

KANSAS
HERPETOLOGICAL
SOCIETY



NEWSLETTER

NUMBER 43

JUNE 1981

NO KHS FIELD TRIP PLANNED FOR THE SUMMER

Due to the historically poor attendance at KHS field trips and meetings held during the summer, it was decided to eliminate them. The very high temperatures and the increasing cost of gasoline have made it impractical for most members to attend. One suggestion that has been made to reduce driving time and cost for members attending field trips involves organizing three or four field trips on the same weekend in different parts of the state. This would enable members to attend the meeting in their area, and not be forced to drive hundreds of miles to a KHS meeting. Of course, there are benefits and drawbacks to any course of action. One benefit of holding one field trip in a certain part of the state is that people from other areas are given an opportunity to explore a different physiographic province with members that are familiar with the local fauna and flora. Meeting members from other areas also tends to increase the solidarity of the Kansas Herpetological Society.

The next meeting of the KHS will be held in the early Fall. The exact time and place for the meeting will be announced in the next newsletter. We may decide to hold several regional meetings on the same day, and, would like to know how you feel about this idea. Please write to any KHS officer to express your ideas. Their names and addresses are listed on the inside front cover of this newsletter.

Hope to hear from you. See you in the Fall.

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KHS AND KABT MEET AT CLARK COUNTY STATE LAKE FOR SPRING MEETING

Clark County State Lake, located north of Ashland, was the site of the first Kansas Herpetological Society field trip of 1981. It was a joint meeting with the Kansas Association of Biology Teachers (KABT), and was held during the first weekend in May. Herpetologists and biology teachers from all parts of Kansas and some parts of Oklahoma started arriving and setting up camp by the middle of the afternoon on Friday, the first of May. There were between thirty and forty interested persons in attendance by noon of the next day.

Bullsnakes, hognose snakes, collared lizards, racerunners, and ground snakes were among the most common herps found by KHS members as they drove to the meeting area from their respective homes. One of the first interesting finds in Clark County was a Texas brown snake (*Storeria dekayi texana*) which was collected on Friday evening just after sundown at the camping area by Leta LaShay, Regina LaShay, and Larry Miller.

Saturday morning, several of the campers were up early and fixing breakfast, but another group, consisting of J.T. Collins, Kelly Irwin, Larry Miller, Leta LaShay, and Regina LaShay headed to Ashland for a good breakfast at any good eating place. They found that there was no eating place in Ashland, however, and had to drive to Sitka.

After breakfast, the KABT meetings started at the camping area, and, several herpetologists split up into small groups to turn rocks in the hope of finding some of the interesting herps known to occur in the area. The lake area covered over a thousand acres, and the private ranch upon which the group had permission to collect comprised another fifteen thousand acres. Therefore, they had plenty of room to roam, turn rocks, and climb hills. The only problem was that it was quite dry and windy.

After many rocks had been turned and several miles had been covered by foot, a few lizards had been observed and some tadpoles were found in a watering tank. The only abundant animals seemed to be scorpions. They were almost everywhere. It was one of those arachnids that brought one of the first collecting adventures to an end. While turning a large rock, Kelly Irwin received a sting on the finger. He quickly discovered that a scorpion sting was nothing to laugh about. In fact, the intense pain seemed to be almost unbearable. Kelly received first aid from Larry Miller, who always brings a first aid kit for just such an event. After resting at camp for several hours, Kelly continued his collecting. He suffered no serious side effects from his encounter with the small, venomous creature.

When Kelly did return to the field, he was determined to make a good find. It took turning many rocks, but his hard work did pay off. Kelly collected the only specimen of the New Mexico blind snake (*Leptotyphlops dulcis dissecta*) to be found during the field trip. He also found several other interesting species.

The KABT herpetology field trip got underway about 3:00 PM Saturday afternoon with the group heading to the rocky hillsides west of the lake. They got plenty of exercise, but only found a few prairie ringnecks (*Diadophis punctatus arnyi*), plains blackhead snakes (*Tantilla nigriceps nigriceps*), and some rather fast lizards.

