# KANSAS HERPETOLOGICAL SOCIETY NEWSLETTER NO. 97

AUGUST1994

# **ANNOUNCEMENTS**

# NEW CAPRON ILLUSTRATION

Marty Capron announces a new limited edition print. The print is of the Argus Monitor (*Varanus panoptes*) and is limited to only 60 copies, numbered and signed by the artist. Each print is approximately 11" X 14" and is printed on high quality ivory artists stock. A reduced example of the print follows this announcement. Prints are available for \$30 (incl. shipping and handling) and checks or money orders should be made payable to Marty Capron at Route 1, Box 58, Oxford, Kansas 67119.



#### NEW PUBLICATION AVAILABLE

T.F.H. Publications, Inc. announces it newest publication, *Reptiles and Amphibians: Maintenance in Captivity* by Eric M. Rundquist. Quite different in tone from most T.F.H publications, this profusely illustrated volume (with many photos by KHS members Suzanne and Joe Collins) offers a relaxed, but accurate, view of the art of all phases of keeping captive herps. The chapter on local, state, and international law and regulations which affect captive herp keepers is unique. The hardbound, 220 page tome with 198 full color photos and illustrations is available for only \$24.95 + \$2.50 shipping and handling. Please allow 4-6 weeks for delivery. Make checks or money orders payable to *Osage Copperhead Ventures*, *P. O. Box 547, Lawrence, Kansas 66044*.

#### **BOX TURTLE ALERT**

The New York Turtle and Tortoise Society reports that the U.S. fish and Wildlife Service (USFWS) has agreed to propose that North American Box Turtles (*Terrapene carolina* and *T. ornata*) be listed on Appendix II of the Convention on International Trade in Endangered Species (CITES). CITES listing will mean that effective controls can be put on the trade of these turtles, tens of thousands of which are shipped overseas yearly, where the vast majority die. There is little doubt that Kansas specimens end up in this trade.

NYTTS asks at this time that you write to Ms. Mollie Beattie, Director; USFWS, Dept. of the Interior, 18th and C St., NW; Washington, D.C. 20240. Please state that you agree with the proposed listing of Box Turtles on Appendix II in November (which must be voted on by the CITES membership) but urge that these turtles be placed on CITES Appendix III now. Appendix III listing can be done without a vote of the membership and will facilitate immediate control over trade in these turtles. NYTTS also recommends that you write your state senators and urge them to sign on to Senator Jeffords letter in support of listing Box Turtles on both Appendices II and III.

#### VOLUNTEERS WANTED

Earthwatch, a non-profit organization, is seeking your help on two-week sea turtle field research projects. Join the EarthCorps and work side-by-side with renowned scientists saving Leatherbacks (*Dermochelys coriacea*) in St. Croix, creating safer nesting areas and surveying the nesting success of sea turtles in Costa Rica, or working with local villagers to protect Bahian sea turtles in Brazil.

No special skills are required; EarthCorps members are trained in the field. You support the research and cover food and lodging expenses with tax-deductible contributions averaging \$1500 plus travel.

Earthwatch has been offering the public unique opportunities to participate in a wide variety of field research projects since 1972. For more information about membership and expeditions, call 800-776-0188, or write Earthwatch, 680 Mt. Auburn Street, P.O. Box 403HP, Watertown, Massachusetts 02172.

# KHS BUSINESS

#### KHS ANNUAL MEETING FOR 1994

The 21st Annual Meeting of the Kansas Herpetological Society will be held 5-6 November at Friends University in Wichita, Kansas. Friends is located at 2100 University, which is in west Wichita at Meridian and Kellogg. The general sessions will begin at 8:30 a.m. at Room 100, Wallingford Lecture Hall in the William Penn Science Building. The schedule is as follows: Saturday—8:30-registration, 9:30-welcome by Dr. Biff Green, Friends Univ. president, 9:40-11:15-presentations, 11:15-group photo, 11:30-12:45-lunch, 12:45-business meeting/election, 1:15-3:30-presentations, 3:30-free-for-all slide show (bring your five best slides!), 4:00-5:00-live herp exhibit and photography session led by professional photographers Larry Miller, and Suzanne and Joe Collins. Dinner is free forage.

The evening session will begin with a tour of the herpetarium at the Sedgewick County Zoo at 6:30. The beer social and annual auction will be held at the Ron L. Blakely Education Building at the zoo at 7:30. Please bring items for the auction (publications, T-shirts, posters, artwork, herp equipment, etc. Remember, though, no live animals!). The annual auction helps keep your membership costs down so bring cash, checks, and plastic. We will accept VISA and MasterCard.

The Sunday session will begin at 8:30 a.m. at the Friends Science Building. Presentations will run from 9:00-11:30 and closing announcements and adjournment will be at 11:30.

Items for sale (publications, art, T-shirts, etc.) will be located in room 110 of the Science Building. Authors Joe and Suzanne Collins, and Eric Rundquist will be available to sign copies of their most recent works.

Please mark 5-6 November on your calendars and plan to attend. Help keep the Kansas Herpetological the most progressive regional herpetological society in the U.S.!

# KHS OFFICER NOMINEES

Nominees for office in the Kansas Herpetological Society at this year's annual meeting are as follows: President-elect—Chris Mammoliti or Stan Roth, Secretary/Treasurer—Karen Toepfer (unopposed). Chris is employed by the Kansas Department of Wildlife and Parks in the Environmental Services Section in Pratt and has been a very active member for a number of years. Stan is a charter KHS member and a member of the original KHS organizing committee. He teaches biology at Lawrence High School.

#### LOGO CONTEST STILL ON

Although we have received a few submissions for an official KHS logo (all of which have been of high quality, by the way), your Executive Council would like to receive a few more if possible. In addition, we have discovered a slight complication.

Karen Toepfer has discovered, after perusing back issues, that the KHS membership voted in 1987 to have the Ornate Box Turtle be the official logo for the Society. However, no design or logo was actually formulated after that time. Therefore, we are asking those who have submitted previous logos to resubmit with the turtle as the theme and any new submissions should also use the Box Turtle as a central theme. Please remember that this logo is for official KHS communications and should be kept small and relatively simple for purposes of reduction. Submissions for the logo should be no more than two inches by two inches and should be in line drawing format. We apologize for the oversight. Send designs to me at 1705 Haskell Ave., Lawrence, Kansas 66044.

-EMR

### KHS SPRING FIELD TRIP A RESOUNDING SUCCESS

The annual KHS Spring field Trip was held on the weekend of 30 April-1 May 1994 in Cherokee County in the southeastern corner of Kansas. Twenty-seven participants gathered at Schermerhorn Park in Galena on Saturday to inspect the recent work of the U.S. Fish and Wildlife Service, Kansas Department of Wildlife and Parks, and the Galena Parks Department to protect Schermerhorn Cave from further destruction. Everyone was favorably impressed with the efforts of these agencies and agreed that the area was considerably improved from its previous condition. KHS congratulates all involved with this project on their work. KHS members then proceeded to conduct a thorough cleanup of the site and gathered several large trash bags of human detritus for later removal. After the cleanup, KHS members then proceeded to various areas to conduct their own field searches. A large group went to a site near Lowell discovered by Joe and Suzanne Collins, Kelly Irwin, and Travis Taggart in 1993. This ravine, with stream and two small caves, proved to be a spectacular area for herps and yielded all of the Kansas threatened and endangered salamanders, except for Typhlotriton and Eurycea multiplicata. It is quite likely that these latter two species may be found at this site. In addition, the site appears to be the original locality where Edward Taylor discovered the first Cave and Longtail Salamanders in Kansas. It is possible that the Pickerel Frog may have originally been found at this site.

After an invasion of and feast at the Spring River Inn, KHS members continued their forays into the county before settling in for the night.

On Sunday morning, an impromptu photography session was conducted by Suzanne and Joe Collins for many of the rare herps discovered by the KHS crew. Most participants departed the area sometime before noon. All in all, even though the weather had been rather cool and drizzly, everyone agreed that the trip had been most satisfying and successful. Species and numbers of individuals found during the field trip are listed in this year's accounting of Herp Counts in this issue of the *Newsletter*.

# KHS BRINGS YOU GREAT NEWS OF THE WORLD

#### **ROUNDUP SUPPORTER**

To the editor:

I am writing this to the persons and organizations who are trying, in every way, openly or underhandedly, to end the Rattlesnake Roundup held annually in Sharon Springs. These people, in what has become akin to harassment, come up with about every conceivable infraction of any regulation or law they could think of—real or imagined.

I am an ex-law enforcement officer and with the myriad of laws and regulations out there, you and I are constantly breaking some law, knowingly or unknowingly. Given the same courtesy, freedom and ability to ask any and all questions, I could follow any reporter around for two days and gather enough infractions to fill half a sheet of paper. With this information, the backing of a large newspaper, the tenacity of herpetologists, and the flow of ideas from other sources, I could do this person great damage. All I have to do is give great emphasis on even minor wrong doings, and in time, a great many people will think very negatively about him.

Our opponents are working on the above premise and I am not naive enough to think that sooner or later they will not come up with something we have overlooked or happened without our knowledge.

We are not about to roll over and play dead. We have lots of pride, we have to be tough to exist, we know our situation better than they do in Eastern Kansas and would like to take care of ourselves with their "help".

We have a volunteer committee of 15 to 16 people and active support of another 75 to 100 in the smallest population county in the state. We are struggling against a large organization of herpetologists, Sierra Club and other clubs and newspapers with thousands of circulation. With those odds, we may someday lose.

Stop the conservation and information that comes as a result of this show. Tell the community that there will no longer be a 2,000 to 3,000 [sic] crowd of people to fill the motels, restaurants, etc. Tell PRIDE to try and find another source of income, and we will go back to killing every rattlesnake we see, year around, as nearly everyone in western Kansas has done for the past 150 years.

