

May, 1987

ANNOUNCEMENTS

Spring KHS Field Trip to be in Atchison County

The spring 1987 field trip of the Kansas Herpetological Society has been planned for the weekend of 6-7 June. It will be at the Atchison State Lake, located in the northeast part of Atchison County.

The lake is rather small and it should not be difficult to find each other, even for KHS members. There should be some KHS members there by Friday evening, 5 June, so look for familiar faces.

There are a number of interesting animals found in the area. It should be a fun weekend. Bring friends and plan on some good herping.

Check Your Address Label!

Please check your address label on this issue of the KHS Newsletter. If there is a RED MARK on the label, it means we do NOT have your 1987 dues marked PAID. If you have paid your dues, please notify us of the error. IF YOU HAVE NOT PAID 1987 DUES, please do so immediately.

Also, please check your name and address as they appear on the label. We are in the process of converting to a new computer system, and we would like to make any necessary label corrections now. If a change needs to be made in your name or address, please let us know.

Thanks for your help.

11th International Herpetological Symposium

The 11th symposium on Captive Propagation and Husbandry of Reptiles and Amphibians will be held in Chicago, Illinois, from 17-20 June 1987. The emphasis at these events is on learning better techniques for breeding and raising animals, with both formal presentations and informal gatherings of the participants. In addition to the regularly held activities, tours will also be offered of the Brookfield Zoo and Lincoln Park Zoo. The registration fee (\$90) includes two dinners, coffee breaks, bus rides, and a copy of the 1987 Proceedings. Spouse registration fee is only \$45. Special events include behind the scenes zoo tours, field trip to the Field Museum, speakers on herpetofauna of the Malagasy Republic, Wildlife of Australia, a workshop on detection of parasites in fecal samples, and an open forum on turtle and tortoise husbandry and breeding techniques. Register by 15 May to avoid a

late fee. For more information and registration forms, contact:
International Herpetological Symposium
Zoological Consortium, Inc.
13019 Catoctin Furnace Road
Thurmont, MD 21788
phone: (301) 271-7488

Photo Contest

The third annual Chickadee Checkoff Photo Contest is underway, sponsored by the Kansas Wildlife and Parks Commission. First prize is \$100, second is \$50, third is \$25. Category: any non-game mammal, bird, reptile, amphibian or invertebrate found in Kansas. Kodachrome slides only. No limit on number of species, but no more than six photos of each species should be submitted. Deadline for entries is 1 July 1987, and contest is open to anyone who lives or works in Kansas. Slides will be judged based on quality, composition, and general appeal. For further information, contact:

Photo Contest
Kansas Wildlife and Parks Commission
R.R. #2, P.O. Box 54A
Pratt, Kansas 67124

Upcoming Events in Lawrence

The Museum of Natural History at the University of Kansas is offering its Summer Workshops for Young People. The 40 week-long sessions for children 4-13 will cover 24 science topics, including reptiles and amphibians. For more information, write or call the Public Education office, Museum of Natural History, Lawrence, Kansas 66045, (913) 864-4173.

Information on Artificial Insemination

Anyone having any information on the artificial insemination of reptiles is requested to please send a copy of the article or information, or a citation of the literature to Ken Kundel, Virginia Zoological Park, 3500 Granby St., Norfolk, VA 23504. Your cooperation in this matter is greatly needed and appreciated.

New Discount Herpetological Catalog Available

Sigma Enterprises has a new catalog out listing herpetologically related books, posters, T-shirts, and vitamins for captive reptiles. For catalog and order form, contact:

Sigma Enterprises
4919 34th Street
San Diego, CA 92116

Captive Herp Care Supply Catalog

A new catalog is out from Sta-In-Pet, featuring stacking display units, bowls, tanks, terrariums, heating units, lights, screens and so forth. Order from:

Stay-In-Pet
P.O. Box 2932
Santa Fe Springs, CA 90670
Phone (213) 946-0804.

1987 Catalog Available

The 1987 Herpetological Search Service and Exchange catalog, listing over 3800 herpetological titles among the 4300 items it contains, is now available for \$2.00 postage. From:

Herpetological Search Service & Exch.
117 East Santa Barbara Road
Lindenhurst, NY 11757.

Herp Posters and Films

Zoo Med Laboratories is offering "a few selected products that carry a special interest" for herpetologists, including two VHF Films on the Alligator Snapping turtle and a full color poster featuring a selection of 120 photographs of both common and rare reptiles and amphibians from around the world (\$7.50, including postage). For orders or details, contact:

Gary Bagnall
Zoo Med Laboratories
1420 S. Ritchey Unit C
Santa Ana, CA 92705.

