

KANSAS HERPETOLOGICAL SOCIETY NEWSLETTER NO. 80

May 1990

ANNOUNCEMENTS

New Organization for Cheloniophiles

The Endangered Turtle Protection Foundation of the Americas has been founded as "a non-profit, charitable educational organization dedicated to informing the public regarding conservation issues, the need for habitat preservation and the proper husbandry of reptiles and amphibians indigenous to the Americas." They emphasize public education, preservation, and propagation of turtles. Memberships begin at \$12 (Junior) and run to \$250 (Sponsor). For more information contact:

The Endangered Turtle Protection Foundation
P.O. Box 4617
Greenville, Delaware 19807
(302) 571-1718

KHS member Susan Mohring writes that the Mid-Atlantic Turtle & Tortoise Society (MATTS) will be a part of this organization. They are planning a quarterly newsletter (The Chelonian Conservationist) to appear starting in April 1990. You may contact MATTS at the address above for further information.

Meetings of Interest

The combined annual meetings of the *Society for the Study of Amphibians and Reptiles* and the *Herpetologists' League* will be held at Tulane University in New Orleans from 5-10 August. Contact Dr. Harold Dundee, Department of Zoology, Tulane University, New Orleans, Louisiana 70118 or call 504-865-5191 for additional information about these meetings. This is the major herpetological meeting of the year.

The International Herpetological Symposium will be held this year from 20-23 June in Dallas. Registration prior to 15 May is \$125, after 15 May registration is \$150. Make checks payable to "International Herpetological Symposium, Inc." and send them to Dr. Michael J. Uricheck, Department of Chemistry, Western Connecticut State University, Danbury, Connecticut 06810. You may also contact him for information about the Symposium.

The first National Reptile Breeders' Expo will be held from 3-5 August in Orlando, Florida. Contact Wayne Hill, c/o Central Florida Herpetological Society, P.O. Box 3277, Winter Haven, Florida, 33881 for further information.

Tortoises Hatch at OKC Zoo

KHS member and Oklahoma Herpetological Society President David Grow reports the hatching of two Galapagos Tortoises (*Geochelone elephantopus*) on 21 February 1990 at the Oklahoma City Zoo. This is the first reproduction of this species at an interior mainland zoo under completely artificial conditions and represents the culmination of over 10 years intense work to have this species breed at OKC. Congratulations to Dave and his crew.

KHS BUSINESS

New Editorship for KHS

As many of you probably noticed in the last issue of this Newsletter, there has been a major change of editorship for the KHS.

I have grudgingly accepted this onerous task. Hmm, that doesn't sound right. Okay, I leaped at the opportunity with open arms. That's not true either. Somewhere in the middle of those two statements lies the truth. At any rate, for better or worse the Kansas Herpetological Society now has a new editor (me) and associate editor, Marty Capron. Jeff Whipple has (thankfully) agreed to remain as associate editor. What this means is that I can spread the blame around when I screw an issue up. If any of you have any complaints or suggestions, take them to Marty or Jeff. In truth, if any of you do have any complaints, please contact any of us at any time (between 0800 and 1700 hrs, weekdays).

Another major change is that, beginning with this issue, the Newsletter is now produced on KHS's very own Macintosh SE computer, instead of the one at the KU Museum of Natural History. That's right, folks, we went out and spent the *entire* treasury on this slick technological marvel. Got your breath back yet? Good. We did not actually spend the entire treasury but we did spend a good portion of it. Fortunately, due to your generous contributions at the annual auction, a small dues increase, private donations from D. E. and Edna Bradley, Cox Machine Company, and The Metal finishing Company, Inc. of Wichita, and donations from Executive Council members, our actual cost was very low and well within the means of our treasury. We still operate very much in the black. Although the initial use for the Mac will be production of the Newsletter, we are checking into various other options that this tool now affords us, such as developing a regional data base for Kansas herps. Any suggestions you may have are more than welcome.

Finally, I want extend a very heartfelt thanks to John Simmons and Joe Collins for their many years of service on this Newsletter. John, in particular, has done an outstanding job of ensuring that the KHS Newsletter is one of the better such organs in the country. Joe's contributions, not only to this Newsletter but to KHS as a whole are without measure. I hope and intend that we will continue to follow in their path of excellence.

— Eric M. Rundquist

P. S. If any of you potential submitters have word processing capabilities, we can convert directly from 3.5 inch floppy disks. However, at this time we can convert only if the document is in Microsoft Word (version 4.0). In the future, we will probably be able to translate from other word processing software and we will let you know if and when that happens. Your disks will be returned to you after we convert onto our files.

You Gotta Have It

Yes, folks, once again through the magic of Olin Karch's little black camera, videos of various KHS members in volved in various activities (uncensored) are now available. For the unbelievably low price of only \$10 you may obtain videos of either 1988 or 1989 hijinks. Even better, a combined tape of both years is yours for only \$15. Entertain guests, embarrass friends, blackmail enemies. Buy them while they're hot, but just buy them!! (Remember we just raided the treasury to buy the computer upon which this Newsletter was printed.) Mail checks or money orders payable to KHS to: Olin Karch, 1112 Rural, Emporia, Kansas, 66801. Get yours before supplies run out!



KHS BRINGS YOU GREAT NEWS OF THE WORLD

Letters to the Caldwell Messenger

Open Letter to Lee Johnson:

WHY? Why Lee? What motive could you possibly have, or hate for the State Symbol, that would spark you to make and wear a sweatshirt that would "put down" the Ornate Box Turtle? To wear such a sweatshirt to the Homecoming football game and all the parties you attended after the game.

Why do you want to take the pride from our youth who worked so hard for a year, or from the Caldwell citizens who have pride in their accomplishment? Why do you want to take this pride from their teacher, from the parents and all the other Caldwellites, the people from across Kansas, from across our bordering states and even from our school system itself? . . . They all said "go for it" and gave their support. Are we not to forget that feat? . . . A task that took lots of time, energy and good 'ole American work.

Do we now say "Sorry kids, we made a mistake and really didn't think you could do it."

I for one, have great pride in our youth, whether it be in their classroom or out on the sportsfield. If your football team is #1 State Champs we are proud of it and go all out to support them and yes, talk about their accomplishment for years after. Why can't we do this when it is academic?

