

KANSAS HERPETOLOGICAL SOCIETY

NEWSLETTER No. 107

MARCH 1997



ANNOUNCEMENTS

NEW KHS AWARD IN 1998

The Kansas Herpetological Society is pleased to announce the establishment of the

***Suzanne L. & Joseph T. Collins Award
for Excellence in Kansas Herpetology***

The Award is established in recognition of the scientific and artistic achievements of Suzanne L. Collins and Joseph T. Collins, whose life-long study and conservation of the native amphibians and reptiles of Kansas is amply demonstrated in their extensive and excellent writings and photography, both academic and popular, about these animals. The Award will be presented once each year on the occasion of the annual meeting of the Kansas Herpetological Society before its assembled membership. The *Collins Award* is funded by a trust in perpetuity, and will increase in amount each year through reinvestment. The initial award will be at least \$700.00 (and may be as much as \$1000.00), making it the largest annual state award for any biological, wildlife, or conservation organization in Kansas. The recipient of the *Collins Award* will be chosen by the Executive Council of the Kansas Herpetological Society, or a committee appointed by them.

In even-numbered years, the *Collins Award* shall be bestowed on that member of the Kansas Herpetological Society who, in the preceding two calendar years, accomplished the following: Published a paper of significance on the systematics, ecology, or conservation of a native spe-

cies of Kansas amphibian(s) and/or reptile(s) in the *Kansas Herpetological Society Newsletter*, *Transactions of the Kansas Academy of Science*, *Herpetological Review*, or the *Journal of Herpetology*, or presented a lecture of significance on the systematics, ecology, or conservation of a native species of Kansas amphibian(s) and/or reptile(s) at the paper sessions of the annual meeting of the Kansas Herpetological Society. To qualify for the Award, a significant portion of the field work or observations appearing in a paper or lecture must have occurred in Kansas, or the systematic data must have been based in substantial part on Kansas specimens.

In odd-numbered years, the *Collins Award* will be given to that member of the Kansas Herpetological Society who accomplished the following: Was chosen the best in a juried competition of color photography portraying an amphibian(s) and/or reptile(s), said competition to take place on the occasion of the annual meeting of the Kansas Herpetological Society during odd-numbered years. To qualify for the Award, the photography must portray a species native to Kansas.

The first *Collins Award* will be presented at the Silver Anniversary Meeting of the KHS in Lawrence during November 1998. Individuals wishing to make contributions to the trust should make checks out to *The Center for North American Amphibians and Reptiles* (abbreviated CNAAR). Note on the check that the money is for the *Collins Award*, and send it to: P. O. Box 4694, Lawrence, Kansas 66046. All contributions are tax deductible.

Events of Interest to KHS Members

13-14 March 1997 Meeting of the Kansas chapter of the Wildlife Federation. Overland Park. Contact Larry Zuckerman, Kansas Dept. of Wildlife & Parks 316-672-5911. KHS member Joe Collins will conduct the auction.

2-4 May 1997 ANNUAL KHS SPRING FIELD TRIP, Z-Bar Ranch, Cottonwood Falls. (See page 2.)

10-11 May 1997 Annual meeting of the Kansas Association of Biology Teachers, Belvidere, Kansas. Contact Ken Brunson, Kansas Department of Wildlife & Parks 316-672-5911.

24-27 May 1997 2ND KHS FIELD TRIP, Comanche County, Coldwater City Lake. (See page 2.)

KHS SPRING FIELD TRIPS

The Annual KHS Spring Field Trip will be held 2-4 May 1997 at the Z-Bar Ranch in Chase County near Cottonwood Falls. As many of you know, the Z-Bar has recently been designated a National Prairie Preserve, the only one of its kind in the United States. KHS has been invited as one of the first groups to conduct faunal surveys on the ranch, a signal honor for us. The ranch is located near Cottonwood Falls and KHS will headquarter and camp at Chase County State Lake, which is located on U.S. Rt. 50 just west of Strong City. KHS members may arrive the evening of 2 May and KHS signs will be posted at the lake. CB channel 4 will be monitored. For additional information on this field trip, contact Larry Miller at (913) 836-2119.

A second KHS spring field trip will be held on 24-26 May 1997, and will center around the Coldwater area of Comanche County, Kansas. Camping is available at the Coldwater City Lake located just south of the City of Coldwater. The Comanche Motel (316-582-2104), located at 204 South Central in Coldwater, is available for those not wishing to camp. Participants may arrive as early as Friday evening the 23rd of May. Coldwater is located at the junction of U.S. Rts. 160 and 183. As always, CB channel 4 will be monitored. This is a wonderful time to be in the Comanche, Clark, and Barber County areas. For further information on this trip, contact Larry Miller.

In addition, Eric Rundquist will be conducting faunal surveys that weekend at a study site (actually three sites) on the Alexander Ranch in nearby Barber County. KHS members are welcome to participate in these studies. The Alexander Ranch is located at the junction of U.S. Rt. 160 and the Sun City Road in Barber County. Those wishing to participate should contact Eric at (913) 832-9093.

KANSAS HERP COUNTS & AMPHIBIAN SURVEYS

Well, folks, it's time for the Annual KHS Herp Counts. As usual, the count period runs from 1 April-31 May. You will find a copy of the KHS Herp Checklist enclosed with this Newsletter. Please note that there is one change to the Kansas Herp Checklist, namely the Barred Tiger Salamander (*Ambystoma mavortium*) and the Eastern Tiger Salamander (*Ambystoma tigrinum*) are now recognized as two separate species, not subspecies. It is important to make this distinction on your returned counts. If you are unsure of the range of these two salamanders, check Joe Collins' *Amphibians and Reptiles in Kansas*, 3rd edition to be sure. If you are unsure of the identity of any Tiger Salamander you encounter, either send a photograph of the specimen to me or just list it separately as "Tiger Salamander." Remember that anyone may participate in the Herp Counts and that road counts are just as valid as actual

field counts. Send all completed forms to Eric Rundquist at the address listed on the inside front cover of the Newsletter.

In addition, a copy of the Kansas Amphibian Survey form is also included with this Newsletter. The Amphibian Survey is part of the ongoing efforts of the Declining Amphibian Populations Task Force to monitor amphibian populations around the world. KHS has participated in this work for a number of years. Amphibian surveys can be conducted at any time of the year. I would like to ask, in light of recent reports of deformed frogs in the Midwest, that anyone discovering populations of frogs with deformed, missing, or additional limbs please make note of such populations on the form and include as exact locality data for the population as possible. Again, return completed forms to Eric Rundquist.

NEW TEXAS BOOK BY JAMES R. DIXON

The Texas Herpetological Society is pleased to announce the availability of its first Special Publication, *Texas Herpetological Literature, 1826-1996* by James R. Dixon. This work updates the bibliography in Dixon's *Amphibians and Reptiles of Texas* (College Station: Texas A&M Press, 1987) and includes a total of almost 2800 references. The current publication also includes tables that list the frequency of occurrence in the literature of all Texas reptiles and amphibians.