Conference on California Herpetology

The Natural History Museum of Los Angeles County will be the site for a conference on the herpetology of California, to be held 10-11 October 1987. Among questions to be explored are why California has "one of the richest faunas of this kind in North America" [certainly a quantitative vs. qualitative judgement if ever there was one], which California herps are in the most danger from habitat loss, and how do some California herps "spend their most secret lives." The \$30 fee (a mere \$25 before 25 September) includes admission and a copy of the abstracts. For more information, contact:

Southwestern Herpetologists Society
P.O. Box 7469
Van Nuys, CA 91409

NEW BOOKS TO NOTE

Endangered Species

State Lists of Endangered and Threatened Species of Reptiles and Amphibians, Including Laws and Regulations of Each State, by William B. Allen, Jr. of the Pittsburgh Zoo. 91 pp, \$7.00. Available from the author :

William B. Allen, Jr.
P.O. Box 5250
Pittsburg, PA 15206.

Yet Another New Texas Snake Book

Eakin Press has announced the publication of **Snakes of South Central Texas** by Thomas G. Vermersch and Robert E. Kuntz. It is 6 x 9 inches and has 144 pages, six color plates, photographs of 41 species, maps, charts, and an index. To order by phone, with Visa or Mastercard, by dial 1-800-445-7303, wait for dial tone, and then dial 1771. Price by phone is \$12.95. It is also available by mail for a mere \$12.00 (postage paid) from:

Eakin Press
P.O. Box 23069
Austin, TX 78735

Autographed Books on African Herps Available

A limited number of **autographed** copies of the following books are available from Kwena Gardens, "The Crocodile Paradise at Sun City." Prices INCLUDE packaging and AIR MAIL postage. To purchase, send along an International Money Order (available at the U.S. Post Office). The books are:

Snake vs. Man - A Guide to Dangerous and Common Harmless Snakes of Southern Africa, by Johan Marais (see review in KHS Newsletter No. 64, page 18). 102 pp., 62 color photographs. \$19.00

South African Frogs, by Passmore and Carruthers. 270 pages with color and black & white photographs. Also has a record of frog calls. Soon to be out-of-print. \$24.00

Discoveries of a Crocodile Man, by Tony Pooley. 213 pp., "few color pictures." \$10.00

Send your order, with International Money Order, to:

Johan Marais
Kwena Gardens
P.O. Box 234, Sun City
Bophuthatswana
South Africa

Look It Up

The Herpetologists' League has recently reprinted the **Index to Herpetologica, 1936-1955**, which covers volumes 1-11 of this useful journal. Price for HL members is \$5.00, non-members \$7.50. The **Index to Herpetological, 1956-1975** is also available for the same price, or, buy both and for just \$8.00 (members only). In addition, back issues of the journal are available at the following prices: Vol. 1-29 for \$25 per volume; Vol. 30-39 for \$40.00 per volume; and Vol. 40-current for \$50.00 per volume. There is a 20% discount if you buy 1-10 complete volumes, and a 50% discount if you buy more than 10 complete volumes. Non-members add 10% for postage.

Make checks payable to The Herpetologists' League:
Ellen J. Censky
Section of Amphibians and Reptiles
Carnegie Museum of Natural History
Pittsburgh, PA 15213

Sweet Herps, Alabama

Vertebrate Animals of Alabama in Need of Special Attention, which includes some reptiles and amphibians, edited by Robert Mount. 124 pp, color photos, maps. Available for \$8.00 from:
Alabama Agricultural Experiment Station
Auburn University
Auburn, AL

Long Awaited Book Now Waiting

The Venomous Reptiles of Arizona, by Charles H. Lowe, Cecil R. Schwalbe, and Terry B. Johnson. 115 pages, 50 color photographs plus line drawings and maps. Covers the Gila monster, coral snake, 17 subspecies of rattlesnakes, and six rear-fanged snakes. Includes a chapter on "The Bite and Its Treatment." 6 x 9 inches, paperback. Available for \$7.50 from:
Information Branch
Arizona Game & Fish Department
2222 W. Greenway Road
Phoenix, AZ 85023

And From the Deep South

Reptiles del Centro, Centro-oeste y Sur de la Argentina. Herpetofauna de las Zonas Aridas y Semiáridas, by Jose M. Ceil. 528 pp., 114 figures, 146 color plates, clothbound. Covers the reptiles of the central, western, and southern areas of Argentina. Keys in both Spanish and English. Available for 90.000 Italian lira (ask your local bank for a conversion to dollars, or order and wait for an invoice which will arrive before the book), from:
Museo Regionale de Scienze Naturali
Via Maria Vittoria 18
10123 TORINO (ITALY)

KHS BRINGS YOU NEWS OF THE WORLD...