I'm a Caldwell Bluejay and proud of it. But, I also support our State Reptile. The Bluejay will always be Caldwell's mascot, but the Ornate Box Turtle is our history. Think about it!

I challenge you, Lee and anyone else to come out in the open with a letter to the editor, stating what you have against the State Reptile. Quit back-stabbing and putting-down so those of us who are proud of our 1986 sixth grade class and the teacher and all who supported their bill, can continue to keep this accomplishment in Caldwell, Kansas, USA.

Sincerely yours,

Cleda Baker
Friend of the Ornate Box Turtle

Dear Damon (Editor of Caldwell Messenger):

I have been informed that a proposed "letter to the editor" has been circulating which challenges me for wearing a sweatshirt depicting the ornate box turtle encircled by the international symbol of prohibition. I have not seen that letter, but assume that it derides me as being "anti-Caldwell" in some form or another and requires an answer.

I believe the civics lesson taught to and learned by the sixth grade class of 1986 was invaluable, and I applaud the effort put forth by that class and their teacher. The reward for that enthusiastic lobbying effort was the legislative enactment, naming the Ornate Box Turtle Kansas' state reptile. We were all proud of their accomplishment. Unfortunately, the effort, and accompanying reward, was insufficient to sustain everyone within the community. It appears some would want to commercialize that accomplishment by attempting to make Caldwell known solely as the Ornate box Turtle Capital of the World. I find that ludicrous, in light of the fact that Caldwell has a history that encompasses the Chisholm Trail, the railroads, the Czech heritage, the Cherokee Strip Run, Henry Brown's infamous exploits, etc. We have much history that is unique to this City. Let the turtle be part of our history, but not the entire legacy that we pass on to our progeny.

I must admit, however, that the foregoing is an afterthought. The offending shirt design was conceived as a joke, an attempt to poke fun at a symbol which I perceived was being elevated to

the position of a sacred icon. Judging from the dozens of people who laughed and applauded upon seeing the shirt, I suspect the time was ripe for such comic relief. Perhaps now it is time to move forward with the truly important issues which we face in our attempt to improve the quality of life in Caldwell.

Yours truly,

Lee A. Johnson

(Submitted by Larry Miller, Caldwell, Kansas)

Turtle Controversy Blamed For Suspension of Teacher

The Caldwell Ornate Box Turtle War may have claimed its first casualty this week — sixth-grade teacher Larry Miller's job.

Miller's students led the successful drive to have the turtle declared the state reptile in 1986. That led to a case of "turtlemania" among some in the Sumner County town of 1400. A backlash followed because some residents of the town resented the amount of turtle imagery being associated with the town.

The Board of Education voted unanimously Monday to suspend Miller with pay. Board President Gage Overall and school administrators declined to say why they suspended the veteran teacher.

But Miller's union representative, David Kirkbride, has a hunch.

"All this is tied to the turtle controversy, that's my belief", Kirkbride said. "I'm not sure how it's connected at this point, but there has to be a connection."

Overall would not talk about Miller, or Kirkbride's assessment of the suspension.

"That's his opinion. I'm not saying either way", Overall said.

Miller himself was saying very little.

"Of course I have an opinion, but I don't want to give it - not right now", Miller said.

The whole turtle controversy had simple beginnings. Back in late 1985, Miller's sixth-graders embarked on a science and civics lesson - lobbying the Legislature to have the turtle declared the state reptile. The next year they won, after a campaign featuring buttons, posters, T-shirts, and hundreds of letters.

In 1987, the mayor signed a turtle protection proclamation. At least one local merchant started selling turtle paraphernalia.

But backlash started with anti-turtle jokes, T-shirts, and buttons. Last year, rumors spread through the town that people were shooting turtles or running over them with cars, an activity people in town called "turtle popping".

In late 1989, school administrators told Miller not to discuss the turtle controversy in his class.

Miller filed a grievance, arguing that the directive denied him his academic freedom. The school board did not agree, and voted against the grievance last month.

At the Monday board meeting a group of parents went to the board to talk about tensions in Miller's classroom.

They did not bring up the turtle controversy, said Wayne Hammar, one of the parents.

"I can state quite categorically that that is not my concern", Hammar said.

Because Miller was suspended until the end of the school year, he is worried about his future with the Caldwell school system.

"I can't predict what I will be doing", Miller said. "I, of course, am checking into the possibility of getting into the classroom. This is not a vacation."

According to Kansas law, the school board has to notify a teacher by April 10 of board members want the teacher to leave the district. At that point, the board has to give a reason for not renewing the teacher's contract.

"In my opinion, they do not have grounds for non-renewal", said Kirkbride, executive director of the South Central Kansas-National Education Association. "We have lawyers we can bring in if we need to, and it looks like we'll need to."

"The town has divided into seemingly pro-turtle and anti-turtle factions", he said. "It sounds humorous to outsiders, but to the people of Caldwell it's deadly serious."

— Wichita Eagle, 14 March 1990

Toad Licker Busted!

A Los Angeles man is awaiting trial in a Colombian jail after his arrest on the mind-blowing charge of licking hallucinogenic toads!

Stanton Greer, 28, allegedly traveled to the South American country to procure Cane toads, which secrete an LSD-like substance through their backs and are prized by druggies for their mind-altering properties.

Users lick the backs of the creatures to hallucinate and get high. Authorities say thousands of young people have been licking toads for kicks.

But Greer is the first to be arrested and charged with the crime.

"The substance secreted by the toads is drug just like heroin, marijuana, and cocaine", Police Detective Jorge Nunez told newsmen in Bogota.

"Now we don't go out looking for toad lickers. We don't have the manpower for that. But Mr. Greer was so blatant we couldn't look the other way. He was sitting in the middle of a busy street hallucinating his brains out with a Cane toad in either hand."

In his statement to police, Stanton allegedly said that he jetted from L.A. to Bogota to get South American Cane toads "because they are more powerful than those in the U.S."

He went on to say that he intended to smuggle a few dozen back to the States in a suitcase but couldn't resist the temptation to try a few out before he flew back.

"The man was babbling like a lunatic when we arrested him", said Det. Nunez.

Greer faces a two-year prison term and fines up to \$1,000 if convicted of using illegal hallucinogenic drugs.