(signed) Paul Walker Sharon Springs

—Lawrence Journal-World, 21 May 1994 (submitted by Alison Smith Reber, Lawrence)

#### **ROUNDUP RESPONSE**

Editor.

Paul Walker of Sharon Springs, Kansas, claimed in his letter that the annual rattlesnake roundup promotes conservation. Why then did numerous professional biologists, the Kansas Herpetological Society, the Kansas Wildlife Federation, the Kansas Audubon Council, the Sedgwick County Zoological Society, the Kansas Chapter of the Sierra Club, and the Kansas Department of Wildlife & Parks all provide legislative testimony against the roundup? Mr. Walker referred to the efforts of these and other groups as "underhanded." I find nothing inherently underhanded about any of these organizations.

Mr. Walker suggests that roundup opponents place great emphasis on minor wrong doings. I assume he is referring to the event sponsors' recent run-in with the Kansas Department of Health and Environment regarding the sale of uninspected meat. Does he consider violation of state health laws to be minor? These laws are designed with human safety in mind. The roundup organizers think it is silly to drag a meat inspector out to Sharon Springs for a two-day event, but what if someone became sick or even died from salmonellosis or botulism because sponsors, after being warned in advance, still refused to have the meat inspected?

Mr. Walker claimed that without the roundup, they will all go back to killing every rattlesnake they see. He failed to mention that they continue to kill every rattlesnake they see, only now they cage the animals with no food or water for a month before killing them. I spoke with many people at the roundup who had no idea that all the snakes, including those carrying young, would be killed. The sponsors did not publicize the animal's ultimate fate.

Mr. Walker believes concerns expressed by conservation groups will make Sharon Springs look bad. I believe Sharon Springs has made themselves [sic] look bad. Public awareness of environmental issues is at an all-time high, and commercial exploitation of wildlife is no longer "politically correct." If the organizers of the Sharon Springs rattlesnake roundup truly care about the future of their community, they should seriously consider the long-term effects of hosting an event that is offensive to so many people.

(signed) David Reber, KHS President-elect Alison Smith Reber —Lawrence Journal-World, 29 May 1994 (submitted by Ralph Black, Lawrence)

# ZOOLOGIST'S SEMINAR AIMS TO OVERCOME FEAR OF SNAKES

Myth: snakes spend their time "lurking", waiting to attack humans, and most are dangerous to people.

Fact: snakes are crucial to the natural environment and most are harmless and are terrified of humans. They do not bite people unless molested.

Those tidbits were presented during a talk by a Kansas University zoologist, who sorted out fact and fiction on snakes for about 20 people Tuesday at Lawrence Memorial Hospital.

"Fear of snakes is something we need to get rid of...its time has come," said [KHS member] Joe Collins, editor at the Kansas University Natural History Museum and author of the Peterson field Guide of Reptiles and Amphibians.

Of 38 species of snakes in Kansas, five are venomous, he said, including three species of rattlesnakes, the Copperhead, and the Cottonmouth. The Cottonmouth, however, is only found in extreme southeast Kansas.

"I know that you're here tonight because of the five that can hurt you," he said. "It's a really easy thing to get over."

Three species of [venomous] snakes can be found in Douglas County, he said. But "you have to be very lucky in order to find a venomous snake" here.

Collins explained that bites from venomous snakes are overrated.

"Death from venomous snakebite is a non-statistic in Kansas," he said, adding that only one person — a 1-year-old in western Kansas — has died from a snake bite since 1950.

"If you want to be number two, you'll have to try very, very hard," he said.

Most people who are bitten by venomous snakes are treated and released after receiving medical attention, he said.

And, in about 50 percent of the bites, no venom is injected, he said.

As part of his presentation, Collins brought a four-foot Bull Snake that participants could see and touch, up close.

One young woman, however, quickly left the LMH auditorium as soon as Collins took the snake out of a pillow case.

"Come back some time, we can work it out," Collins said to the woman.

One participant, Tom Campbell of Lawrence, who is afraid of snakes, said Tuesday night was the first time he touched one.

"It's not what I thought," he said. "It was great. But I won't be going out looking for any soon.

— Lawrence Journal-World, 8 June 1994 (submitted by Irving Street, Lawrence)

# CURIOSITY BITES BACK AT TWO LAWRENCE BOYS

Derick Alexander, who's already been bitten on the cheek and nose by snakes outside his rural Lawrence home, learned a valuable lesson Friday morning.

When you're dealing with a Copperhead [Agkistrodon contortrix], don't grab it. Not even by the head. Not even if your 5-year-old friend's dangling it by the tail.

"I saw it start moving its head up toward his hand, so I grabbed it," Derick said. "Then I saw the diamonds, and then I dropped it and it bit me. It didn't hurt."

Yet. A 10-inch baby Copperhead—just as [venomous] as a three-foot version of the [venomous] land serpent—had sunk its two fangs inside the 8-year-old's right thumb, causing an instant bruise and numbness not common to the harmless Garter and Ringneck [Snakes] seen in the country.

Although the crying soon followed—"Big time," Derick said later—the pain and impending overnight hospital stay seemed worth it.

Jeremy Bivens, Derick's friend, had suffered only a scratch from his expedition into the side yard at the Alexander's home, about a mile east of the Clinton Lake dam.

"Yeah, I saved his life, but I'm the one that got bit," Derick said, as matter-of-factly as the computerized blood-pressure unit alongside his bed at Lawrence Memorial Hospital. "It feels like someone stuck a nail in my toe."

Dr. Mary Vernon said Derick was fortunate the snake didn't inject more venom into his 90-pound body; otherwise the reaction could have been far more severe than his swollen right hand and arm.

Vernon said the effects likely would have been much worse had Jeremy been the one bitten. And for his part, Jeremy didn't know what he was dealing with.

"It was nice to me," Jeremy said.

Nancy Bivens, Jeremy's grandmother, said that living in the country meant snakes were a regular part of life.

But that didn't' necessarily mean kids needed to pick them up and walk around the yard.

"I'm petrified of snakes and spiders and I try to get the kids to be too, but Jer—he's so inquisitive," said Bivens, who killed the Copperhead with a stick before taking Derick for help. "Oh, dear lord..."

Leanna Alexander has already spent time reinforcing snake handling rules with her son.

She said Derick learned well from his annual trips to Kansas University's Natural History Museum, and reacted bravely to a potentially tragic situation.

At the hospital Friday afternoon, she asked her son the basic question: what are you going to do the next time one of your friends grabs a [venomous] snake?

"Hmmm, hmmm," he said. "I'll slap his hand, so he will drop it—don't grab it, slap it."

—Lawrence Journal-World, 18 June 1994 (submitted by Irving Street, Lawrence)

# **FEATURE ARTICLES**

# RESULTS OF THE SIXTH ANNUAL KHS HERP COUNTS HELD 1 APRIL-31 May 1994

# ERIC M RUNDQUIST 1705 HASKELL LAWRENCE, KANSAS 66044

The sixth series of KHS-sponsored Kansas Herp Counts, a controlled census of amphibians and reptiles held annually by many Kansas herpetologists, normally during the months of April and May, took place in 1994. A total of 40 counts were conducted this year and are reported herein, demonstrating various approaches to censusing amphibians and reptiles. One count was sponsored by the Society and held in late April-early May. Common names are those standardized by Collins (1990).

In a change in format from previous official counts, where state endangered and threatened species, species in need of conservation, or commercially valuable taxa are reported, exact localities are not listed. I have done so due to concerns expressed by others and by myself that listing these localities may lead to commercial harvest or other destruction of these species. Persons with a legitimate interest in accurate locality data may contact me with a request for such information. In addition, some species reported herein may appear to be new county records. Without preserved voucher specimens or officially catalogued photographs, such listings herein are not valid county records nor are they valid literature records. Although I understand that, in many cases, it is not possible to have additional verifiers available, I cannot accept selfverification for such records without the existence of these voucher specimens or photographs.

# 1st Bourbon County Count

On 5 March, 1994, a herp count was conducted by Lewis Anderson from 12:00-3:00 P.M. in Bourbon County.

| Spring Peeper |              |
|---------------|--------------|
| Total         |              |
| 2 species     | 24 specimens |

Verifier was Lewis Anderson.

#### 2ND BOURBON COUNTY COUNT

On 19 March, 1994, a herp count was conducted by Lewis Anderson from 1:00-6:30 P.M. Bourbon County.

| Spring Peeper                |
|------------------------------|
| Total                        |
| 3 species                    |
| Verifier was Lewis Anderson. |

### 3RD BOURBON COUNTY COUNT

On 20 March, 1994, a herp count was conducted by Lewis Anderson from 12:00-6:30 p.m. at T26S, R24E, Sec. 7 in Bourbon County. Participants were Lewis Anderson and V. E. Anderson.

| Common Garter Snake          | 1      |
|------------------------------|--------|
| Total                        |        |
| 1 species                    | ecimen |
| Verifier was Lewis Anderson. |        |

# 4TH BOURBON COUNTY COUNT

On 1 April, 1994, a herp count was conducted by Lewis Anderson from 12:00-5:00 P.M. in Bourbon County.

| American Toad       1         Northern Cricket Frog       9         Spring Peeper       3         Southern Leopard Frog       1 |
|---|
| Southern Leopard Frog 1 Slider 2 Plainbelly Water Snake 1   |
| Total   |
| 6 species   |

Verifier was Lewis Anderson.

# CRAWFORD COUNTY COUNT

On 1 April, 1994, Lewis Anderson conducted a small herp count at 2:00 P.M. in Pittsburg.

Common Garter Snake ...... 1

Total

1 species ...... 1 specimen

Verifier was Lewis Anderson.