KHS Members Receive Kansas Junior Academy of Science Honors

KHS members Alexis Powell and David Reber both completed science projects that were judged "highly superior" at the Kansas Junior Academy of Sciences competition in Wichita.

Alexis Powell completed a project in the Animal Physiology and Pharmacology Division, titled "The Effects of Temperature on the Rate of Oxygen Consumption on Acheta domestica, the House Cricket." David Reber's project was in the Experimental Psychology and Animal Behavior Division, and was called "Dominant Methods of Subduing Prey by Individual Constricting Snakes."

KHS sends its congratulations to both Alexis and David.

Chinese Crocodile Lizard Born at Dallas Zoo

A Chinese crocodile lizard (Shinisaurus crocodilurus) gave birth to two young, one of which was stillborn, at the Dallas Zoo on 20 October 1986. This represents the first captive breeding of this species at the zoo. The breeding colony consists of 2/2 adults and is maintained in an enclosure measuring 78 x 81 x 117 cm. The exhibit contains a water drip system, plastic plants and logs. Black lights are also used. Ambient temperature is ca. 26 C, and a "hot spot" is available for thermoregulation. Courtship behavior was observed on several occasions. Males display to females with slow, jerky head bobs, then pursue females in rapid and jagged motion. The neonate is being maintained in a manner similar to the adults, with insects offered as food.

--AAZPA Newsletter 28(1):12

(submitted by Ruth Gennrich, Lawrence)

David Shepherd Sure Knows How To Take the Fun Out of Driving

You're driving on a Louisiana road and spy a snake ahead. There's nothing you would rather do than squish the slithering reptile under your wheels. But first, remember: David Shepherd may be watching you.

Mr. Shepherd, a 46-year-old biology professor at Southeastern Louisiana University, is a fan of reptiles who has related interests in American driving habits. To test the effect of the latter on the former, he conducted an experiment--and saw some pretty gruesome stuff.

At a local toy store he bought a two-foot-long rubber snake. Then he and some of his students trekked out to a fairly untraveled highway, put the snake in the road, hid in the woods and waited. The object: To see how many drivers ran over it. Sometimes a plastic turtle was used instead, to see which animal fared worse.

The snake fared worse.

The professor's results, which he recently announced to the Louisiana Academy of Science, showed that of 12,400 encounters between snake and auto over a period of three years, 1,281, or 10.3%, ended in "death" for the snake. Of the 9,600 encounters between turtle and auto, only about 5% ended in the turtle's "death."

Moreover, of the 1,281 snake "deaths," 498 resulted from drivers deliberately going out of their way to make a hit.

"Lots of times (cars) would turn around and run back over the snake," says Mr. Shepherd. "The most was five times." And some people stopped, put their wheel on the creature, and "rolled back and forth." The students saw others drive up on the road's shoulder. Once a sheriff even jumped out of the car and pulled a gun--but the group came out of hiding to explain.

It wasn't all bad. One woman stopped to help the snake off the road. When she heard a car coming, "she ran down the road, waving her arms, not wanting the (car) to hit him," says Mr. Shepherd.

Mr. Shepherd says the experiment was inspired by a disturbing memory from his student days. He had seen a huge truck swing into the opposite lane of a highway, specifically to hit a snake. After reading articles on animals killed on highways, he wondered, "How many are intentional?"

The professor, whom some locals now call "The Snake Man," says he's just lucky his interest is in reptiles. "If I'd been interested in deer," he says, "I couldn't have really done this."

--The Wall Street Journal, 17 February 1987
(Submitted by Irving Street, Sibbleyville)

Snakes Sliding Into Research Roles

You're hungry, but your feet are tied together, your hands are pinned behind your back, and you're lying belly down on the floor. In front of you looms the refrigerator, and to eat, you must open the door.

If you can imagine this, then you can imagine what snakes must go through to catch a meal, said Joseph Collins, KU zoologist and editor with the Museum of Natural History.

After years of slithering on the earth, snakes finally are coming into their own as research animals, Collins said.

And Collins should know.

Collins, Susan Novak, Chicago graduate student and Richard Seigel, researcher with the Savannah River Ecology Laboratory in South Carolina, spent about two and a half years compiling "Snakes: Ecology and Evolutionary Biology."

The 529-page text, released April 8 by Macmillan Publishing Co., is the most comprehensive book about snakes available today, Collins said.

"It attempts to summarize knowledge of snake biology and to serve as a launching point for research in the future," Collins said.

Scientists have overlooked snakes as laboratory animals, he said, because of a bias toward white mice and rats, which are

readily available, cheap and easy to breed in captivity.

If scientists want to research snakes, they must either catch the reptile themselves or order them from biological supply houses. Collins said that snakes were not expensive if the researcher was willing to use local species.

"If you take about four or five people out and lift rocks, you'll get a snake about every 50 rocks," he said.