— World Weekly News, 13 March 1990
(Submitted by Ann Bradley, Wichita)

Editor's Note: The present and past editor have been besieged with articles on hallucinogenic Marine toads (*Bufo marinus*). The following article is the only one I have deemed appropriate for the *Newsletter*. It was extracted from a magazine which also contained articles on a husband controlling his wife with a TV remote control, doctors curing gay people with cattle prods, and scientists finding bigfoot eggs. You figure out where the truth lies. But, please do not send any more toad juice articles as they will not be printed.



Wichita's Little Monsters

Breeding monsters is no easy task.

Sure, lots of folks see monsters in their nightmares, and special-effects wizards whip plastic and lime together for horror flicks all the time.

Eric Rundquist, an herpetologist and Sedgwick County zookeeper who breeds Gila Monsters, knows producing *real* monsters takes ingenuity.

Six Gila Monsters hatched at the zoo between Nov. 7 and 12 and are to be on display this weekend.

"They're a bizarre-looking creature," Rundquist said Thursday of the new little monsters. "They appear to be nasty, when in fact they aren't."

"Unfortunately, they carry the name of 'Gila monster'." he said. "If you called them Gila lizards it would be a whole different thing."]

Only two zoos, the Oklahoma City Zoo and the Sedgwick County Zoo, have had much success breeding the lizards in captivity, Rundquist said.

In the wild, the lizards hibernate during the winter. To successfully breed Gilas in captivity, the zoo had to simulate the hibernation period. It puts its six adults into an artificial hibernaculum — a large, white, commercial refrigerator.

The Gilas went into the fridge last December and were taken out in March. After hibernation, the warmer temperatures stimulated the males' sperm production. The lizards bred in May.

Two months later, the zoo's three females laid 13 eggs, about half of which turned out to be fertile. Rundquist and his co-workers moved all the eggs as soon as they were laid, putting them into gallon jars inside an incubator, where they remained until hatching.

Thursday, Rundquist fed the firstborn Gila its first meal — a whole pink baby mouse.

— Wichita Eagle, 17 November 1989
(Submitted by Jack Shumard, Wichita)

Runny Nose is Death to Tortoise

The desert tortoise — already threatened by man's encroachment and reptile-eating ravens — faces a deadly new threat in a mysterious respiratory disease spreading rapidly in California's Mojave Desert, experts say.

"It's like a cold — a runny nose," said John Brode, a Sacramento-based biologist with the state Department of Fish and Game. "All we know is that it seems to be a viral infection and it's very serious. There's very little chance of recovery. anywhere from 10 to 50 percent of the population is infected, so it is definitely a major threat to this species."

A century ago, the plodding reptiles, symbols of patience and perseverance in fable, wandered relatively undisturbed throughout the deserts of the southwestern United States. But their numbers have diminished as humans have used their habitat for industrial, recreational and agricultural purposes.

Ravens large predatory birds, followed humans into the desert to feed on garbage and found young tortoises, whose shells hadn't hardened, to be easy targets, and the tortoise population dwindled further.

Environmental groups list preserving the tortoise as a goal, and use it as an argument for creating a vast national park in the California desert, but they haven't made suggestions about fighting the respiratory disease.

"The poor things are under a lot of pressure from all directions," said John Borneman, western regional representative for the National Audubon Society.

—Wichita Eagle, 30 July 1989
(Submitted by Jack Shumard, Wichita)

Dangerous Reptiles Seized by Officers at San Carlos Home

It is not a house where Indiana Jones would feel comfortable.

The movie hero hates snakes and if he had entered the home in San Carlos with law officers yesterday, he would have encountered 500 of the reptiles — some longer than 10 feet - in cages.

The officers, completing a four-week investigation, entered the Renkrib Avenue house with a search warrant and said they found a sophisticated, immaculate breeding and sales facility for domestic and foreign snakes.

Alleging violations of a city code that prohibits the possession of dangerous reptiles, they seized two venomous lizards and 26 snakes — including eight albino Burmese pythons that sell for a reported \$1,000 each.

Also inside the house were 1,000 mice and rats being raised as food for the snakes, officers added.

The owner, Gary Sipperley, 32, was neither cited nor arrested, but he faces administrative hearings that may require him to remove more of the snakes from the house, said Sally Hazzard, director of the county animal control department.

He also could be prosecuted for operating a business illegally in a residential neighborhood, Hazzard added. Officers seized documents during the raid, which began at 9 a.m. and lasted until about 1:30 p.m.

Sipperley, described by officers as "cooperative," could not be reached for comment. he was in the house when officers left, but moments later did not answer the door.

Hazzard said the investigation was triggered one month ago when a neighbor complained about the number of snakes in the house, located on a quiet street near Cowles Mountain.

When officers from county animal control, state fish and game, police, fire, city zoning and health services went to the home yesterday, they said they found an elaborate snake-breeding operation.

They described neat rows of pine shelves used to store glass boxes and cages holding the reptiles. The enclosures, lined on the bottom with newspaper, "were clean enough to eat out of," one officer said.

There were snakes of all sizes and colors, they added, and all appeared to be in good condition.

Hazzard said officers were looking for violations of a city code that bans the possession of reptiles considered dangerous, including those that are venomous, or constricting, or exceed 3 1/2 feet in length, or weigh more than 15 pounds.

The 28 reptiles removed from the house were taken to the San Diego Zoo for identification and will remain there while animal control officers decide their fate.

Zoo officials said the seized animals include two Mexican beaded lizards, which are venomous, one boa constrictor from South America, three pimbura pythons from Sri Lanka, and two white-lipped pythons and one carpet python from Australia.

Neighbors described Sipperley and his wife, Vicki, as "a nice, quiet couple" and said they were unaware that snakes were in the house. Others said they had seen Sipperley in his garage building enclosures.

One man said he now understands the personalized license plate on the back of a pickup truck parked in Sipperley's driveway. "SNKE MNY," it reads. The license-plate holder bears the message: "Bought by snake money."

We are appalled that Animal Control can raid a person's home and confiscate someone's personal property over a senseless ordinance stating that snakes over 3 1/2 feet are dangerous animals. Most harmless snakes grow to more than 3 1/2 feet and are sold at all pet stores. This is strictly Animal Control's idea of "dangerous," and not a city law.

The county, after protests from the scientific and zoological community and responsible snake owners, rejected this ordinance. Do all snake lovers in fear of their animals' lives have to move to the county to keep their pets?