Since Texas is a large area and is centrally located, this bibliography will be extremely useful to herpetologists working in most areas of the United States and northern Mexico. It includes all publications that mention Texas reptiles and amphibians from the 1828 work of Berlandier through works published as late as October 1996. The society envisions issuing periodic updates to keep the bibliography as current as possible.

Dr. Dixon is the ideal herpetologist to compile this bibliography. In addition to publishing the most comprehensive guide to Texas herpetology, he has spent the last 30 years teaching at Texas A&M and curating the Texas Cooperative Wildlife Collections. Even though his current title is Professor Emeritus, Dixon continues to inspire students both directly and indirectly with his field work and publications.

Texas Herpetological Literature, 1826-1996 is available on computer disk in either MS-DOS or Mac format. Each disk contains an instruction file and the bibliography as an ASCII text file and as one or more popular word processing program files. The price of each disk is \$11.00, including tax and postage.

Please send orders, specifying desired format, to: David Haynes, Texas Herpetological Society, Secretary/Treasurer, 1810 West Mulberry, San Antonio, Texas 78201

Please make checks payable to the Texas Herpetological Society and allow 2 to 3 weeks for delivery.

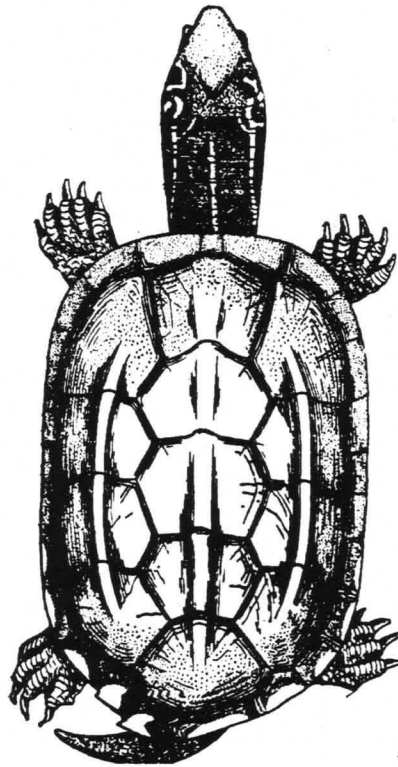
TEXAS HERPETOLOGICAL SOCIETY FALL SYMPOSIUM

Over two dozen nationally and internationally recognized researchers on snake behavior and ecology have tentatively committed to present talks on Snake Ecology of the 21st Century on 18–19 October, 1997. Dr. Gordon Burghardt, University of Tennessee will be the banquet speaker and an auction will be held afterwards. Featured events include Field trips to the University of Texas at Tyler Ophidian Research Colony, Caldwell Zoo and Sheff's Wood (Nature Conservancy Preserve—14 year recapture study of snakes); workshops on field techniques, radiotracking, pit-tagging, and analyzing behavior in snakes.

The symposium will be held at the lodge of Camp Tyler, a youth camp on a large lake with 600 acres of woodland. Cabins available for 80 people (rustic but cheap). The camp features great cooks and is only about 20 minutes from the University of Texas at Tyler. Those preferring more civilized accommodations can find hotels in Tyler.

Join other snake ecologists for the 1997 THS fall meeting.

For further information and future announcements contact: Neil B. Ford, Department of Biology, University of Texas at Tyler, Tyler, Texas 75799; email: nford@mail.uttyl.edu or telephone (903) 566-7249



KHS BUSINESS

NEW KHS DISTINGUISHED LIFE MEMBER

The KHS Executive Council announces with pleasure that Dr. Dwight Platt of Bethel College in North Newton is the latest KHS Distinguished Life Member. Dr. Platt received his doctoral degree under Dr. Henry Fitch at the University of Kansas, and has conducted and published important life history studies on Kansas amphibians and reptiles over a forty year period. In addition, Dr. Platt was instrumental in establishing the first listing of Kansas endangered and threatened species in the 1970s. He also served as President of the KHS. The Executive Council congratulates Dr. Platt for his dedication to Kansas amphibians and reptiles, and the Society extends its good wishes for a long, happy, and productive retirement.

KANSAS LEGISLATIVE UPDATE

The annual state legislative session is well upon us as of this writing and, as usual, there are a some bills being presented of concern to KHS. The most onerous of these appears to be HB 2368, a bill that proposes suspending all state surface water quality standards and targets certain threatened and endangered species in Kansas, including the Common Map Turtle. In addition the bill would establish a special commission to examine all state water quality standards. The makeup of the proposed commission is heavily weighted towards an anti-conservation bias. I appeared before the House Committee on the Environment on 20 February and presented testimony against this bill, as did the Kansas Natural Resource Council, Sierra Club, and the Audubon Council. This testimony is published later on in this Newsletter. It appears that the bill will make it out of committee in amended form but it is still a dangerous piece of legislation. I strongly urge all KHS members to contact their local legislators and tell them to vote against this bill.

The other legislation of interest to KHS is HB 2361 and SB 309, bills amending the state's endangered species act. As many of you are aware, the Kansas Endangered Species Act was seriously threatened with being gutted by last year's state legislature. To stave off this threat, the Kansas Nongame and Endangered Species Task Force was formed to review the act and present their recommendations to this year's legislature. The Task Force was made up of members of the following groups: Kansas Nongame Advisory Council, Kansas Farm Bureau, Kansas Association for Conservation and Environmental Education, Kansas Chapter of the American Fisheries Society, Kansas Herpetological Society, Kansas Chapter of the Wildlife Society, Kansas Ornithological Society, Kansas Livestock Association,

Kansas Audubon Council, Kansas Association of Conservation Districts, Kansas Natural Resource Council, Kansas Department of Wildlife and Parks (KDWP), Kansas Building Industry Association, State Association of Watersheds, U. S. Department of Agricultural Farm Service Agency, Kansas Wildlife and Parks Commission, and one private landowner. The KHS representative to the Task Force was Joe Collins.

The group was charged with "reviewing the provisions of the existing act, giving particular attention to the practices and procedures involved in determining whether any species of wildlife indigenous to the state is a threatened or endangered species in this state, and forwarding recommendations emphasizing voluntary compliance" to the appropriate legislative committees. Essentially, the task force proposed bringing more public input into the listing process and provided low-cost or no-cost tax incentives for landowners to conserve and preserve critical habitat for endangered species.

I believe that the task force has compiled an excellent set of recommendations that will strengthen and preserve our existing endangered species act and will provide for vital public input and support that was previously lacking. I urge all KHS members to support the task force recommendations and am proud that our organization was an important contributor to same. Write your legislators and ask to vote in favor of SB 309 and HB 2361. Anyone desiring additional information, a summary of the task force recommendations, or a copy of the task force report should contact me.

For those with Internet access, copies of SB 309, HB 2361, and HB 2368 can be found at <http://www.ink.org>. Click on "Legislative" on the web page.

— EMR

TESTIMONY BEFORE THE HOUSE COMMITTEE ON THE ENVIRONMENT ON HB 2368 20 FEBRUARY 1997

My name is Eric Rundquist. I am a co-founder, past president, and current editor for the Kansas Herpetological Society, a conservation organization concerned with the state's amphibians and reptiles. I am also the communicator for Kansas for the international Declining Amphibian Populations Task Force, a network of thousands of people around the world monitoring amphibian populations. I have over 35 years of field experience in Kansas, having worked in every county in the state during this period.