The most interesting find of the afternoon on a KABT field trip was a young Texas longnose snake (Rhinocheilus lecontei tessellatus) which was collected on the wildflower trip by Bill Tayler of Bartlesville, Oklahoma.

Additional herps that were collected in the Clark County State Lake area include: the ground snake (Sonora semiannulata), the six-lined racerunner (Cnemidophorus sexlineatus), the collared lizard (Crotaphytus collaris), the northern prairie lizard (Sceloporus undulatus garmani), the red-eared slider (Chrysemys scripta elegans). These animals were observed by J.T. Collins, Ray Loraine, Hank Guarisco, and Kelly Irwin.



(Regina LaShay, a junior from East High School in Wichita, Holds up an eastern hognose snake, Heterodon platyrhinos, which puts on an impressive show of hissing and hood spreading)(Photo by Larry Miller)

In addition to the many scorpions, other interesting arachnids were found on the field trip. Hank Guarisco found a tarantula under a rock on a hillside near the lake in the middle of the afternoon. Upon returning to camp, many people had the opportunity to handle the tarantula, and discovered how interesting and gentle these animals real are. While returning to Lawrence, Hank also discovered a small solpugid under a piece of wood in Harper County. This is another fascinating arachnid that is native to the deserts of the southwestern part of the United States.

Almost everyone headed home later Saturday evening. However, three cars headed east to Barber County State Lake, located at the north edge of Medicine Lodge. On the way, J.T. Collins skillfully collected two prairie rattlesnakes (Crotalus v. viridis) and Larry Miller collected a young bullsnake (Pituophis melanoleucus sayi).

The group consisting of Larry, Leta, and Regina headed southwest to the Oklahoma state line and then east to Caldwell. They found a number of interesting herps including: about twenty bullsnakes, Texas horned lizards (Phrynosoma cornutum), racerunners, an eastern hognose, eastern yellowbelly racers (Coluber constrictor flaviventris), and a D.O.R. black rat snake (Elaphe o. obsoleta).

The weekend had yielded at least twenty different species of herps from the unique southwestern part of the state. It also gave herpetologists and biology teachers the chance to get together for an enjoyable weekend.

-----Larry Miller, 524 North Osage St., Caldwell, Kansas 67022.

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RECORD LENGTH BULLSNAKE FROM HARPER COUNTY, KANSAS

A new length record for the bullsnake (Pituophis melanoleucus sayi) was established for Kansas when Mike Kane of Bluff City, Kansas collected a large specimen of that species near his home in Bluff City. The snake was killed by Kane and then measured by Bluff City residents. Their measurements showed the large reptile to be between seven feet three and seven feet six inches in length.

The snake was photographed by a reporter from the local paper in Anthony, and by Larry Miller the afternoon of 22 May 1981, the day after it had been found and killed. It had been kept in a plastic bag in a refrigerator at the Garvey Elevator in Bluff City part of the time after being killed; thus, the specimen was in good condition.

Miller returned the snake to Caldwell where it was again measured, and the animal's weight was taken before it was preserved for the KU Museum of Natural History's herpetological collection. It measured 226 cm (88 3/4 inches) and weighed 3.6 kilograms (a little less than 8 pounds).

Joseph T. Collins states in his 1974 edition of "Amphibians and Reptiles in Kansas," that the record length bullsnake from this state was an individual from Douglas County that measured 73 inches. In the "Field Guide to Reptiles and Amphibians of Eastern and Central North America," Roger Conant states that the record length for the bullsnake is 254 cms (100 inches). Therefore, the 226 cm specimen collected by Kane in Bluff City (Harper County) not only represents the largest specimen of the bullsnake from Kansas, but is also the longest snake of any species from the state.

-----Larry Miller, 524 North Osage St., Caldwell, Kansas 67022.

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CITIZENS OUTRAGED BY OKLAHOMA "RATTLESNAKE ROUNDUP"

The following comments were submitted as letters to the editor of The Sunday Oklahoman regarding the annual pillaging of rattlesnakes in Oklahoma.