Gary Sipperley is a well-respected, professional snake breeder. His hobby and love of snakes has added to our scientific knowledge on captive breeding and care of pet snakes.

snakes, like most animals, are rapidly disappearing in the wild because of loss of habitat and merciless killing for their skins, which are used for boots, purses, belts and other clothing articles. Education and conservation are needed instead of harassment of people captive-breeding snakes.

What Animal Control, the police, fire, health, fish and game, and zoo officials found at Gay's home were healthy, well-cared-for pets in locked cages — not dangerous, wild animals. Many zoo employees had to spend needless hours removing the snakes, making temporary housing for them, and moving them to the zoo, only to have to return most of them the next day.

This needless confiscation and waste of taxpayers' money has upset responsible snake owners in San Diego who are afraid this may happen to them.

—The San Diego Union, 29 June 1989
(Submitted by Fred Elledge, Oceanside, California)

Ugly? Not in the Face of Real Loss

Last spring I waded into a farm pond with a bucket and captured three tadpoles on the orders of my 5-year-old daughter.

Transferred to a fish bowl on the kitchen table, two tadpoles expired almost immediately from being uprooted, or excessively examined by curious hands, or from the trauma of exposure to the tap water that we drink every day.

The third survived and prospered. He was as ugly a little fellow as you'd hope to find, a bloated thing with dull, unreflective beads for eyes.

If you'd seen him then you might have re-examined you notions about the sanctity of life. Our teen-agers made a show of gagging when they had to sit down and eat in the company of such a gross, obscene bladder of life.

Then one day his metamorphosis began. Two twiglike legs sprouted at the base of his tail. His sunken, primitive eyes migrated from the side to the top of his head, bulging like jewels. His tail withered and dropped off.

Sometimes, as if driven by the agony or ecstasy of transformation, he would explode in a frenzy of splashing and kamikaze dives. At last his gills closed and he climbed up on his rock and breathed pure air. An almost human intelligence shined in his eyes.

I had never thought of a frog as a handsome creature, but that was because I had never seen a frog arise from a tadpole. It was Lazarus, the incarnate image of rebirth.

Beauty is relative, it was easy to see. And it wasn't hard to understand why so many fairy tales feature a frog turning into a prince. The idea doesn't seem at all far-fetched to anyone who's seen a frog emerge from a glob of phlegm.

The graduation of the frog from an object of disgust to the status of a pet was well-timed., for it coincided with disaster the befell the bunny.

Our girl left him outside one evening. As darkness fell, we searched his favorite haunts with flashlights. A cat slinked away and evaporated into the bushes.

The following morning our little one came down, took one look at the empty cage and turned away. She said not a word about the bunny until one of her friends came over to play.

"I'm not old enough to have a bunny," she announced. It wasn't until that evening that she was able to confront the truth.

"Opie!" she suddenly cried out. "I'll never see you again. It was all my fault. I loved him too much."

Only two weeks before, I had chased the bunny through the house with yardstick, yelling curses at him. Now I felt an unspeakable sense of loss. Days after he disappeared I still searched for him hopelessly around the yard.

It was the finality of it we weren't prepared for. What crazy impulse is it that makes us seek out attachments that are bound to end in tears? How can parents deal with the loss of a child when the loss of a bunny hurts so much?

a week after his disappearance, our daughter saw something under the television's perch.

"Opie!" she cried. But it was not a rabbit pellet and a miraculous sign that her bunny was still alive. It was only a ball of lint.

she made up a kind of ballad about Opie to deal with her grief. She dreamed of him living happily in the woods with the raccoons, the possums and the skunks. Sometimes the funereal silence around the house was pierced by strange bunny calls emanating from her room

The rest of us diligently transformed our sorrow for the bunny into affection for the frog. To keep our minds off Opie we became fanatical executioners of house flies.

Visitors to our refrigerator these days are sometimes appalled to discover a glass full of dead flies beside the peanut butter, mayonnaise and jam. No from in this world is going to eat any better than ours.

— George H. Gurley, Jr.

Behind the Lines, Kansas City Times, 23 August 1989

(Submitted by Larry Zuckerman, Pratt)

Leaping Leaf Frogs

When it rains in the Reptile House at the Woodland Park Zoo, it pours Solomon Island Leaf Frogs. Hundreds of these frogs have hatched there in what is believed to be the first breeding of the species in captivity.

The climate in the frogs' natural habitat is wet, with anywhere from six to 16 inches of rain per month, depending on the season. Recreating these conditions in their exhibit stimulated the females to lay eggs, which they buried in the soil — a mode of reproduction never before reported in frogs.

— Animal Kingdom, November/December 1989

Former Forester Turns Turtle

Michael Rugge, a forester who learned about the sea during two years working on a tugboat, decided its creatures needed more protection than exploitation.

So he moved out of his house and into a trailer sitting on a friend's land and founded the Sea Turtle center, a small but active conservation group based in Nevada City, Calif. It is dedicated to protecting sea turtles and sea birds along the West Coast.

Rugge rents his home to provide income for the center.

He and his volunteers teach conservation in schools, taking a complete assortment of slides, furs, hides and bone to show students, help provide transportation and supplies for volunteers protecting 400,000 nesting seabirds on Rasa Island off Baja, and round up volunteers to camp on the beaches of western Mexico to protect sea turtle eggs from poachers.

"We're on the Pacific Coast of Mexico in the State of Michoacan, supporting Laura Sarti's program with volunteers, educational materials and direct donations of camping material and supplies," Rugge said.

Volunteers prowl the beaches at night, collecting loggerhead turtle eggs and bringing them back to the nursery. Later in the season they also release hatchlings, which eventually will grow to be half-ton turtles, the largest of the sea turtles.

During their stay, the volunteers camp in tents.

"It's pretty much a hands-on project, including weighing adult turtles, which average 800 to 1,000 pounds," Rugge said.

The volunteers from the University of Mexico have been working on the Michoacan beach for 10 years, protecting turtles and doing research. This year, Rugge said, the Sea Turtle Center was able to bring Laura Sarti to an international symposium on Jekyll Island, Georgia, so she could present her work to the scientific community.

The field work is in the winter with leatherback turtles and in the summer with Pacific ridley turtles.

Spring is classroom time.

Using materials confiscated by the U.S. Fish and Wildlife service, Rugge and his volunteers take skins, hides, stuffed animals and other materials to the classroom "to give the kids a first-hand view of what this animal looks like stuffed, dead and skinned. Then we show them slides so they can see what it looks like alive and in its natural habitat."