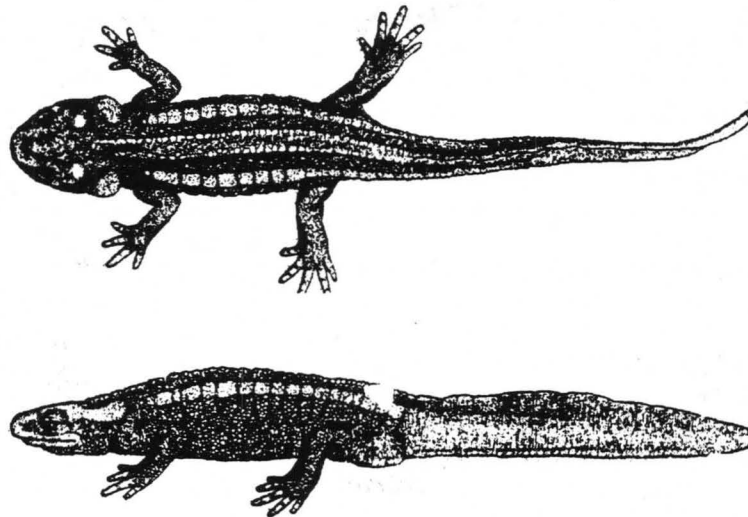
I strongly urge this committee to reject HB 2368 for the following reasons: suspending current state regulations on water quality could have a significant impact on aquatic reptile and amphibian communities, could have a significant impact on the health of the people of this state, and the health of the people of this state is a primary consideration over so-called cost-effectiveness.

There is strong evidence and indications that surface water pollutants have had a considerable negative impact on aquatic turtle and amphibian populations in Kansas. Research conducted some years ago by Dr. David Edds and his students at Emporia State University showed a strong correlation between pollutants and population declines and developmental defects in aquatic turtles in southeast and south-central Kansas, particularly among Map Turtles, a group that includes one state threatened species. Work by Dr. Lou Guillette, formerly of Wichita State University, strongly indicates that certain pollutants and their breakdown by-products act as artificial reproductive hormones in many creatures, including reptiles and mammals. These false hormones dramatically reduce the reproductive abilities of these creatures and there is no reason to believe that they do not have the same effect on humans. I believe that atrazine is one of the pollutants that has been linked with

this syndrome. In addition, I have recent reports from Meade and Douglas Counties of frogs with deformed, missing, or additional limbs. This phenomenon has caused considerable alarm in Missouri and Minnesota and there is some evidence that surface water pollutants are responsible for these defects. Reports from localities as widely separated as Meade and Douglas Counties indicate that this may be a statewide problem. Again, there is no reason to believe that pollutants would not have the same effect on humans.

Procedurally, I believe, that should this bill pass, it will be in direct conflict with legislation currently under consideration by this committee and the Senate Committee on Energy and Natural Resources. I refer to HB 2361 and SB 309, which are a result of task force recommendations mandated by the State Legislature last year.

On a personal note, as a taxpayer and voter, I am concerned that any legislation would be proposed that could possibly compromise my health and that of those people I love and for whom I care. I believe that HB 2368 is an example of just that kind of legislation and, again, I strongly urge this committee to reject this bill. Thank you for your time and consideration.



KHS BRINGS YOU THE WORLD OF GREAT NEWS

SCIENTISTS TALK TURTLE: A NEW STUDY RECONSIDERS THEIR PLACE IN THE REPTILIAN FAMILY TREE

For nearly 80 years, scientists have been trying to figure out exactly where the enigmatic turtle belongs in the family tree of reptiles. Modern science generally accepts that they are the living descendants of ancient reptiles, a sort of living fossil that somehow survived the mass extinctions that wiped out their kin and other animals, such as the dinosaurs.

But a researcher at Chicago's Field Museum of Natural History now says that these fascinating hard shelled residents of wetlands and ponds may not be as primitive as once thought.

Instead of being the direct descendants of long-extinct reptiles who roamed the Earth nearly 290 million years ago, turtles may be a lot younger. Their actual birth date may be from 240 million to 250 million years ago, which makes them cousins of modern-day lizards, snakes and even crocodiles.

The suggestion comes from Field Museum paleontologist Olivier Rieppel, who did his research with Michael DeBraga, a graduate student of zoology at Erindale College at the University of Toronto, Ontario. The results of their research are being published in the scientific journal *Nature*.

If true, the theory challenges the long-accepted scientific belief that turtles are the oldest living example of ancient reptiles. As such, turtles are often used as a benchmark for comparison with other animals.

"Those basic notions that have been held up for decades are being called into question," Rieppel said. "If we are right with our hypothesis, science cannot use turtles anymore as a primitive model.

That could mean that other species are younger than originally thought and may shed new light on the origins of many other animals.

Rieppel and DeBraga compared hundreds of characteristics of turtles to characteristics of modern animals and to fossil records. In particular, they studied naturally occurring holes in the skulls of turtles and the construction of the ankle bones, both of which are thought to provide clues about an animal's origins. They used a computer to compare hundreds of possible similarities and analyze the results.

"Turtles...and lizards share a pattern of bone formation," Rieppel said. "This is a very strong signal for a close relationship."

Even before Rieppel and DeBraga completed their

research, scientists had many questions about the origins and evolution of the turtles, one of the Earth's most unusual creatures. It is unique in that it wears protective armor on its back and has its shoulder blades inside its ribcage instead of outside.

Such questions of origin are not unusual, say scientists, who point to the relatively new idea that birds are really feathered dinosaurs as another example of how scientists sometimes change their minds as more information is gathered.

Part of the problem, scientists say, is that the system of classifying animals in a hierarchical family tree was invented in the 17th century and doesn't take into account more recently discovered evolutionary changes.

"Ours is a heretical view and some people won't appreciate it," said DeBraga, who noted that the newly released paper contradicts the work of one of his own professors at the University of Toronto.

Robert Rice, DeBraga's professor, supports the generally held notion that turtles were a primitive life form.

"I don't necessarily agree with the results of the research, but that doesn't matter," Rice said. "It is the progression of ideas that is the hallmark of science."

— *Kansas City Star*, 4 January 1997

Submitted by Suzanne L. Collins, Lawrence

ARKANSAS STATE STUDENT ADVANCES A "FUZZY" THEORY

Use a dog or a monkey for scientific research and people will howl in protest. But sacrifice a mouse or a lizard and hardly anyone will let out a squeak.

A Manila woman said she has proved what the psychology profession calls the "fuzzy theory," through testing held at Arkansas State University.

Her findings were significant enough to send her to Toronto to present her research at the American Psychology Association's annual convention in August.

Terri East, 35, a senior psychology major, conducted two studies over the past year and came up with the same conclusions: People object more to scientific research testing when fuzzy, cute animals are used.

Her findings were reported in a brief article in the December issue of *Glamour*.

People surveyed in the study, East said, "basically said if an animal was cute and cuddly, don't do the research on it. You don't want me to touch the cat, but you don't care what I do with the lizard."

