

# KANSAS HERPETOLOGICAL SOCIETY



## NEWSLETTER No. 116



JUNE 1999

### ANNOUNCEMENTS

#### **KHS ANNUAL MEETING CALL FOR PAPERS**

This is the official call for papers for the annual meeting of the Kansas Herpetological Society, which will be held 6–7 November at Pratt Community College in Pratt, Kansas. Those interested in making a presentation should submit a short abstract or title no later than 15 August to KHS President Chris Mammolit, Department of Wildlife and Parks, 512 SE 25th Avenue, Pratt, Kansas 67124-8174; telephone: 316-672-5911; email: chrism@wp.state.ks.us

#### **KHS GLOYD-TAYLOR SCHOLARSHIP**

Nominations are now due for the annual KHS Howard K. Gloyd-Edward H. Taylor Scholarship in Herpetology. Nominations for this award are open to any student enrolled in an accredited educational institution in Kansas or any KHS member enrolled in any accredited educational institution outside of Kansas. Students from primary school through university are eligible. Nominations should include typewritten details, not to exceed two pages, of the nominee's qualifications, plus name and address of the nominee and nominator. Self-nomination is excluded.

All nominations should be sent to KHS President Chris Mammoliti, Department of Wildlife and Parks, 512 SE 25th Avenue, Pratt, Kansas 67124-8174; phone - 316-672-5911; E-mail: chrism@wp.state.ks.us. The KHS Executive Council makes the final decision and announces the scholarship winner at the KHS annual meeting.

Those wishing to contribute to the scholarship fund should send contributions to KHS Secretary/Treasurer Karen Toepfer and note that the contribution is specifically for the Gloyd-Taylor scholarship fund. All contributions are tax-deductible.

#### **SUMMER HERPETOLOGY COURSE**

Emporia State University is offering a summer course in herpetology this year. Herpetology (Zo 459) and Advanced Herpetology (Zo 859) will be offered as 3 credit-hour summer courses at Emporia State University from 6 July–5 August 1999.

Instructors will be Dr. Lynnette and Greg Sievert. Classes will meet in Science Hall Room 46 from 8:00–10:30 am MTWR.

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

For information about enrolling for summer courses contact the ESU Admissions office (316) 341-5465 or the ESU Registrar.

For more information about the summer classes in Biology contact the Division of Biological Sciences at (316) 341-5311. To ask about Herpetology, contact Dr. Lynnette Sievert at (316) 341-5606 or email her at sievertl@emporia.edu

#### **TOPEKA COLLEGIATE SCHOOL HAS HAPPY HISTORY OF HERPETOLOGY**

The Topeka Collegiate School Science Department has been involved with a variety of herpetological related projects during the past 13+ years. A few of their projects are listed below.

1985–86: At least two teachers at Topeka Collegiate (then Shawnee County Day School) involved some of their students in the campaign to have the Ornate Box Turtle named the state reptile of Kansas.

1985–91: Topeka Collegiate students and teachers involved with several herp research projects in the Red Hills of Kansas.

1992–98: Students, teachers, and parents from Topeka Collegiate have been involved with annual herp counts and other herp related activities.

1993–94: The 4th–8th grade students at Topeka Collegiate School were involved in the campaign to have the Barred Tiger Salamander named the state amphibian of Kansas. The entire TCS middle school attended the bill signing that April at the governor's mansion at Cedar Crest.

1995–98: A variety of students, teachers, and parents

from Topeka Collegiate have been involved with attempts to ban Kansas' barbaric rattlesnake roundup. The 1997-98 special environmental action class was featured in dozens of newspaper articles, magazines articles, and television broadcasts as they worked on this issue.

#### THE COLLINS AWARD FOR PHOTOGRAPHY

Competition for *The Suzanne L. & Joseph T. Collins Award for Excellence in Kansas Herpetology* will feature photography in this odd-numbered year. Entries are restricted to photographs of an amphibian(s) and/or reptile(s) that is native to Kansas. Participants should be sure that their submissions are set up and ready at Pratt Community College between 8:00 am and 10:00 am on Saturday, 6 November 1999. Judging will be completed by 5:00 pm on that date. Submissions must be in the form of prints (color or black-and-white) no larger than 11 x 14 inches and matted to stiffboard for ease of setting up, viewing and judging. Name of the photographer must be printed on the rear of each mounted photograph. No more than five (5) submissions per photographer. Elected officers of the KHS

and CNAAR are not eligible to compete. Competing photographers must be KHS members and must be present for *The Collins Award* ceremony on Saturday evening. The participant chosen to have taken the outstanding photograph will receive a check for \$1000.00 and recognition by the KHS.

In the even-numbered year 2000, *The Collins Award* will be given at the KHS 27th Annual Meeting in Kansas City, Missouri, to the KHS member judged to have published or presented during 1998 or 1999 a scientific paper of exceptional merit about an amphibian(s) and/or reptile(s) native to Kansas.



## KHS BUSINESS

### KHS SPRING FIELD TRIP

The KHS Spring Field Trip was held 22–23 May in Ellsworth County at Kanopolis Reservoir and was the usual resounding success. A total of 32 participants flipped rocks, stomped through wetlands, drove endless roads, and spent hours listening in the beautiful Smoky Hills and managed to discover 514 specimens of 32 species of amphibians and reptiles. The most unusual find of the weekend was a young adult Western Diamondback Rattlesnake discovered in Horsethief Canyon. This snake was obviously released, as this species does not get closer to Kansas than central Oklahoma (see following article).

A complete listing of participants, species, and specimens will be in the annual herp count report in the next newsletter.

### EDITOR'S NOTE

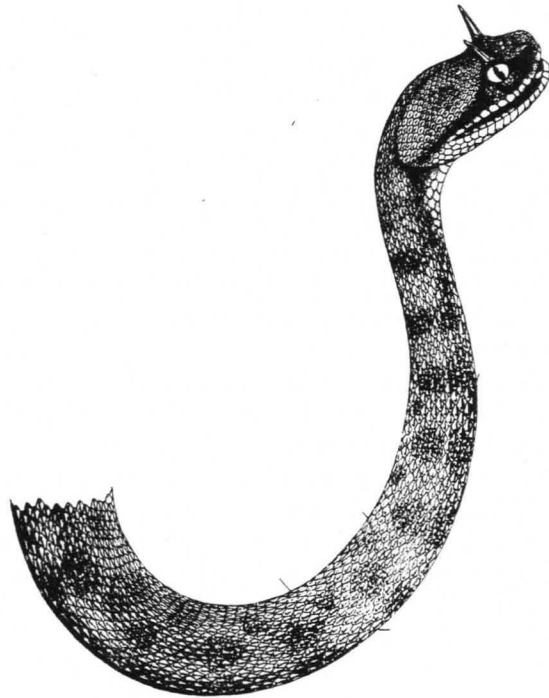
The annual KHS Herp counts will not be presented in this issue of the newsletter. On 4 June 1999, I was the recipient of a bite by a Western Diamondback Rattlesnake that caused me to spend three days in the intensive care unit of Lawrence Memorial Hospital and from which I am still recuperating. This snake was captured at Kanopolis State Reservoir on 24 May 1999, two days after KHS members captured a similar snake at the same locality during the annual KHS Spring Field Trip. This is at least the fourth diamondback recovered from Kanopolis in the last four years, which indicates to me that some unknown idiot is deliberately releasing this dangerous species into an area of high and unsuspecting human activity.