#### 5TH BOURBON COUNTY COUNT

On 16 April, 1994, Lewis Anderson made a herp count from 1:00-7:00 P.M. in Bourbon County at T26S, R24E, Sec. 7.

| Northern Cricket Frog |
|-----------------------|
| Gray Treefrog complex |
| Bullfrog              |
| Southern Leopard Frog |
| Snapping Turtle       |
| Ornate Box Turtle     |
|                       |

Total

6 species ...... 48 specimens

Verifier was Lewis Anderson.

#### LINN COUNTY COUNT

On 16 April, 1994, Lewis Anderson conducted a small herp count at 3 mi E of Blue Mound in Linn County from 8:00 A.M.–12:00 P.M.

Total

Verifier was Lewis Anderson.

#### 1ST MARAIS DES CYGNES NWR HERP COUNT

The first Marais des Cygnes National Wildlife Refuge Herp Count was held on 16 April 1994. Suzanne L. Collins, Kelly J. Irwin, and Joseph T. Collins visited the newly-created Refuge in Linn County and observed amphibians and reptiles from 9:30 A.M. to 5:00 P.M. The day was sunny and warm (75–80°F). The Refuge consists almost exclusively of lowland flood plain forest and pasture, with some farmland. The following species were observed:

| American Toad         | 2 |
|-----------------------|---|
| Gray Treefrog complex | 2 |

| Western Chorus Frog (estimate of five choruses) 72 |
|--|
| Plains Leopard Frog                                |
| Bullfrog (5 adults, 15 tadpoles) 20                |
| Snapping Turtle                                    |
| Painted Turtle                                     |
| Ornate Box Turtle (shell only)1                    |
| Five-lined Skink                                   |
| Broadhead Skink                                    |
| Ground Skink                                       |
| Ringneck Snake                                     |
| Racer 1  |
| Rat Snake 6  |
| Plainbelly Water Snake                             |
| Northern Water Snake 1                             |
| Brown Snake  |
| Common Garter Snake                                |
|  |

Total

18 species ...... 167 specimens

Verifier was Joseph T. Collins.

#### SUMNER COUNTY HERP COUNT

A herp count was conducted by students, teachers, and parents from Topeka Collegiate School on 16 April 1994 in Secs. 14 & 15, T35S, R3W, Sumner County, Kansas. Methods used included rock turning as well as searching near streams and a small pond. The weather was mild (71 ° F) and the sky was clear. Collecting time was two hours.

Those participating included: Larry L. Miller & Mary Kate Baldwin (science teachers at Topeka Collegiate School), Joel H. Nance, Frank Shepherd, Larry O'Hara, and Glenn Freeman (parents of TCS students), Sam Knowlton, John Freeman, Nick O'Hara, Dylan Brooks, Katie Crowe, Jared Nance, Jimmy Shepherd, Allison Brooks, and Kelly Farmer (TCS science students), Carson Ward and Nina Ward (the owners of the land where the count was conducted) and Gene Trott (photographer from Hunnewell, Kansas).

| Northern Cricket Frog                    | 5   |
|--|-----|
| Spotted Chorus Frog                      | 1   |
| Plains Leopard Frog                      | 1   |
| Bullfrog (includes estimate of tadpoles) | 100 |
| Lesser Earless Lizard                    | 2   |
| Prairie Lizard                           | 4   |
| Southern Prairie Skink                   | 7   |
| Ringneck Snake                           | 57  |
| Ground Snake                             | 5   |
|  |     |

Total

9 species ...... 182 specimens

Verifiers were Larry L. Miller and Mary Kate Baldwin.

#### 1ST MARAIS DES CYGNES WMA HERP COUNT

The first Marais des Cygnes Wildlife Management Area Herp Count was held on 17 April 1994. Kelly J. Irwin visited the WMA in Linn County and observed amphibians and reptiles for 4.5 hours. The day was sunny and warm (ca. 80°F). The WMA consists of lowland flood plain forest, forested upland ridges, and marshes. The following species were observed:

| Smallmouth Salamander 1                           |
|---|
| Eastern Newt                                      |
| American Toad (1 adult, 10 chorusing) 11          |
| Gray Treefrog complex 8                           |
| Western Chorus Frog (estimate of two choruses) 50 |
| Plains Leopard Frog4                              |
| Southern Leopard Frog (estimate of one chorus) 50 |
| Slider  |
| Five-lined Skink                                  |
| Western Worm Snake                                |
| Ringneck Snake 6                                  |
| Rat Snake   |
| Western Ribbon Snake 1                            |
| Common Garter Snake                               |
| Smooth Earth Snake                                |
| Copperhead 1                                      |
|   |

#### Total

16 species ...... 265 specimens

Verifier was Kelly J. Irwin.

# 1ST DOUGLAS COUNTY STATE LAKE HERP COUNT

On 21 April 1994, while wandering aimlessly in a mostly unsuccessful search for morels, a very casual herp count was conducted by Eric Rundquist from 2:05-3:35 P.M. at Douglas County State Lake in southern Douglas County. Skies were partly cloudy with a no breeze and air temperature was 72°F. Water temperature was 66°F with a pH of 7.5. It should be noted that three of the Plains Leopard Frogs observed were dead in a small beaver pond. There were no apparent signs of illness, trauma, or predation on these individuals.

| American Toad (calling)      |
|------------------------------|
| Bullfrog 1                   |
| Ornate Box Turtle            |
| Five-lined Skink             |
| Fence Lizard                 |
| Ground Skink                 |
| Total                        |
| 7 species 17 specimens       |
| Verifier was Eric Rundquist. |

THIRD ANNUAL JOHNSON COUNTY HERP COUNT

Conducted by Randall Reiserer, a herp count was held on 23 April 1994 from 1:00-3:30 p.m. in Johnson County approximately three miles southeast of DeSoto. Participants were Randall Reiserer and Eric Rundquist. Air temperature was 74°F and soil temperature was 68°F. Water temperature was 64°F with a pH of 8.0. Skies were clear with a slight south wind. The first half of the survey area had been disturbed by commercial collectors and only eight specimens of four species were found there. Undisturbed habitat yielded the remaining individuals.

| Northern Cricket Frog          | 7 |
|--------------------------------|---|
| American Toad (1 calling)      |   |
| Gray Treefrog (calling)        |   |
| Plains Leopard Frog            |   |
| Five-lined Skink               |   |
| Great Plains Skink             |   |
| Copperhead                     |   |
| Western Worm Snake             |   |
| Racer                          |   |
| Ringneck Snake                 |   |
| Milk Snake 5                   |   |
| Common Garter Snake            | 1 |
| Flathead Snake                 | 3 |
| Total                          |   |
| 13 species 140 specimens       | S |
| Verifier was Randall Reiserer. |   |

On 23 April, 1994, Lewis Anderson and V. E. Anderson made a small herp count at 10:00 A.M. AT 3 mi E. 0.5 mi S El Dorado in Butler County.

BUTLER COUNTY COUNT

| Great Plains Toad 1          |  |
|------------------------------|--|
| Total                        |  |
| *,                           |  |
| 1 species                    |  |
| Verifier was Lewis Anderson. |  |

# CHASE COUNTY HERP COUNT

On 24 April 1994, a herp count was conducted by Daren Riedle from 5:00-7:30 P.M. at T19S, R6E, SW 1/4 of Sec. 12. The other participant was Jay Jefferey.

| Western Chorus Frog | 1 |
|---------------------|---|
| Ornate Box Turtle   | 1 |
| Great Plains Skink  | 9 |
| Collared Lizard     | 2 |
| Racer               | 2 |

# BAKER WETLANDS HERP COUNT

A herp count was conducted at Baker Wetlands, Lawrence, Douglas County on Monday, 25 April from 10:00–11:00 P.M., following mild thunderstorms. Participants were Alison Smith Reber and David Reber.

| Smallmouth Salamander     | 4  |
|---------------------------|----|
| Total                     |    |
| 3 species                 | 15 |
| Verifier was David Reber. |    |

#### LYON COUNTY HERP COUNT

On 24 April 1994, a herp count was conducted from 7:00–8:00 P.M. at T17S, R13E, NW  $\frac{1}{4}$  of Sec. 34. Participants were Daren Riedle and Kurt Grimm.

| American Toad          |  |  |  |
|------------------------|--|--|--|
| Five-lined Skink       |  |  |  |
| Six-lined Racerunner 1 |  |  |  |
| Ringneck Snake         |  |  |  |
| Rat Snake              |  |  |  |
| Prairie Kingsnake      |  |  |  |
| Common Kingsnake       |  |  |  |
| Racer                  |  |  |  |
|                        |  |  |  |
| Total                  |  |  |  |
| 8 species              |  |  |  |

#### 1994 KHS FIELD TRIP HERP COUNT

A herp count was held in conjunction with the annual KHS spring field trip to Cherokee County on 30 April from 8:30 A.M.-3:30 P.M. The primary count sites were Schermerhorn Park near Galena and another site near Lowell. Additional surveys were conducted in other areas of the county by the 27 participants. Skies were overcast with intermittent rain, which had followed heavy rains in

the area the previous two days. Air temperatures ranged from 46-48°F. Water temperatures ranged from 49-55°F and pH's were 6.7-7.3. Participants were Joseph T. and Suzanne L. Collins, Caleb and Olin Karch, Al Kamb, Carolyn, Emily, and Michael Moriarty, Lora Whittecar, Dan Carpenter, Henry Hall, C. J. Russell, Eric and Ann Rundquist, Tracy Hirata-Edds, David, Kyle, and Corinne Edds, Mathew and Sam Hastings, Al Volkmann, Daren Riedle, Paul Shipman, Jay Jeffrey, Dale W. Sparks, Neil Bass, Katie McGrath, Kirk Mullen, and Shawn Stoffer.

| Longtail Salamander 8                                    |
|--|
| Cave Salamander  |
| Eastern Newt   |
| Grotto Salamander 5                                      |
| Northern Cricket Frog                                    |
| American Toad4   |
| Eastern Narrowmouth Toad                                 |
| Spring Peeper (est. of 4 choruses + 3 actual counts) 125 |
| Coal Skink 1   |
| Five-lined Skink   |
| Ground Skink   |
| Ringneck Snake 7   |
| Milk Snake   |
| Brown Snake 1  |
| Redbelly Snake   |
| Flathead Snake   |
| Western Ribbon Snake 1                                   |
|  |

Total

Verifiers were Joseph T. Collins and Eric Rundquist.