The project was done as a requirement in East's Human Research psychology course during the spring semester.

East first asked 40 people to list 15 animals as "fuzzy" or "non-fuzzy" and chose the top five animals from both categories for her research.

Fuzzy animals, she found, included cats, dogs, monkeys, rabbits, and dolphins. Technically, dolphins are not fuzzy, but public perceptions of the aquatic mammals is that they are cute, intelligent animals.

Non-fuzzy animals were frogs, pigs, lizards, rats, and cows.

East developed a questionnaire and placed a "fuzzy" and "non-fuzzy" animals in various testing situations.

One question asked people how they felt about scientists inserting electrodes into the brains of rats and monkeys to determine the effects of cocaine. As expected, more people opposed the testing conducted on monkeys than they did on rats.

"We found people weren't consistent in their objections to the testing," said Pamela Ansborg, East's professor. "They wanted to save the cute, cuddly ones over the slimy animals."

East was one of 21 students across the country to present her findings at the Toronto convention.

The experiment has fostered East's opinion of using animals for scientific research. She said she opposes animal testing for developing cosmetic products, but sees the need for life-saving testing.

"I ask students during lectures how many of them have had skin grafts because of burns," she said. "I say, 'Thank you very much, there's a cat that was burned up to see if that skin graft first worked.'"

— *Arkansas Democrat Gazette*, 21 December 1996
Submitted by Suzanne L. Collins, Lawrence

SNAKE PARASITE MAY BE BEHIND DEFORMED FROGS

Shortly after the discovery of frogs with deformed limbs alarmed Minnesota and Wisconsin, research in California is revealing a likely explanation.

New data on a pond of misshapen amphibians in the Mother Lode seem to rule out heavy metal or other chemical toxic causes. Instead, Sierra College biologist Charles Dailey speculates that an insidious snake parasite is infiltrating the frog population, causing grotesque malformations.

His work is supported by landmark studies that confirmed a link between the parasite and massive deformities suffered by salamanders and frogs in an Aptos pond in 1990.

When the Aptos pond was discovered, "a huge wad of puzzle pieces fit together," said Stanley Sessions, a biolo-

gist now at Hartwick College in Oneonta, N.Y., who led the Aptos research.

Frogs are generally regarded as a "sentinel" species, so sensitive to minute environmental changes that their populations respond dramatically. That's why people calling a state frog hot line to report hundreds of frogs with stump legs, missing eyes and extra limbs gave chills to Minnesota scientists.

At an emergency conference held there last month, researchers speculated that water pollution, radiation or ozone depletion could be throwing frog development into upheaval.

Sessions' and Dailey's work suggests a different villain.

Dailey examined a pond in Nevada County that supports thousands of baby bullfrogs, as many as 10 percent of which have an extra limb, a deformed eye or a missing leg.

He told the Sacramento Bee that the pond is too far above mining areas to suffer from remnant toxicity. He also ruled out heavy metal contamination because the frogs showed no neurological damage.

Instead, Dailey suggested that a parasitic fluke left behind by carnivorous birds may be preying on the frog population to complete its reproductive cycle.

Flukes, which thrive in the intestines of garter snakes, must go through a two-stage life cycle to arrive at their preferred dwelling place. The cycle begins when the snakes excrete fresh fluke eggs into the pond and snails gobble them up. Inside the snails, a single egg hatches into hundreds of thousands of larvae.

The larvae emerge together in a huge mass. They search for little tadpoles, which happen to grow up into a favorite garter snake snack. The tender spots where the tadpole's back legs are developing provide an easy spot for the fluke larvae to burrow into tadpole flesh, lose their tails and secrete a hard covering. There they wait until the tadpole or eventual frog gets eaten by a snake. "Voila," Sessions said.

In the meantime, the hundreds of hard cysts formed by the fluke larvae interfere with the tadpole's development. Instead of making one frog leg, the cells give orders to make many. The tadpoles that develop into frogs will then be crippled by misshapen legs.

Sessions demonstrated his theory by implanting tiny plastic beads into tadpole limb buds. As the tadpoles grew into frogs, they developed extra legs.

Sessions said tadpoles are amazingly elastic as they transform into frogs. It's possible at that stage to transplant an eye to a tadpole's back and have the creature grow into a frog that can see behind itself. Tadpoles also are highly susceptible to injury, with birds and other creatures poking about.

Sessions said that the sudden upsurge in deformed frogs could be caused by an increase in the fluke population

could be the result of the growing number of students hunting for "mutant" amphibians for high school science projects.

Fertilizers that seep into ponds could cause an explosion of pond grasses, which would then die off and support a plentiful population of flukes. Sessions thinks direct chemical mutations are unlikely, but he didn't rule out the possibility.

He said his theory is more likely; it is also a more comforting explanation. If he's wrong and chemicals are the cause, "then we're really, seriously in trouble," he said.

— The San Francisco Examiner, Oct. 21, 1996
(Submitted by T. H. Fritters, Kansas, Okla.)

ON THE TURTLE TRAIL

First came the Beatles' octopus's garden. Now there might be a secret turtle highway under the sea.

Scientists tracking endangered leatherback turtles say the creatures may have distinct migration paths in the open ocean.

A team of researchers — from Cornell University in Ithaca, N.Y., the State University College in Buffalo, Drexel University in Philadelphia and Indiana-Purdue University in Fort Wayne — used radio transmitters to track eight adult female leatherbacks.

Over a period of four years, the turtles left their nesting ground in Playa Grande, Costa Rica, and headed southwest. Some of the turtles made it farther than others before their transmitters stopped working. But the researchers noticed a striking pattern — the turtles stayed confined to a corridor about 300 miles wide and up to 1,700 miles long.

Writing in the latest issue of the journal *Nature*, the scientists said the probability is low that the turtles would stay in such a narrow area by chance.

— Lawrence Journal World, 9 December 1996
(Submitted by Suzanne L. Collins, Lawrence)

RECORD BREAKING SNAPPING TURTLE WAS TAKEN FROM LAKE IN ORANGE, MASSACHUSETTS

How do you put the Friendly Town on the map?
Catch a world-record breaking snapping turtle out of Lake Rohunta.

What do you do with a 76.5 pound snapping turtle?

If you are John Rogers, a professional snapping turtle hunter from Maine, sell it to the Toronto Zoo for public display.

Rogers, who has trapped turtles for the past 45 years, broke his previous record by nearly 10 pounds with the

huge terrapin (*Chelydra serpentina*) a male of indeterminate age. It has a shell about 20 inches long and nine inches deep, a 10-inch neck circumference and a 12-inch tail circumference.

The turtle was weighed on a freshly certified postal scale in the Westborough Post Office the day after Rogers captured it and brought it to the Mass. Division of Fisheries and Wildlife field office in Westborough.

Rogers broke the old record of 65 pounds (from Minnesota) with a Middlesex County monster in July of 1988. That turtle weighed 67 pounds and had remained the unchallenged, wild-caught world record for the species until the past June 26.

Rogers described the catch in a recent Massachusetts Wildlife Publication generated by the MDF&W.