For the past two years, attempts have been made to introduce a bill into the Kansas Legislature that would ban the importation into Kansas of non-native dangerously venomous snakes. The primary rationale behind the bill was that these snakes present a serious risk to human health and safety. The bill was deemed frivolous by committee chairpersons on both attempts and never received serious consideration, much less a hearing. The bite I received was life-threatening and generated tens of thousands of dollars in medical bills, much of which will be paid for by state taxpayers, since this was an on-the-job injury. It is obvious that the fears of those attempting to get this bill passed were well-founded and I challenge the chairs of the past legislative committees to treat this as a frivolous issue in the future. I am sure that their political constituents would be interested in learning that their inaction has directly cost the taxpayers of Kansas.

I also call upon the law enforcement division of the Kansas Department of Wildlife and Parks to launch an

immediate investigation to determine and arrest the perpetrator of the releases of these rattlesnakes in the Kanopolis area. I will be more than happy to assist these officials in any way I can.

—EMR



## KHS BRINGS YOU GREAT NEWS OF THE WORLD

### RATTLESNAKE TAKES BITE OUT OF RESEARCHER

A Kansas University animal researcher was in serious condition at Lawrence Memorial Hospital after being bitten by a Western Diamondback Rattlesnake.

Eric Rundquist had the animal pinned with a device called a "snake stick" and was preparing to euthanize it when the snake freed its head and bit him on the hand. Rundquist immediately began [irrigating the wound] while his co-workers euthanized the snake and drove Rundquist from the KU Natural History Museum to the hospital.

The bite was a freak accident, said [KHS member] John Simmons, collection manager for the museum. Simmons was assisting Rundquist with the snake and euthanized it after the bite.

"Everything was being done properly," he said. "It just happened."

The snake was found by Kansas State University researchers working near Kanopolis in north-central Kansas. The researchers, unsure what type of snake they had captured, brought it to the museum. The museum usually receives dead specimens, so this was somewhat unusual Simmons said. Nevertheless, everyone who handled the snake was well-trained, he said.

Rundquist was calm on the way to the hospital, KU graduate student [and KHS member] Chris Sheil said. Sheil had assisted with the snake and drove Rundquist to the hospital.

"He had an autopilot reaction," Sheil said. "He was telling me on the way to the hospital that he had weekly training for snakebites (at a former job)."

Western Diamondbacks are not native to Kansas, Simmons said. He noted, however, that several others also had been found in the same area. Simmons believes the snakes are being set loose on purpose, perhaps by people trying to begin a snake population for a "roundup" — an activity in which snakes are killed for sport.

— Lawrence Journal World, 5 June 1999  
(Submitted by Ralph Black, Lawrence)

### MIDDLE SCHOOL STUDENTS FIND FREAKY FROGS IN STREAM

In the back corridors of the Natural History Museum at the University of Kansas, Eric Rundquist is studying some one-legged (sic) frogs that may be a dramatic signal of the threatened condition of Kansas waterways.

Or the deformities of the three amphibians found recently in a northeast Kansas stream could mean nothing, he said.

Rundquist, who is an animal science technician at KU in Lawrence, is the state coordinator for the Kansas chapter of a national group of scientists who study frog malformations.

And when a group of Royal Valley Middle School students recently found two deformed toads and one deformed frog, Rundquist said he was extremely interested in what they found.

The significance of frog deformations is undecided in the scientific community. However, many scientists theorize that frogs, which live in aquatic environments and have relatively thin skin, are strong indicators of a waterway's health. Frogs' sensitivity to pollutants, some argue, could be an early warning sign that streams and rivers are being filled with chemical poisons.

Rundquist has taken reports of abnormal amphibians from six counties in Kansas. They range from extra limbs to missing limbs to club-feet.

"The fact that we're seeing (changes in) a group of animals that have been around for hundreds of thousands of years and survived when other animals like the dinosaurs became extinct means these are probably some strong effects," Rundquist said.

That is why when some Minnesota students found a group of deformed amphibians in 1995, the discovery made national headlines. Since then, much attention has been focused on frogs.

Linda Geiger, a science teacher at Royal Valley Middle School, said she thought of the Minnesota students when her own group found the freaky frogs while on a field trip around the South Cedar Creek near Mayetta.

Geiger takes about 80 eighth-graders to the waterway twice a year to collect samples and monitor the water's condition. Although they don't set out to collect frogs, she said, this year they may have stumbled onto something rare.

The kids caught two deformed toads one day, and another when a different group returned the next day.

Geiger said she immediately knew they had found something potentially important, and she called Rundquist. She also hopes to correspond with Minnesota teachers and students to share data.

"I'm excited about the endless opportunities," she said. "This is just really a good chance for students to become involved with global issues. These things are happening all over, not just here in your own back yard."

When Rundquist saw the frogs, he was excited too. Although Rundquist said it would be a stretch to assume humans are in danger simply because frogs are developing with malformations, the potential for trouble is there.

Rundquist plans to scrutinize the disfigured frogs with microscopes and X-rays to unlock the secrets of their deformities.

Preliminary research indicates they may be caused by parasites or excessive chemicals in their watery environments.

If the problem is linked to chemicals, the environment could be reaching a critical point, Rundquist said.

"It's a touchy issue," he said. "This is an agricultural state and many people depend on these chemicals for their livelihood.

"But if there is a direct relationship to human health, something should be done."

—Topeka Capital Journal, 26 October 1998  
(Submitted by Ethlyn Irwin, Topeka)

## **SEDGWICK COUNTY ZOO CURATORS LEAD CONSERVATION EFFORTS IN CENTRAL AND SOUTH AMERICA.**

Mike Quick remembers the scene this year on the Paraguay border. Truck after truck, one every 30 minutes, rumbled down a highway into neighboring Brazil, each truck loaded with 40-foot-long tree trunks measuring 3 feet wide.

Quick's companion, who works at the zoo in Paraguay's capital, said, "There goes the blood of Paraguay."

Quick, the curator of mammals at the Sedgwick County Zoo, spends weeks each year in Paraguay trying to save those forests. But his work there, which he began in 1994, doesn't take him into the tropical rain forests, which boast the richest biodiversity on the planet. It takes him to the zoo in Paraguay's capital, Ascunson.

Most of Paraguay's people live in cities, no more likely to see a jaguar than people in Chicago are to see a grizzly bear, Quick explained.

But they do visit Ascunson's zoo, about 4,000 people each weekend. On Quick's first month long visit there, he found a haphazard collection of animals, cages falling apart, animals being teased.