#### SOUTHEAST SHAWNEE COUNTY HERP COUNT

Conducted by teachers, students, and parents from Topeka Collegiate School on 30 April 1994 in Sec. 34, T13S, R17E, Shawnee County, Kansas. The weather was overcast with light cold rain at times. The wind was out of the north, and the air temperature was 71° F. Method of collecting was rock turning and listening for calling frogs. Collecting time was one hour.

Those participating included: Kelly Farmer, Allison Brooks, Stacy Elmer, Ben Straus, Dylan Brooks, Jared Nance, Nick Riedel, Sarah Twemlow, Susan Twemlow, Alex Straus, Zach Straus, Mary Kate Baldwin, Kevin Freed, Larry L. Miller, Alice Brooks, Joel Nance, Lanette Farmer, Joe Taschler (Topeka Capitol-Journal), and Thad Allton (Topeka Capitol-Journal).

| American Toad                 | 2 |
|-------------------------------|---|
| Western Chorus Frog (calling) | 1 |
| Plains Leopard Frog           | 3 |
| Five-lined Skink              | 6 |

Verifier was Daren Riedle.

| Great Plains Skink     |  |  |
|------------------------|--|--|
| Ringneck Snake         |  |  |
| Great Plains Rat Snake |  |  |
| Common Garter Snake 1  |  |  |
| Total                  |  |  |
| 8 species              |  |  |

#### SOUTHWEST DOUGLAS COUNTY HERP COUNT

Conducted by students, teachers, and parents from Topeka Collegiate School on 30 April 1994 in Sec. 35, T13S, R17E, Douglas County, Kansas. Methods used included rock turning, searching along the banks of a small pond, and listening for calling amphibians. The temperature was 71°F with a very cloudy sky. Collecting time was one hour.

Those participating included: Larry L. Miller (upper school science teacher at Topeka Collegiate School), Allison Brooks, Ben Straus, Dylan Brooks, Jared Nance, Nick Riedel, Sarah Twemlow, Alex Straus, Zach Straus, Kevin Freed, Joel Nance, and Susan Twemlow.

| American Toad         | 1  |
|-----------------------|----|
| Northern Cricket Frog | 1  |
| Ornate Box Turtle     | 2  |
| Great Plains Skink    | 5  |
| Ringneck Snake        | 41 |
| Prairie Kingsnake     |    |
| Lined Snake           | 2  |
|                       |    |

Total

Verifier was Larry L. Miller.

# WOODSON COUNTY HERP COUNT

A herp count was held on 1 May 1994 at Toronto Reservoir State Park from 3:00–4:00 p.m. Participants were Daren Riedle and Jay Jefferey.

| Smallmouth Salamander 1    |  |  |  |
|----------------------------|--|--|--|
| American Toad 1            |  |  |  |
| Five-lined Skink 2         |  |  |  |
| Western Worm Snake 1       |  |  |  |
| Ringneck Snake 2           |  |  |  |
| Copperhead                 |  |  |  |
| Total                      |  |  |  |
| 6 species                  |  |  |  |
| Verifier was Daren Riedle. |  |  |  |

MARAIS DES CYGNES WMA & NWR HERP COUNT

A combined Marais des Cygnes Wildlife Management Area and National Wildlife Refuge Herp Count was held on 7 May 1994. Amphibians and reptiles were observed by day for 5.5 hours. The day was overcast with temperatures between 55–60°F. Participants were Emily Moriarty, Kelly J. Irwin, Suzanne L. Collins, and Joseph T. Collins. The following species were observed:

| Smallmouth Salamander                       | 1     |  |
|---|-------|--|
| American Toad (tadpoles in a single school) | 100   |  |
| Western Chorus Frog                         | 3     |  |
| Bullfrog                                    |       |  |
| Snapping Turtle                             |       |  |
| Common Musk Turtle (shell only)             |       |  |
| Ornate Box Turtle (shell only)              | 1     |  |
| Painted Turtle                              | 6     |  |
| Slider                                      | 2     |  |
| Five-lined Skink                            | 1     |  |
| Broadhead Skink                             | 4     |  |
| Ringneck Snake                              | 52    |  |
| Racer                                       | 1     |  |
| Rat Snake                                   | 4     |  |
| Prairie Kingsnake                           | 1     |  |
| Western Ribbon Snake                        | 2     |  |
| Common Garter Snake                         | 9     |  |
| Brown Snake                                 | 1     |  |
| Plainbelly Water Snake                      | 1     |  |
|   |       |  |
| Total                                       |       |  |
| 19 species                                  | imens |  |

Verifier was Joseph T. Collins.

### ELLIS COUNTY HERP COUNT

The 1994 Ellis County Herp Count was held on 7 May from 2:00–4:30 p.m at two sites. Participants were: Neil Bass, D.W. Spier, Travis Taggart, Greg Walters, Ruth Walters, Donna Cooper, Mark Van Doren, Curtis Schmidt, Jimmy Schmidt, Mark Cooper, Matt Arnold and Karen Toepfer.

| Tiger Salamander        | 4  |
|-------------------------|----|
| Western Chorus Frog     | 8  |
| Plains Leopard Frog     |    |
| Woodhouse's Toad        | 3  |
| Plains Narrowmouth Toad | 3  |
| Bullfrog                | 5  |
| Collared Lizard         |    |
| Six-lined Racerunner    | 6  |
| Northern Prairie Skink  | 1  |
| Great Plains Skink      | 0. |

| Slider 1   | Northern Water Snake  |
|--|---|
| Ringneck Snake 1   | Rat Snake 1   |
| Lined Snake 6  |   |
| Milk Snake 1   | Total   |
| Great Plains Rat Snake 1   |   |
|  | 8 species 14 specimens                                      |
| Total  |   |
|  | Verifier was Daren Riedle.                                  |
| 15 species   | vollier was Datell Redde.                                   |
|  | ( P C II C  |
| Verifier was Karen Toepfer.  | 6TH BOURBON COUNTY HERP COUNT                               |
| vermer was Karen Toepter.  |   |
| D. C. H. C.  | Conducted by Chris Mammoliti, a herp count was held         |
| RUSSELL COUNTY HERP COUNT  | on 11-12 May 1994 in Bourbon County. The count in-          |
|  | volved 143 miles of road cruising in the county (from 8:00- |
| The Russell County Herp Count was held on 8 May  | 10:00 A.M. and 6:00-8:00 P.M.) and five hours of rock       |
| 1994. Participants were Curtis Schmidt and Mark  | turning at the Hollister Wildlife Area and Bourbon State    |
| VanDoren. Participants spent the better part of the day road   |   |
| cruising, rock turning and miscellaneous ledge reconstruc-   | fishing Lake. Air temperature was in the 70's with partly   |
| tion. This activity took place in the northwest quarter of the   | cloudy to overcast skies and a light southerly breeze.      |
|  |   |
| county   | Northern Cricket Frog (estimate of 4 choruses) 100          |
|  | American Toad   |
| Plains Leopard Frog  | Eastern Box Turtle  |
| Western Chorus Frog  | Ornate Box Turtle   |
| Northern Prairie Skink   | Slider 3  |
| Great Plains Skink 6   | Collared Lizard 3   |
| Collared Lizard 5  | Five-lined Skink  |
| Ornate Box Turtle  | Broadhead Skink   |
| Common Kingsnake   | Ground Skink  |
| Ringneck Snake 18  | Six-lined Racerunner 3                                      |
| Six-lined Racerunner 1   | Western Slender Glass Lizard                                |
| Brown Snake 1  | Western Worm Snake  |
| Great Plains Rat Snake 1   | Ringneck Snake  |
| Milk Snake 1   | Rat Snake   |
| Lined Snake 1  | Prairie Kingsnake 1   |
| Western Slender Glass Lizard 1   | Gopher Snake 1  |
| Blackhead Snake  | Diamondback Water Snake 1                                   |
| Racer 1  | Common Garter Snake   |
|  |   |
| Total  | Total   |
|  |   |
| 16 species 59 specimens  | 18 species 189 specimens                                    |
|  |   |
| Verifier was Karen Toepfer.  | Participant and verifier was Chris Mammoliti.               |
|  |   |
|  | 7th Bourbon County Herp Count                               |
| Montgomery County Herp Count   |   |
|  | On 15 May 1994, Lewis Anderson completed a herp             |
| On 8 May 1994, a herp count was conducted by Daren   | count from 1:00-8:00 p.m. at the Hollister Wildlife Area in |
| Riedle from 2:00-4:00 P.M. at Montgomery County State  | Bourbon County.   |
| Lake.  | Bourbon County.   |
| and the second s | Northern Cricket From                                       |
| Distant  | Northern Cricket Frog                                       |
| Painted Turtle   | Gray Treefrog complex                                       |
| Slider   | Bullfrog  |
| Ornate Box Turtle  | Southern Leopard Frog                                       |
| Ground Skink   | Snapping Turtle   |
| Five-lined Skink   | Eastern Box Turtle  |
| Six-lined Racerunner 1   | Ornate Box Turtle   |
|  |   |

| Five-lined Skink             | 2  |
|------------------------------|----|
| Broadhead Skink              |    |
| Gopher Snake                 | 1  |
| Plainbelly Water Snake       | 1  |
| Total                        |    |
| 11 species 30 specimer       | ns |
| Verifier was Lewis Anderson. |    |
| 9 Pourson Course Herr Course |    |

#### 8TH BOURBON COUNTY HERP COUNTS

On 16 May 1994, Lewis Anderson completed herp counts from 3:00–5:00 P.M. and 7:30–8:00 P.M. at T26S, R24E, Sec. 7 and T26S, R23E, Sec. 11 respectively in Bourbon County.

| Northern Cricket Frog11      | ı |
|------------------------------|---|
| Gray Treefrog complex (est.) | 5 |
| Bullfrog                     | 2 |
| Southern Leopard Frog        |   |

#### Total

Verifier was Lewis Anderson.

