

KANSAS HERPETOLOGICAL SOCIETY



NEWSLETTER No. 117

SEPTEMBER 1999



ANNOUNCEMENTS

***Kansas Herpetological Society
26th Annual Meeting
5-7 November 1999
Pratt, Kansas***

Theme of the Meeting

Kansas Amphibians, Turtles and Reptiles

The entire program for the KHS 26th Annual Meeting will be held in Pratt, Kansas. Lodging arrangements will not be handled by the KHS; please contact the Pratt Motels directly, as follows: Days Inn (316) 672-9465, Super 8 Motel (316) 672-5945, Economy Inn (316) 672-5588, Best Western Hillcrest (316) 672-6407, and Budget Inn (316) 672-6468.

Friday, 5 November 1999

7:00 pm until whenever. KHS Evening Social at Woody's Sports Bar & Grill, 418 South Main Street, Pratt, Kansas.
Note: Buy your own refreshments and munchies.

Live Exhibit. KHS members are encouraged to bring live examples of amphibians, turtles, and reptiles (venomous snakes are not permitted) to exhibit in cages or aquaria or other containers at Pratt Community College Community College. Note: You must supply your own cages, containers, jars, etc. We encourage KHS members to attend the annual meeting with their cameras in order to photograph these creatures. Room 59 at Pratt County Community College will be available to receive live herpetofauna on Friday evening from 6:00 pm to 8:00 pm. Times for members to conduct herpetological photography on Saturday and Sunday are listed below.

Saturday, 6 November 1999

8:00 am Registration: Karen Toepfer (KHS Treasurer) at Pratt Community College, 348 NE Route 61, Pratt, Kansas.

PLEASE NOTE: Photographers competing for *The Suzanne L. & Joseph T. Collins Award for Excellence in Kansas Herpetology* must get their submissions set up and ready in the Pratt Community College Art Gallery between 8:00 am and 10:00 am on this date. Judging will be completed by 5:00 pm same 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. Up to five (5) submissions per photographer. Elected officers of the KHS and CNAAR are not eligible to compete. Competing photographers must be present for *The Collins Award* ceremony on Saturday evening

8:00 am to 5:00 pm. Live Exhibit at Pratt Community College in Room 59.

Scientific Paper Session 1 at Pratt Community College.

Moderator: David Saunders, Emporia State University

8:20 am Welcome by Chris Mammoliti, KHS President.

8:30 am Keynote Speaker: Victor Hutchison, George Lynn Cross Research Professor of Zoology, The University of Oklahoma, Norman. Topic: Biology of the World's Largest Anuran: the Goliath Frog, *Conraua goliath*.

9:15 am Speaker: Dan Fogell, Department of Biology, University of Nebraska at Omaha, Omaha, Nebraska. Topic: Seasonal Activity and Habitat Preferences of the Timber Rattlesnake (*Crotalus horridus*) in Southeastern Nebraska.

9:30 am Speaker: Eli Greenbaum, Natural History Museum, University of Kansas, Lawrence. Topic: Sexual Differentiation in the Spiny Softshell (*Apalone spinifera*).

9:45 am Speakers: Kevin Aldrich, Adam C. Roberts & David K. Saunders, Department of Biological Sciences, Emporia State University, Emporia. Topic: Comparative Erythrocyte Osmotic Fragility and Blood Properties of Selected Amphibians and Reptiles.

BREAK 10:00 am

Scientific Paper Session 2 at Pratt Community College.

Moderator: John Lokke, University of Nebraska at Omaha

10:15 am Speakers: Larry L. Miller and Mary Kate Baldwin, Topeka Collegiate School, Suzanne L. Collins, The Center for North American Amphibians and Reptiles, Lawrence, and Joseph T. Collins, Kansas Biological Survey, Lawrence. Topic: Herpetofauna of the Grasslands of Northeastern New Mexico and Adjacent Oklahoma and Texas.

10:30 am Speaker: Travis W. Taggart, Sternberg Museum of Natural History, Fort Hays State University. Topic: Evolutionary Relationships within the *Plethodon glutinosus* Complex.

10:45 am Speaker: Nicole Gerlanc, Department of Biology, Kansas State University, Manhattan. Topic: Habitat Affects Response of Western Chorus Frog (*Pseudacris triseriata*) Tadpoles to Changes in Water Chemistry.

11:00 am Speaker: Robert Powell, Department of Natural Sciences, Avila College, Kansas City, Missouri. Topic: Edge Effects on Anoline Ecomorphs in Rainforest and Cloudforest Habitats of the Dominican Republic.

11:15 am Speaker: Cameron Liggett, Sternberg Museum of Natural History, Fort Hays State University, Hays. Topic: Herping in Kansas (80 Million Years Ago).

11:30 am to 11:45 am KHS Group Photograph taken by Larry L. Miller (Kansas Heritage Photography, Wakarusa)

LUNCH: noon to 1:00 pm

Scientific Paper Session 3 at Pratt Community College.

Moderator: Stanley Roth, Lawrence, Kansas

1:00 pm Speakers: Eric M Rundquist & Ann Rundquist, Animal Care Unit, University of Kansas, Lawrence. Topic: Snake Bite.

1:30 pm Speaker: John Lokke, University of Nebraska at Omaha. Topic: Observations on a Population of Bullsnares from an Urban Cemetery in Douglas County, Nebraska (1974–1999).

2:00 pm Speaker: Cindy Moore, Department of Biological Sciences, Emporia State University, Emporia. Topic: Temperature-mediated Responses in *Desmognathus fuscus* (Plethodontidae).

2:15 pm Speaker: Christopher Sheil, Natural History Museum & Biodiversity Research Center, University of Kansas, Lawrence. Topic: Recent Discovery of Footprints of the Diapsid Reptile, *Petralacosaurus kansensis*.

2:30 pm Speaker: David Grow, Oklahoma City Zoo. Topic: A New Herpetarium in the Future of the Oklahoma City Zoo.

BREAK 3:00 pm

KHS BUSINESS MEETING 3:30 pm to 5:00 pm with KHS President Chris Mammoliti presiding

Introduction of current KHS officers by Chris Mammoliti

KHS Treasurer's Report for 1999 by Karen Toepfer

KHS Secretary's Report for 1999 by Daren Riedle

KHS Editor's Report for 1999 by Eric M Rundquist

Presentations of resolutions for possible adoption by the assembled KHS members.

Report on Plans for the 27th Annual KHS Meeting at Kansas City, Missouri in 2000 by KHS President-Elect Robert Powell (Avila College, Kansas City, Missouri).

Election of KHS Officers for 2000. The 1999 KHS Nominating Committee is composed of Ken Brunson (chairperson), Larry L. Miller, Daren Riedle, Eric Rundquist and Karen Toepfer, and offers the following slate of candidates:

For President

Robert Powell Avila College, Kansas City, Missouri

Serving as president-elect during 1999, and automatically assumes the KHS presidency on 1 January 2000.