1. "I trust that mine is not the only letter of protest and outrage that you will receive regarding the picture of the two pretty girls with snakes on this morning's front page. The caption explained that the snakes were defanged and their mouths sewn shut - which presumably made it all right for this atrocity to happen."

"I yield to no human on earth in my fear and loathing of reptiles - I am almost neurotic in my fear of them, having been brought up by parents who were likewise afraid; but that a presumably civilized state could permit, let alone condone, such treatment of any living creature simply boggles the mind."

I am a transplanted citizen of Oklahoma for the past 16 years, and I would not want to live anywhere else in the world - at least the world as I have seen it married to an Air Force man for over 20 years. Oklahoma has everything, we think. But unfortunately, it seems also to have persons of the "good ol' boy" persuasion that permit this type of thing - and also dogfights and cockfights. It is a sad commentary indeed on a state that could produce Miss America, Will Rogers and Wiley Post that this state could be teaching its young that cruelty is perfectly all right, acceptable and to rewarded by such publicity."

"Since I did move from another part of the United States to Oklahoma, I also feel moved to tell you that the vast majority of the tourists (at least those coming from the East coast) could care less about the now notorious Cowboy Hall of Fame. Not everyone is a Western buff and there are many perfectly sane, civilized people who have never heard of the Hall or want to hear about it."

"For every person who would come here to see our vast wonders, surely another person will be "turned off and tuned out" by this wanton display of cruelty to any of God's creatures - no matter how unpleasant to most of us this creature may be."

"For shame, Oklahoma. Let's get civilized about our treatment of things non-human. No, I won't "go back where I came from." I have no doubt that will be suggested: but I pay my Oklahoma taxes, I work and live in Oklahoma and I will speak my mind on this subject."

"I ask that my name not be printed as I have no doubt persons who disagree with me would be quite capable of mailing me a snake."

-----B.J., Midwest City.

2. "I never imagined that I would write a letter in defense of snakes! I am no reptile lover - indeed, I find them most repulsive and frightening. Therefore, I go out of my way to avoid their company."

"I cannot imagine why anyone would attend such an event as the Waurika Rattlesnake Hunt. However, that is their problem, not mine. I cannot imagine why anyone would want to hunt, play with or tease rattlesnakes! I suppose that it makes these people feel "tough." It must indeed take a very "tough" person to have their picture taken with a snake that has been "defanged and their mouths sewn shut!" Certainly sounds like a very sporting event to me! "

" I am appalled...shocked...outraged that you printed the picture of these mutilated creatures and the accompanying article on the front page of your publication on Monday, April 13. It appears that you condone this warped activity. How sad."

-----Jean Martino, Edmond.

3. "Regarding the front page Monday, April 13 - almost as much coverage as the headline on the launching of the space shuttle - the Snake Hunter's Festival?"

"I couldn't believe it. I have waked the past two nights sick to my stomach, thinking of this, and am appalled. Let me establish that I don't like snakes - they make my skin crawl. I have no objections to the hunting and killing of them in a humane manner. Even to the delicacy of the eating of snake meat, okay, to each his own. I am definitely not a vegetarian, but if I thought that the animals of the meat I eat were tortured to death, I would become one."

"As far as I'm concerned, the town of Waurika should have kept their Festival a secret. Publicity they got, yes, but gross. To quote: '...a very mixed lot that included everyone from tourists and local families with children, to motorcycle bikers and snakeskin traders."

"Likewise, I surely would become a vegetarian if I had to watch the butchering of the animals. But according to the article, the butchering and skinning of the snakes was a major attraction. Sure sounds sick to me. However, what really got to me was the very reassuring fact your reporter kept pointing out - 'the snakes were defanged and their mouths sewn securely.' How very nice for all those nice people who wanted their picture taken. No doubt this was done in a most painful way to the snakes, and then a long and agonizing death for them. How sadistic! How can anyone make a party out of all this sort of thing? This seems as barbaric to me as the dog and cock fights."

"The conclusion that I have come to is that the 'large number' (Heaven help us) of people who get their jollies watching and participating in this sort of massacre - I'd rather meet the snake in a dark alley than them."

-----P.J., City.