The center is pretty much a one-man show.

"Funding for the first two years pretty much came out of my own pocket," said Rugge, who has a degree in forestry and also has worked in construction, "which I fall back on if I have to."

"I've sold my car and reduced my expenses so I can be in the field most of the year. I've devoted my income to pretty much keeping the center alive," he said. "I'm single, 40, with no family ties."

— Lawrence Journal World, 11 June 1989
(Submitted by Suzanne L. Collins, Lawrence)

Principal's Snake Draws Complaints

An elementary school principal kept an 11-inch python in his office and showed it to children who misbehaved, parents charged.

The principal, who has been transferred to another school, said the charges were unfounded.

"It was intimidating. He would feed it mice and the snake would crush them. I don't know what the children thought, but the parents didn't like it," said Dorothy Carrillo, one of the parents who complained.

Robert Hill Lane Elementary school Principal Dennis Duylea called the charges "ludicrous."

The school district found no wrongdoing on his part. The transfer, the district said, was to ensure "a quiet operating environment" for students.

Deputy district Superintendent Sidney Thompson said: "There is no evidence he used the snake in a threatening manner."

— Topeka Capital Journal, 9 September 1989
(Submitted by Suzanne L. Collins, Lawrence)



FEATURE ARTICLES

CAPTIVE REPRODUCTION OF THE SHELTOPUSIK (*OPHISAURUS APODUS*)

Daniel L. Schupp
Department of Environmental Management
510 North Main
Wichita, Kansas 67203

The sheltopusik (*Ophisaurus apodus*) is a legless member of the family Anguidae, as is the western slender glass lizard (*Ophisaurus a. attentuatus*) which is found in Kansas. The sheltopusik is an Old World species, however, that ranges from the Balkan Peninsula through Turkey, Syria, Iraq, Iran, and into the central Asian portion of the Soviet Union. Its western distribution includes the Yugoslavian-Albanian Adriatic coast and Greece. It occurs as far north as Bulgaria and Romania.

The family Anguidae tends towards a reduction of limbs, although several New World species have four well-developed limbs. Sheltopusiks have vestigial leg stumps on either side of the vent. Osteoderms (bony scales) give the sheltopusik a rigid characteristic very unlike snakes. As in most species of the family, the sheltopusik has a distinct lateral fold. They are excellent exhibit animals, illustrating the similarities of lizards and snakes.

Sheltopusiks are reported to attain a total length of up to 1.4 meters and live to be over 20 years of age. Males have larger, more robust heads than females. The three animals at the Sedgwick County Zoo that make up the breeding group were acquired individually as adults from 1976-1982. Each individual is just under one meter in total length, with the greater portion of the total length consisting of tail.

In the past, all three sheltopusiks were housed in an 18" X 22" X 34" exhibit box that did not provide enough room for physical or visual separation of the specimens and no temperature gradient was provided.

As an inducement to breed, the group was periodically provided with larger quarters and during the winter of 1982-83, subjected to a 40-day cooling period at 67° F.

It has been well-established that cooling temperate climate species helps induce breeding behavior and successful breeding and in the winter of 1985-86, we began in earnest a program of artificially cooling selected species at the herpetarium. Among the species was the trio of sheltopusiks.

After a fast of approximately one week to clear the gut, the sheltopusiks were put into a hibernaculum on 15 December 1985. The hibernaculum we used was quite simple; a refrigerator with a thermostat to control the temperature. Starting at 72° F, the temperature was decreased daily by 2° F until 55° F was reached. The animals, housed individually in plastic sweater boxes, were periodically checked and provided with drinking water. Temperature was maintained at 55° F until 14 March 1986.

Upon removal from the hibernaculum, the group was set up in a stock tank with a wood chip substrate, a limestone rock pile, assorted wood cage furniture, and branches. A Sunlamp was used for an ultraviolet light and heat source. Temperature was maintained at approximately 80° F with a somewhat warmer temperature under the Sunlamp. An L:D cycle of 9:15 changing to 10:14 (corresponding to Daylight Savings Time) was used. These are the minimum day lengths and were quite often longer, depending on how early the herpetarium was opened. In the fall, L:D ratios were again 9:15 following the change to Central Standard Time.

The group was fed every other day with free-choice crickets dusted with DiCal, a calcium supplement, and "supervitamins", an in-house vitamin/mineral supplement. Either neonate rats or mice or Bird-of-Prey, a commercial zoo diet, were offered at least once a week in lieu of crickets. The group was offered drinking water three times per week. By 22 June, no

courtship had been observed and the trio went back to the original small display box at that time.

On 16 December 1986, hibernation was again initiated. The same regimen was followed, gradually cooling the animals to 55° F and maintaining them at that temperature until 11 March 1987. At this time, the temperature was gradually increased over a four day period until 75° F was reached and the group was removed and set up in a large exhibit box measuring 24" X 46" X 33".

The exhibit was constructed similar to the stock tank used the year before. Photoperiod, diet, ambient temperature, and humidity were the same, the chief difference being that the exhibit was positioned directly under paired 4" Vitalites instead of a Sunlamp and an incandescent bulb with reflector was used to provide a basking spot.

On 5 May 1987, male SR170 was observed copulating with female 2371 from 1500 hrs until the building closed at 1800 hrs, at which time copulation was continuing.

On 6 May, the same pair were courting, with the male pursuing the female and biting her on the dorsum. Courtship continued on 7 May. On 14 May, the same male was showing interest in the female's vent, nosing and biting at her vent and above. The female's head was raised during this time. She eventually moved away and the male pursued, biting her anteriorly.

By 4 June, the female had been lying on her side for several days, often in the basking areas. She appeared heavy and lumpy, i.e. gravid, and was separated at this time to an identical exhibit box set up in a similar way as the other, with an incandescent bulb provided for basking. A flat rock raised over ground peat moss was provided as a nesting site.

The female continued to feed until 1 July, when an egg was discovered at the nest site. The egg was removed for incubation. Another egg, laid in the open, was discovered 5 July. The first egg measured 47 mm X 18 mm and weighed 10 g. The second egg measured 38 mm X 14 mm and weighed 5 g. The two were set up for incubation in a one-gallon jar approximately 1/3 full of vermiculite. The vermiculite was moistened with tap water at a water:vermiculite ratio of 2:1 by weight, which is a standard ratio used at Sedgwick County Zoo. The mouth of the jar was covered with plastic wrap and sealed with a rubber band. The incubator temperature was set at 80°F.