"It was about dusk and I was poking my canoe around Lake Rohunta, picking up a few "keepers" but nothing special. I'd worked the lake a couple of times over the past 20-25 years, and I knew it didn't produce turtles much over 30 pounds; it just isn't a big turtle water, so I wasn't expecting much.

"I was heading back for the day, pretty tired, when I spotted a couple of surface weeds going under. Sometimes that's turtle; sometimes it's fish or muskrat. A few seconds later— about the time it would take for a really big turtle to cover the distance— another stem went down. I poled over and started poking around with my gaff, hit shell and hauled away.

"At first I thought I'd latched onto a sunken truck tire. I knew right away it was a big one, but I didn't realize how big until I finally got it in the canoe. I've only caught five or six turtles over all the years that stretched across the gunnels like this one."

Rogers took the turtle home with him and placed it in a fenced pond near his house in Maine. He considered offers from all over the world before selling it to the zoo in Canada for \$2,500.

Rogers has been written up in *Yankee Magazine* and other periodicals and will appear in an issue of *National Geographic* next year.

The snapping turtle is common in Massachusetts and is the only reptile classified as a game species.

— Athol Daily News, 11 December 1996
(Submitted by Suzanne L. Collins, Lawrence)

BOA CONSTRICTOR CONVICTION

William A. Keefer, United States Attorney for the Southern District of Florida and Jorge Picon, Senior Resident Agent, United States Fish & Wildlife Service, announce that Tim Eaton, 36, of Tequesta, Florida, was sentenced to two years in prison and ordered to pay a \$25,000 fine today by U. S. District Court Judge Lenore Nesbitt following his

conviction by a federal jury on all five counts of an indictment charging him with conspiring to smuggle over one hundred Peruvian boa constrictors into Miami International Airport in violation of the [federal wildlife law]. Eaton had also been charged with two counts of smuggling boa constrictors and with two counts of receipt, sale and facilitating the transportation of smuggled boa constrictors in violation of the smuggling statute, Title 18, U.S.C. 545. The conviction came after a week-long jury trial in July 1996.

According to the evidence presented at trial, between February and November 1993, the defendant conspired to smuggle approximately 141 Boa Constrictors (*Boa constrictor*), one Rainbow Boa (*Epicrates cenchria*) and three Green Anacondas (*Eunectes murinus*) from Peru in violation of [federal law]. Because these animals are species of wildlife listed on Appendix II of the Convention on International Trade in Endangered Species ("CITES"), they are prohibited from importation into the United States without first obtaining a valid CITES permit from the exporting country. At all relevant times, Peru had banned the commercial trade in its Amazon rainforest species, including these.

The Peruvian Boa Constrictor is a highly desired reptile within the U.S. pet trade. Because of its distinctive red coloring and because of its relative rarity due to the fact that Peru does not allow its export, the Peruvian boa commands a much higher price than the common Boa Constrictor in the U.S. pet market. At the sentencing hearing, the Court found that the evidence showed that in 1993, a healthy Peruvian Boa Constrictor would sell for approximately \$400 on the retail market, bringing the total retail value of the smuggled wildlife in this case to \$57,600.

According to the evidence adduced at trial, Eaton is the president of Peruvian Imports Unlimited, which imports and distributes "Cat's Claw", reported to be a herbal remedy. Eaton testified at trial that his company grossed \$3.5 million in sales in 1995.

The case was prosecuted by Assistant United States Attorney Lauren Priegues of the Environmental Crimes Section and investigated by Special Agent Charles Bepler.

USFWS News Release
(Submitted by Travis W. Taggart, Hammond, Louisiana)

HERPETOCULTURISTS VS. HERPETOLOGISTS COOPERATION OR COMPETITION?

James B. Murphy, Kraig Adler and Joseph T. Collins

Although the "terrarium" phenomenon has existed in Europe for nearly 150 years, one could hardly have imagined the extraordinary phenomenon of herpetoculture and

the remarkable technology which has been developed to support reptiles and amphibians in captivity during the past 20 years. Many species are now commonly bred in captivity through multiple generations, whereas in the past, many of these herps rarely survived for long periods. Successful reproduction events were once unusual and celebrated widely, but today, some individuals are making substantial livings breeding herpetofauna. If a skeptic wants to verify this, one only need attend one of the many expos that are springing up throughout the United States and view the range of captive-bred creatures that are offered for sale. Regional herpetological societies may encourage members to bring their surplus stock to meetings for sale and trade, and those societies that don't encourage this practice may not survive. Many husbandry books, manuals and magazines are published regularly and are widely read. So the evidence is strong that herpetoculture in all its complexity is here to stay (deVosjoli; 1994a, 1994b). The question is this: What will herpetoculture become in the future?

About the Authors

In spite of our backgrounds, we have developed a similar view of the interface between herpetoculture and herpetology, and our observations have been formulated and refined for more than 35 years. We present them here with the hope that some of the antagonism that we perceive to exist between herpetoculturists and herpetologists might stem from a lack of understanding as to the purpose of each discipline. Further, we will outline problems that are evident between the practitioners in each arena, and offer some suggestions as to how these misunderstandings and different purposes might be reconciled.

The Difference Between Herpetology and Herpetoculture

The field of herpetoculture has grown much faster than its old academic sister, herpetology, and has already surpassed traditional herpetological societies in the number of participants. Herpetoculture is not herpetology; some of its means may be similar, but its objective is different. Herpetology is a division of biological sciences, and deals with systematics, phylogenetic concepts, measurements of selective pressures and response of organisms to them, natural history, physiology, and behavior.

Herpetoculturists are knowledgeable about successful techniques for maintaining and breeding a variety of amphibians and reptile, but their goal is often the production of novelties that are not meant for reintroduction into the wild. Instead, they are often concerned with successfully producing a new phenomenon which will herein be defined as "designer herps," meaning reptiles and amphibians that

are bred for their attractiveness in color or pattern. Herpetoculturists supply the demand for these creatures as pets, but the animals have no niche outside captivity.

Darwin (in Fitch, 1980) identified "domestic animals" as having certain characteristics (i.e., shorter generation time, increased fecundity, ability to adapt to captive circumstances), which reflects certain trends seen in captive amphibians and reptiles. We really don't have a clear picture as to whether the animals that are being produced in captivity are similar to wild conspecifics. By definition, captive-bred organisms are not natural and cannot be compared with wild organisms that are natural. The measurements and assessment of competence of captive herps relative to their wild counterparts is not well developed. (See Love, 1995 for discussion of problems and possible solutions.)

The emergence of the evolutionary species concept (as a replacement for the biological species concept) has also relegated the results of captive breeding to a much-diminished status in systematic herpetology. (See Frost and Hillis [1990] for a description of the scope of the topic and terminology.) Thus, herpetoculturists can no longer propose that they are breeding reptiles to conserve a species for reintroduction into the wild, or to better reveal their systematic relationships to presumably related taxa. They are now free to pursue the development of designer herps as attractive and ideal pets. Greater availability of reptiles, particularly snakes, as pets will certainly result eventually in greater acceptability of wild snakes as normal and essential aspects of the natural environment. This is, to us, one of the most important benefits of herpetoculture.