In five years, Quick has helped draft a master plan for the zoo and trained keepers in building exhibits and caring for animals. Last year, Ascunson's zoo director visited Kansas to tour the Wichita zoo and others in Kansas and Nebraska.

"The turnabout has been tremendous," Quick said. "There's really community pride in the zoo now."

That translates to more public support for government conservation programs, Quick said, some of which he is consulting on.

He is helping the Paraguayan agriculture ministry de-

velop a new national park in the northwest part of the country. In 1972, naturalists in the Chaco region found a giant peccary, a wild pig species they'd previously thought existed only as a fossil animal.

Another little seen species is the bush dog, a wild dog that lives in underground burrows and hunts at night. Quick has arranged for a doctoral student at Kansas State University to do field research on the bush dogs in a preserve.

Quick works under the umbrella of Partners of the Americas, an exchange program for economic development, education and the arts as well as the environment. Paraguay, a landlocked country between Argentina and Brazil, is Kansas' partner country.

Quick is not the only one at the Sedgwick County Zoo racking up frequent flyer miles on flights south.

Until this summer, bird curator Jon Seltz frequently flew to Costa Rica to direct programs at IPEAT, a center in the central mountains of Costa Rica, to rehabilitate tropical birds confiscated from poachers supplying the pet trade.

For birds, Latin America is part of Kansas' ecosystem. Migratory birds such as orioles and tanagers, the robins that announce spring—even the Kansas state bird, the meadowlark—winter in Central America. Soon, the flocks from the Rockies to the Atlantic will funnel down to scattered forests that add up to an area the size of Maryland.

"Losing an acre of habitat there is like losing whole states here," Seltz said.

The help preserve Kansas' summer songbirds, Seltz is exploring a project in Costa Rica that focuses on persuading people there not to keep the birds as pets, which many do, he said.

"We can buy as much rain forest as we can," Seltz said. "But we won't save it without education and finding a way for the people there to coexist with it."

Zoos are working with local people to learn how to profit but protect their natural resources, said Karen Graham, the Sedgwick County Zoo's curator of fish, reptiles and amphibians.

Forty million tropical fish are taken each year from Brazil, but 95 percent die before reaching pet shops in the United States. So zoos are working with fishermen to improve the way they handle fish to minimize death.

Graham is working in the Amazon River basin as educational coordinator for an international task force studying why frog species are vanishing from seemingly healthy forests there.

The frogs may be sounding an alarm like a canary in a coal mine - of environmental damage from pesticides or ozone depletion that will eventually affect people, too.

The loss of frogs and other species may affect people, too.

The venom of poison dart frogs, for example, is being studied as a non-addictive substitute for morphine. Frogs' sticky skin secretions are being refined into a surgical glue.



The venom of the deadly bushmaster snake is being tested in pharmaceutical company labs to see if it can yield drugs.

"We don't know what we are going to lose before we find it," Graham said.

—Wichita Eagle, 22 September 1998  
Submitted by Eva Williams, Wichita

## WOOD FROGS RETURN TO MISSOURI

Owen Sexton has done a lot of things in his 71 years, but one of the things he is proudest of is the return of the Wood Frog to this part of Missouri.

What started as a pet project 20 years ago has turned into something of an accomplishment for the biologist at Washington University in St. Louis—and all without huge grants.

"I would have been happy with just establishing a resident population in one little pond," Sexton said.

Instead, the amphibians spread to areas far removed from the pond that started it all in 1980. "I think what we have shown is that species that had been virtually wiped out can come back, given the proper environment and a little luck."

Records indicate that the Wood Frog, *Rana sylvatica*, was present in northern Missouri at the turn of the century, but was nearly absent in the region, which includes the St. Louis area, by 1980.

The Wood Frog mates in small ponds for a week to 10 days each year.

Females deposit eggs in egg masses in shallow water and the eggs hatch tadpoles that eventually lose their tails, grow legs and become frogs.

Then they go off to live in the woods until it's time to mate again the following spring, usually in the same pond.

In 1980, the Missouri Department of Conservation located an isolated pond in Warren County in which Wood Frogs still mated. An agent collected an egg mass and delivered it to Sexton. Sexton placed the egg mass—produced by a single female Wood Frog—in a small pond at Washington University's Tyson Research Center.

The repopulation was on.

The frogs from that first batch thrived and expanded into areas around the center, even crossing Interstate 44 to take up residence on the other side.

"We have no idea how they got across the highway," Sexton said. "Just lucky, I guess. Or fast. We have talked to everyone we know to talk to — the St. Louis Zoo, the Conservation Department — and none of them had reintroduction programs going in that area. Those frogs had to have come from our pond. I call it serendipity."

"No one has figured that one out," agreed Steve Spezia, supervisor of the St. Louis Region of the Missouri Department of Conservation. "But the frogs got there.

"Through Owen's research and cooperation, we have established something that probably wouldn't have been there," said Spezia, who calls the biologist his mentor in the area of amphibians.

No one knows why the frogs disappeared in the first place, but Sexton trots out the usual suspects: destruction of their environment by development and such seemingly harmless moves as stocking ponds with fish — many of which feed on the amphibians in their larval stage and can wipe out entire populations.

"Amphibians are on the decline in a large part of the world," he said.

"It's no mystery. You can't build subdivisions without destroying ecosystems."

The lean, bearded professor has studied population dynamics of amphibians in the Cloud Forest of Venezuela and lived for a while with the Choco Indians of Panama in 1961 while assessing populations of amphibians near the site of the proposed Pan American Highway.

He has checked out anolis lizard populations in the wilds of Belize and searched for rattlesnake dens in the high plains of Colorado.

Sexton, who joined Washington University in 1955, also is a co-founder with "Wild Kingdom" founder Marlin Perkins of the Wild Canid Survival and Research Center. The center has succeeded in breeding Mexican gray wolves for reintroduction into the wild in Mexico and the southwestern United States.

The Tyson research center comprises about 2,000 acres of wooded land surrounded by another 5,500 acres of parkland. That much insulation from the rapidly developing, surrounding suburban areas provides Sexton the isolation needed for his research.

On a recent spring-like day, Sexton guided a reporter up a gravel track to a shallow vernal pool. Such ponds typically fill up during the winter and spring and then dry up as the summer progresses. Even the ones that remain year-round are too shallow to support fish.

On this day, about 100 male Wood Frogs about 2 inches long swam on the surface, trying to attract females with croaks that sounded more like the quacking of ducks.

"It looks like a good population this year," said Sexton as he walked carefully around the edges of the pond, peering into the clear water. He pointed out fist-sized Wood Frog egg masses that appeared blue-black in the water. Farther down the bank he spotted a fluorescent green lump that was a salamander egg mass covered with a warming blanket of algae.

The algae thrives on the egg mass and provides oxygen and food to the growing creatures inside.

Within a week, he said, the adult frogs would be gone from the pond, having moved back into the woods where they live most of the year, eating insects, earthworms and even other small frogs and being eaten by herons, hawks, fish, mink and raccoons.