By 10 July, the second egg was almost completely collapsed and was removed from the incubator. By 14 July, the remaining egg also collapsed and was discarded. Neither egg showed any sign of fertility.

On 15 December 1987, the trio was put back into the hibernaculum for the third consecutive year. On 16 March 1988, the group was removed and set up under the same conditions as the year before. Notable changes, however, were that a Sunlamp was provided instead of an incandescent bulb, Osteoform was now being used as a calcium supplement, and Nekton-Rep was used as a vitamin/mineral supplement.

In 1988, courtship was first observed on 4 May and continued on 5 May. The pair involved was the same pair observed copulating on 5 May the year before. By 1 June, no further courtship and no copulation had been seen but the female was noted to be very scuffed up on her dorsum, much more so than the previous year. This was presumed to be from unobserved courtship activities, i.e. male biting female.

On 6 June 1988, the female, being obviously gravid, weighed 476.5 g, as compared to 419 g when she emerged from the hibernaculum earlier in the year. She was separated from the group at this time and set up in the oviposition unit as described before.

On the morning of 2 July 1988, seven eggs were discovered laid in the open, not at the nest site. This was exactly a year and a day from when the first egg was laid in 1987. Egg weights ranged from 8.6-9.2 g. The eggs were set up as described before, except that the substrate was drier, with a water:vermiculite ratio of 1:1 by weight and an incubation temperature of 83° F.

By 27 July, two eggs had died and an examination revealed very small embryos.

On 23 August, one of the five remaining eggs was sweating. The following morning, after 54 days incubation, two eggs had pipped. On 25 August, the two eggs that pipped were opened and

revealed full-term, dead neonates. The remaining three eggs were also opened and contained full-term, dead embryos.

For the fourth consecutive year, the trio was returned to the hibernaculum on 15 December. The female weighed 425.5 g at this time, slightly higher than her 419 g mass upon emerging from the hibernaculum the previous spring and considerable less than her pre-egg-laying mass of 478.5 g. The breeder male weighed 366.2 g, again slightly higher than his spring emergence mass of 356.0 g. The third animal, which has never been observed participating in any sort of courtship or combat, weighed 330.0 g, 13 g heavier than post-hibernation.

On 15 March 1989, upon removal from the hibernaculum, the group showed an overwinter average mass loss of just 2%, with the female losing just over 3%.

Courtship this year was first observed on 10 April, earlier than had been seen in the two previous years. It was not until 20 May that further courtship was observed, at which time the male was noted holding the female immobile by the neck for over an hour. The following morning, the male was seen pursuing the female and the female's vent area was noticed to be swollen. Two days later, more courtship activity was observed and on 25 May copulation was seen.

By the first week of June, as in the two previous years, the female appeared to be gravid and was separated from her cagemates. Herp quarters were similar to those provided in previous years with a Sunlamp and heat pad added for additional warmth.

The female weighed 483.5 g on 27 June, very close to her pre-egg-laying mass of 1988.

On 11 July, two eggs were discovered at the morning check and were removed. Within two hours, a third egg was discovered and removed and by mid-afternoon, five eggs overall had been laid. All the eggs were laid near the same spot, the female not using the nest area provided. The female was quite defensive and remained at her nest site throughout the day. The following day, she remained coiled in an S-shape at her nest site, although no more eggs were laid. In the three years that eggs have been laid, the event has occurred within a 10 day span from 1-1 July.

The five eggs ranged in mass from 8.8-10.0 g and were incubated as described previously except that a water:vermiculite ratio of 1:2 by weight was used this year with an incubator temperature of 82° F. Also, the vermiculite used this year was finer-grained than that used in the past. According to Dave Blody of the Fort Worth Zoo, larger-grained vermiculite has been associated with partial clutch failures of various species at the Dallas and Houston Zoos.

By 1 August, two eggs had molded and were removed. A third egg began to dent on 25 August and by 30 August was almost completely collapsed. At the morning check the following day, the dented egg was discovered to have hatched overnight. The neonate was completely emerged but still attached to the egg by a relatively large umbilicus, which was tied off and cut that afternoon.

On 1 September, a second egg had hatched with the neonate being about 1/3 emerged and very alert, as was the first to hatch. This animal, unlike the first, separated completely from the egg by mid-afternoon. The remaining egg was also hatching at this time. The third hatchling was completely out of its egg by the next morning and its condition was the same as the second to hatch. All three fertile eggs hatched.

The first neonate to hatch, which required the tying and cutting of the umbilicus, weighed only 4.4 g and died within the week. The remaining two, both hatching after 53 days incubation, weighed 7.1 and 7.7 g at hatch. In contrast, the average mass of the two full-term dead neonates as well as the three full-term dead embryos from 1988 was less than 2.9 g.

By four weeks of age, the individual weighing 77.7 g at hatch had dropped to 6.5 g, but by 11 October was up to 8.5 g. The animal weighing 7.1 g at hatch was up to 8.5 g at four weeks and weighed 10.0 g on 11 October. Both animals were approximately 270 mm in total length on 11 October and feeding well every other day on 1/4 inch crickets, waxworms, and earthworm pieces dusted with Osteoform and Nekton-Rep.

KANSAS THREATENED SPECIES AND PROTECTION OF THE GYPSUM HILLS HABITAT

By

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I have read with considerable interest the several articles on revising the Kansas endangered and threatened species list to remove peripheral amphibians and reptiles, and on the anti-Box Turtle campaign appearing in the February 1990 Kansas Herpetological Society newsletter. I'd guess that a lot of the same local and state political forces that were involved in the SOS (Save Our Snakes) incidents several years ago are at it again. I'm sure those with a strong interest in and concern for natural Kansas will protect and defend threatened species and their habitats against these anti-conservation groups.

"The Ornate Box Turtle Capitol of the World" and conservation would seem to me a much better image than "The Rattlesnake (or Box Turtle) Roundup Capitol". Maintaining achieved conservation gains is often more difficult than achieving them. In the case of the Broadhead Skink, Northern Redbelly Snake, Central Newt, Earth Snakes, and the Eastern Spotted Skunk, destruction of habitat is, as usual, the primary issue.