Further, if herpetologists have different aims than herpetoculturists, then perhaps the confusion and potential antagonism between the two groups might be abated if both sides realize that the end points are different. It is a curious aberration that, on occasion, people who keep living herps tend to call themselves herpetologists. This is different, in that aquarists do not call themselves ichthyologists, aviculturists are not ornithologists, dog or cat owners are not mammalogists, etc. Terminology may contribute to the confusion; see Sprackland and McKeown (1994) for expanded definitions of herpetologists and herpetoculturists, of "professionals" and "amateurs" (these terms may further confuse the issue). Some true herpetologists are amateurs (e.g., the late Laurence M. Klauber), whereas some herpetoculturists are professional (the big breeders).

What Herpetologists Could Learn From Herpetoculturists

Some herpetologists maintain research laboratory colonies of amphibians and reptiles to answer a variety of interesting theoretical questions regarding animal behav-

ior, physiology and related topics, but they may be unfamiliar with much of the literature, improved technology and myriad husbandry techniques that are known and commonly used by herpetoculturists. This is unfortunate! Herpetoculturists have discovered breeding techniques for snakes, such as putting two males in a cage for pre-mating combat, thermal gradients for gravid females and many other aspects to improve husbandry.

In spite of the increased attention to animal welfare promulgated by zoo and university animal care and use committees, on occasion, one can see substandard health in the captive specimens. Some of the most apparent examples caused by improper husbandry include thermal gradients, lack of security and complexity of the captive environment, unawareness of feeding strategies and social behaviors, and poor medical treatment. If the animals are faring poorly, then how valid are the data and conclusions generated from these studies?

Another important benefit of herpetoculture for a researcher is the availability of test subjects that can no longer be collected. (too rare, permits, etc.)

What Herpetoculturists Could Learn From Herpetologists

Over the years, the three of us have watched many herpeto enthusiasts develop a strong interest in amphibians and reptiles, which is reflected in their efforts to amass a large, living, private collection. Some of these people are totally consumed by the passion to acquire more and more herps. Eventually, as numbers increase and the sheer drudgery of maintaining all of the critters becomes overwhelming, interest wanes and the charges suffer. It is disturbing that herpetoculturists are occasionally driven by monetary value of their collections, and the enterprise degenerated into a buy-and-sell mentality, an approach that is limited and ultimately dissatisfying. There are other commercial dealers, however, who operate within an organized, defined breeding program. These individuals may make a fair living, continue to experiment with new techniques and maintain an intellectual curiosity about their charges.

Indeed, in order to sustain a long-term interest, we postulate that it is better for a herpetoculturist to look at captive herps in a more holistic way. It is certainly more enriching to look at interesting animals doing interesting things rather than simply focusing exclusively on monetary issues of building a large collection of rare herps. If one delves into biological aspects such as thermal ecology, behavior, systematics and phylogenetic relationships, physiology and so on, a broader understanding emerges that is much more satisfying for the herpetoculturists. This approach contributes to a sustained and more intellectually challenging overview of the diversity of amphibians and

reptiles, while at the same time the herpetoculturists can pursue the marketing and selling of a high-quality product.

Herpetoculture: Conservation, the Law and Ethics

There is substantial traffic in illegal amphibians and reptile, which reflects demand. Could herpetoculture unknowingly be contributing to this problem? Several issues are relevant to this discussion.

If captive amphibians and reptiles are genetically and phenotypically different from their wild counterparts, then it is consistent that the former no longer fit the strict definition of "species," but rather are "designer herps." If this is the case, then laws regulating the traffic and commerce of captive herps would not be applicable, and wildlife officials could be released from the task of regulating these creatures. Wildlife officials invest substantial energy, time and money toward the regulation of captive amphibians and reptiles, but these resources would better serve the protection of biodiversity by being redirected toward protective measures of threatened ecosystems and comprehensive studies of wild populations. (See McNeely et al. [1900] for an overview of the shrinkage of global biological diversity and conservation recommendations.) Problems relating to the illegal importation of wild herps would have to be solved. One conspicuous example is "paper-hanging," which is the falsification of documents claiming that imported wild herps are, in fact, raised in captivity. One ingenious solution to prevent this practice is the proposal by Backner (1995) to implant passive integrated transponders in captive-bred animals that would serve as lifelong identification tags.

As previously mentioned, some herpetoculturists often claim that their efforts promote conservation. The claim is made that captive stock could be used to augment wild populations, but how does this happen? There are virtually no reintroduction programs, and the subject of reintroduction is a highly controversial issue. The introduction of viral and other diseases of captives onto the natural populations is but one of many potential problems. There are virtually no successful long-term examples (see Dodd and Seigel, 1991; Gibbons, 1995).

So, the salient argument must be that wild populations benefit by being less impacted because the demand for animals is supplied by captive stock. In other words, if herpetocultural activities contribute to a lessening demand for wild reptiles, then we should see a shrinkage of annual imports over time. Now let's review some past figures: In 1970, 1,736,695 live reptiles were imported into the United States, and 1,343,172 individuals in 1972 (Busack, 1974). In 1984 import totals were 765,153; the next year, the number went down to 543,289. However, during the years 1987 throughout the early months of 1991, an average of

more than 1,700,000 reptiles were imported annually (unedited USFWS LEMIS data compiled by Andrea Gaski, Traffic, USA.) At the time of this writing, we don't have current importation numbers since 1991, but the take-home message is that herpetoculture has not, so far, contributed significantly to a decline in imported live reptiles. In fact, importations significantly *increased* during 1987 through 1991. It seems that the availability of a wide array of herp species in pet shops and other sources has stimulated greater interest in herps as pets, which, in turn, has created an ever-greater market than would otherwise have existed. These importation numbers are a dramatic increase, and the implications of these figures should be clear to herpetoculturists. The basic problem, of course, is that captive-bred examples of a given species are generally more expensive than wild-caught specimens. The demand on wild populations will not stop until the prices are at least equal.

One would suspect that many freshly imported reptiles would fare poorly in captivity. In 1992, Lyndon A. Mitchell and David T. Roberts from Dallas Zoo recorded approximately 3,900 telephone calls that were directed to the Department of Herpetology during a 12-month period. All the caller were requesting husbandry information or advice to help them care for ailing herps. As advocates for amphibians and reptiles, we should all be concerned for the health and welfare of captive specimens, and rather staggering importation numbers mentioned previously are not reassuring. (Refer to Warwick et al. {1995} for a discussion of issues relating to welfare of captive herpetofauna.)

Cooperation

For any human interaction focused on the completion of a task or development of a program, there must be respect and mutual support between the participants to work toward positive conclusions. Herpetoculturists occasionally claim that herpetologists are unwilling to deal with them, with zoo workers in particular identified as culprits.