For President-Elect

Mark Ellis, Wakarusa, Kansas

David Saunders, Emporia, Kansas

For Treasurer (unopposed)

Karen Toepfer, Hays, Kansas

For Secretary (unopposed)

Daren Riedle, Stillwater, Oklahoma

Introduction of Travis W. Taggart, Sternberg Museum of Natural History at Hays, as the new Editor of the KHS Newsletter for 2000 by KHS President Chris Mammoliti.

DINNER BREAK 5:00 pm to 7:00 pm. KHS president Chris Mammoliti encourages the assembled membership to dine at the Cafe Bourgeois in Pratt, because the KHS auction will start there at 7:30 pm.

7:00–10:00 pm Auction at Cafe Bourgeois, 1600 East 1st Street (U. S. Route 54), Pratt, Kansas. Munchies will be provided. We are working on the beverages.

Approx. 7:00 pm Presentation of the *Howard Kay Gloyd-Edward Harrison Taylor Scholarship* for 1999 by Chris Mammoliti (KHS President).

Approx. 7:15 pm Presentation of *The Suzanne L. & Joseph T. Collins Award for Excellence in Kansas Herpetology* by Chris Mammoliti (KHS President) and Robert Powell (The Center for North American Amphibians and Reptiles). The recipient of *The Collins Award* receives a check for \$1000.00.

Approx. 7:30 pm, the KHS Auction will be conducted by Joseph T. Collins, ably assisted by KHS Treasurer Karen Toepfer (Hays), Suzanne L. Collins (The Center for North American Amphibians and Reptiles, Lawrence), and Ann Rundquist (Lawrence), and featuring many excellent books and other items (of questionable value). KHS Treasurer Karen Toepfer takes cash, credit cards, and checks. Be sure and get a bidding number from her before the auction commences. Bid vigorously, and support the KHS.

Sunday, 7 November 1999

8:00 am Registration: Karen Toepfer (KHS Treasurer) at Pratt Community College.

8:00 am to noon. Live Exhibit at Pratt Community College in Room 59.

Scientific Paper Session 4 at Pratt Community College.

Moderator: Dwight R. Platt, Bethel College

8:15 am Speaker: Eric M. Rundquist, Animal Care Unit, University of Kansas, Lawrence. Topic: A Walk in Beauty: Observations of a Kansas Herpetologist.

8:30 am Speaker: Angie Babbit, Department of Biological Sciences, Emporia State University, Emporia. Topic: Diel Cycles of Metabolism in Cope's Gray Treefrog, *Hyla chrysoscelis*.

9:00 am Speaker: M. Steven Doggett, Department of Biological Sciences, Wichita State University, Wichita. Topic: Monitoring Chytridiomycosis in Kansas Amphibian Populations.

9:30 am Speaker: J. Daren Riedle, Paul A. Shipman, Stanley F. Fox, and David M. Leslie, Department of Zoology, Oklahoma State University, Stillwater. Topic: Alligator Snapping Turtle Management in Oklahoma: Current Research and Future Objectives.

10:00 am Speakers: Jay Jeffrey & Matt Whiles, Department of Entomology, Kansas State University, Manhattan. Topic: Effects of the PGA-class Colbert Hills Gold Course Construction on Prairie Amphibians.

BREAK 10:00 am

Scientific Paper Session 5 at Pratt Community College.

Moderator: Joseph T. Collins, Kansas Biological Survey

10:00 am to noon: Speaker: Joseph T. Collins, KAMP Coordinator. Topic: The Kansas Amphibian Monitoring Program (KAMP): Comments, Criticisms, Discussions, and (maybe) Solutions, plus a Summation of Progress Made.

About 11:30 am: Presentation of the *KAMP Big Croaker Awards* for 1999 (two awards of \$100.00 each will be given to the most diligent KAMP volunteers, one from eastern Kansas and one from western Kansas).

Noon: Have a safe trip home. See you next year in KCMO.

26th Annual Meeting Committee
Chris Mammoliti, Chairperson

Joseph T. Collins will serve as Master of Ceremonies for the meeting

Note: *The Suzanne L. & Joseph T. Collins Award for Excellence in Kansas Herpetology*, to be given for the best photograph of a Kansas amphibian and/or reptiles, will be presented at this KHS Annual Meeting. In 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.

RATTLESNAKE ROUNDUP PAMPHLET

The Humane Society of the United States has recently made available a pamphlet detailing animal abuse at U. S. rattlesnake roundups. Former KHS president Karen Graham was a contributor to this publication. To request copies of this pamphlet, contact Dr. Teresa M. Telecky, Director of Wildlife Trade Program at 1-301-258-3142 or 75547.2755@compuserve.com.

CONTEMPORARY HERPETOLOGY

NEWS UPDATE

Contemporary Herpetology (CH) is pleased to announce the publication of four new on-line papers, as follow:

Review: Amphibian surveys in forests and woodlands, by K. M. Parris.

Phylogenetic relationships among West Indian xenodontine snakes (Serpentes: Colubridae) with comments on the phylogeny of some mainland xenodontines by B. I. Crother.

Phylogeny of some Middle American pitvipers based on a cladistic analysis of mitochondrial 12S and 16S DNA sequence information by S. D. Werman, B. I. Crother, and M. E. White.

Contribution to the systematics of *Caiman latirostris* (Daudin, 1802) (Crocodylia, Alligatoridae), by M. Crea, J. Merler, and R. Quintana, translation by B. Warren.

CH has also added two new features: an on-line directory of herpetologists (co-sponsored with CNAAR) and a directory of web sites of herpetological interest worldwide. The on-line directory/CH registry is a editable and searchable database of herpetologists, providing various data such as email address, phone number, interests, etc. But to be useful, herpetologists must enter their information into the database. Please take a few moments to register even if you have already registered before. The email list for future announcements will be contrived from the those individuals that indicate so in the directory.

CH has also added a new mirror site at the British Museum (of Natural History). This additional site was recruited to provide a guarantee that CH will always be online and accessible to non-US registrants.

The four sites are:

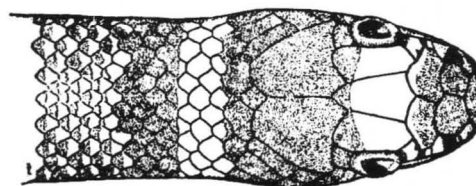
California Academy of Sciences, San Francisco: <http://dataserver.calacademy.org/herpetology/herpdocs/index.htm>

The Center for North American Amphibians and Reptiles, Lawrence: <http://eagle.cc.ukans.edu/~cnaar/CH/>

Southeastern Louisiana University, Hammond: <http://vmsweb.selu.edu/~pcsd4805/>

British Museum (Natural History), London: http://www.nhm.ac.uk/hosted_sites/ch/

All of the features described above can be accessed at any one of these mirror sites.