Some snakes common in Kansas are the racer, the bull snake, the milk snake and the ringneck. Collins said that these species were harmless and would make excellent research animals.

Some scientists also may hesitate to use snakes because they are uncomfortable around them. Novak said that when she began working for an ecology laboratory, she was afraid of snakes, but overcame her fear quickly.

Collins said that snakes offered research opportunities that rats and mice could not.

"For example, how does an animal without arms and legs go about eating?" Collins said. "How do snakes manage to survive and reproduce without any of the appendages we consider normal?"

Collins said that (the late) Takeru Higuchi used black rat snakes for his experiments. Higuchi, Regents distinguished professor of chemistry and former chairman of the department of pharmaceutical chemistry, died of heart failure March 24.

Although the book is geared for biology researchers, professors and their students, Collins said that anyone with a casual interest in snakes might find parts of it useful.

"For instance, in the last chapter there is a list of endangered snake species. And for people who keep snakes as pets, there's a wonderful table that lists all the known foods that snakes eat," he said.

Collins said that hundreds of Lawrence residents kept snakes as pets, primarily out of curiosity in the limbless reptiles.

When Collins had a pet snake as a child, he expected it to be more like other pets.

"However, I quickly got serious and realized that snakes aren't affectionate at all," he said.

Snakes have a fear-fascination element for most people, Collins said.

"Most adults are afraid of snakes, and they typically react to snakes by killing them," he said.

However, he said, the reptile house was usually the most popular attraction at zoos and that people liked to look at snakes as long as they were safe behind glass.

Novak recommended that people first consult an expert and then begin handling small, non-poisonous snakes if they want to overcome their fear of snakes.

Novak is studying Russian language and culture so that she will be able to translate Russian research on snakes and other reptiles into English. Russian is the most frequent language besides English used in scientific papers, she said.

--University Daily Kansan, 15 April 1987
(submitted by J.B. Bellcastle, Runksdown)

There'll Always Be An England

Thieves have stolen special toad signs just days after they were put up to warn motorists of a protected breeding ground.

Now hundreds of toads at Berrick Salome are in danger of being squashed as they sit in the road calling to their mates.

Biology teacher Mrs Marion Shaw, who has campaigned for the village near Wallingford to be designated as one of the country's 220 protected "toad sites," is disgusted by the theft.

"A lot of villagers are very upset about it--we went to a great deal of trouble to get the signs in the first place and they disappear within days of being put up," she said.

She has been told by the British Herpetological Society, which protects reptiles, that more than a third of these toad signs are stolen because they are so unusual.

"I expect youngsters have taken them to display on their bedroom wall, she added.

For many years the toads have thrived around the village ponds, which are unpolluted by crop spraying. During the mating season in March and April the toads sit in the road at night calling to females.

Last year, more than 500 were found squashed in just two nights.

The two signs--a triangle with a red reflective edging, surrounding a black toad--were put up near to the toads' breeding ground to warn motorists of the love-lorn toads in the road.

Mrs Shaw, who is head of Biology at Icknield School, Watlington, said Oxfordshire County Council could not afford to provide any new signs, but she would put up make-shift ones.

--The New Yorker, 19 September 1986 (taken from the Oxford Times)
(submitted by Elizabeth Patton, Lawrence)

River Keepers Fear Snappers in the Thames

LONDON: Thames River authorities are worried that the waterway may soon have some unwelcome guests -- vicious snapping turtles.

About 1,000 of the reptiles have been imported into Britain from their natural habitat in North America, and the Thames Water Authority said some of them may end up dumped in the river that flows through London and much of southern and central England.

"We've had cases of pet owners dumping the snapper's smaller relation, the terrapin, into the Thames, and we now have a relatively harmless colony living in the quieter sections of the Oxford Canal," authority spokesman Brigitte Daniels told the Independent newspaper Thursday.

No snappers have turned up in the Thames so far, Daniels said. "But if people start releasing unwanted snappers into the system, there could be a real threat to fish stocks, birds and small mammals," she said. "They've even been known to take off people's arms."

The snappers arrive here no bigger than a large coin but can end up weight 200 pounds, she said.

Last year, Daniles said, the authority needed the help of London Zoo to capture a 3-foot-long stray South American catfish that got into the river, and colonies of tropical fish were thriving in the warm waters around power stations and sewage treatment plants.

--The Topeka Capital-Journal, 10 January 1987
(submitted by Jeff Whipple, Lawrence)

Where is Omar?

Omar is a 60-pound alligator snapping turtle. Omar used to live in a creek in Kansas. But now no one knows where Omar is.

Scientists found Omar in the creek last spring. They wanted to study Omar to learn more about alligator snapping turtles. The scientists wanted to know things such as what the turtles eat and when they sleep.