4. "Your article of April 13 on the Waurika rattlesnake hunt raises some serious questions about these events and the future of Oklahoma's reptile populations. High prices for snake meat, snake skins, and other appendages have led to large scale commercialization of snakes. Sophisticated and highly effective collecting methods, including the gassing of snake dens, has led to total extermination of certain snakes in some areas of Oklahoma."

"This situation not only threatens the growing number of recreational snake collectors but also threatens the balance of nature. Snakes have a definite role in an ecosystem, including rodent control as an example. Overharvest of snakes will have detrimental effects on vegetation as well as other wildlife forms. There appears to be an urgent need to set seasons, bag limits, and require licensing for those involved in snake hunting."



Martin B. Capron

"Perhaps with passage of a nongame wildlife bill and growing interest in snake hunting by the Wildlife Conservation Commission we'll see some needed action on this problem. The Oklahoma Wildlife Federation, a private non-profit association, sees a definite need to carefully monitor this situation before we find snakes on our endangered species list. In the meantime all Oklahomans and particularly those who organize snake hunts should voice some concern for snakes and other nongame wildlife species."

-----Rick Jameson, Executive Director, Oklahoma Wildlife Federation, City.

----- (the above letters were taken from The Sunday Oklahoman, April 19, 1981, and submitted to the KHS newsletter by Jim Knight)

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KHS MEMBERS ATTEND ANNUAL WILDLIFE STUDY IN SUMNER COUNTY, KANSAS

A dozen KHS members were among the 60-70 persons that attended the Sixth Annual Chikaskia River Wildlife Study the weekend of 17-18 April 1981 on the Freeman Dillard farm located just north of the small town of Drury, Kansas. The group had beautiful warm weather the first day of the study, and much needed rain the second morning.

During the several organized field trips along the river and to other interesting areas of Sumner County the group observed and collected thirteen species of amphibians and reptiles. They also collected and identified a number of species of fish native to the river.

The amphibians and reptiles collected included: Bufo cognatus, Bufo w. woodhousei, Acris crepitans blanchardi, Rana catesbeiana, Rana blairi, Terrapene o. ornata, Sceloporus undulatus, Phrynosoma cornutum, Cnemidophorus sexlineatus viridis, Lampropeltis c. calligaster, Lampropeltis getulus holbrooki, and Nerodia sipedon.

-----Larry Miller, 524 North Osage Street, Caldwell, Kansas 67022.

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RECENT EFFORTS TO SAVE THE KEMP'S RIDLEY SEA TURTLE

Jack Woody and David Bowman went to Brownsville, Texas, to help set up the fourth Kemp's Ridley sea turtle (Lepidochelys kempii) camp at Rancho Nuevo, Mexico. The field crew was trained and given assistance in transporting equipment necessary for egg collection and incubation and adult turtle banding. The camp, which was

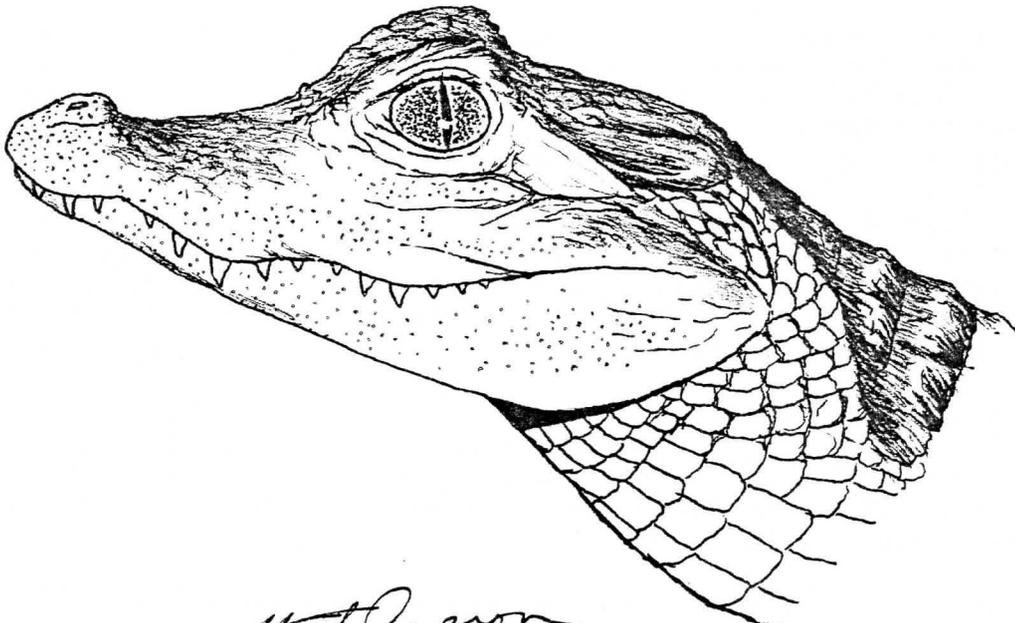
set up as of April 15, received its first nesters the next day.