Check out the KHS web site at

<http://eagle.cc.ukans.edu/~cnaar/khs/khsmain.html>

for the most up-to-date information about KHS meetings, field trips, awards, officers and the society's history.

KHS BUSINESS

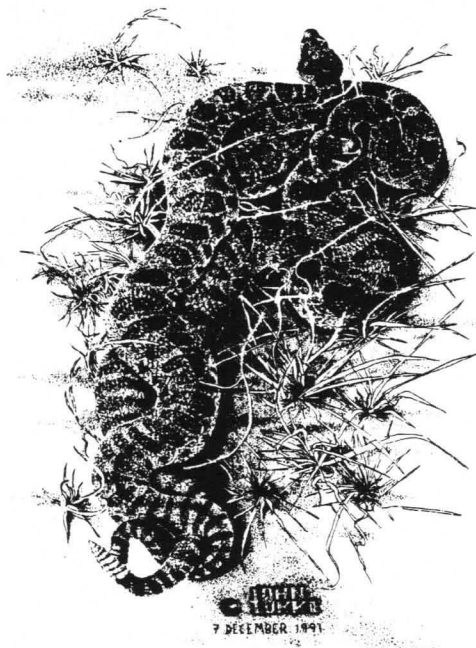
KHS EXECUTIVE COUNCIL OFFICER NOMINEES FOR 2000

The KHS Nominating Committee appointed by KHS President Chris Mammoliti announces the following slate of candidates for office beginning in the new millennium 2000. They are as follows: For President-Elect—Mark Ellis, Wakarusa, Kansas and David Saunders, Emporia, Kansas; for Treasurer (unopposed)—Karen Toepfer, Hays, Kansas; for Secretary (unopposed)—Daren Riedle, Stillwater, Oklahoma.

Mark is a longtime KHS member and has participated in many Society activities including field trips, past annual meetings, and as a member of the Live Herp Exhibit Committee for the 1996 Society for the Study of Amphibians and Reptiles Annual Meeting that was held in Lawrence.

David is a professor of biology at Emporia State University. He has a keen interest in the physiology of amphibians and reptiles, particularly as it relates to blood systems. He has a number of students at Emporia working on herpetological-related studies.

—1999 KHS Nominating Committee
Ken Brunson, Chair
Larry Miller
Daren Riedle
Eric Rundquist
Karen Toepfer



CHEROKEE COUNTY FALL 1999 HERP COUNT

Kansas: Cherokee Co: three sites: Schermerhorn Park Cave, Taggart Falls, and Spring River at Ks. Rt. 96 bridge. Sunny and cool. 2 October 1999. 10:00 am to 4:45 pm. Observers: Robert Acuff, Jr., Robert Acuff, Sr., Troy Anderson, Lucia Baldwin, Mary Kate Baldwin, Joseph T. Collins, Cynthia A. Cummings, Nate Davis, Steven Doggett, Shonette Doggett, Mark Ellis, Max Good, Dan Johnson, Dustin Johnson, Cameron Liggett, Robert J. Mangile, Larry L. Miller, Suzanne L. Miller, Dan Murrow, James Reimer, Jill Reimer, Kathy Shidler, Travis W. Taggart, Steven R. Wahle, David Wickell, Joey Williams, and Donovan Wilson

Eastern Newt (efts only)	4
Longtail Salamander	±15
Cave Salamander	±10
Grotto Salamander	3
American Toad	3
Woodhouse's Toad	1
Northern Cricket Frog	±100
Spring Peeper	1
Plains Leopard Frog	1
Green Frog	2
Southern Leopard Frog	±50
Eastern Narrowmouth Toad	1
Common Snapping Turtle	1
Eastern Box Turtle	6
Ornate Box Turtle	1
Fence Lizard	6
Ground Skink	6
Coal Skink	1
Five-lined Skink	±20
Broadhead Skink	1
Western Worm Snake	1
Ringneck Snake	±10
Rough Green Snake	1
Eastern Racer	2
Eastern Rat Snake	3
Bullsnake	1
Western Ribbon Snake	1
Common Garter Snake	2
Brown Snake	5
Plainbelly Water Snake	2
Northern Water Snake	1
Copperhead	1

Total

32 species ±263 specimens

Verifiers: Larry L. Miller, Travis W. Taggart, Dan Murrow & Joseph T. Collins.

KHS BRINGS YOU GREAT NEWS OF THE WORLD

LOUNGING LIZARD WEAR

Nike is putting its trademark swoosh in the rarest lizards in the world. And the first reptile down the runway Thursday was at the Sedgwick County Zoo.

How did Nike get into lizard ready-to-wear?

The zoo's reptile curator, Karen Graham, wrote a letter asking the company to, just do it, please. And she volunteered her three iguanas, among only 23 at six U.S. zoos, to test vests designed to hold radio tracking devices.

Fewer than 100 Jamaican iguanas remain in a 38-square mile area on the Caribbean island. To help boost their numbers, baby iguanas are collected as they hatch and raised at the zoo in Jamaica.

Once they are too big for rats or mongooses to eat, they are released. Researchers track them with battery-operated radio transmitters. But the rocky, thorny underbrush in the appropriately named Hellshire Hills was, well, hell in anything holding the transmitters.

"Our homemade vests didn't hold up," said Graham, who has been to Jamaica twice to help study and release iguanas. "Other vests were stronger but didn't fit the iguanas well."

She thought Nike's All Conditions Gear, its outdoor/hiking products line, could design a vest tough enough to outlast the 18-month batteries on the transmitters.

Damon Clegg, a designer at Nike's Oregon headquarters, says the vests were more of a footwear challenge than a clothing one.

"these little creatures are low to the ground, and T lots of abrasion," he said Thursday.

Fabric needed to be durable but breathable, so the cold-blooded reptiles could gain and loose heat; and it needed to stretch since the iguanas can grow to six feet in length.

The final version has a stretchable, breathable mesh upper and a polyurethane coated leather belly portion. And it has Nike's All Conditions Gear Logo.

"We probably went through six rounds of prototypes," Clegg said. "Karen calls this the Armani version because it's got real nice piping around the armholes."

Fourteen vests arrived this week at the zoo in west Wichita. The zoo's three iguanas, who won't be released, will wear them constantly so Graham can test the vest's fit and durability.

But if you go to the zoo, don't expect to see Edith, or Ida and the unnamed male strutting their stuff. The life of a fashion-conscious iguana is stressful enough. To encourage them to breed, zookeepers don't stress the lizards by putting them on view.