#### OSAGE COUNTY HERP COUNT

Conducted by Larry L. Miller (upper school science teacher at Topeka Collegiate School) and assisted by Kelly Farmer (seventh grade student at TCS), Dylan Brooks (seventh grade student at TCS), and Allison Brooks (eighth grade student at TCS) a count took place on 12 May 1994 at NW1/4, Sec 3, T14S, R17E, Osage County, Kansas. The count took place between 4:30 P.M. and 5:30 P.M.

Methods of collection and observation included mostly observing amphibians along the banks of two small ponds and tadpoles in a very shallow poor measuring about 10' x 40'. The large number of toad tadpoles was calculated by counting the number of live tadpoles in one square foot in the pool and multiplying by the square footage of the pool. The entire bottom of the shallow pool was covered with toad tadpoles. Toad tadpoles were also observed in several other smaller pools, but their populations were not nearly as large. The estimate given below is conservative. The temperature during the count was about 75 °F and the sky was clear with no wind. There had been rain in the area several times during a three week period before the count was conducted.

| American Toad (adult)                           |  |
|---|--|
| Toad Tadpoles ( <i>Bufo</i> sp.) ±40,000        |  |
| Western Chorus Frog (calling from small pool) 3 |  |
| Plains Leopard Frog                             |  |

| Ornate Box Tu<br>Great Plains S | dults & 60+ tadpoles in sm<br>irtlekink |                  |
|---------------------------------|---|------------------|
| Ringneck Snal                   | ke                                      | 18               |
|                                 | Total                                   |                  |
| 9 species                       |   | 40,000 specimens |
| Verifier was I                  | Larry L. Miller.                        |                  |

#### RUSH COUNTY HERP COUNT

The first Rush County Herp Count was held on 14 May 1994. Participants were Curtis Schmidt and Mark Van Doren. The ever fearless participants wrought mayhem throughout the northeastern 1/4 of the county for approximately 4 hours.

| Plains Leopard Frog    | 11 |
|------------------------|----|
| Bullfrog               |    |
| Woodhouse's Toad       | 3  |
| Snapping Turtle        | 1  |
| Collared Lizard        | 3  |
| Six-lined Racerunner   | 1  |
| Plains Blackhead Snake | 1  |
| Common Kingsnake       | 1  |
| Great Plains Rat Snake | 1  |
| Racer                  |    |
| Gopher Snake (DOR)     | 1  |
| •                      |    |

# Total

Verifier was Karen Toepfer.

#### NORTHWEST DOUGLAS COUNTY HERP COUNT

The following count was conducted by Larry L. Miller and Suzanne Wineland on the afternoon of 21 May 1994 at a small shallow pond located in the SW $^1$ / $_4$  of the E $^1$ / $_4$  of the NW $^1$ / $_4$  of Sec. 31, T11S, R18E, Douglas County, Kansas. The temp. was 72° F. and the sky was clear. The count consisted of walking around a small shallow pond in a very wooded area and counting amphibians that were observed as well as counting amphibians heard calling during the time period. The total time for this count was 20 minutes. No reptiles were observed.

| Northern Cricket Frog         |
|-------------------------------|
| Total                         |
| 3 species                     |
| Verifier was Larry L. Miller. |

### BAKER WETLANDS HERP COUNT

On 21 May 1994, David Reber conducted a herp count at Baker Wetlands in southern Lawrence, Douglas County from 9:00-10:15 p.m. Participants were Alison Smith Reber, David Reber, Willey Frick, and Karen Frick.

| Gray Treefrog complex2Plains Leopard Frog1Bullfrog18 |
|--|
| Total  |
| 3 species  |

Verifier was David Reber.

#### 6TH ANNUAL BELVIDERE AREA HERP COUNT

A herp count was held from noon on 21 May to noon on 22 May. It was conducted primarily in the areas of Pratt, Sun City and Belvidere (Pratt, Barber, and Kiowa Counties), Kansas. For the first time there were more human participants than species counted in this herp count. Thirty people participated in the Count. All participated to at least some extent in actively looking for herps at some time during the count period or in support capacities including one baby (Weston Jantz). Participants turned rocks and observed through walking (73 person hours walking) along with 27 person hours driving. Since most vehicles caravaned to the camp site, only one vehicle for the trip down conducted a road count. Two vehicles were counted for the return trip as actively herping. This was calculated for 98 miles from nine observers in two vehicles over one hour which accounts for 18 person hours driving.

The weather ranged from the mid 80's F in the afternoon and 10-13 mph south winds to the lower and mid 60's after dark with very light southerly breezes and mostly clear skies. There was a nearly full-moon with clear skies the night of the 21st. No rains in recent weeks had occurred and all upland breeding pools for amphibians were dry. There were very few calling amphibians after dark except for cricket frogs. Participants camped out at the old "MacNamara" place on the upper end of the Koger Ranch north and west of Belvidere. Participants in the 6th Belvidere Area Herp Count were Andi Brunson, Jessi Brunson, Katelin Brunson, Ken Brunson, Lee Ann Brunson, Dana Eastes, Jacob Eastes, Joel Eastes, Carmen Forrest, Bob Hartmann, Joyce Hartmann, Branden Jantz, Dalaina Jantz, Garrett Jantz, Marvin Jantz, Tami Jantz, Weston Jantz, Cole Kumberg, Kitsten Kumberg, Linda Kumberg, Tracy Kumberg, Mark Kumberg, Carol Mammoliti, Chris Mammoliti, Kirk Mammoliti, Sarah Mammoliti, Logan Shoup, Mark Shoup, Rose Shoup, Will Shoup.

| Northern Cricket Frog    | 30           |
|--------------------------|--------------|
| Plains Leopard Frog      |              |
| Ornate Box Turtle        |              |
| Painted Turtle           | 5            |
| Collared Lizard          |              |
| Great Plains Skink       | 6            |
| Southern Prairie Skink   | 1            |
| Texas Horned Lizard      | 3            |
| Six-lined Racerunner     | 5            |
| Gopher Snake             | 2 (1 DOR)    |
| Coachwhip                |              |
| Lined snake              |              |
| Total                    |              |
|                          |              |
| 12 species               | 80 specimens |
|                          |              |
| Verifier was Ken Brunson |              |

#### 1ST CLARK COUNTY HERP COUNT

On 23 May 1994, a herp count was conducted by Bob Powell from 7:00–8:00 A.M. at Clark County State Fishing Lake. Conditions were warm with high winds. There were eight participants

| Prairie Lizard         |              |
|------------------------|--------------|
| Great Plains Skink     |              |
| Southern Prairie Skink | 2            |
| Six-lined Racerunner   | 2            |
| Ringneck Snake         | 8            |
| Night Snake            | 1            |
| Common Kingsnake       | 1            |
| Total                  |              |
| 7 species              | 16 specimens |
|                        |              |

Verifier was Bob Powell.

# 2ND CLARK COUNTY HERP COUNT

On 23 May 1994, a herp count was conducted by Bob Powell from 10:26–8:26 A.M. at 1 mi W, 7.2 mi N of Ashland. Conditions were warm with high winds. There were eight participants

| Collared Lizard          | 5           |
|--------------------------|-------------|
| Great Plains Skink       | 1           |
| Ringneck Snake           | 1           |
| Gopher Snake             |             |
| Total                    |             |
| 4 species                | 8 specimens |
| Verifier was Bob Powell. |             |

#### 3RD CLARK COUNTY HERP COUNT

On 23 May 1994, a herp count was conducted by Bob Powell from 1:30–2:00 P.M. at 4.1 mi N of Ashland. Conditions were warm with high winds. There were eight participants

| Collared Lizard          | 1         |
|--------------------------|-----------|
| Prairie Lizard           | 1         |
| Great Plains Skink       | 2         |
| Ringneck Snake           | 2         |
| Plains Blackhead Snake   |           |
| Ground Snake             | 1         |
|                          |           |
| Total                    |           |
| 6 species 8              | specimens |
|                          |           |
| Verifier was Bob Powell. |           |

#### BUTLER COUNTY HERP COUNT

On 24 May 1994, a herp count was conducted by Bob Powell from 11:30A.M-1:10 P.M. at Butler County State Lake. Conditions were warm with high winds. There were eight participants

| Northern Cricket Frog    | >25     |
|--------------------------|---------|
| Plains Leopard Frog      | >3      |
| Ringneck Snake           |         |
| Graham's Crayfish Snake  | 1       |
| Plainbelly Water Snake   | 2       |
| Diamondback Water Snake  |         |
| Northern Water Snake     | 2       |
| Total                    |         |
| 7 species                | ecimens |
| Verifier was Bob Powell. |         |

# CHASE COUNTY HERP COUNT

On 24 May 1994, a herp count was conducted by Bob Powell from 3:00–3:40 P.M. at Chase County State Lake. Conditions were warm with high winds. There were eight participants

| Collared Lizard        | 1           |
|------------------------|-------------|
| Great Plains Skink     | 2           |
| Ringneck Snake         | 2           |
| Great Plains Rat Snake |             |
| Total                  |             |
| 4 species              | 6 specimens |

Verifier was Bob Powell.