Zoos house living amphibians and reptile collections, so it's natural that herpetoculturists view these institutions as potential sources for breeding stock. One of us (J.B.M.) has been approached literally hundreds of times by herpetoculturists who were trying to get stock from the Dallas Zoo, but in only a handful of instances did they initiate conversations by offering support to strengthen the zoo's collection, conservation and research initiatives or educational programs without attaching strings. In other words, some of these people were self-centered and selfish, with financial gain driving their initiative. Some zoo curators may choose to deal with private individuals, but only if there is reciprocity, a sustained and successful breeding program, and confidence that the herpetoculturists is ethi-

cal and beyond reproach. However, there are often laws promulgated in the country of origin controlling the disposition of captive offspring to private individuals by zoos. In some instances, internal zoo policy dictates that surplus animals must initially be offered to certified members of the American Zoo and Aquarium Association before being offered to nonmembers. This is not a policy that the curators can unilaterally violate, regardless of how worthy they judge a private individual's needs to be.

Given that the above arguments and examples are compelling, then how can herpetoculturists contribute in a meaningful way to herpetology and conservation efforts? Some initiatives easily come to mind:

1. Financially support conservation initiatives, such as the Jamaican iguana project, or others for local species that are in decline.

2. Record data on reproductive cycles that may reflect phenotypic plasticity.

3. Document problems of inbreeding (see Murphy et al., 1987; McCrady et al., 1994 for examples that lead to interesting theoretical questions).

4. Survey wild populations, or assist ecologists who are doing so, to develop a database to assess potential environmental effects (i.e. amphibian decline).

5. Support international societies financially and programmatically.

6. Support the dissemination of books and other literature on the proper keeping of herps by beginners.

An excellent model for cooperation between apparently disparate entities is the program involving the Cornell Laboratory of Ornithology and the amateur birding community. Professionals and amateurs work together to create an incredibly important database to assess population decline and recruitment, species diversity, natural history and related topics. Linkage between the two groups is love, respect and concern for birds and their habitats. A specific example is "Project Feeder Watch," which began in 1987 as a winter survey of the birds that visit backyard feeders in North America, and which is funded by the National Science Foundation and the fees paid by amateurs who are involved. Amateur participants fill out sophisticated data forms that are later analyzed by ornithologists at Cornell. Twelve thousand persons have signed up, of whom 7,000 submit data, and the ecology faculty are in high praise of the very sophisticated information that these "amateurs" send in.

There is one big difference between the two bird communities and the two herp groups: The amateur birders are almost entirely field-oriented naturalists, not breeders. This makes certain collaborations a lot easier for them than for us. Nevertheless, herpetologists and herpetoculturists would do well to work as successfully to promote equivalent initiatives (see Ehmann, 1994 for examples).

By promoting reptiles as pets, responsible

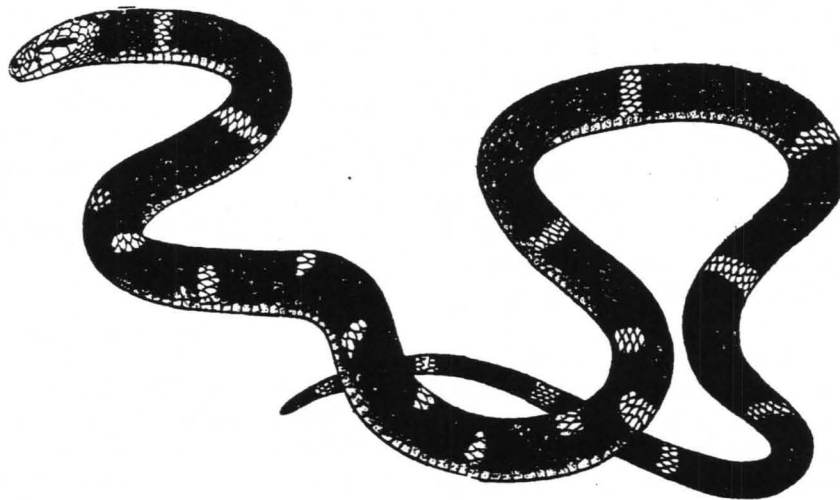
herpetoculturists will probably do more to eliminate the traditional prejudices and fallacies that have been held towards these creatures than all of the works that have been written on the subject. But, in order to maintain credibility, it is critically important for herpetoculturists to refrain from making false claims about conservation and reintroduction that are unsupported by evidence. To make such claims is a disservice to the legitimacy of herpetoculture, and invites criticism by opponents.

To end on a positive note, we issue the following challenge to both the herpetological and herpetocultural communities: Join together to develop a program of equal significance as the one that has been generated by ornithologists and amateur birders.

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- from *Reptiles Magazine* 5(3): 72-79 (March 1997)
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FEATURE ARTICLES

NEW RECORDS OF AMPHIBIAN AND REPTILE IN KANSAS FOR 1996

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The ten new county records and three maximum size records listed below are those accumulated or brought to my attention since the publication of records for 1995 (Collins, 1996). Publication of these new records permits me to give credit and express my appreciation to the many individuals who collected or obtained specimens and donated them to me for deposition in an institutional collection. Further, recipients of this list are permitted an opportunity to update the range maps and size maxima sections in *Amphibians and Reptiles in Kansas Third Edition* (Collins, 1993). Finally, these new records represent information that greatly increases our knowledge of the distribution and physical proportions of these creatures in Kansas, and thus gives us a better understanding of their biology. This report is my 22nd in a series that has appeared annually since 1976, and the data contained herein eventually will be incorporated into the fourth (revised) edition of my book.

The Kansas specimens listed below represent the first records for the given county based on a preserved, cataloged voucher specimen in an institutional collection, or represent size maxima larger than those listed in Collins (1993). Any information of this nature not backed by a voucher specimen is an unverifiable observation. All new records listed here are presented in the following standardized format: standard common and current scientific name, county, specific locality, date of collection, collector(s), and place of deposition and catalog number. New size maxima are presented with the size limits expressed in both metric and English units. Common names are those now standardized for North America, as compiled by Collins (1990), and are given at the species level only.

The records listed below are deposited in the herpetological collections of the Natural History Museum, The

University of Kansas, Lawrence (KU) and the Southwestern College Museum of Natural History (SC). I am most grateful to the members of the Kansas Herpetological Society, and to the staff of the Kansas Department of Wildlife and Parks, who spent many hours in search of some of the specimens reported herein. Some of the records contained herein resulted from field studies sponsored by funds from the Kansas Department of Wildlife and Parks' Chickadee Checkoff Program. John E. Simmons, Collection Manager for the Division of Herpetology, Natural History Museum, The University of Kansas, diligently assigned catalog numbers to the specimens listed below, and to him I am indebted. Thanks are due also to Leonard Krishtalka, Director, and William E. Duellman, Curator of Herpetology, of the Natural History Museum, The University of Kansas.

NEW COUNTY RECORDS

YELLOW MUD TURTLE (*Kinosternon flavescens*)

POTTAWATOMIE Co: SE 1/4 Sec. 12, T10S, R8E. 30 July 1995. Letha Cartenson (KU 223470). This turtle was taken after extensive flooding in the Kansas River, and may have drifted downstream from the western part of that drainage.

COMMON MUSK TURTLE (*Sternotherus odoratus*)

ELK Co: SE 1/4 Sec. 29, T29S, R11E. 6 June 1996. Larry Miller, Katherine Garlinghouse and Jocelyn Nichols (KU 223472).