I would recommend that any state-commissioned study of your threatened species consist of a better balance than the one Oklahoma recently experienced regarding rattlesnake roundups. The results of that commissioned study have probably accomplished more to set back our 15 years of Oklahoma Herpetological Society programs and policies on this unsafe, inhumane, habitat and species-destroying practice than any rattlesnake rounduppers could have done.

It's the threatened ecosystems, and all that goes with them, which really need protection in the end. However, this may be a larger struggle to overcome the economic and political interests. In Oklahoma, after years of economic and political dispute, the Nature Conservancy was the agency that purchased the 30,000 acre Bernard Ranch in Osage County for a tallgrass prairie preserve. More tallgrass prairie preserves in both of our states will go a long way toward protection of our threatened species. Even the relatively small Springer Tallgrass Prairie Preserve in northeastern Garfield County, Oklahoma, and one of the original Nature Conservancy properties in the state, protects many species, including several of those threatened in Kansas.

An area for which I am increasingly concerned is the Gypsum Hill of northwestern Oklahoma and southcentral Kansas. It's a unique midgrass ecosystem of gypsum and alabaster mesas, buttes, caves, sinks and springs, which is being increasingly abused. The Hill have been deforested, farmed, ranched, trapped, hunted, polluted by oil wells, pits, and ponds, stripmined for gypsum, polluted with sewage and other human waste, and now is being used for toxic waste storage and disposal. The only partly protected areas in the Hills are Alabaster Caverns State Park in Woodward County near Freedom and Roman Nose State Park in Blaine County near Watonga. However, state parks are noted more for their recreational value than in the preservation of flora and fauna, including snakes and other reptiles particularly. But what can you expect in an area where rattlesnake hunts occur annually in several locations and now have the apparent blessings of herpetologists?

Amphibians and reptiles are not the only interesting species in the Gypsum Hills the need and deserve protection. While several kinds of cactus occur in the Hills, Black Lace (*Echinocereus caespitosus* var. *purpureus*) is a very rare species found in the Glass Mountains (Weniger, 1984). It's ironic that nothing is being done to develop or protect Glass Mountains State Park which is a few miles downstream of the Lone Mountain hazardous waste site along the Cimarron River.

Bats and their habitats are another of the threatened fauna of the Gypsum Hills. Bat species depending on the gypsum caves in the Hills may be especially vulnerable to pollution and habitat destruction. Glass (1969) listed eight bat species as occurring in Alabaster Caverns State Park, six of them cave-dwelling. Black (1971) lists the six cave bats as occurring in Gypsum Hills caves. Bee, *et. al.* (1981) and Jones, *et. al.* (1985) list three species as occurring only in the gypsum Hills in Kansas: Townsend's Big-eared Bat (*Plecotus townsendii*), Pallid Bat (*Antrozous pallidus*), and the Cave Myotis (*Myotis velifer*).

Amphibians and reptiles that may be influenced in their distribution by the Gypsum Hills (Lardie and Black, 1981) include: Smallmouth Salamander (*Ambystoma texanum*), Red-spotted Toad (*Bufo punctatus*), Spotted Chorus Frog (*Pseudacris clarkii*), Strecker's Chorus Frog (*Pseudacris streckeri*), Ground Skink (*Lygosoma laterale*), Blind Snake (*Leptotyphlops dulcis*), Common Garter Snake (*Thamnophis sirtalis*), Texas Night Snake (*Hypsiglena torquata jani*), Copperhead (*Agkistrodon contortrix*), Massasauga (*Sistrurus catenatus*), Prairie Rattlesnake (*Crotalus v. viridis*), and the Western Diamondback Rattlesnake (*Crotalus atrox*). In southcentral Kansas, the Red Hills may be associated with the gypsum Hills as a greater part of the ecosystem.

I believe our threatened ecosystems and their interrelated flora and fauna must be protected by all possible means. Economic and political interests are powerful groups supported by huge financial resources. I'm sure the Kansas Herpetological society is already supporting and working with organizations such as state chapters of the Nature Conservancy, heritage, and wildlife organizations. This may be the most practical means of saving ecosystems, by purchasing tracts before they can be damaged or destroyed. In your efforts to preserve natural Kansas, I wish you all great success and you can count on my support. Maybe we can continue to work together to save these wonderful and necessary ecosystems such as the Gypsum Hills of northwestern Oklahoma and southcentral Kansas.

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SHORT REVIEWS OF RECENT PUBLICATIONS

Smithsonian Herpetological Information Service. Three new publications have been issued in the SHIS series for 1989. For information about obtaining copies of these publications, contact Dr. George Zug, Division of Amphibians and Reptiles, Smithsonian Institution, Washington, D.C., 20560. You must include a self-addressed mailing label with your request.

Number 77. Three new species of *Gekko* and remarks on *Gekko hokouensis* (Lacertiformes, Gekkonidae), by Kai-ya Zhou, Yue-zhen, and De-jun Li. 12 pp, including photocopies of plates.

This is an English translation of an article which appeared in October 1982 in *Acta Zootaxonomica Sinica* 7(4): 483–446. The paper includes a key to the species of *Gekko* in China, as well as descriptions of *Gekko auriverrucosus*, *G. liboensis*, and *G. scabridus*.

Number 78. Index of biographies of herpetologists and ichthyologists in *Copeia* 1913–1988. by C. J. McCoy. 33 pp.

This is a very useful publication for anyone interested in the history of herpetology or ichthyology. Since its founding in 1913, the journal *Copeia* has run death notices, full length obituaries, and sometimes longer articles on many famous, infamous, and nearly forgotten workers in the field. Prior to this publication, locating information on a specific person meant a lot of work plowing through indexes and tables of contents. But no longer.

There are three lists: one for bibliographic articles (arranged alphabetically by name of subject, an annual list of biographies, and a list of the appropriate citations in *Copeia*. These are further augmented by a notation indicating whether the article is a short death notice or a longer biography, and whether or not a portrait and/or bibliography are included.

Here you will readily find references to everything from the death of noted cobra tamer Grace O. Wiley to a biography of Raymond Ditmars to the tragic death by boomslang bite of K. P. Schmidt.

Number 79. A key and checklist to the Neotropical snake genus *Liophis* with country lists and maps, by James R. Dixon. 28 pp. plus 12 pages of maps.