The scientists put two small radios on Omar. The radios helped the scientists keep track of Omar. But one day, a flood came. It washed Omar out of the creek. Now the scientists are asking, "Where's Omar?"

--Weekly Reader, Edition 3, 20 February 1987. Also includes absolutely stunning photograph of a leering J.T. Collins holding a vicious looking Omar, mouth agape. The caption to this photo reads: "This is scientist Joseph Collins holding Omar before a flood washed the turtle away." But wait, there's more! The following is part of the teachers supplement to Weekly Reader:

Reading Comprehension

1. What is Omar? (an alligator snapping turtle)
2. Where did scientists find Omar last spring? (in a creek in Kansas)
3. Why did scientists put radios on Omar? (The scientists wanted to study Omar to learn more about alligator snapping turtles.)
4. Why don't scientists know where Omar is now? (A flood came and washed Omar away.)

And so it goes. Thanks for this hot news item to J.T. Collins, who loyally gave it to your editor, knowing full well that it would be printed...

Close Encounters with a Snake of the Big Kind

Last Friday Harold Dryden, Larned, came into the office and sat down with a overly long, scaly skin draped across his lap. This is the story he told:

"Some friends and I were canoeing on the Arkansas River Sunday, May 3. We saw a big snake close to the bank and it slithered into the water, swimming towards our canoe. Before I knew it, the snake had slithered into the canoe and wrapped itself around my neck twice. I was panic stricken and tried to pull the

horrible thing off of me but it pulled me out of the boat and under the water." [EDITOR'S NOTE: The caption of the photograph with this article says that Dryden is six feet, four inches tall.]


"It seemed like an hour, but I know it couldn't have been more than five minutes, that the snake and I fought each other under the muddy waters of the Arkansas. I couldn't untwist it's body from my neck and it was squeezing the air from my lungs. Somehow, I managed to get my hunting knife from the picket [sic] of my jeans. I stabbed the snake repeatedly in its neck until it released its hold."

"We beached the canoe and pulled the snake from the water. When we measured it was an even seven feet long, including head and tail. I skinned it right there on the bank of the river. Having no convenient way to keep the meat, I left it in the brush. But I was sorry later when a friend said it was quite a treat to fry bull snake meat. He said after frying for about two minutes on one side, it will flop over to the other side all by itself. But I have the skin. It's not a really good skin: the snake was close to molting and so the leather is rather scaly."

--Larned Tiller & Toiler, 11 May 1987

SOMETHING WILD!

By Robert F. Clarke, Ph.D.



SOME PERSONS MISTAKE THE FORKED TONGUE FOR 'FANGS.' FANGS ARE TWO HOLLOW TEETH THAT ARE UNFOLDED FROM THE FRONT OF THE UPPER JAW. THESE INJECT THE POISON, WHICH IS ORDINARILY USED TO SECURE FOOD. THE TONGUE IS A SENSORY TOOL WITH WHICH THE SNAKE LEARNS ABOUT ITS VICINITY.

IN KANSAS, COPPERHEADS OCCUR EAST OF THE FLINT HILLS.



COPPERHEAD

Agkistrodon contortrix

ALTHOUGH LOOKING FIERCE AND AGGRESSIVE IN THIS DRAWING, COPPERHEADS ARE RATHER MILD-MANNERED AND LIE STILL WHEN APPROACHED, DEPENDING ON PROTECTION OF THEIR COLOR PATTERN, WHICH BLENDS PERFECTLY INTO THE LEAF LITTER THAT COVERS THEIR USUAL HABITAT—ROCKY WOODS.

WELL NAMED, FOR THE TOP OF THE HEAD IS COPPER-COLORED. THE BODY IS A LIGHT BROWN, WITH RICH CHESTNUT BANDS. THESE BANDS ARE NARROW ON MID-BACK AND WIDE ON THE LOWER SIDES.

TWO TO TEN YOUNG ARE BORN ALIVE IN AUGUST OR SEPTEMBER.



A contribution from the Nongame Wildlife Improvement Program
Kansas Fish & Game Commission

RECENT LITERATURE OF INTEREST TO KHS MEMBERS

Gorman, Wendy L. and Michael S. Gaines. 1987. Patterns of genetic variation in the cricket frog, Acris crepitans, in Kansas. *Copeia* 1987(2):352-360.

This paper reports on the results of a study of the geographic variation and population structure of 16 populations of Acris crepitans in Kansas, ranging from the far western edge of the state to the eastern edge, distributed along the 30 degree N Latitude line, and three southern localities from the Arkansas River system. Genetic variation was studied by a process called electrophoresis.

Analysis of the variation in allelic frequencies between populations living in pond and stream habitat suggests that there is local adaptation due to selection.