#### COWLEY COUNTY HERP COUNT

On 24 May 1994, a herp count was conducted by Bob Powell from 7:00–8:30 A.M. at Cowley County State Lake. Conditions were warm with high winds. There were eight participants

| Woodhouse's Toad             | 1  |
|------------------------------|----|
| Northern Cricket Frog        | 25 |
| Collared Lizard              |    |
| Ground Skink                 | 2  |
| Great Plains Skink           | 2  |
| Western Slender Glass Lizard | 3  |
| Ringneck Snake               |    |
| Flathead Snake               | 14 |
| Common Kingsnake             | 3  |
| Brown Snake                  |    |
| Copperhead                   | 1  |
|                              |    |
| Total                        |    |
|                              |    |

Verifier was Bob Powell.

#### 3RD ANNUAL DOUGLAS COUNTY HERP COUNT

11 species ...... 55 specimens

On 25 May 1994, a herp count was conducted by David Reber from 9:15–10:40 A.M. at a site southwest of Lawrence near Clinton Lake in Douglas County. Participants were David Reber and Eric Rundquist. Skies were partly cloudy with a no breeze and air temperature was 72–75°F. Habitat was mixed hardwood deciduous forest at an abandoned limestone quarry. The count methods consisted of visual sightings and rock turning.

| Northern Cricket Frog (calling) | 2   |
|---------------------------------|-----|
| Gray Treefrog complex (calling) |     |
| Ornate Box Turtle               | 1   |
| Five-lined Skink                | . 5 |
| Copperhead                      | . 3 |
| Western Worm Snake              | 4   |
| Timber Rattlesnake              | . 1 |
| Common Garter Snake             | . 1 |

Total

Verifier was David Reber.

#### PRATT COUNTY HERP COUNT

On 25 May 1994, Lewis Anderson completed a herp count from 12:00-4:00 p.m. at the Pratt Fish Hatchery.

Plains Leopard Frog 2
Bullfrog 1

Total

2 species 3 specimens

Verifier was Lewis Anderson.

# BARTON COUNTY HERP COUNT

The dynamic duo of Curtis Schmidt and Mark Van Doren surveyed Cheyenne Bottoms in Barton County on 28 May 1994, from 9:30 A.M. to 3:30 P.M. They drove the roads in search of whatever was unlucky enough to show itself.

| Plains Leopard Frog     |  |
|-------------------------|--|
| Snapping Turtle         |  |
| Painted Turtle          |  |
| Great Plains Skink 1    |  |
| Gopher Snake            |  |
| Plains Garter Snake 4   |  |
| Graham's Crayfish Snake |  |
| Diamondback Water Snake |  |
| Massasauga 1            |  |
|                         |  |

Total

9 species ...... 21 specimens

Verifier was Karen Toepfer.

Total species in this year's counts were 65 and total specimens observed were 2412 (+ 40,000 *Bufo* tadpoles).

# Literature Cited

Collins, J. T. 1990. Standard Common and Current Scientific Names for North American Amphibians and Reptiles. Third Edition. SSAR Herpetol. Circ. 19: iv + 41 pp.



# NEW RECORDS OF AMPHIBIANS AND REPTILES IN KANSAS FOR 1993

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Zoologist & Editor Natural History Museum The University of Kansas Lawrence, Kansas 66045

and

Director
The Center for North American Amphibians and Reptiles
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The forty-two new county records and four maximum size records listed below are those accumulated or brought to my attention since the publication of records for 1992 (Collins, 1993a). 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, 1993b). 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 nineteenth in a series that has appeared annually since 1976, and the data contained herein eventually will be incorporated into the fourth (revised) edition of my book.

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 (1993b). 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 (1990), and are given at the species level only.

The records listed below are deposited in the herpetological collections of the 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, 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, highly esteemed Collection Manager for the Division of Herpetology, Natural History Museum, The University of Kansas, diligently assigned catalog numbers to the specimens listed below, and to him I am indebted. Thanks are due also to Philip S. Humphrey, Director, and William E. Duellman, Curator of Herpetology, of the Natural History Museum, The University of Kansas.

# **NEW COUNTY RECORDS**

TIGER SALAMANDER (Ambystoma tigrinum)

McPherson Co: Blackkettle Creek, 1.5 mi S & 0.5 mi E Moundridge. 8 June 1993. Al Neufeld (KU 221455).

PLAINS SPADEFOOT (Spea bombifrons)

WABAUNSEE Co: Sec. 18, T10S, R12E. 10 May 1993. Keith Coleman & James Gubanyi (KU 221471).

AMERICAN TOAD (Bufo americanus)

COFFEY Co: Sec. 6, T23S, R17E. 29 May 1993. Keith Coleman (KU 221457). JACKSON Co: Sec. 35, T19S, R16E. 6 May 1993. James Gubanyi (KU 221456)

#### GREAT PLAINS TOAD (Bufo cognatus)

ATCHISON Co: Sec. 2, T6S, R20E. 18 May 1993. James Gubanyi (KU 221458). Johnson Co: Sec. 20, T12S, R22E. 11 May 1993. Keith Coleman (KU 221459). Leavenworth Co: Sec. 33, T12S, R21E. 9 June 1993. Keith Coleman (KU 221461). Pottawatomie Co: Sec. 23, T10S, R12E. 23 May 1993. Keith Coleman & James Gubanyi (KU 221462). Wabaunsee Co: Sec. 34, T10S, R12E. 7 May 1993. James Gubanyi (KU 221463). Wyandotte Co: W of I-435 near Missouri River, ca. 0.5 mi NE Wyandotte County Lake turnoff, T10S, R24E. 7 July 1993. Keith Coleman (KU 221459)

# GREAT PLAINS NARROWMOUTH TOAD

(Gastrophryne olivacea)

Jackson Co: Sec. 34, T6S, R13E. 11 July 1993. Keith Coleman & James Gubanyi (KU 221467). Lane Co: Sec. 22, T16S, R27W. 7 July 1993. Stanley Roth (KU 221468)

# SNAPPING TURTLE (Chelydra serpentina)

**WABAUNSEE Co**: Sec. 27, T11S, R13E. 16 June 1993. James Gubanyi (KU 221472).

# EASTERN BOX TURTLE (Terrapene carolina)

LEAVENWORTH Co: Sec. 34, T8S, R22E. 11 June 1993. Joseph T. Collins & Suzanne L. Collins (KU 221515). Probably an escaped pet; no evidence as yet that a breeding population is present in the county.

# ORNATE BOX TURTLE (Terrapene ornata)

**DONIPHAN Co**: Sec. 6, T3S, R21E. 1 May 1993. Thad Geiger, Nathan Geiger & Galen Geiger (KU 221477).

#### **OUACHITA MAP TURTLE**

(Graptemys pseudogeographica)

GEARY Co: Kansas River, Sec. 28, T11S, R6E. 1 September 1993. Kelly J. Irwin, B. Musser, William Busby & Errol D. Hooper, Jr. (KU 221475).

# SLIDER (Trachemys scripta)

RILEY Co: Fort Riley, Area 49, Vinton Pond. 11 September 1993. Jeffrey R. Parmelee (KU 221248).

#### SMOOTH SOFTSHELL (Apalone mutica)

**GEARY Co:** Kansas River, Sec. 26, T11S, R5E. 30 August 1993. Kelly J. Irwin & B. Musser (KU 221473).

# SPINY SOFTSHELL (Apalone spinifera)

**RUSH Co:** Sec. 2, T16S, R18W. 15 July 1993. Travis W. Taggart (KU 221494).

# COLLARED LIZARD (Crotaphytus collaris)

**KEARNY Co**: Sec. 1, T25S, R38W. 26 June 1993. Travis W. Taggart (KU 221495).

### TEXAS HORNED LIZARD (Phrynosoma cornutum)

Douglas Co: Kansas River levee, ca. 1 mi N Riverfront Park entrance, Sec. 13, T12S, R19E. 24 July 1993. Olin Karch (KU 221479). Grant Co: Sand Arroyo Creek, Sec. 29, T29S, R38W. 11 August 1993. Travis W. Taggart (KU 221496). The Douglas County specimen probably represents an escaped or released pet.

NORTHERN PRAIRIE SKINK (Eumeces septentrionalis)
CHAUTAUQUA Co: 1 mi E Elgin. 23 April 1993. Roy
Engeldorf (KU 221480); Sec. 4, T35S, R10E. 24 April
1993. Carolyn Moriarty & Suzanne L. Collins (KU
221511).

### RINGNECK SNAKE (Diadophis punctatus)

NEMAHA Co: 1 mi N Sabetha, T1S, R14E. Spring 1993. John M. Young & David P. Jones (KU 221481).

WESTERN HOGNOSE SNAKE (Heterodon nasicus)
STANTON Co: Sec. 35, T30S, R39W. 10 August 1993.
Travis W. Taggart (KU 221498).

EASTERN HOGNOSE SNAKE (Heterodon platirhinos)

KEARNY Co: Arkansas River, Sec. 8, T25S, R37W. 26

June 1993. Travis W. Taggart (KU 221497).

GREAT PLAINS RAT SNAKE (Elaphe emoryi)
CHAUTAUQUA Co: Sec. 4, T35S, R10E. 23 April 1993.
Mark Van Doren & Russell Toepfer (KU 221199).

PRAIRIE KINGSNAKE (Lampropeltis calligaster)
GEARY Co: ca. 2 mi S jct Rt. 18 & I-70. 5 June 1993.
James Gubanyi & Marla Gubanyi (KU 221484).

### COMMON KINGSNAKE (Lampropeltis getula)

Greeley Co: Sec. 30, T18S, R39W. 21 May 1993. Travis W. Taggart (KU 221500). Logan Co: Sec. 22, T13S, R34W. 14 May 1993. Travis W. Taggart (KU 221499).