If the vests pass the tests, Nike will produce about 100 for the Jamaican release program at no charge.

No, it's not a product that Nike thinks could have commercial applications, Clegg said with a chuckle.

"We have some knowledge and ability, and I thought that would be nice to pass along. It's been a real fun project," he said.

— The Wichita Eagle, 10 September 1999
(Submitted by Eva Williams, Wichita)

KHS MEMBER ALISON REBER SHARES HER PASSION TO PROTECT

THE KANSAS RIVER VALLEY

After starting her own school and then closing it, Alison Reber, 27, is again turning her energies to environmental education through her involvement with the Kaw Valley Heritage Alliance.

Alison Reber didn't climb trees as a child.

"Mommy said I would get hurt if I climbed trees so I did not climb trees," she said. "I followed the rules."

Growing up, she did just that. She got good grades. She did what she was told, what she was supposed to do.

It was in high school that Reber, now a 27-year-old naturalist, strayed from the "supposed to" path: go away to school, continue on to graduate school and take a job in academia.

Instead, she stayed home and went to Kansas University, married her high school sweetheart, started a nature school and had her first child.

The school failed after the first year.

But the hurt her mom warned her about wasn't permanent.

And now she is climbing again.

While her husband is teaching biology at Free State High School, she has taken a part-time job with the Kaw Valley Heritage Alliance and is expecting her second child.

"I have been waiting for this all my life, and I didn't even know it," she said of her Heritage Alliance job.

The feeling is mutual, said Joyce Wolf, administrator for the alliance.

"She's doing a bang up job," Wolf said. "It was a great match."

The alliance was founded in 1994 by the Kansas Land Trust, the Kansas Rural Center and the National Park Service. Other groups and agencies have since joined the coalition.

Its funding comes from various sources, including the Environmental Protection Agency, the National Endow-

ment for the Arts and the Kansas Humanities Council.

And its goal is to preserve the natural and cultural heritage of the Kaw River Valley mostly by encouraging partnerships among citizens and organizations.

Reber has taken on the role of education coordinator, bring to the job her teaching background and an infectious love of nature, which she cultivated during long walks on her family's farm as a child.

A portion of that love, particularly for the prairies and wooded hills of northeast Kansas, is probably genetic as well.

That farm, which is about a mile from the five-acre property she and her husband rent just southwest of Kansas Highway 32 and Interstate 70 has been in her family for six generations, seven if you count her daughter.

It was purchased by her great-great-great grandmother, Caroline Mackey, in the 1850s.

Her parents, Richard and Nancy Smith still live there.

"It's pretty special to be in this area," Reber said.

Reber's love of teaching came a little later.

After attending elementary school in Tonganoxie, Reber went to Central Junior High and Lawrence High School where she took biology with teacher Stan Roth Jr.

"I think he had a pretty major impact on the way we look at the role of education and how we teach people about it," Reber said.

When she says "we," she means her husband of six years, David Reber.

Their relationship was built during trips to area schools with snakes and other critters to show off.

Those trips also encouraged Reber's desire to work with children, a desire cemented in 1993 by an unpleasant internship with a company that did environmental studies on investment properties.

"It was a pretty wretched experience," she said. "We both felt that we wanted to be working with kids instead of working with adults in the adult science world."

In 1995, the couple started the Natural Heritage Center at Sixth and Lawrence Avenue.

They hosted 200 students for after-school programs and 10 home-schooled children as part of their periscope program six hours a week.

"It was a 'don't look down' kind of thing," Reber said. "My accountant father and mother were saying maybe it would be a good idea to wait...The standard line was, 'Let's do it now while we have nothing to lose.'"

It was a risk for sure, two young people - 24 and 27 at the time - starting their own school, but they did it anyway.

"We had a vision and we were sticking to it," Reber said.

For a year, the couple put in 60-hour weeks, mixing in part-time hours at Raintree Montessori School, along with the work at their own school.

"That was probably enough to roast us pretty good," she said.

The decision to close the Natural Heritage Center was made with Reber confined to bed pregnant with her first child and was accompanied by a series of family tragedies.

Reber's grandmother died. David Reber rolled his truck. Burglars broke into their house.

"It was a really bizarre year," Reber said.

But it ended on a good note.

On August 20, their friend Roth called to tell David Reber about a teaching job at Free State, which he eventually took.

And on September 2, Tabitha Louise Reber was born.

Reber was mother and student, taking classes at Kansas and Washburn Universities.

The Heritage Alliance called this spring, a match that appears to be a good one.

Reber has been working only 10 hours a week for the alliance, but she looks forward to doubling that time in January as she pursues plans to offer a day camp next summer.

If it works, she hopes to coordinate such camps up and down the Kansas River system.

"I think it is going to be busy, but I think it will be a lot of fun also," she said.

Reber said Kansas students learn too much about the environment from books and too little from outdoor experiences.

"These kids know more about the tropical rain forest than they could ever tell you about the prairie," she said. "They are afraid of coyotes...It's sad. There is just no other way to say it."

If Reber had her way, the students would come home each day covered in mud from their adventures outdoors.

"It's important to just let kids be in nature," Reber said.

"It's important not just for biology experiments, but also to encourage writing and art, to understand history and to see the practical side of chemistry.

Reber wants people to care about the natural environment not simply because it is polite to clean up trash, but 'because it is a wonderful place to be.'

"You can't be afraid of the environment if you are going to make decisions about it," she said.

Reber knows it will be a hard sell. Field trips that actually go into the field are difficult and time consuming to arrange.

But the rewards for the class, the city and the state are worth it, Reber said. And Reber's new vision goes beyond the reach of the Kaw River Valley.

"We can become something the rest of the nation looks at," she said. "I guess I have pretty high aspirations."

—Lawrence Journal World, 16 November 1998
(Submitted by Suzanne L. Collins, Lawrence)

TRACKING TURTLES SLOW ENDEAVOR STUDENTS HOPE PROJECT WILL HELP PRESERVE ANIMALS' ENVIRONMENT

Progress doesn't move at a turtle's pace.
But, unfortunately, turtles themselves do.

Some students at Dublin Scioto High School don't want the animals to get bulldozed by developers.

The students — 120 in three classes — are following about 20 woodland turtles around on land behind their school on Hard Road.

The turtles, also called "box turtles" because of their ability to hide completely in their shells, are about 6 inches long.

Using radio transmitters affixed to the animals' shells with epoxy, the students are keeping track of them and documenting the environments they prefer, their weight and their condition. They want to share their information — and habitat data from three years of the project — with the Dublin City Council this summer. "This land is going to be a parking lot unless we do something about it," said Meredith Campbell, a senior at Dublin Scioto. "We don't expect to save the woods, but we want to make sure the green space that is in the developing plans is in the correct places," said Gardner Watkins, the teacher leading the project. In Watkins' class, Systems of the Earth, students study the natural environment in general — observing the plants and animals outside the school — and turtles in particular. The district owns 10 acres north of the high school, and neighbors have agreed to let students study on an additional 290 acres, much of which is not yet developed.