"They are an important link in the food chain," said Sexton, "when there are enough of them. You can often determine how robust an ecosystem is not by the number of species, but by the number of individuals within a species. And there are now a lot of Wood Frogs out there."

Around the pond is a "drift fence," which funnels small creatures into buckets for counting as they try to get to the pond. Sexton says he believes most of the frogs and salamanders that mate in the pond go there on one night in a mass migration from an area of about 100 meters around the pond.

The count this year indicated seven species of frogs and three kinds of salamanders had headed for the pond.

Sexton, who has worked with reptiles and amphibians for most of his life, says he believes a defining moment in his career came when his parents, catering to his interests, presented him with a snake pit in their Merchantville, N.J., backyard for his 12th birthday.

—Associated Press, 18 April 1999

(Submitted by Larry Zuckerman on his way to Florida)

## TIMBER RATTLESNAKES NEED PROTECTION

Jay Montfort put a fence around his stone company's property to keep out the rattlesnakes.

"They're rattlesnakes. They're poisonous. They're deadly," he says. "It seems pretty fundamental that you should be able to keep deadly things off your property."

Not in this case.

Timber Rattlesnakes are a threatened species in New York, and the state claims the fence violates New York's Endangered Species Act.

Lawyers for the state will be in court as early as today to ask that the 4-foot wire-mesh fence be torn down before the snakes stir from hibernation.

"We have an obligation to protect not only the attractive species, but the rattlesnakes and the other less cuddly animals that make up the biodiversity of the state of New York," says Richard Brodsky, chairman of the state Assembly's environmental conservation committee.

The state claims the fence would have the effect of "disturbing, harrying and worrying" the dozens of snakes. Theodore Kerpez, a state wildlife biologist, says in court papers that the fence would block the snakes from their usual places to hunt, bask in the sun and reproduce, and would probably cause them "physiological stress."

The snake fight in a suburban area north of New York City has become intertwined with a larger controversy dating to 1990.

That's when the Montfort family's quarry and cement-block business applied for permission from the state Department of Environmental Conservation to mine rock from the parcel of land, which runs along the bottom portion of the Sour Mountain ridge in the Hudson River Valley.

Among the environmentalists opposed was Scenic Hudson, which owns the top of the wooded ridge. Warren Reiss of Scenic Hudson said the mine would scar the land, kick up dust, make noise and perhaps contaminate groundwater.

Other residents have said they are happy about the 50 full-time jobs Montfort says the project would bring. The Fishkill town board has supported it.

The controversy simmered as the Sour Mountain application wended its way through New York's environmental review process. Then, in 1996, an off-duty state wildlife employee discovered the rattlesnake den 260 feet from the Sour Mountain property.

The state soon demanded a new report from Montfort assessing the effect the mining would have on the rattlesnake den, which Reiss says may have existed for up to 7,000 years.

Accusing the state of a stall tactic, Montfort's company instead sued the DEC to force a resolution of the other environmental issues before studying the snakes. He has cast the issue as rattlesnakes vs. jobs.

"What is it, Governor Pataki? Rattlesnakes or jobs? Brie and champagne or business and employment?" Montfort employee Scott Birkler said in an open letter on the company's Web site.

Montfort accuses the state of colluding with the environmentalists who want to stop the mining. DEC spokesman Sam Thernstrom denies it: "The administration is working according to law, regulation and common sense."

Nothing is going on at the Sour Mountain site right now. The main Montfort Bros. manufacturing plant is in Fishkill, a few miles away.

The roughly two-mile fence started going up in January, but the state persuaded a judge on March 5 to halt construction.

A hearing on whether to tear down the half-completed fence is being expedited because the rattlesnakes are expected to wake from their winter's sleep soon.

— The Wichita Eagle, 19 March 1999

(Submitted by Larry Zuckerman on his way to Florida)

## THE TERRIBLE TURTLE TRADE

Around the world, turtles are being sold as pets and spreading disease. They are even dissected live for their meat. Rabbits they were not. Flopsy, Mopsy, and Cottontail were hatchling turtles, Red-eared Sliders the size of silver dollars, trucked to New England from "turtle ranches" in the South and casually tended by my two young sisters in the 1960s. They came with their own frying-pan-size pool with a plastic palm tree in the middle. When they died (which happened about twice a month), our mother would rush down to the pet store and buy new ones before my sisters returned from school. Sometimes Flopsy, Mopsy, and Cottontail died from overwhelming bacterial infection-i.e., they "went septic." At other times they died from parasites or malnutrition or were eaten by our pet raccoon. My sisters wondered why extra pools were stacked all over the cellar and why their turtles never grew. Basically, they were disposable pets.

Since then, there have been big changes in the pet-turtle industry.

Some species are no longer available, and prices for others have soared. This is because a third of the world's 266 known species are threatened with extinction. Although the pet trade is only one of many threats, it has shown that the sustainable harvest of adult turtles is, as one herpetologist puts it, "an oxymoron." The stunning success of the order Testudines over the past 210 million years has not been a function of fecundity. Turtles don't spew eggs like fish and amphibians; instead, they rely on longevity, replacing themselves over decades. One wild adult represents an enormous genetic investment.

And yet wild adult turtles are legally and routinely caught and sold on domestic and foreign markets. Now that old-world turtles are in short supply and, in some cases, protected, North American Box Turtles are in greater demand. Box Turtles, which can live for 120 years, are legally caught and peddled in this country. In Louisiana, the State Department of Wildlife and Fisheries is waging a fierce lobbying blitz to get American Box Turtles removed from Appendix II of CITES (the Convention on International Trade in Endangered Species, to which 144 nations are signatory) so they can be sold abroad as well. The Appendix II designation permits foreign trade only if there's proof it won't hurt wild populations. But there is no such proof, says John Behler, head of herpetology at the Bronx Zoo and chair of the Tortoise and Freshwater Turtle Specialist Group of the International Union for the Conservation of Nature and Natural Resources. He calls Louisiana's quest to redevelop the world market "harvest-till-they-drop management."

Wood Turtles, which can live for a century and don't reach sexual maturity until they are 10 to 20, were rejected in 1994 for threatened status under the Endangered Species

Act. Now they are so popular as pets that poachers have stripped entire watersheds. "In some states you can tell when poachers have been through a drainage," says turtle researcher Jim Harding of Michigan State University. "One ridge over from a healthy population, there'll be nothing. They pick them up by the gunnysack. Even though we've stopped that here in Michigan, every time the Boy Scouts canoe down a stream, they pick up one or two. Populations get knocked off suddenly by experienced poachers or over years by incidental collecting."

Steve Garber, now a professor at Embry-Riddle Aeronautical University, in Prescott, Arizona, spent 20 years studying a Wood Turtle population on 2,471 acres controlled by the South Central Connecticut Regional Water Authority. All was fine with his 133 marked subjects until 1983, when the watershed was opened to public recreation. Immediately the turtles began to disappear.

Garber was baffled. He checked disease, road mortality, predation.