#### MILK SNAKE (Lampropeltis triangulum)

GRANT Co: Wagon Bed Springs, Sec. 16, T30S, R36W. 11 August 1993. Travis W. Taggart (KU 221501).

# BROWN SNAKE (Storeria dekayi)

LINCOLN Co: 2 mi W Beverly on Rt. 18. 15 November 1992. Steve Kozak & Arick Huggins (KU 221485). WYANDOTTE Co: Nearman Creek Power Plant, T10S, R24E. 21 April 1993. Daniel Murrow (KU 221487).

#### WESTERN RIBBON SNAKE (Thamnophis proximus)

ELLSWORTH Co: below Kanopolis Dam, Sec. 2, T16S, R6W. 12 April 1993. Travis W. Taggart (KU 221503). Leavenworth Co: 1.7 mi E Tonganoxie, Sec. 2, T11S,

- R21E. 15 June 1992. Marc R. Thiry (KU 221488). RUSH Co: Timber Creek, Sec. 2, T16S, R18W. 15 July 1993. Travis W. Taggart (KU 221502).
- COMMON GARTER SNAKE (Thamnophis sirtalis)
  ROOKS Co: Woodston Wildlife Area, Sec. 17, T7S,
  R16W. 6 July 1993. Travis W. Taggart (KU 221504).
- LINED SNAKE (*Tropidoclonion lineatum*)
  CHAUTAUQUA Co: Sec. 4, T35S, R10E. 23 April 1993.
  Karen Toepfer (KU 221489).
- TIMBER RATTLESNAKE (Crotalus horridus)

  Montgomery Co: W 1/2 Sec. 19, T33S, R13E. 16

  August 1993. Daren Riedle (KU 221491).
- WESTERN RATTLESNAKE (*Crotalus viridis*)
  STEVENS Co: Cimarron National Grasslands, Sec. 27, T32S, R39W. 27 July 1993. Travis W. Taggart (KU 221505).
- MASSASAUGA (Sistrurus catenatus)
  HAMILTON Co: Sec. 36, T23S, R42W. 10 August 1993.
  Travis W. Taggart (KU 221506). PAWNEE Co: U. S. Rt. 183 at Arkansas River, Sec. 21, T23S, R18W. 13 September 1993. Travis W. Taggart (KU 221507)

#### NEW MAXIMUM SIZE RECORDS

- PLAINS LEOPARD FROG (Rana blairi)

  GEARY Co: Fort Riley at base of Backstop Ridge, just
  N of Rifle Range. 19 July 1993. Jeffrey R. Parmelee
  (KU 220989). SVL = 104 mm (4 1/8 inches). Female.
- SNAPPING TURTLE (Chelydra serpentina)

  Leavenworth Co: Sec. 15, T12S, R21E. 29 April 1993.

  Junior Black (KU Color Slide 10621). Upper shell length = 382 mm (15.5 inches). Male.
- EASTERN HOGNOSE SNAKE (Heterodon platirhinos)
  HARPER Co: 6 mi N Harper. 23 August 1992. Kevin
  Albright (KU 221200). Total length = 1097 mm (43 1/8 inches). Female.
- PLAINS GARTER SNAKE (*Thamnophis radix*)

  ELLIS Co: NE of Hays. September 1993. Mark Van
  Doren, Curtis Schmidt & Russell Toepfer (KU 221508).

  Total length = 1044 mm (41 1/8 inches). Female.

#### LITERATURE CITED

Collins, J. T. 1993a. New Records of Amphibians and Reptiles in Kansas for 1992. Kansas Herpetol. Soc. Newsl. 92: 16–20.

- Collins, J. T. 1993b. Amphibians and Reptiles in Kansas. Third Edition. Univ. Kansas Nat. Hist. Mus. Pub. Ed. Ser. 13: 1–397.
- Collins, J. T. 1990. Standard Common and Current Scientific Names for North American Amphibians and Reptiles. Third Edition. SSAR Herpetol. Circ. 19: iv + 41 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 (1993a).

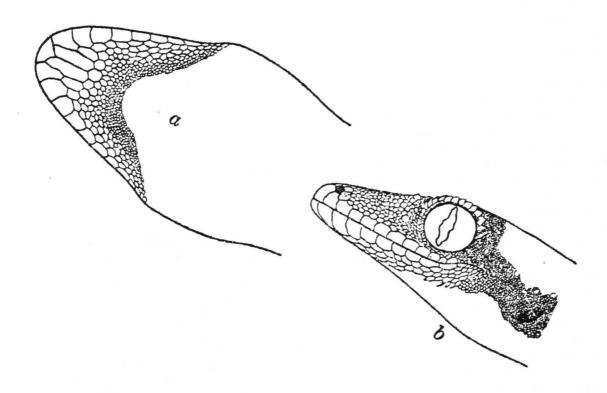
- Anonymous. 1986. These Bite and Sting. Be Careful. Publ. Kansas Dept. Health and Environ., Topeka. 10 pp.
- Axtell, C. B. 1976. Comparisons of Morphology, Lactate Dehydrogenase, and Distribution of *Rana blairi* and *Rana utricularia* in Illinois and Missouri. Trans. Illinois Acad. Sci. 69(1): 37–48.
- Axtell, R. W. 1993. Are Copperheads Challenging Both the Biological and the Evolutionary Species Concepts at the Same Time? Abstract SSAR Ann. Meeting, Bloomington, Indiana. Unpaginated.
- Brown, B. C. 1950. An Annotated Check List of the Reptiles and Amphibians of Texas. Baylor Univ. Studies, Baylor, Texas. xii + 259 pp.
- Busby, W. H., J. R. Parmelee, C. M. Dwyer, E. D. Hooper, and K. J. Irwin. A Survey of the Herpetofauna on the Fort Riley Military Reservation, Kansas. Report St. Biol. Surv. Kansas 58: 1–79.
- Cink, C. L. 1991. Snake Predation on Nestling Eastern Phoebes Followed by Turtle Predation on Snake. Kansas Ornith. Soc. Bull. 42(3): 29.
- Collins, J. T. 1993a. New Records of Amphibians and Reptiles in Kansas for 1992. Kansas Herpetol. Soc. Newsl. 92: 16–20.
- \_\_\_\_\_, J. T. 1993b. Amphibians and Reptiles in Kansas. Third Edition. Univ. Kansas Mus. Nat. Hist. Pub. Ed. Ser. 13: 1–397.
- \_\_\_\_\_, and S. L. Collins. 1993. Reptiles and Amphibians of Cheyenne Bottoms. Hearth Publishing, Hillsboro, Kansas. xii + 92 pp.
- \_\_\_\_\_, and E. M. Rundquist. 1993. Results of the fifth Kansas Herp Count Held During April-June 1993. Kansas Herpetol. Soc. Newsl. 94: 7–11.
- Edds, D. 1993. Rattlesnake Commercialization Update. Kansas Herpetol. Soc. Newsl. 93: 13.
- Ellner, L. R. and W. H. Karasov. Latitudinal Variation in the Thermal Biology of Ornate Box Turtles. Copeia 1993(2): 447–455.
- Fitch, H. S. 1993. Distribution and Abundance of Snakes in Kansas. Ann. Meet. Southwest. Assoc. Naturalists, Springfield, Missouri. Abstract No. 62.

- \_\_\_\_\_, H. S. 1993. Relative Abundance of Snakes in Kansas. Trans. Kansas Acad. Sci. 96(3-4): 213-224.
- Fusilier, L. C. 1993. Habitat Partitioning Among Three Sympatric Species of Map Turtles, Genus *Graptemys* (Testudines, Emydidae). Ann. Meet. Southwest. Assoc. Naturalists, Springfield, Missouri. Abstract No. 4.
- Gress, B. and G. Potts. 1993. Watching Kansas Wildlife. Publ. Kansas Dept. Wildlife and Parks, Pratt. viii + 104 pp.
- Hibbard, C. W. 1934. Notes on some cave bats of Kansas. Trans. Kansas Acad. Sci. 37: 235–238.
- Hunter, M. L., Jr., J. Albright and J. Arbuckle (editors). 1992. The Amphibians and Reptiles of Maine. Maine Agric. Exp. Sta. Bull. 838: 1-188.
- Jantzen, P. G. 1993. Prairie Wanderings. The Land and Creatures of the Grasslands. Hearth Publishing, Hillsboro, Kansas. xii + 141 pp.
- Kirkpatrick, D. 1993. Map Turtles of the United States. Reptile and Amphibian Magazine (Nov.–Dec. issue): 6–17.
- Klemens, M. W. 1993. Amphibians and Reptiles of Connecticut and Adjacent Regions. St. Geol. Nat. Hist. Surv. Connecticut Bull. 112: 1–318.
- Long, D. R. 1993. Yellow Mud Turtles. Reptile and Amphibian Magazine (March/April). Pp. 22–26.
- Lovich, J. E. 1993. *Macroclemys, M. temminckii*. Cat. American Amph. Rept. 562.1–562.4
- Martin, E. P. 1956. A Population Study of the Prairie Vole (*Microtus ochrogaster*) in Northeastern Kansas. Univ. Kansas Publ. Mus. Nat. Hist. 8(6): 361–416.
- Martin, R. (editor). 1994. Life in Kansas. Univ. Kansas Explore (Winter). Pp. 16–17.
- McKenna, M. G. and R. W. Seabloom. 1979. Endangered, Threatened, and Peripheral Wildlife of North Dakota. Inst. Ecol. Stud., Univ. North Dakota Res. Report 28: 1–62.
- Murrell, M. A. 1993. Snakes Alive! Kansas Wildlife and Parks 50(3): 18–21.
- Pisani, G. R. and H. S. Fitch. 1993. A Survey of Oklahoma's Rattlesnake Roundups. Kansas Herpetol. Soc. Newsl. 92: 7–15.
- Platz, J. E. and A. Lathrop. 1993. Body Size and Age Assessment among Advertising Male Chorus Frogs. Jour. Herpetol. 27(1): 109–111.
- Rainey, D. G. 1956. Eastern Woodrat, *Neotoma floridana*: Life History and Ecology. Univ. Kansas Publ. Mus. Nat. Hist. 8(10): 535-646.
- Riedle, D. 1994. Distribution of the Timber Rattlesnake (Crotalus horridus) in Chautauqua, Elk, and Montgomery Counties, Kansas. Kansas Herpetol. Soc. Newsl. 95: 11-12.
- Rundquist, E. M. 1993. A 20-year Retrospective of the Kansas Herpetological Society: Past, Present, and Future. Kansas Herpetol. Soc. Newsl. 94: 12–16.