The Rancho Nuevo sea turtle operation is an extremely delicate one, representing an international cooperative effort between the United States and Mexico. There have been several instances in past seasons of unexpected visitors at the facility. The camp is not equipped to handle visitors who have not made prior arrangements with Mexican officials. Any person desiring to visit this season must coordinate with Jack Woody, Region 2, well in advance, or they may not be accepted in the camp by Mexican personnel.

The headstarted Kemp's Ridley turtles from last season will be released on June 3 off the Padre Island National Seashore by the National Marine Fisheries Service (NMFS). The turtles, not yet one year old, number between 1,500 and 2,000. The Galveston NMFS laboratory, home of this headstart program, is scheduled to close. Alternative arrangements are being explored for continuing the program for this most endangered of all sea turtle species.

-----Endangered Species Technical Bulletin, May 1981, Vol.VI, No.5, p.2

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W. Arthur Capron
'81

PROPOSAL RECOGNIZES STATEWIDE RECOVERY OF LOUISIANA ALLIGATORS

New studies support a recent Service proposal to change the legal status of the American alligator (Alligator mississippiensis) in 52 parishes in Louisiana (F.R. 5/1/81). If finalized, alligators affected by the proposal would be reclassified from Endangered or Threatened status under the Endangered Species Act of 1973 to Threatened under the Similarity of Appearance provision of the Act. Alligators in the remaining 12 Louisiana parishes are already classified under the less restrictive Similarity of Appearance status.

Effective law enforcement by the state of Louisiana and the Service helped curtail taking, enabling the alligator to recover from former low numbers and regain biological stability in the state. Reclassification of alligators in the 52 Louisiana parishes, as proposed, would be a formal recognition by the Service of the species' recovery and would make available to the state an option to institute alligator harvests on a statewide basis, in accordance with the Service's special rule on Threatened alligators and existing state laws.

Because of similarity of appearance with other alligators which occur in varying densities in wetland habitats in other states (including Alabama, Arkansas, Florida, Georgia, Mississippi, North Carolina, Oklahoma, South Carolina, and Texas), it would still be necessary to impose some restrictions on commercial activities involving species taken in Louisiana. These provisions would insure the conservation of other alligator populations as well as other crocodylians that are endangered or threatened.

The alligator was first classified as endangered throughout its range in 1967, due to a reduction in numbers from hunting and poaching. Subsequently, as the alligator recovered in certain parts of its range, the Service effected the following reclassifications: 1) Reclassification to threatened by similarity of appearance in three coastal parishes of Louisiana, reflecting complete recovery (F.R. 9/26/75); 2) Reclassification to threatened, reflecting partial recovery in all of Florida and certain coastal areas in South Carolina, Georgia, Louisiana, and Texas (F.R. 1/10/77); and 3) Reclassification to threatened by similarity of appearance, again reflecting complete recovery of nine additional parishes of Louisiana (F.R. 6/25/79). Subsequent to the most recent reclassification, the Service has sponsored further review of the status of the alligator in Louisiana.

In June 1979, the Service contracted with Dr. R.H. Chabreck of Louisiana State University to compile a status review of existing scientific and commercial data on the alligator in Louisiana. Chabreck's report recommends statewide reclassification of the species in view of current protection, number of alligators, and an abundance of alligator habitat.