Finally, he discovered hikers were taking the turtles home one at a time. In 1991, only 14 remained. In 1992, they were gone.

The foreign and domestic sale of Wood Turtles is illegal, but some states let people collect them for pets. So all pet Wood Turtles are said to have been collected rather than purchased, and wildlife officers can rarely make a case against poachers. In Florida, 20 and 30-year-old adult turtles (supposedly bred in captivity) had been arriving at wholesalers by the pickup truckload and finding their way to Europe. Equally stressed by the pet trade are Spotted and Map Turtles. Bog Turtles, declared federally threatened in 1997, go for about \$1,000 each on the black market. "It seems impossible to think of someone catching a robin and selling it at a pet store," says Garber. "We now take it for granted that those animals are totally off-limits, but in many cases catching and selling wild turtles is completely legal."

Pet stores still carry Red-eared Sliders, selling them for \$10 to \$15 each, but the silver-dollar-size ones are no longer available.

In 1975 the Food and Drug Administration banned domestic sale of turtles less than four inches in length because they were causing an estimated 300,000 cases of salmonellosis annually. Ranches are fed slaughterhouse offal rich in salmonella, and when children would put the hatchlings in their mouths, they'd get sick. It wasn't that the big ones were any less riddled with disease, it was just that they didn't slide so trippingly over the tongue. The ranches (which aren't ranches at all but fenced-in ponds into which adult sliders from the wild are continually dumped for breeding stock) responded by catching even more wild adults for sale in the United States and by shifting the hatchling trade overseas. Today about 8 million hatchlings, most of them laden with salmonella, are annu-



ally exported to 60 nations.

Venting excuses and apologies for the pet-turtle trade is Marshall Meyers, executive vice-president of a trade group called the Pet Industry Joint Advisory Council. But when I asked him if it was hypocritical of the United States to declare mouth-size turtles too dangerous for anyone but foreigners, he gave me an honest answer: "Since when has the U.S. government not been hypocritical?"

The pet turtle business is infecting more than just people. "We are, in fact, exporting our turtle-disease problems around the world, and the potential for problems of epidemic proportions to wild stocks is high," Behler warns. When the pets get sick or their owners tire of them, they are tossed or flushed into habitat occupied by native turtles. Red-eared Sliders, for example, native to the Mississippi drainage from Illinois south, are now established in the wild all over the world. In Washington they are threatening the vanishing Pacific Pond Turtle. In the southeastern states they are compromising the genetic integrity of Yellowbelly Sliders by breeding with them. Two years ago the 16-member European Union banned the import of Red-eared Sliders because of the damage they are said to be doing to European Pond Turtles. Meanwhile, in the Mississippi system—the one place Red-eared Sliders belong—they are in decline.

Two turtle species—Desert Tortoises in the West and Gopher Tortoises in the Southeast—are getting clobbered by a fatal respiratory-tract infection that they may have contracted from imported tortoises unleashed in their habitat. Nearly 250,000 desert tortoises are kept as pets in California, Arizona, and Nevada, and wherever the respiratory disease is encountered, feral tortoises are found nearby. Turtle authority Bill Belzer, a biologist at Clarion University, in Pennsylvania, reports, "More than 50 percent of the individuals in some desert-tortoise populations now carry this contagious, incurable disease, pressing the species toward extinction." Recently the malady has shown up in North American Box Turtles.

Quickening the spread of turtle disease here and abroad is the belief of some Asians that good karma can be had by being kind to captive turtles—i.e., setting them free. In America and around the world, you can buy wild-caught specimens for the express purpose of releasing them—except that in many cases they don't belong in the places they are released. In New York City, a dealer of Florida Softshells—a species that lives in warm freshwater habitats—recently sold a load to a Buddhist temple, then watched while the animals were ceremoniously dumped into New York Harbor.

Last December I visited the Turtle Hospital of New England, in Upton, Massachusetts—the only health-care facility in North America for land and freshwater turtles. It is directed by Barbara Bonner, an intense young veterinarian who teaches reptile clinical medicine at Tufts Univer-

sity. Turtles from all over the world stretched their necks at us as we walked past their plastic tubs. They were begging for food, usually processed pellets. Some of the patients that weren't begging had intravenous catheters protruding from their necks or fiberglass-and-epoxy patches on broken carapaces and plastrons. Some were septic and oozing blood through their shells. A few were on oxygen. Bonner showed me an enormous fish hook she had extracted from the gullet of a now-robust Florida Softshell legally harvested by baited setline and legally sold at a Boston fish market. With a Doppler ultrasound probe we listened to the whoosh-shoosh-whoosh heartbeat of a healed Flower-box Turtle and the much slower pulse of a diseased one.

Unlike birds or mammals, abused turtles take a year or two to get sick. Even with the right treatment, which few vets other than Bonner are trained to provide, they take a year or two to get well.

According to Bonner, virtually all turtles from pet stores are desperately sick when purchased. "It takes about six months just to clean them up and rid them of parasites," she says. "Some are half the body weight they ought to be. It's estimated that 95 percent of the wild turtles that enter the pet trade are dead within a year.

Pet stores don't make their money selling the turtle; they make their money selling the \$250 setup that goes with it. So if your pet dies, it doesn't matter to them, because with that kind of investment, you're going to buy another."

Reptile dealers (who sell hundreds of species to the pet trade) frequently salvage wild turtles from food markets in China, where it is believed that humans can acquire longevity by eating turtle meat.

There is scant interest in eating captive-bred turtles, because they are perceived, correctly, to be not long-lived. The Chinese consumed their own turtles long ago; but in the late 1980s, when their currency became interchangeable on the world market, they began consuming everyone else's. All the turtles of Southeast Asia—5 species, a quarter of the world's total—are now in grave danger.

"It's the greatest reptile crisis since the demise of the dinosaurs," declares Bonner.

In July 1997, American veterinarian and turtle collector William McCord visited two Chinese turtle markets in the cities of Guangzhou and Shenzhen. He reported seeing about 10,000 turtles sold over a two-day period. And after a recent trek to Vietnam, Ross Kiester of the U.S. Forest Service's Global Biodiversity Team filed this report: "Wherever we looked there was what we called a reverse pet shop—a storefront with signs advertising it would buy any kind of turtle. We've recently been told that those stores are closing since there are no more turtles left to buy."

Ironically, the U.S. pet trade provides some of these species their one chance to escape extinction. If enough people like Bonner can purchase food-market refugees from pet dealers and get them to reproduce in captivity,

there's a possibility of someday restocking Southeast Asia. That, in fact, is the primary mission of the Turtle Hospital of New England, whose Turtle Bank works with nine needy Southeast Asian species that Bonner has identified as most practical to obtain and breed. The main problem is that the turtles arrive in frightful condition. Many haven't eaten for six months, and some have been packed on ice. Having been kept in filthy water and mixed with turtles of all species, they are loaded with pathogens and parasites. Typical was the Flower-box Turtle mailed to the hospital by a colleague in Chicago. When I saw it, its eyes were crusted shut. It was septic, emaciated, on a feeding tube, and receiving 10 medications, some intravenously. Yet, tenuous and pathetic as its existence was, this turtle was one of the lucky ones.