- \_\_\_\_\_, and J. Triplett. 1993. Additional Specimens of the Western Cottonmouth (Agkistrodon piscivorus leucostoma, Reptilia: Squamata) from Kansas. Trans. Kansas Acad. Sci. 96(1-2): 148-151.
- Seigel, R. A. and J. T. Collins (editors). Snakes. Ecology and Behavior. McGraw-Hill, Inc., New York. xvi + 414 pp.
- Shaffer, L. L. and C. J. McCoy. 1991. Pennsylvania Amphibians and Reptiles. Publ. Pennsylvania fish Commission, Harrisburg. vii + 161 pp.
- Shipman, P. A. 1993. Behavioral Ecology of the Alligator Snapping Turtle (*Macroclemys temminckii*) in Southeast Kansas. Ann. Meet. Southwest. Assoc. Naturalists, Springfield, Missouri. Abstract No. 6.
- \_\_\_\_\_. 1993. Natural History of the Alligator Snapping Turtle (*Macroclemys temminckii*) in Kansas. Kansas Herpetol. Soc. Newsl. 93: 14–17.
- \_\_\_\_\_\_, D. R. Edds, L. E. Shipman, and D. Blex. 1993. Alligator Snapping Turtle (*Macroclemys temminckii*) Habitat Selection, Movements, and Natural History in Southeast Kansas. final Report Contract No. 279 Kansas Dept. Wildlife and Parks, Pratt. ix + 91 pp.
- Sites, J. W., Jr., J. W. Archie, C. J. Cole, and O. Flores Villela. 1992. A Review of Phylogenetic Hypotheses for Lizards of the Genus *Sceloporus* (Phrynosomatidae): Implications for Ecological and Evolutionary Studies. Bull. American Mus. Nat. Hist. 213: 1–110.
- Smith, D. D., D. J. Pflanz and R. Powell. 1993. Observations of Autohemorrhaging in Tropidophis haetianus, Rhinocheilus lecontei, Heterodon platyrhinos (sic), and Nerodia erythrogaster. Herpetol. Review 24(4): 130–131.
- Sprackland, R. G. 1993. Husbandry and Breeding of Collared Lizards. The Vivarium 4(4): 23–26.
- Staszko, R. and J. G. Walls. Rat Snakes: A Hobbyist's Guide to *Elaphe* and Kin. T.F.H. Publ., Neptune City, New Jersey. 208 pp.
- Taggart, T. W. 1992. Bufo debilis. Geographic Distribution. Herpetol. Review 23(3): 85.
- \_\_\_\_\_. 1992. *Graptemys pseudogeographica*. Geographic Distribution. SSAR Herpetol. Review 23(3): 88.
- \_\_\_\_. 1992. Kinosternon flavescens. Geographic Distribution. Herpetol. Review 23(3): 88.
- \_\_\_\_\_. 1992. *Eumeces obsoletus*. Geographic Distribution. Herpetol. Review 23(3): 89.
- \_\_\_\_. 1992. Crotalus viridis. Geographic Distribution. Herpetol. Review 23(3): 91.
- \_\_\_\_\_. 1992. Heterodon platirhinos. Geographic Distribution. Herpetol. Review 23(3): 91.
- \_\_\_\_. 1992. Lampropeltis getula. Geographic Distribution. Herpetol. Review 23(3): 91.
- \_\_\_\_. 1992. *Nerodia sipedon*. Geographic Distribution. Herpetol. Review 23(3): 91.
- \_\_\_\_. 1992. *Thamnophis sirtalis*. Geographic Distribution. Herpetol. Review 23(3): 92.

- \_\_\_\_\_. 1993. *Elaphe emoryi*. Geographic Distribution. Herpetol. Review 24(2): 67.
- \_\_\_\_\_. 1994. The Natural History and Distribution of the Green Toad (Bufo debilis) in Kansas, with a Report on an Effort to Reintroduce the Species into the Cimarron National Grasslands. Final Report Kansas Dept. Wildlife and Parks, Pratt, Kansas. 12 pp.
- Taylor, E. H. 1993. The Lizards of Kansas. Kansas Herpetol. Soc. Spec. Publ. 2: 1–72.
- Toal, K. R. 1992. Storeria dekayi. Geographic Distribution. Herpetol. Review 23(3): 92.
- Toepfer, K. 1993. A Comprehensive Assessment of Aquatic Habitat and Known Herpetofauna of Ellis, County, Kansas. Report Kansas Dept. Wildlife and Parks, Pratt. 48 pp.
- \_\_\_\_. 1993. *Elaphe emoryi*. Geographic Distribution. Herpetol. Review 24(4): 156.

- Twente, J. W., Jr. 1955. Aspects of a population study of cavern-dwelling bats. Jour. Mammal. 36: 379–390.
- Vial, J. L. and L. Saylor. 1993. The Status of Amphibian Populations. A Compilation and Analysis. IUCN Species Survival Comm. Declining Amph. Populations Task Force Working Document 1: 1–98.
- Viets, B. E. 1993. An Annotated List of the Herpetofauna of the F. B. and Rena G. Ross Natural History Reservation. Trans. Kansas Acad. Sci. 96(1-2): 103-113.
- Vogt, R. C. 1993. Systematics of the False Map Turtles (Graptemys pseudogeographica complex: Reptilia, Testudines, Emydidae). Ann. Carnegie Mus. Nat. Hist. 62(1): 1-46.
- Wolfenbarger, K. A. 1952. Systematic and biological studies on North American chiggers of the genus *Trombicula*, subgenus *Eutrombicula*. Annals Entomol. Soc. America 45(4): 645–677.



#### **BOOK REVIEW**

Reptiles and Amphibians of Cheyenne Bottoms by Joseph T. Collins and Suzanne L. Collins. 1993. Hearth Publishing Co., Hillsboro, Kansas. xii + 92 pp., two drawings, one map, 32 color photos, bibliography, index. Softbound. \$12.95.

This book is an entertaining guide to the reptiles and amphibians of one the most important wetlands in the United States—Cheyenne Bottoms, in Barton County, Kansas.

Cheyenne Bottoms is best known for its bird life. More than 200 species migrating along the Central Flyway touch down at Cheyenne Bottoms in any given year. With the publication of this volume, the nine amphibian species and 18 reptile species that inhabit the Bottoms are at last being brought to the attention of a wide audience.

Beginning with the dedication to deserving KHS members Larry Miller, Kelly Irwin, and Travis Taggart, a casual and comfortable voice is heard throughout this book. Joe and Suzanne Collins provide a wealth of natural history information in a relaxed and amusing style. Instead of merely recording that the weightiest Snapping Turtle from Cheyenne Bottoms was 32 pounds, for example, they write that "The heaviest Common Snapping Turtle from Kansas was a female with a weight of 32 pounds, pulled ashore by Wayne Hoffman in November 1985." By giving dates and naming people who made the observations or collected specimens, the authors draw attention to the long hours devoted by many people to the study of amphibians and reptiles in Kansas. It is important for the public to understand that a book such as this is built upon the knowledge accumulated through countless hours of fieldwork and painstaking research in libraries and museum collections.

Quite a bit of information on the habits and natural history of each species is provided in the individual accounts, notably mating behavior, life span, and diet. This kind of information is often left out of books about reptiles and amphibians, yet it's the stuff most people really want to know. The descriptions of mating behavior are particularly well-written. There is also a lot of humor in this book. For example, the Northern Water Snake is described as having a "...strong desire to evacuate its bowels on the nearest human."

Although the text is colorfully written and always entertaining, at time anthropomorphism does get in the way of properly explaining why some species behave the way they do. For example, water snakes are "surly," spiny softshells have a "nasty temper," racers are "savage." The use of such subjective terms is misleading. Assigning human traits to animals hinders people from developing an understanding of animals in the context of the natural environment.

The quality of the 32 color photographs is very high.

There are two photographs of Cheyenne Bottoms habitat and 30 lively photographs of reptiles and amphibians. The photographs will make it easy for even beginners to identify the animals they might see at Cheyenne Bottoms.

One curious omission from this volume is a map of the Cheyenne Bottoms refuge. Readers not familiar with the Bottoms may be puzzled by the references to roads and pools 1,2, and 3.

A map is provided on the inside back cover that shows the counties of Kansas and the location of Cheyenne Bottoms in Barton County.

Although the price is a bit steep for a small paperback, this book is highly recommended. It should be noted that the price reflects the expense of including color photographs, and these photographs are well worth including.

Anyone interested in Kansas amphibians and reptiles will appreciate the amount of information this book contains and the enjoyable way in which it is presented. It is a book you will also want to give to someone who is not necessarily interested in herpetology, but who likes to read about Kansas or about wildlife. The folksy, conversational writing style is sure to captivate and amuse all readers. Most important of all, this volume will draw in a new audience of readers who will come to understand amphibians and reptiles as important elements of natural Kansas.

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