In June 1980, the Service began working with Mr. Duane Taylor, wildlife biologist with the Louisiana Department of Wildlife and Fisheries, who has prepared two separate scientifically based reports analyzing alligator populations in non-marsh habitats. Taylor's 1980 report, which concentrated on the central and northern portion of the state, provides evidence that the Louisiana alligator

population is stable, being limited by the support capability of the habitat, and that no further significant increase in alligator numbers can be expected.

Reclassification of all alligators in Louisiana to threatened by similarity of appearance would remove Federal agency responsibilities under Section 7 of the Act. The proposed action, however, would not be irreversible since relisting of the species would be possible should the state substantially change existing management programs or if other changes occur which result in new threats to the species' recovery.

If the state elects, alligator harvest programs, increasing at a level commensurate with controlled expanded management plans, would likely increase the volume of alligator exports. Exports will continue to be restricted by the requirements of the Convention on International Trade in Endangered Species of Wild Fauna and Flora. The Service will continue to review the possible impact of alligator exports on other endangered crocodylians in international trade and take appropriate action if evidence indicates restrictions are warranted.

Comments and suggestions from interested parties concerning any aspect of these proposed rules should be submitted by June 30, 1981. Send comments to Area Manager, Jackson Area Office, U.S. Fish and Wildlife Service, 200 East Pasacagoula St., Suite 300, Jackson, Mississippi 39201.

-----Endangered Species Technical Bulletin, May 1981, Vol.VI, No.5, p.4

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HIPPO, LION, CAMEL AND OSTRICH MEAT REGULARS OF ILLINOIS MEAT COMPANY

Lockport, Ill. (AP) - Toss another hippoburger on the grill, Virginia, we've got company. Yes, Virginia, anybody can buy hippopotamus, and some people even prefer lionburger, buffaloburger or camelburger cookouts with rattlesnake snacks. Hippo roasts and steaks are \$5.95 a pound, and ground hippo is \$4.50 at Czimer Foods Inc., which provides as much as five tons of exotic animal meat weekly for the nation's discriminating diners.

Art Czimer, 72, says 75 percent of the business is in wholesale shipments to restaurants and hotels throughout the country. The rest mainly is with customers who are allergic to chemicals in processed meats. Hippopotamus is a good mover, he says.Most of the sources are game farms in this country.

Czimer says one of the most popular items is rattlesnake. "We can sell all we can get," he says. "We just received 1,000 pounds from Texas and are selling it for \$6.95 a pound. People love rattlesnakes barbecued, fried or made into a pate."

-----taken from article in the Lawrence Journal World, June 3, 1981.

KANSANS FOR SAFE PEST CONTROL

A newly-formed organization in Kansas is working to reduce hazards to people and the environment caused by unwise use of pesticides. Called, "Kansans for Safe Pest Control," the group is not trying to eliminate the use of all pesticides, but emphasizes that pesticides are often applied needlessly and in an improper manner. They encourage monitoring of pest populations and use of the many non-chemical methods of **pest prevention** and control. They also call for use of safer pesticides in preference to more environmentally-damaging ones, and greatly improved efficiency of pesticides application.

Do you ever wonder, when you see a pesticide spray plane fly overhead, where all the toxic chemical it's carrying will end up? Often more pesticide misses the target area than hits it. Ten to sixty percent of spray and 70% to 90% of dust travels more than a thousand feet from the target, according to a study done for the Environmental Protection Agency (EPA) in 1975.

Much of the pesticide actually hitting the crop will kill beneficial insects and microorganisms, both on the leaves and in the soil. These beneficials normally maintain a natural system of checks and balances that protects the crop from many other destructive insects and disease organisms. Thus application of one pesticide often causes other pest problems to develop, which then require additional pesticide applications.

The pesticide hitting the crop will eventually be degraded by soil microorganisms, but that sometimes takes a long time. For example, one half of an initial dose of toxaphene takes ten years to degraded in the soil. Much of the pesticide evaporates, leaches into ground water or runs off into streams. This contamination of our air and water supply poses a serious health threat. The pesticide drift poses an even greater immediate threat. Wildlife, livestock, bees, crops and people can be severely injured or killed.

