression was 0.603, whereas  $R^2$  for the polynomial regression was 0.637. The difference between these values was significant ( $F = 13.62$ ,  $df = 1, 147$ ,  $P < 0.01$ ), indicating that the quadratic component of latitude accounted for a part of the variance in azygous scale counts that the linear regression missed. In other words, there was a significant discontinuity in azygous scale counts such that counts at 27°, 29°, and 31° were not on a simple linear cline with the counts at higher latitudes, but were separated from the higher latitudes by a significant inflection.

The same types of regression were carried out for the total number of loreal scales (i.e., number on right side plus number on left side). The  $R^2$  for the linear regression was 0.649, and the  $R^2$  for the polynomial regression was 0.651. In this case the difference between the two coefficients of determination was not significant ( $F = 0.43$ ,  $df = 1, 147$ ,  $P < 0.05$ ). Accordingly, variation in loreal counts was entirely linear and, hence, clinal.

We wish to underscore several points. First, both azygous and loreal counts separate *Heterodon kennerlyi* from *H. nasicus*, and these respective variables are highly correlated with each other ( $r = 0.691$ ,  $df = 148$ ,  $P < 0.01$ ). Second, because loreal counts are clinally related to latitude, this variable cannot be used of itself for separating the two taxa. Third, even though the two variables are strongly correlated, azygous counts contain a significant quadratic component in their relation with latitude, whereas loreal counts do not. The former variable, therefore, provides justification for specific separation of *H. kennerlyi* from *H. nasicus*.

These two taxa fall into the category of semispecies of Mayr (1963) and Mayr and Ashlock (1991), at least some examples of which may be taxonomically regarded as species. The pattern of geographic variation and high degree of distinction of the two taxa of present concern we regard as consistent with species rank.

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# The Kansas Herpetological Society

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

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