The snake genus *Liophis* contains 35 species and at least 62 subspecies, but there are 137 different names which have been proposed for them. With this publication, you can quickly and easily determine which names are valid and which are not. *Liophis* are wide-ranging snakes occurring throughout the Caribbean and most of South America. In addition to a short statement on distribution of each species, this publication also contains a list of *Liophis* taxa by country.

Number 80. A survey of officially rejected nominal herpetological taxa and their allocations, by Hobart M. Smith and David Chiszar. 33 pp.

This is a very interesting list of 12 family names, 87 generic names, and 101 specific names which are not valid, which is to say, they have been rejected by the International Commission on Zoological Nomenclature. You will probably find many names here you recognize from older books, as many rejected names actually have some history of use. Reasons for the rejection of these names vary quite a bit — anything from being a name proposed for a species which has already been described to names rejected for nomenclatural reasons.

There are some great names here too, like *Axolotl* (proposed in 1831 for a creature which is actually *Ambystoma mexicanum*).

New SSAR Publications. Several new publications are available from the Society for the Study of Amphibians and Reptiles. These include:

Crumley, Charles R. 1990. Type catalogues of herpetological collections: an annotated list of lists. Society for the Study of Amphibians and Reptiles Herpetological Circular No. 18. 50 pp. Available for \$5.00 (postage included) from Douglas H. Taylor, Dept. of Zoology, Miami University, Oxford, Ohio, 45056.

For all you list makers out there, here is a reference to over 100 type catalogs indexed by museum and family, and each one is nicely annotated. Type catalogs were once a standard publication of museums, but don't often appear now. In fact, many of the major herpetological collections have not published an up-to-date type list in years. I suppose this is why the author decided to use the older spelling, catalogue, instead of catalog, which is far less awkward and is the standard spelling in current museum studies literature. The notes on each publication point out which ones include a bit of the history of the collection or its builders in addition to the list of types.

Adler, Kraig (editor). 1989. Contributions on the history of herpetology. 202 pp. Available for \$20 hardbound (including postage) from Robert D. Aldridge, Dept. of Zoology, St. Louis University, St. Louis, Mo., 63103.

This excellent book contains three parts. "Herpetologists of the Past" by KHS member Kraig Adler, is the longest section (136 pp.). It contains portraits and biographies of 140 important herpetologists from all over the world (all of them dead, by the way). Each biography is good reading, explaining not only what the herpetologist's contributions to the field were, but where each studied and worked and who they in turn influenced. Included are all the famous names you know as leaders in the field, but also many whose chief contribution was to inspire their students to do important work. Just being able to link faces to the names of many of these herpetologists is well worth the price of the book. If you are at all serious in your interest in herpetology, you will really love this section of the book. It even contains a photocopy of a hand-written letter from John Edward Holbrook, penned in 1837, telling a collector how to ship him live specimens of *Pseudemys scripta*.

The second section, "Index of Authors in Taxonomic Herpetology", is by KHS member John Applegarth. It lists over 2400 people who have described taxa of amphibians and reptiles and many who had taxa named after them. Full names, date of birth, country of residence, and the taxonomic orders in which they proposed names are given.

The last section is "Academic Lineages of Doctoral Degrees in Herpetology", by Ronn Altig. This is a project Altig has been collecting information on for years, and it is quite fascinating. He has traced each "academic lineage" (from student to professor to the professor's professor and so on) back as far as he can. Some interesting things turn up. Most of the important names in herpetology in North America, for instance, can trace their academic lineage back to Louis Agassiz, who came to Harvard from Switzerland, already as a famous scientist. He inspired scores of students as he built up the Museum of Comparative Zoology.

About 1300 names are included on these lists.

All in all, this is an excellent book. It's large format (8.5 X 11 in.) and high quality paper and binding make it a pleasure to pick up and read. It is packed with fascinating information that really makes the personalities of influential herpetologists come alive on the page. It's a steal at \$20.

BOOK REVIEW

Campbell, Jonathan and William Lamar. 1989. *The Venomous Reptiles of Latin America*. 440 pp., 504 color photographs, 115 maps, 6 color maps, 34 tables. Available for \$59.50 from Cornell University Press, 124 Roberts Place, Ithaca, New York, 14850.

This fantastic book covers 145 species of snakes and two lizards. There is a section of regional keys and keys to venomous snakes (the regions are Mexico and Central America, the Caribbean Islands, and South America), and species accounts grouped by genus. There are also three articles by other authors on issues relating to venomous reptiles: "Snakebite Treatment and First Aid" by George Watt; "Annotated Bibliography of Snakebite in Latin America" by David Hardy; and "Producers of Antivenoms for Venomous Snakes of Latin America" by David Hardy.

You will also find here the local names of most species, which is particularly helpful if you are traveling in Latin America, and an extensive bibliography. The regional accounts contained detailed and informative physiographic descriptions of the areas under consideration. The species accounts are very thorough and include notes on distribution, habitat, description, species of similar appearance and so forth. The distribution maps are quite good.

Photographs of live animals have been used whenever possible and many appear to have been taken in the field. As you would expect in a book dealing with this many species, the quality of photographs is variable, but almost all are good to excellent. In all, there are 565 color photographs of reptiles arranged on 72 pages.

This book is printed on high quality paper, well-bound, with a beautiful cover. The reproductions of the photographs, drawings, and maps are superb.

The extensive field experience of authors Campbell and Lamar in Latin America is reflected throughout the book. Their familiarity with the animals, habitats, Spanish scientific literature, and Latin American herpetologists has enabled them to produce a stunning volume. This is both an authoritative and beautiful book.

BOOK REVIEW

Frost, Darrel R. and Richard Etheridge. 1989. *A Phylogenetic Analysis and Taxonomy of Iguanian Lizards (Reptilia: Squamata)*. Miscellaneous Publication No. 81, University of Kansas Museum of Natural History, 65 pp. Contact the Publications Secretary, Museum of Natural History, University of Kansas, Lawrence, 66045 for price and ordering information.

This paper, based on the Ph.D. research of KHS member Darrel Frost, discusses the relationships of the diverse lizard family Iguanidae (ca. 54 genera and 546 species) in terms of phylogenetic systematics. A total of 147 characters (everything from bones to hemipenes) were used in the analysis, and not surprisingly, the end result is that it appears the family Iguanidae, as we have long thought of it, is actually several families of lizards (maybe eight, the authors say) masquerading as one.

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