Students helped Watkins write a 15-page grant proposal, earning them \$10,000 this year from Toyota and the National Science Teachers Association, which jointly support classroom science projects.

The Columbus Zoo has also been funding the project — providing \$6,000 since 1996.

"Box turtles nationwide are rapidly being depleted," said Don Winstel, the zoo's assistant director. "The animals are being collected so fast — they're a hot pet item in Europe. It's hard to believe they can sustain their population."

But turtle tracking isn't easy, the students say. They spend one day a week walking down paths and cutting through brush, carrying antennas and notebooks and following the blips that come over their receivers.

Usually, they find one of their specimens under a tree or log. They keep track of them by the names they have assigned the turtles. On Wednesday, for example, students spent an hour tracking Juan Valdez, whom they recognize by a missing piece along the edge of his shell.

Students say they are learning more about the environment than they would if they stayed indoors.

"I didn't even know there were turtles out there," said Braden Suver, a senior.

"Just out there, there's a pond," said Steve Gleditsch, a junior. "It's starting to turn into a marsh. We can see how organisms are starting to die out and new ones are coming in."

"I like coming outside," said Campbell, who trekked in thick-soled black boots. "It's so weird to see development, then a line, like pushing into the undeveloped regions."

—Internet Newsgroup article, 3 May 1999
(Submitted by Alan Salzberg, New York, New York)

TEXAS' HORNED LIZARD MAY BE AFFLICTED WITH MALARIA

It is an animal that is symbolic of Texas, one that children used to keep as pets. But now it is illegal for anyone to even touch the horned lizard, much less put it in a box and pat it.

Researchers at Texas A&M University-Kingsville say they may have discovered the reason for the rapid disappearance of the horned lizard, popularly known as the horned toad, around the state.

They think the lizards may have malaria.

Scott Henke and Alan Fedynich, scientists with the Caesar Kleberg Wildlife Institute at Texas A&M University-Kingsville, will spend the summer catching horned lizards to test them for malaria.

"Other lizards in Texas have it," Henke said. "So it is a good possibility horned lizards do."

Henke said that malaria would account for the lowered reproductive rate scientists have discovered in the reptiles, with horned lizards having half the number of eggs they did 20 years ago. Malaria would also make them weaker and less able to run from predators, Henke said.

Horned lizards once were popular among children for their forbidding, miniature dinosaur-like appearance and their ability to spit blood from pores near their eyes, Fedynich said.

"Horned lizards are as much a part of Texas folklore as cowboys, longhorns, the Alamo and listening to coyotes howl at the moon," Henke said. "Unfortunately, many young Texans have not experienced the thrill of seeing a horned lizard in their backyard."

Horned lizards don't live east of a line from Fort Worth to Corpus Christi, except in small pockets. The horned lizard was one of the first species listed by Texas as threatened in 1977.

Henke said there is no obvious reason for the decline in population of horned lizards. Some have attributed the population decrease to red imported fire ants, first detected in 1953, Henke said. The red ants may have run off other ants that were prime sources of food for the lizards.

The lizards' decline also has been blamed on the widespread use of insecticides and by overcollection as pets. But Henke said none of those reasons explains their disappearance throughout so much of the state.

If they discover the horned lizard does have widespread malaria, there isn't much that can be done about it, Henke said.

"If malaria is the problem, individuals that are resistant to it will probably survive, and the population will bounce back," Fedynich said.

—HERPDIGEST, May 1999

(Submitted by Alan Salzburg, New York, New York)

PYTHON-RAISERS BECOMING ENDANGERED

Camau Province, Vietnam—Farmers who had enjoyed the lucrative job of raising pythons some years ago are now becoming "endangered species" as the market for the reptiles have fallen sharply, forcing many of them out of business.

"Python-raising has now become outdated," said Tran Van Ngoan, 50, who was lured into breeding pythons six years ago in Ca Mau Province, about 300 kilometers southwest of Ho Chi Minh City.

When Ngoan started his business, pythons were highly-priced and the cost of raising them was low.

Before business turned sour in mid-1997, pythons were bred at household levels in the Mekong Delta in southern Vietnam. But eventually breeders were forced to shut down operations, prompting a lot of them to release their pythons into the forest and rice fields.

Ngoan said the price of newly hatched pythons dropped to 4,000 dong (about 0.30 dollar) a piece in 1997 from 140,000 dong in late 1996. Python meat price slid to 30,000 dong per kilogram from 60,000 dong per kg during the same period.

Because no one wants to buy pythons anymore, Ngoan said he has to raise pigs to make both ends meet.

The situation remains unchanged since 1997, said Ngoan who now has 60 adult pythons in cages in his house. He claims he lost 50 million dong last year due to bad business.

Ngoan said he keeps the pythons that are unsold — rather than release them — "out of my love for them."

A number of other breeders try to keep the pythons they had raised, hoping their prices will bounce back.

"We are waiting for help from the government to look for outlets for the pythons that we are breeding," said another breeder, Tran Thanh Hoa, 67, a retired local official.

"Only those who are pessimistic about the situation would release them," he said.

Hoa, who started the job seven years ago with 40 reptiles, said it does not cost him much to keep the animals. He said they do not need much space, complicated cultivation techniques, too much care or food.

"Everybody, old or young, male or female, can raise

pythons because the tropical monsoon weather conditions here are suitable to them, they do not catch diseases easily, and their food is simple and widely available," Hoa said. He currently keeps 17 pythons.

Both Ngoan and Hoa attributed the fall in the python prices to the absence of a stable market for the reptile because the trade has been conducted by individual traders, and with no state support.

Nguyen Vu Phong, deputy director of the Ca Mau Park, said the breeding of pythons became large-scale in the province in 1984 after some locals raised them as pets. He said many locals started to breed crocodiles in 1991.

Provincial authorities have not found any solution to the problem of providing subsidy to python-breeders. Instead, authorities grouped them into associations in an attempt to give them opportunities to share knowledge and techniques in python cultivation and to look for outlets, Phong said.

The practice of releasing pythons into the forest has caught the attention of various newspapers which voiced warnings that someday people would not dare to go to the forest or rice fields for fear of the reptile attacks.

The local media had called for the development of a processing-industry of python products inside the country.

Ca Mau authorities last year decided to buy 5,000 small pythons at a price of 10,000 dong a piece and then released them into the forest, the Saigon Giai Phong daily published in Ho Chi Minh City said.

It said the Ministry of Agriculture and Rural Development in September last year established an association of breeders of pythons and other wild animals. But so far the association has remained nominal, it said.