The bank's two specimens of *Geoemyda yuwonoi*—a species for which there is not yet a popular name because it was discovered only three years ago, on an island in Southeast Asia—were doing somewhat better. They had arrived from a Chinese food market carrying one egg each (the normal clutch size); but they were so sick that the eggs would have rotted inside them. To save their lives, Bonner had administered a drug to make them lay the eggs, which to her surprise seemed viable and are now in the incubator.

"How do we stop the slaughter?" I asked her.

"You don't," she said. "You establish refugee populations in as many places as you can, and you wait for the animals to become extinct in the wild and for people to value them alive." The video Bonner ran for me—shot by McCord at the turtle markets in Guangzhou and Shenzhen—convinced me that she had it right. Trucks, crates, and barrels were packed with live turtles, including at least five species listed on Appendix I of CITES—the critically endangered designation, which forbids trade among member nations, of which China is one. Since there is no refrigeration at the Chinese markets, turtles must be kept alive, but this in no way interferes with preparation of the animals as food. Butchers carefully remove carapaces and plastrons with chisels and hammers. Fat is sliced out, unwanted organs discarded, and the still-living beasts stacked on display counters. "I can't watch this; I'll be back," announced Bonner when a butcher began chopping away at a large softshell.

After the carapace and several pounds of organs had been removed, what remained of the turtle bit the knife and was beaten back.

Even Chinese markets in the United States butcher turtles this way.

Humane laws that apply to warmblooded creatures don't apply to reptiles, because the public somehow equates the ability to experience pain with the ability to thermoregulate. In 1981, Congress asked the Fish and Wildlife Service to promulgate regulations for humane and healthful importation of reptiles, but the agency didn't get around

to it until 1997. When the draft regulations were published, the pet industry shrieked and the Fish and Wildlife Service retreated. At this writing, the regulations are said to be in the works again, but that could mean anything. The airlines have regulations for both importation and exportation, but these are commonly ignored, because only about 7 percent of the shipments are ever inspected. "People don't realize that while they are on the plane sipping their sodas there are turtles and lizards below them, bleeding to death," says Teresa Telecky, director of wildlife trade for the Humane Society of the United States.

That's not just animal rights hyperbole, according to wildlife inspector Joe Ventura of the Fish and Wildlife Service, who works the Port of Los Angeles. "We've seen turtles stacked on their sides like dinner plates so they couldn't extend their limbs," he says.

Turtles destined for the pet trade are often shipped in cardboard boxes that get crushed when cargo shifts, and it's not unusual to see these boxes soaked with blood. In one shipment from Tanzania, 511 Pancake Tortoises and 307 Leopard Tortoises had been packed on top of one another. Fifty animals were dead, 400 appeared near death, and almost all were grievously dehydrated. There was much blood, many broken carapaces, and dozens of missing legs. About 50 females carried broken eggs.

"I am a turtle keeper," says Allen Salzberg, director of the Society for the Conservation of Reptiles and Amphibians. "But I also believe that the continued shipping of turtles into the U.S. in the present unregulated state is pure consumer fraud. Stress kills turtles. What can be more stressful than being crammed into a box with hundreds of other animals for a week or more? Even if an animal survives, the damage has been done, and it's only a matter of time until it dies."

But the pet industry's Meyers told me, "Our industry advocates humane transport rules by the airlines. In fact, we forced them to put in some humane standards back in the early 1970s. You don't condemn a whole activity by an isolated shipment." When I asked him if, given all the problems of depletion, genetic contamination, and disease, people should keep pet turtles at all, he said, "Should people keep dogs? Dogs have disease, too. Dogs run free. There's a split in the environmental community. There are some people who believe in sustainable use. There are some that don't." I guess it depends how you define sustainable.

Something was bothering me about all the turtle conservationists I talked to. If having turtles for pets is as reprehensible as they claim, how is it that almost all of them have kept and/or keep pet turtles? "That's the conundrum," explained Bonner. "The only chance turtles have is for people to care passionately about them. But if you grow up without ever having turtles as pets or ever coming close to them in the wild, you become an adult who doesn't care if

turtles stay on the planet. People who want a turtle shouldn't go to a pet store, and they shouldn't catch one. They should contact a turtle society and get the name of a reputable breeder. Turtles sold by breeders are expensive—maybe \$150 each—but more likely to be healthy. People need to understand that turtles are long-lived; nobody should buy one without being willing to make a 50-year commitment."

Having watched my sisters' disposable Red-eared Sliders cascade into the black hole of pestilence and predation, and having raised a turtle-doting daughter of my own, I now offer this advice to parents: All children who beg for a pet turtle should be ignored for at least two months. If they persist after that, it's okay to listen. Ask why they want one. Fondness for the television cartoon Teenage Mutant Ninja Turtles is not a good reason. (When the series debuted in Britain, one pet dealer reported a 400 percent increase in turtle sales.) If you know someone who keeps a turtle, ask if your child can scrub the green scum off the sides of the tank and the rocks, dump the smelly water, and watch while the turtle shreds its food and, as likely as not, bites the hand that feeds it.

After four months, if the child asks again, provide the phone number of a top breeder and announce that it's okay to start saving money.

—Audubon Magazine, 1 March 1999  
(Submitted by Alan Salzberg, New York)

## SNAKES WIN ANOTHER ONE

Macedonia, Alabama—Punkin Brown stalks around the altar of the Old Rockhouse Holiness Church, his head bobbing, his voice a stream of guttural barks. The congregation is clapping and shouting.

Nonchalantly, he plucks a 3-foot yellow Timber Rattlesnake from a wooden box.

The rattler stiffens in a "V" shape in Brown's right hand as he hops across the stage on one leg.

"They say it won't bite", the evangelist shouts. "If it won't bite, there ain't no sense in being scared. I know one thing: That the Lord told me it was all right. The Lord said it would be all right."

Brown, 34, knows they can bite. The preacher from Parrottsville, Tenn., has been bitten 22 times since he began handling serpents 18 years ago. His wife, Melinda, 28, mother of their five children, died of a bite three years ago at a revival in Kentucky.

On this October day on Sand Mountain in northeast Alabama, the family history repeats itself.

Brown doesn't flinch when the rattler sinks a fang into the base of his left middle finger. If he is scared, it doesn't show.

"God don't ever change," he says, his voice ever-so-slightly less forceful than before. "God don't ever fail, and He never will."

Brown hands the snake to another man and walks behind the altar. A man in a striped shirt follows behind, stroking Brown's head and neck, his own head jerking violently up and down.

Brown is calm

"God's still God, no matter what comes," Brown says, his voice relaxed and reassuring, the fire and brimstone gone. "No matter what else. God's still God."

These are his last words of preaching.