TO REMEMBER OUR STATE REPTILE

It took thousands of calls and letters along with great media coverage and massive support from the citizens of Kansas to cause the 1986 Kansas Legislature to pass the bill making the ornate box turtle the official state reptile of Kansas. The efforts of all those involved have now started another movement that a lot of people feel should not end.

It all started in Caldwell, Kansas in October of 1985. Caldwell has not been the same since! People now know where the little town of less than 2,000 is located. They now know what it is famous for--the state reptile of Kansas.

During the summer of 1986, dozens of people from all across the country asked about the ornate box turtle when they stopped in Caldwell. Some bought wooden turtles and t-shirts from local stores. Others just wanted to see a live turtle. At least one store kept a specimen on display during the summer months. One family from Alaska took time to photograph one of the turtles being kept for display.

A number of people from Caldwell and other areas are afraid that people may forget the state reptile unless something is done to remind them. Some of these people would like to see the Chamber of Commerce in Caldwell or the City of Caldwell put large signs along major roads leading to Caldwell showing the turtle and saying something about our state reptile. The Caldwell Elementary School already displays a four foot by eight foot wooden ornate box turtle in front of its building on special days. However, the school is not located in an area that those traveling through town always see.

Caldwell and Kansas should be proud of its turtle. Everyone who feels Caldwell should do more to honor Kansas' State Reptile is asked to write the Caldwell Chamber of Commerce in Caldwell, Kansas 67022, with their suggestions and comments.

--Friends of the Ornate Box Turtle, Sumner County, Kansas

FEATURE ARTICLES

Selected Observations on South-Central Kansas Turtles

by

Martin Capron

Box 542

Oxford, Kansas 67110

The following account is the accumulation of nearly ten years of observation and field work in south-central Kansas. Having lived on the banks of the Arkansas river for my entire life, many of these observations are incidental to fishing trips, snake-hunting excursions, and assorted other forms of work and recreation that have kept me in close proximity to the river. These assorted notes, though not a regimented study or detailed examination of the species discussed, present a variety of observations available only to those with a prolonged and intimate relationship with a river ecosystem.

Softshells (genus Trionyx) are one of the most observably abundant turtles in the lower Arkansas river, where both the western spiny softshell (Trionyx spiniferus hartwegi) and the midland smooth softshell (Trionyx muticus muticus) occur in similarly high population densities. Random trapping from 1978 through 1986 showed that the two species occur in a nearly 50:50 ratio. Populations along the lower Arkansas River may currently be as high as 500-700 individuals of each species per river mile, but in the late 1970s may have run as high as 1000 animals of each species per river mile.

The decline from the late 1970s to date may be due in part to the availability of suitable nesting beaches in the area. Both species of softshells utilize sandbars for nesting, preferably those three to six feet above water level and up to 50 yards from the river. Several remote sandbars that were formerly utilized are now gone due to flooding in the past six years. Also, most sandbars in the area suffer some damage from Off-the-Road Vehicle (ORV) usage, notably three-wheeled motorcycles. These machines not only frighten away nesting females, but also destroy nest cavities and eggs. I have observed these turtles nesting both at midday and well after dark, however, ORV usage may occur at any time on these sandbars and is often extensive.

The softshells in the lower Arkansas River usually nest in the first two weeks of June and newly hatched young appear in shallows off of the sandbars near mid-August. Interestingly, of over 100 spiny softshell eggs I have incubated, all have hatched between 10-15 August. Egg predation from raccoons and skunks is very high in south-central Kansas and I have observed skunks digging out eggs on sandbars near 1300 hr in late June.

Both the adults and the eggs of this species are edible. I have occasionally eaten both. The eggs, hard-boiled, fried or raw (the best way) were indistinguishable from chicken eggs. The turtle

mean is delicious when deep-fat fried, though greasy. The latter fault may, in fact, be easily blamed on the cook rather than the cooked.

Ouachita map turtles (Graptemys pseudogeographica ouachitensis) also utilize the same nesting beaches as the softshells, though usually laying their eggs a full week to ten days after the softshells have finished. I found a large female nesting near the treeline on a sandbar 28 yards from the water at 1400 hr on 16 June 1985. The air temperature was 87 degrees F, and the sand surface considerably hotter.

Populations of Ouachita map turtles on the lower Arkansas River are quite high, trapping and observation indicating from 100 to 120 per river mile. Males were caught in traps in a ratio of some 3:1 over females. Ouachita map turtles frequently appear during the winter months basking on snags and rocks. Winter activity has been noted as early as 4 February at air temperatures as low as 42 degrees F (see KHS Newsletter 64:15-16). One adult male was observed basking with a thin layer of ice remaining along the shore and the waterline at exposed snags. I have found several of these turtles floating dead in the water in winter months or frozen in surface ice, and presume they remained active too long and were caught by the rapidly dropping temperatures.