Breeders said the establishment of the association is necessary to protect the wild animals, create more jobs and increase the income of the people, and prevent tax evasion and smuggling of pythons in the future.

Many restaurants in the Mekong Delta are offering dishes of python meat at very low prices. Locals said one can eat a hefty meal of python meat for only 20,000 dong, with several python meat dishes being served.

Both Ngoan and Hoa said many python breeders only hope for a stable market, not high prices, for their products. "It is ideal if we can export pythons," they said.

The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) — which took effect in Vietnam on April 20, 1994 — bans the international trade of wild animals except in cases where governments can certify the artificial origin of the animals.

Ngoan said he understands the CITES concerns for pythons, emphasizing the oversupply of the reptiles at the moment. "There is no need to worry about their extinction, but maybe it is our job that is endangered."

— HERPDIGEST, Volume 1, Number 61
(Submitted by Alan Salzburg, New York, NY)

WEED KILLERS MAY ALTER ALLIGATORS

A new study suggests that atrazine - the nation's most popular weed killer - may be partly responsible for the abnormal hormone levels and undersized male genitals found in some Florida alligators.

The study, by New York ecologist Barry Commoner, relies on computerized estimates of how much of the chemical fell on several lakes in 1991.

Commoner, director of the Center for the Biology of Natural Systems in Flushing, N.Y., said his computerized wind models show that large amounts of atrazine are wafting from sugar fields and falling or raining into four lakes north of Orlando.

Those are the same four lakes where University of Florida scientists have found sexually altered alligators.

Atrazine is heavily used by sugar growers in Palm Beach and Hendry counties, as well as on farms around the nation. Commoner said that while the results of his study are not conclusive, they offer a "striking indication" that the chemical could help skew the gator's sexuality.

But Pete Rosendahl, environmental vice president for sugar company Flo-Sun Inc. in Palm Beach, said Commoner is on shaky ground when he makes such sweeping arguments without testing water samples.

"He's jumping to conclusions before he's done his homework," Rosendahl said.

Research by atrazine's Switzerland-based manufacturer, Novartis Crop Protection, has shown that any amount of the chemical falling with rain would be far too diluted to harm wildlife, said Dennis Tierney, the company's environmental products manager.

Commoner's paper contains no useful data about how much atrazine the alligators actually received or what assumptions he used in his model, Tierney said.

"It appears they started with a premise that pesticide use in Florida is harmful," Tierney said.

Commoner conducted his atrazine study with \$90,000 from the W. Alton Jones Foundation, a Virginia-based not-for-profit organization.

He submitted his report to the foundation in November, but it has not been published in a peer-reviewed scientific journal. The Palm Beach Post published an article on the study.

Commoner, who is considered by some to be a father of the modern environmental movement, said his study points to a need for more scrutiny of all agricultural pesticides.

Commoner, 81, first came to prominence in the 1950s and 1960s by opposing nuclear weapons tests.

—Tallahassee Democrat, 3 January 1999
(Submitted by Suzanne L. Collins, Lawrence)

EL NINO BRINGS A BUMPER SNAKE CROP

The snake season comes early this year and it's going to be big.

Real big. As in lots of snakes, and lots of snake encounters with people.

Because of the wet warm weather this winter and spring, there will be a bumper crop of critters as king snakes, gopher snakes and the ever-popular diamondback rattlesnake, according to Valley snake experts.

Dale Burton, a founder of Rattlesnake Awareness Programs of Arizona, predicts that will be unusually plentiful as the weather warms up. Human contact with snakes will be plentiful, too.

Hikers, mountain bikers and other desert visitors need to be extra aware of rattlesnakes. So do residents living near the natural desert and particularly those living in or near home construction, such as Ahwatukee and north Scottsdale.

"The homes were built where the snakes were hibernating," Burton said. "Many of them have been disturbed by all the digging activity."

Because of the unseasonably warm weather in the past month, Burton already has received dozens of calls from scared homeowners who want snakes removed from their properties.

Usually, he said, the calls don't start coming in regularly until late April and May.

Tom Taylor of the Arizona Herpetological Association said his group also has been getting an unusually high number of snake calls for so early in the season.

"It's been an exceptional year," Taylor said. "We've had a lot of rainfall, and these desert animals are dependent on the spring and winter rains."

As the summer heats up, he said, his volunteer group will get 40 to 50 calls a day in the Valley for snake removal.

"Just on call after another," Taylor said. "I can sympathize with these 911 operators. Sometimes these people are off the deep end, really panicking."

Rural/Metro firefighters also serve as snake removers in such desert areas as north Scottsdale and Fountain Hills.

Most of the calls turn out to be harmless gopher snakes, which can resemble rattlers, Taylor said. Many people panic at the sight of a snake whether it's harmless or not.

Most of the snake encounters are with common non-venomous varieties, such as gopher snakes, king snakes and brightly colored ground snakes. Arizona's most prevalent venomous snakes are the diamondback rattlers, Mojave rattlers and the occasional coral snake.

Despite the booming Valley population, venomous snake bites are rare, and deaths are very uncommon, due to antivenin. Most people are bitten while teasing snakes or trying to catch them.

An early spring causes snakes to come out of hiberna-

tion earlier, find mates and begin to reproduce. So, a longer mating season results in more snakes.

Burton noted that female rattlesnakes have the odd ability of storing sperm for an extended period after mating and fertilizing herself when the conditions are right. Early warm temperatures and moist weather will persuade the females that now is a good time to release the sperm gained last year, when conditions were dry and harsh.

Also, there will be more rodents surviving in the desert for them to feed on, boosting the snakes' chances of survival. And, in turn, animals that feed off the snakes, such as hawks, eagles, foxes and javalinas, benefit from the booming snake population.

"There's a lot of stuff going down, a domino effect," Burton said. "We have El Nino to thank for this. It's going to kick off a bumper crop this year."

The volunteers who go out to pick up snakes from homes, then drive them out to a remote desert area and release them, say they are willing to help at any hour. That's because they fear the alternative: people killing the snakes out of fear and ignorance.

Snakes have an important tile in the balance of desert ecology, feeding on rodents that otherwise could overrun an area. Burton pointed out that west Texas, famous for its rattlesnake roundups, now has a serious problem with its rat and mouse populations.

"A rattlesnake is a very efficient eating machine," he said. "In their lifetimes, they might eat 500 rodents. That's their purpose: rodent control."

"When they go and eliminate an entire (snake) species in an area, the rodents go nuts."

The Environmental Protection Agency and the Centers for Disease control are concerned about rodent proliferation, Burton said, because of the deadly hantavirus, which is spread via rodent feces.

Greg Woodall, a Scottsdale archeologist and desert preservationist, said that even when the snakes are relocated to unpopulated areas, chances are that the animal will die anyway.