MISSISSIPPI MAP TURTLE (*Graptemys kohnii*)

COWLEY Co: Sec. 34, T30S, R7E. 26 April 1983. D. Low (SC 169).

COLLARED LIZARD (*Crotaphytus collaris*)

GRANT Co: Sec. 34, T28S, R37W. 14 April 1969.
Collector unknown (SC 171).

NORTHERN PRAIRIE SKINK (*Eumeces septentrionalis*)

CLAY Co: ca. 5 mi (airline) NW Clay Center on Ray O. Smith Ranch. 29 September 1995. Joseph R. Mendelson (KU 223463).

GREEN LACERTA (*Lacerta viridis*)

SHAWNEE Co: Topeka at 4420 SW 23rd Street. 2 August 1996. Jerry Jones (KU Color Slide 11235).

EASTERN HOGNOSE SNAKE (*Heterodon platirhinos*)

LOGAN Co: 4 mi W and 6 mi S Elkader, SE 1/4 SW 1/4 Sec. 36, T15S, R33W. 17 July 1993. Stanley D. Roth (KU 223464).

EASTERN HOGNOSE SNAKE (*Heterodon platirhinos*)

SCOTT Co: 1/4 mi N Scott State Lake dam, SW 1/4 NW 1/4 Sec. 1, T16S, R33W. 24 June 1996. Stanley D. Roth (KU 223465).

LINED SNAKE (*Tropidoclonion lineatum*)

GOVE Co: Sec. 2, T14S, R28W. 27 June 1996. James Gubanyi and Keith Coleman (KU 223466).

SMOOTH EARTH SNAKE (*Virginia valeriae*)

MIAMI Co: Miami County State Fishing Lake, East edge of Secs. 5 and 6, T19S, R24E. 28 April 1996. Eric M. Kessler (KU 223467).

NEW MAXIMUM SIZE RECORDS

OUACHITA MAP TURTLE (*Graptemys ouachitensis*)

RILEY Co: Tuttle Creek Reservoir, Sec. 20, T8S, R7E. 2 August 1996. Steven Seitz & Robert Seitz (KU Color Slide 11236). Carapace Length = 256 mm (10 inches). Female.

RIVER COOTER (*Pseudemys concinna*)

LABETTE Co: Labette Creek drainage at Kansas Army Ammunition Plant, NE 1/4 Sec. 9, T32S, R20E. 24 April 1996. Alan Hynek (KU 223471, carapace only). Carapace Length = 360 mm (14 1/8 inches). Sex unknown; presumably female.

ITALIAN WALL LIZARD (*Podarcis sicula*)

SHAWNEE Co: Topeka at jct. 19th Street and Gage Boulevard. July 1996. James Gubanyi (KU 223462). SVL = 76 mm; total length = 212 mm (8 5/16 inches). Male.

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BOOK REVIEW

AMPHIBIANS AND REPTILES OF NEW MEXICO, by William G. Degenhardt, Charles W. Painter and Andrew H. Price. 504 pp. 149 color illus. 123 maps. University of New Mexico Press. \$35.00. Clothbound.

In recent years we have seen a number of comprehensive monographs on the herpetofauna of different states, although we have not seen a monograph on the herpetofauna of southwestern United States since Lowe, Schwalbe and Johnson (1986) on the venomous reptiles of Arizona, and the long out of date, Snakes of Arizona, by Fowlie (1965). The only other available reference was written by Robert Stebbins, and was a more generalized identification manual for the entire Western United States.

During the past couple of years two separate books have been published on the herpetofauna of the American Southwest. It is ironic that both these books were on the same state of New Mexico.

After the Table of Contents, Preface, and Acknowledgments the authors provide a brief sketch of the physiographic features of New Mexico, along with vegetational and topographical data. This is followed by eleven excellent colored illustrations of the known physiographic divisions, and an additional 123 plates illustrate each species discussed and all of these are informative and aesthetically pleasing.

The brief history of the herpetology of New Mexico is highly informative, and is followed by a checklist of species found within the state. The amphibian section covers some 26 species in no less than 75 pages, and is provided with keys for the known tadpoles and salamander larvae by Ron Altig. The next 264 pages are devoted to the 97 species of reptiles found within the state. Illustrated keys are provided for the salamanders, toads and frogs, turtles, lizards, and snakes. Each species account averaging two to two-and-one-half pages and provides an historical review of prior taxonomic and nomenclatorial changes for each species, followed by descriptive accounts on distribution, description, systematics which lists all subspecies known, along with information regarding subspecies found within the confines of the state, behavior, reproduction, habitat, food habits, parasites along with remarks on the most recent revisionary studies, and comments regarding further studies.

Following the species accounts the authors provide information on four species of amphibians and fifteen reptiles of questionable occurrence within the state. This is followed by a listing of scientific and common plant names used throughout the text, along with a list of museum symbolic codes, glossary, and literature cited section of nearly 1600 references and index rounding out this excellent volume.

The authors mention that such species as *Pseudacris triseriata*, *Phrynosoma douglassi*, *Sceloporus jarrovi*, *S. magister* and *Urosaurus ornatus* are in need of revisionary study, along with common name changes for the recently described *Pseudemys gorzugi* (Western River Cooter), and *Terrapene ornata* from Western Box Turtle to Ornate Box Turtle. The authors have also made several corrections regarding type localities and new designations, along with date changes throughout the text. Several important changes regard such species as *Gastrophryne olivacea* from which no type specimen has been designated, and the authors restrict ANSP 2745 as the likely holotype. The holotype of *Cnemidophorus inornatus juniperus* (MSB 5026) actually comes from 3 miles north and 2 miles east of San Antinito, and not "San Antonio" as stated by Wright and Lowe (1993). Comments on several other species regarding lectotype designation are in error according to the authors, and should be paralectotypes. The authors feel that Cochran (1961) was in error in reporting USNM 7845 as a syntype for *Lampropeltis pyromelana*, and that USNM 11421 is the lectotype and USNM 7845 is a paralectotype.

The most comical comment by the authors was on how *Rana catesbeiana* is protected in New Mexico even though this species has extirpated the major invertebrate, and cold blooded vertebrates from the lower portions of the Rio Casas Grandes region. The authors comment, "that in view of the detrimental effect on other wildlife, this protection is inconsistent with good conservation practices."

The authors have provided a corrigenda of some 23 corrections (1996). Otherwise this volume is filled with important taxonomic and life history data and is an indispensable work on the herpetofauna of New Mexico, as well as an important addition to anyone having a vested interest in southwestern United States.

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NAME THAT HERPETOLOGIST CONTEST !

The following graphic contains caricatures of ten famous herpetologists. As a test of your herpetological history knowledge, your editor is announcing a contest to name all ten (or as many as you can). The person with the highest number of correct identifications will receive a free copy of KHS Special Publication Number 2, *The Lizards of Kansas* by Edward H. Taylor. Send your answers to Eric Rundquist at the address on the inside front cover of this Newsletter. In the case of ties, the winner will be determined by the postmark on your entry. Only one entry per person.

Hint No. 1: None of these men are currently alive.

Hint No. 2: The original illustration was made in the 1930s.

Hint No. 3: Two of the persons illustrated were former KHS Distinguished Life Members.



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