Brown starts to fail. He walks in front of the altar, then back up and paces a little. He braces himself, his left hand on the pulpit, his right on pastor Billy Summerford's shoulder. His head is down and he swallows hard.

Brown raises both hands in the air. His friends hold him up for a few seconds, then lower him to the floor.

A video camera takes in the scene and the incongruous, sweetly smiling face of an oblivious little girl. Someone asks Brown if he wants a doctor. He shakes his head and points to the sky.

"JEEEEEEesus, have your way, JEEEEEEesus," the congregation shouts in warbling voices.

"Right now God! Right now Jesus," the man in the striped shirt screams toward the ceiling. "Help my brother right now. I'll glorify you. I'll praise you for it."

After about 10 minutes, the church goes silent, except for some muffled sobs. The little girl still smiles, uncomprehending.

Brown is dead.

The New Testament's book of Mark calls serpent handling one of the "signs" that true believers must follow. And John Wayne "Punkin" Brown, Jr., a rising star in the Pentecostal faith, was a true believer.

Brown felt he was following God's law when he defied a judge's order following the death of his wife in August 1995. The order restored to him custody of his children from his in-laws, but with conditions: No poisonous snakes around the house and no more snake-handling services for the children.

Now, the newly orphaned children are the objects of a new custody fight, pitting Appalachian tradition against child-welfare law, faith against science, grandparent against grandparent.

Punkin Brown's parents, Peggy and John Brown Sr., who have a snake handling church in North Carolina, are seeking custody of Jonathan 12; Jacob and Jeremiah, 7; Sarah, 5; and Daniel, 4. But on Oct. 7, as their son's body was laid out for viewing at a funeral home, a juvenile court judge in Cocke County, told the Browns that he needed to

determine if the children they had helped raise would be safe with them. They, too, have admitted violating the order.

In a preliminary decision, Judge John Bell gave temporary custody to the children's maternal grandmother, Mary Goswick of Plainville, Ga. She is a former serpent handler, though she says that's all in the past.

An investigation into who should raise the children is continuing; no date has been set for a hearing on permanent custody.

The custody case has forced believers to explain their faith once again to a world they wish would just leave them alone.

Cynthia Porter, a serpent handler from Kingston, Ga. and a friend of the Browns, says the practice is misunderstood. "I have a college education. I work in the medical field. I'm not stupid. I'm no occult. I'm not uneducated," she says. "I know exactly what I'm doing."

Brown found himself deciding between loving God and loving his family. In the end, he decided they were one in the same.

"I let people talk me out of my handling of serpents, and I felt that I had let Melinda down for this," he said. "I only hope the Lord doesn't hold it against me."

Ralph Hood, a psychology professor at the University of Tennessee-Chattanooga and friend of the Browns, says snake handlers forbid their children to touch serpents and often keep the kids at the back of the church. He says he has never heard of a child being killed or even injured at a snake-handling service.

Removing the Brown children from a loving home and from the church their parents died for is not their best interest, he said.

"Within that tradition, the children can understand it that God has called (their parents) home, and that someday they will be reunited with them," says Hood, who testified on Punkin Brown's behalf following the wife's death.

Porter said it is an outrage that families can be punished for risking their lives for religion.

"They don't take race car drivers' kids away from them," she says. "They don't take boxers' kids away from them. They are standing there beating each other to death, literally. They're committing suicide. No. God giveth and God taketh away. Our lives are in his handsóperiod."

Goswick thinks God has delivered her grandchildren to her.

Bell says he hopes to schedule a permanent custody hearing before Christmas. Meanwhile, the children are enrolled in their new schools in Georgia.

—Knoxville News-Sentinel, 8 December 1998  
(Submitted by Nancy & Jerry Green, Knoxville, Tenn.)

## **DEMAND FOR PYTHONS RISING IN VIETNAM AS BOOMING RAT POPULATION DEVOURS CROPS**

Demand for pythons is rising in the Mekong Delta because they have proved effective in killing and frightening off rats that are devastating crops, a Vietnamese official said last month.

The official said the price for a month-old python has shot up to \$4 from 70 cents several months ago. An adult python can go for \$21, a large sum for poor farmers.

Officials said 81 million rats had been killed by the middle of December by traps, poisons or other methods compared with 55 million rats for all of 1997.

The central government launched an anti-rat campaign last year.

But there also have been human casualties.

Dozens of people have died from accidentally stepping on electric rat traps or ingesting poisons meant for rats.

No statistics on Vietnam's booming rat population are available. It is believed to be in the hundreds of millions.

Rat numbers have been growing in recent years because of increased availability of food and the shrinking number of predators, such as cats or snakes, which have been served as meat or sold to China for traditional medicines.

Officials estimate that rats are causing \$5 million to \$6 million in damage a year to crops.

The government last year decided to close restaurants that served cat. It also banned exports of cats and snakes and encouraged people to raise cats.

— The Baltimore Sun, 17 January 1999  
(Submitted by Alan Salzberg, New York)

## **A CHILDREN'S ZOO LOOKS FOR A HOME FOR GOPHER TORTOISES**

An owner of the children's zoo was looking for a home Friday for five Gopher Tortoises that outlived a man who cared for them for more than 50 years.

"We'll take good care of them as long as they are here," said Ron Hines, a retired veterinarian who owns the Sarasota-Manatee Children's Zoo where they are housed now at least temporarily.

Tom Rathbone found a Gopher Tortoise when his home was being built near downtown Sarasota in 1947. An elderly neighbor brought him another and that led to a family of five.

For decades they lived in Rathbone's yard. He built little brick houses for them and fed them—apples, fruit peelings, cat food and more.



The retired Bradenton builder died in November 1997 at the age of 87.

His elderly wife now requires full-time care and is unable to handle the creatures.

A few days ago, a man showed up at the zoo carting the tortoises in a wheelbarrow, explaining how there was no one to care for them any longer.

The tortoises are listed by the state as a species of special concern—one step below threatened, state wildlife biologist Nancy Douglass said Friday. “Their habitat is being lost at such a rapid rate we believe in the foreseeable future they will be threatened,” she said.

Douglass, of the Florida Freshwater Fish and Game Commission, said the tortoises like a high, dry, sandy environment. Unfortunately, so do citrus trees - which take up tortoise habitat.

Back a half century ago there were no laws prohibiting people from keeping them as pets. Today, however, a permit is needed to keep the tortoises in captivity and there must be reasonable justification such as injury or loss of habitat. Otherwise, back they go to the wild.

Hines has just sent a letter to the commission asking for direction. The zoo has an assortment of animals, some that require medical care, some that just need a home.

He knows there will be limitations on where the creatures can be relocated. Until then, he'll care for them.

“They're old and set in their ways,” he said.

—Daytona Beach (Fla.) News-Journal, 8 May 1999  
(Submitted by Larry Zuckerman on his way to Florida)

## SPAIN ZOO RECOVERS STOLEN SNAKES

It's hard to sell hot snakes.

At least that's what the Madrid zoo reckoned after 15 of them turned up in a trash can outside the front gate Thursday, a day and a half after being stolen.