"All these people who move out in the desert and then think that by calling Rural/Metro that everything is happy ducky because the snake is relocated elsewhere in the desert are just kidding themselves," Woodall said, "because the snake will be dead within two weeks."

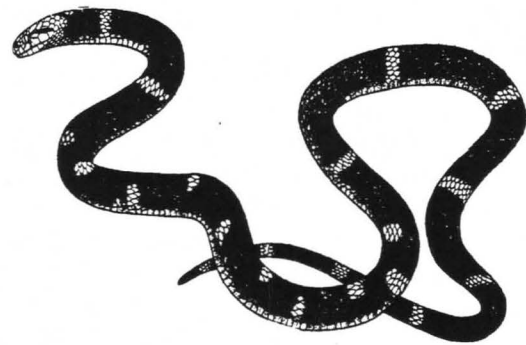
"Snakes have home ranges and territories and when you move them, that's not a good thing. Also, there's no snake-free country that these snakes can move into, so their moving snakes into other snakes' houses, which isn't a good thing either."

Burton, whose small organization operates in conjunction with the American International Rattlesnake Museum in Albuquerque, said his main goal is to educate people about snakes, especially rattlers, so that they don't react with blind fear when they see one in the wild.

"A lot of people who want to live in the Sonoran Desert, they want the ambience, they want to see the quail, the dove and the javelina," Burton said. "But you mention rattlesnake, and they say 'no, we don't want to have that.'"

"People have to extend the courtesy to the animals who were here first."

— The Arizona Republic, 3 April 1998
(Submitted by Suzanne L. Collins, Lawrence)



TENNESSEE TEEN SNAKE BITE VICTIM

A teen who drowned last week in a Polk County lake had been bitten by a snake and died from the venom, the medical examiner says.

The 16-year-old likely was bitten by a rattler or copperhead in the water before going under, U. S. Forest Service spokesman Terry McDonald said Tuesday. McDonald called the incident a "one-in-a-million" occurrence.

Jerry Fletcher of Greensboro, N.C. was on an outing at Chilhowee Mountain campground with fellow members of a group home when he drowned in McKamy Lake. Two counselors jumped in to try to save him.

His body was found more than three hours later. Forest rangers went to the lake to try to find the snake but were unsuccessful.

—The Knoxville News-Sentinel, 3 September 1999
(Submitted by Nancy & Jerry Green, Knoxville, Tenn.)

THAI SNAKE CHARMER'S LUCK RUNS OUT PYTHON KILLS HIM

A Thai snake charmer's luck ran out on Monday when a python he had captured from a neighbour's home coiled itself around his neck and strangled him to death.

Hie Kerdchoochuay, 55, who was known for his snake catching and charming skills, rushed into a neighbour's

house in the northern province of Uttaradit on Monday to catch the python which had intruded the home, police told Reuters on Tuesday.

He put the snake in a sack and was walking home with it when villagers ran into him and asked to see the python.

He then took the snake out and put it around his neck.

He started screaming for help when the reptile wrapped itself tightly around his neck and did not let go until he fell down dead, police said.

Pythons kill their prey by squeezing them, constricting their ability to breathe in.

Villagers and policemen in the area then forcibly unwrapped the snake from his neck and took it into captivity.

—HERPDIGEST, Volume 1, Number 61

(Submitted by Alan Salzburg, New York, New York)

EXTINCT IN ITS NATIVE HABITAT, THE TINY EGYPTIAN TORTOISE IS MAKING A COMEBACK AT THE BALTIMORE ZOO

For the diminutive Egyptian tortoise, the Reptile House at the Baltimore Zoo may now be a more congenial place than back home on Egypt's Mediterranean coast.

Herders, pet traders, farmers and developers have wiped out the species in Egypt, and it is vanishing in Libya and Israel. In this decade it has become the most endangered of the world's turtles, and one of the most endangered animals of any species.

But in Baltimore, the zoo crew has turned a closet full of plastic tubs and electric lights into one of the most successful nonprofit Egyptian tortoise nurseries in the world.

Since their first breeding success in 1994, the tortoises have produced 37 hatchlings. Nine have arrived this year, and four more eggs are incubating.

"It's very satisfying for us here to be successfully breeding an endangered species, and hopefully saving the tortoises from extinction," said Karen St. John, a member of the curatorial staff.

"The fact they're taking the time and space and energy to breed this endangered species is a feather in their cap," said David S. Lee of the Tortoise Reserve, a tortoise conservation organization based in North Carolina.

The Egyptian tortoise is the world's smallest tortoise species. They are tall enough to seem nearly spherical, but the adult females grow only to softball-size dimensions, while the males top out at the size of baseballs. They can live 60 years or more. Some at the zoo are more than 30 years old.

This year's nine hatchlings—Thursday, Cairo, Moses,

Rooney, Leroy, Squishy, Pee Wee, Tick and Arthur—were lined up last week in their terrarium, basking under a brilliant spotlight.

They range in size from pingpong ball (Thursday, 3 1/2 months old) to large marble (Arthur, 3 weeks). Their tan shell plates are edged in dark brown.

The breeding adults were across the aisle in three large sand-filled tubs, awaiting their next meal of kale, collard greens, carrots and squash. Nine more adults and juveniles were on display in the Reptile House's public gallery.

For millions of years, their small size helped the Egyptian tortoises survive in a harsh environment. But in this century, it made them the quarry of pet traders.

Unlike other reptiles and tortoises that soon outgrow an urban apartment, "these guys stay small, so it's something people can work with in a confined area," said Terri Turnbull, a commercial breeder and dealer in Bainbridge, Ohio.

From 1992 through 1996—the year after international commerce in Egyptian tortoises was finally banned under the Convention on International Trade in Endangered Species (CITES)—more than 2,000 were imported into the United States alone.

"And probably for every one brought in, three or four of them died," said Lee.

The CITES ban has had an effect. Since 1995 "there have been very few seizures in consumer countries," said Bruce Weissgold, CITES policy specialist at the U.S. Fish and Wildlife Service. There have been only a few seizures in countries where the tortoises survive in the wild.

But the ban may have come too late. A 1994 survey of the tortoises' range in Egypt found no living specimens and little habitat capable of supporting them.

Survivors are likely in coastal areas of Libya and Israel. But urban development, grazing and agriculture threaten them there, too.

One kink in the trade, Turnbull said, has been a U.S. Food and Drug Administration prohibition on the domestic sale of turtles smaller than 4 inches long. The ban is an effort to protect children, who might put small turtles in their mouths and be infected with salmonella bacteria.

"The problem with Egyptian tortoises is they always fall under that category," Turnbull said. Only some females get that big.