Trapping has shown an abundant though scattered population of common snapping turtles (Chelydra serpentina) in the lower Arkansas River. More interesting observations on this species have been incidental to fishing activities. On 20 May 1986, while pole fishing atop a drift pile, I witnessed a pair of these turtles courting. The male faced the female in approximately 17 inches of water, bobbing it's head and "tickling" the female's head and neck with his foreclaws. This went on for about five minutes whereupon the male surfaced for air and to look about. He then submerged and followed the female into deeper, darker waters. The female, a bit smaller than the male, reappeared in the same area ten minutes later. The male, easily distinguished by a shell disfigurement, was recaptured or observed in the same drift pile seven times from May to September 1986.

A channel catfish (Ictalurus punctatus) caught on 18 September 1984 contained a newly hatched common snapper in it's stomach.

Species such as painted turtles, red-eared sliders and mud turtles, common in area ponds and sloughs, are uncommon in the river itself. However, at least one ornate box turtle (Terrapene ornata ornata) was discovered in direct association with the river. A large female of this species was found soaking in a crater-shaped depression on a sandbar in the Arkansas River in late July 1986. The turtle was less than six feet from the river itself and in full, hot sun near midday some 50 yards from the nearest shade. The air temperature was 92 degrees F, and the animal appeared quite at ease in the water-filled depression it appeared to have excavated. Ornate box turtles in the area frequently congregate about springs, seeps, intermittent pools and still backwaters off the river during hot, dry weather. Some can be found completely submerged but most are in areas with abundant shade.

The sheer numbers of box turtles that share our land can sometimes be amazing. While traveling to Lawrence, Kansas, on 12

May 1986, we kept count of the ornate box turtles we observed in the north-bound lanes of the Kansas Turnpike (I-35) in the 220 miles between Wellington and Lawrence. The total was a surprising 178 individuals. Some were DOR, but most were alive, sitting on the shoulder of the highway as if contemplating the suicidal road-crossing before them.

On 2 June of that year we drove 122 miles from Oxford, Kansas, to Independence, in extreme southeastern Kansas. On this trip, we observed 22 ornate box turtles and 78 three-toed box turtles (Terrapene carolina triunguis), about a third of which were DOR.

Population trends of resident local herps are easily observed by persons in rural or small-town situations. Levels fluctuate yearly from species to species in turtles, as well as snakes, toads, etc. A record of these changes and fluctuations is interesting and useful to the herpetological community and may well be of some importance in the future to biologists and conservationists seeking long-term information on given populations. The Arkansas River is plagued by man-made difficulties, varying from pollution from insecticides to depletion of source water due to irrigation and diversion upstream.

Studies have predicted that the Arkansas River will be dry at Wichita by the end of this century, and at the state line of Oklahoma within the next fifty years. In any event, water levels have fallen dramatically in the past twenty years, especially the last decade.

The alligator snapping turtle (Macroclemys temminckii) I observed in the early 1970s are presumed to be the first casualties of these lowering water tables and sanding-in effects that have occurred in the past decade.

It should be interesting to see how well the turtles of this water course can cope with the problems they will face in the future.

Suggestions for Further Reading

- Capron, M. 1986. Winter activity noted in southern Kansas herps. Kansas Herpetological Society News 1. 64:15-16.
- Collins, J.T. 1982. Amphibians and reptiles in Kansas. Second edition. Univ. Kansas Mus. Nat. Hist. Pub. Ed. Ser. 8:1-356 pp.
- Plummer, M.V. 1975. Population ecology of the softshell turtle, Trionyx muticus. Doctoral dissertation, University of Kansas, 173 pp.
- Plummer, M.V. 1977. Activity, habitat and population structure in the turtle Trionyx muticus. Copeia 1977(3):431-440.

A Numerical Summary of Herpetological County Records and Size
Maxima Records for Kansas, 1975 to 1986

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The establishment in 1974 of the Kansas Herpetological Society coincided with the publication of the first edition of my Amphibians and Reptiles in Kansas. This fortunate coincidence resulted in a greatly increased interest by Kansas herpetologists in discovering or securing voucher specimens to document distributional records or size maxima records for the 92 species of amphibians and reptiles known to inhabit the state. After my book appeared, these voucher specimens were brought to me with such regularity during the first year that I decided to publish such records, and have done so annually for the last twelve years. These new records (plus those for fishes until 1983) were accumulated by me and published (with Jan Caldwell as co-author from 1976 to 1978; by myself thereafter) in the Technical Publications of the State Biological Survey of Kansas (1976 to 1983) and in the Kansas Herpetological Society Newsletter (1984-1987).