The booty was made up of eight rattlers, a viper, a water moccasin (=Cottonmouth) and seven nonpoisonous snakes, plus a turtle. They were removed by a thief or thieves who scaled a fence and forced a lock to reach an exhibit area.

The robbery got extensive play in the Spanish press.

On Thursday, an anonymous caller told a television station where to look for the missing reptiles.

Zoo officials found 15 of them in a rubbish bin, packed inside thermal containers to protect them from the cold, said biologist Enrique Saez.

—Lawrence Journal World, 16 January 1999  
(Submitted by Carolyn Moriarty, Lawrence)

## LAND DEVELOPERS DEFEATED, EVERGLADES PROTECTED

Ending a decade of indecision, a water district board has voted to buy out 1,600 landowners near Everglades National Park as part of a multibillion-dollar program to restore the region's water flow.

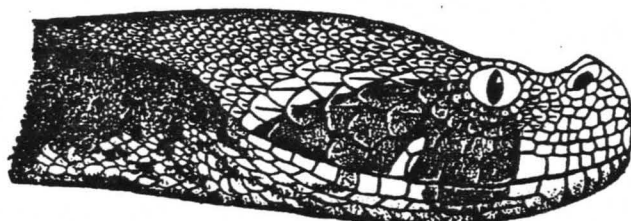
About 200 angry property owners booed the unanimous decision Thursday by the South Florida Water Management District in West Palm Beach and ended the six-hour meeting by chanting: “We won't sell!”

“I don't care how much you offer for my land because my land is not for sale,” said homeowner Maria Gonzalez. “And I will fight with tooth and nail to keep it.”

The vote allows for the flooding of an 8.5 square-mile region on the park's northeastern edge that includes farms, orchards and roughly 350 homes.

County officials say about 640 people live in the area. A property owners' group claims more than 2,000 people, including migrant workers, live there.

—Lawrence Journal World, 14 November 1998  
(Submitted by Suzanne L. Collins, Lawrence)



## FEATURE ARTICLES

### NEW RECORDS OF AMPHIBIANS, TURTLES AND REPTILES IN KANSAS FOR 1998

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The six new county records and three maximum size records listed below are those accumulated or brought to my attention since the publication of records for 1997 (Collins, 1998). Publication of these new records permits me to give credit and express my appreciation to the many individuals who collected or obtained specimens and donated them to me for deposition in an institutional collection. Further, recipients of this list are permitted an opportunity to update the range maps and size maxima sections in *Amphibians and Reptiles in Kansas Third Edition* (Collins, 1993). Finally, these new records represent information that greatly increases our knowledge of the distribution and physical proportions of these creatures in Kansas, and thus gives us a better understanding of their biology. This report is my 24th 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 (1993). Any information of this nature not backed by a voucher specimen is an unverifiable observation. All new records listed here are presented in the following standardized format: standard common and current scientific name, county, specific locality, date of collection, collector(s), and place of deposition and catalog number. New size maxima are presented with the size limits expressed in both metric and English units. Common names are those now standardized for North America, as compiled by Collins (1997), 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 and the Kansas Biological Survey, who spent many hours in search of some of the specimens reported herein. Some of the records contained herein resulted from field studies sponsored by funds from the Kansas Department of Wildlife and Parks' Chickadee Checkoff Program. John E. Simmons, Collection Manager for the Division of Herpetology, Natural History Museum, The University of Kansas, diligently assigned catalog numbers to the specimens listed below, and to him I am indebted.

#### NEW COUNTY RECORDS

GRAY TREEFROG (*Hyla chrysoscelis/Hyla versicolor*)

DICKINSON Co: Sec. 12, T13S, R4E. 15 July 1998.  
Jeff Hubbard, Brian Poister and John Poister (KU  
288630).

PAINTED TURTLE (*Chrysemys picta*)

JACKSON Co: Sec. 1, T6S, R12E. 9 October 1998.  
Suzanne L. Collins and Joseph T. Collins (KU Color  
Slide 11609).

MISSISSIPPI MAP TURTLE (*Graptemys kohnii*)

WYANDOTTE Co: Sec. 11, T10S, R24E. 25 February 1998. Daniel G. Murrow (KU 288640).

EASTERN COLLARED LIZARD (*Crotaphytus collaris*)

SHAWNEE Co: W 1/2 Sec. 23, T12S, R13E. 2 May 1998. Suzanne L. Miller, Larry L. Miller, Allison Viola, Nick Kleiger and Austin Gideon (KU 288635).

PRAIRIE KINGSNAKE (*Lampropeltis calligaster*)

WYANDOTTE Co: Sec. 7, T11S, R23E. 31 May 1998. Suzanne L. Collins and Joseph T. Collins (KU 288636).

BROWN SNAKE (*Storeria dekayi*)

STAFFORD Co: Sec. 20, T21S, R11W. 14 November 1998. Greg Farley (KU 288629).

NEW MAXIMUM SIZE RECORDS

FIVE-LINED SKINK (*Eumeces fasciatus*)

WYANDOTTE Co: Sec. 13, T10S, R24E. 30 April 1998. Daniel G. Murrow, James Markley and Matt Singer (KU 288632). Total length = 222 mm (8 3/8 inches). Male.

LONGNOSE SNAKE (*Rhinocheilus lecontei*)

BARBER Co: SE 1/4 SW 1/4 Sec. 1, T32S, R14W, 1.3 mi E road to Lake City on Rt. 160. 15 May 1993. Steve Kamb (KU 288638). Total length = 877 mm (34 1/2 inches). Male.

NORTHERN WATER SNAKE (*Nerodia sipedon*)

JACKSON Co: Sec. 3, T5S, R15E. 21 October 1998. James Gubanyi (KU 288637). Total length = 1210 mm (47 1/2 inches). Sex unknown.

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# **A CHECKLIST OF THE VERTEBRATE ANIMALS OF KANSAS**

Second (Revised) Edition

**GEORGE D. POTTS, JOSEPH T. COLLINS & KATE SHAW**

Seven hundred and eighty-four kinds of vertebrate animals are now known to occur (or to have once occurred) in Kansas, an increase of thirty-eight species (ca. 5% of the total fauna) since this list was first issued in 1991. This checklist compiles and organizes them all in one booklet to provide ready access to the standard common names and current scientific names (genus and species) of the mammals, birds, reptiles, amphibians, and fishes found in our state. The checklist is divided into Classes, Orders and Families, and features handy indices to both the scientific and common names of the orders, families, and genera recorded from Kansas. Non-native species are clearly noted with an asterisk. Endangered, threatened and extirpated species are noted with an E, T, or X, respectively. This publication is a must for biology and science teachers (elementary, high school, and college), environmental consultants and their firms, biologists with federal and state wildlife agencies, conservation and wildlife groups, zoo and museum personnel, legislators, outdoor writers and authors, and anyone else needing to know the correct spelling of a scientific name or the standardized common name of any vertebrate animal found in Kansas. vi + 50 pages; March 1999.

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