And there's a loophole. The small turtles can be sold for educational or scientific purposes, but few dealers check. Turnbull said she makes her customers sign a paper stating their purpose before she will sell to them. But "you can only go on a person's word," she said.

The CITES ban has boosted prices. When imported animals were available, they sold for about \$100, Turnbull said. "Now they're \$300 to \$400 for captive-bred babies the size of a nickel." Older animals might sell for \$400 to \$500.

St. John said the secret to breeding Egyptian tortoises is mimicking theseasonal light and temperature cycles of the North African desert.

The zoo's breeding tubs are kept at 80 to 85 degrees, and light cycles are timed at 12 to 13 hours a day in the spring and summer breeding season, and 10 to 11 hours in the fall and winter.

After the tortoises mate, the females lay one or two eggs and bury them in the sand. The zoo staff digs them up and moves them to an incubator.

There, the pale, translucent eggs no bigger than a large grape rest in beds of vermiculite for 60 to 90 days until they hatch. Incubator temperatures are critical. Temperatures at the extreme ends of the saferange typically produce more males.

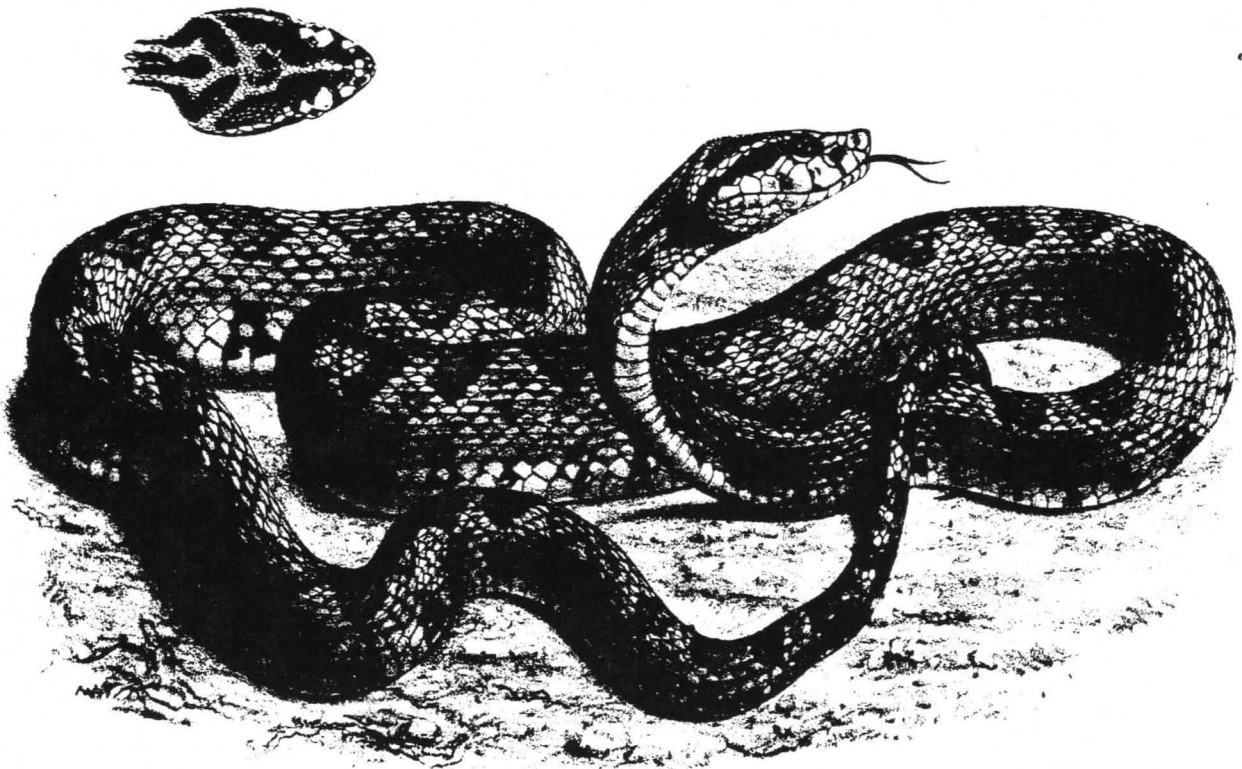
"But we've reduced [temperatures] slightly," St. John said. "We would like to produce more males because they're rarer in the population right now."

It's not clear whether captive breeding will ever lead to reintroduction of the Egyptian tortoises to their native range. "To release captive-bred animals into the wild could introduce diseases into the wild population, or genetic anomalies we're not aware of," St. John said. "In the future, who knows? If they're completely extinct [in the wild] it may become feasible."

Reintroduction seems unlikely. Their habitat is being destroyed by development, over-grazing and farming. Human encroachment has brought with it dogs, ravens and other predators whose numbers are increasing.

For now, zoo breeding will have to suffice, St. John said. "We have to do what we can to preserve the diversity of species on the planet."

—HERPDIGEST, Volume 2, Number 13
(Submitted by Alan Salzburg, New York, New York)



FEATURE ARTICLES

A CASE OF PREDATION BY BALD EAGLES ON SPINY SOFTSHELLS IN KANSAS

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On 25 December 1998, I was alerted to an apparent case of predation by a Bald Eagle (*Haliaeetus leucocephalus*) upon an adult Spiny Softshell (*Apalone spinifera*) on the Arkansas River at Oxford, Sumner County, Kansas. Oxford resident Marlon Crow discovered the remains of the turtle while exploring a sandbar along his property on the above date. A pair of adult eagles had been using a large cottonwood tree nearby as a roost and had witnessed "fishing" by the pair in the river. Mr. Crow had seen the eagle eating a catch on the sandbar earlier and gone to the site to investigate.

Mr. Crow noted talon tracks in the damp sand, the absence of any other tracks, and the condition of the turtle's remains. He then reported his findings to me but I was unable to investigate until 29 December 1998.

Upon searching the sandbar, I found the carapace of an adult (approx. 21 cm L) *Apalone spinifera*. It was lying upside down approximately 1 meter from the water's edge and was completely stripped of flesh. However, it was still fresh and clearly was not an old, dried specimen, as is often found along the river when local fisherman kill this species.

Whether the eagle actually caught the turtle alive or found a recently deceased specimen could not be determined. Mild temperatures in early December had recently plunged to sub-zero readings for several days prior to 25 December. The river was significantly frozen in that period and it is possible that the turtle had been caught in the freeze prior to being re-organized into a Bald Eagle. Talon tracks were still visible in an area ca. 1.5 m diameter around the carcass.

A brief, incomplete literature search revealed notes on Bald Eagle preying on Diamondback Terrapins (*Malaclemys terrapin*), an estuarine species, in both Maryland and Florida. However, I was unable to find reference to *Apalone* being eaten by eagles.

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