In order to record in one place for future reference these twelve titles, I have listed them below with their dates of publication. Additionally, I have summarized in Tables 1 and 2 the annual number of new county records and size maxima records for 1975 to 1986.

Collins, J.T. and J. Caldwell

1976. New records of fishes, amphibians and reptiles (in Kansas for 1975). Tech. Pub. State Biol. Surv. Kansas 1:78-97 (15 June 1976).

Caldwell, J. and J.T. Collins

1977. New records of fishes, amphibians and reptiles in Kansas (for 1975). Tech. Pub. State Biol. Surv. Kansas 4:63-78 (20 May 1977).

Collins, J.T. and J. Caldwell

1978. New records of fishes, amphibians and reptiles in Kansas for 1977. Tech. Pub. State Biol. Surv. Kansas 6:70-88 (2 June 1978).

Collins, J.T.

1979. New records of fishes, amphibians and reptiles in Kansas for 1978. Tech. Pub. State Biol. Surv. Kansas 8:56-66 (9 May 1979).

Collins, J.T.

1980. New records of fishes, amphibians and reptiles in Kansas for 1979. Tech. Pub. State Biol. Surv. Kansas 9:1-11 (13 May 1980).

Collins, J.T.

1981. New records of fishes, amphibians and reptiles in Kansas for 1980. Tech. Pub. State Biol. Surv. Kansas 10:7-19 (29 April 1981).

Collins, J.T.

1982. New records of fishes in Kansas for 1981. Tech. Pub. State Biol. Surv. Kansas 12:17-20 (30 April 1982).

Collins, J.T.

1983. New records of fishes, amphibians and reptiles in Kansas for 1982. Tech. Pub. State Biol. Surv. Kansas 13:9-21 (4 April 1983).

Collins, J.T.

1984. New records of fishes, amphibians and reptiles in Kansas for 1983. Kansas Herp. Soc. Newsl. 56:15-26.

Collins, J.T.

1984. New records of amphibians and reptiles in Kansas for 1984. Kansas Herp. Soc. Newsl. 58:14-20 (December 1984).

Collins, J.T.

1986. New records of amphibians and reptiles in Kansas for 1985. Kansas Herp. Soc. Newsl. 63:4-11 (March 1986).

Collins, J.T.

1986. New records of amphibians and reptiles in Kansas for 1986. Kansas Herp. Soc. Newsl. 66:9-16 (December 1986).

The members of the Kansas Herpetological Society deserve much credit and thanks for their efforts in collecting the specimens that resulted in these compilations. The distributional status of Kansas amphibians and reptiles is now probably better known than that for any other state in the U.S. I plan to continue to publish annual lists of Kansas county records and new size maxima, in anticipation of including them in my proposed third edition of Amphibians and Reptiles in Kansas.

Table. 1. Number of Kansas county records for amphibians and reptiles by year for the period 1975 to 1986 inclusive, as reported annually by Collins and Caldwell (1976 et seq.).

Published by	Year	Amphibians	Reptiles	Totals
Collins & Caldwell (1976)	1975	66	87	153
Caldwell & Collins (1977)	1976	35	52	87
Collins & Caldwell (1978)	1977	42	100	142
Collins (1979)	1978	10	30	40
Collins (1980)	1979	10	38	48
Collins (1981)	1980	7	61	68
Collins (1982)*	1981	-	-	-
Collins (1983)	1982	10	75	85
Collins (1984)	1983	6	37	43
Collins (1984)	1984	6	24	30
Collins (1986)	1985	12	29	41
Collins (1986)	1986	3	59	62
Totals:		207	592	799

*No herpetological records were published in anticipation of the publication of the **second edition** of Amphibians and Reptiles in Kansas, which appeared in April 1982.

Table 2. Number of new Kansas size maxima records for amphibians and reptiles by year for the period 1975 to 1986 inclusive, as reported annually by Collins and Caldwell (1976 et seq.).

Published by	Year	Amphibians	Reptiles	Totals
Collins & Caldwell (1976)	1975	3	4	7
Caldwell & Collins (1977)	1976	1	4	5
Collins & Caldwell (1978)	1977	1	3	4
Collins (1979)	1978	1	2	3
Collins (1980)	1979	1	4	5
Collins (1981)	1980	2	3	5
Collins (1982)*	1981	-	-	-
Collins (1983)	1982	1	10	11
Collins (1984)	1983	0	4	4
Collins (1984)	1984	0	5	5
Collins (1986)	1985	0	2	2
Collins (1986)	1986	1	12	13
Totals:		11	53	64

*No herpetological records were published in anticipation of the publication of the **second edition** of Amphibians and Reptiles in Kansas, which appeared in April 1982.