"Pesticide poisonings total 14,000 nationally every year," estimates Professor of Entomology, David Pimental of Cornell University. "Six thousand require hospitalization. Yearly, there are 200 deaths attributed to pesticides. This translates into three to four billion dollars actual cost in poisonings." Beyond the threat of acute poisoning, many pesticides are known or suspected to cause chronic health problems. Cancer, sterility, severe allergies and birth defects can result when people are exposed to certain pesticides in even extremely low doses, such as receiving spray drift several miles away from the target site.

Do you want to find out more about safe methods of pest prevention and control? Have you received pesticide drift and want help in filing a pesticide damage claim? Or, do you want to join, "Kansans for Safe Pest Control?" Contact Jeanette Armstrong, 2001 Ohio St., Lawrence, Kansas 66044.

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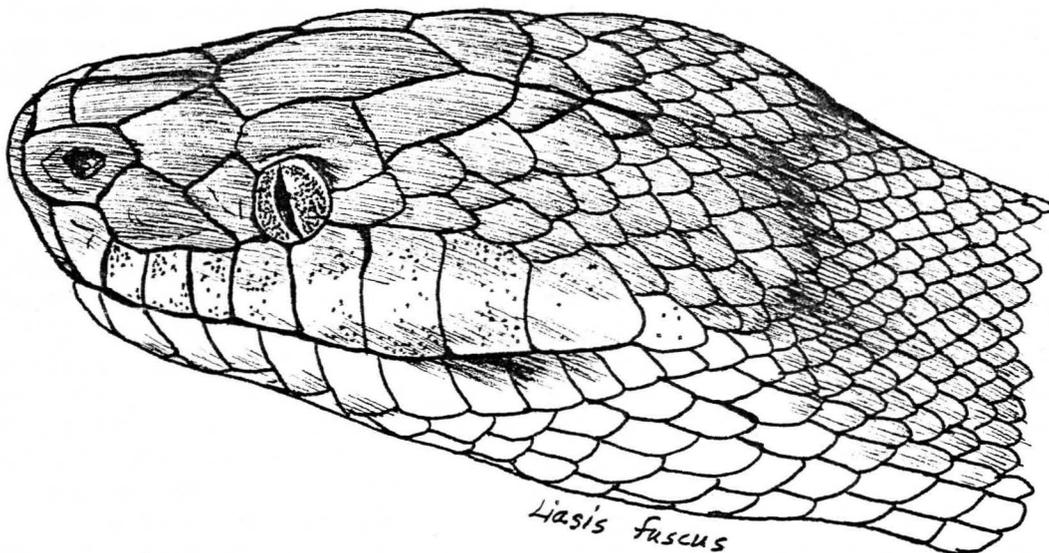
5TH REPTILE SYMPOSIUM ON CAPTIVE PROPAGATION & HUSBANDRY A GREAT SUCCESS

The fifth Reptile Symposium on Captive Propagation and Husbandry was held at the Oklahoma City Zoo, from June 11 to June 14. People from many distant parts gathered to share information concerning the captive propagation of reptiles and amphibians. After a few introductory remarks, Dr. Peter Pritchard, renowned turtle expert and author of the "Encyclopedia of Turtles," addressed the important problem of captive propagation of endangered species. Many objections have been raised concerning the feasibility of breeding endangered species in captivity as a means of saving it from extinction, including the following: 1) removal of individuals from a very small population may actually critically reduce the population and lead to extinction. Dr. Pritchard emphasized the need to institute a captive breeding program early, before a critical level has been reached. It is also feasible to use animals already in captivity to initiate such a program. For example, several Chinese alligators (*Alligator sinensis*) that had been isolated from each other in zoos around the world were brought together, and successful breeding has occurred. 2) if the endangered species' habitat is preserved, the species will take care of itself. This idea, although inviting, is fraught with problems. It may be very difficult to preserve critical habitat because of man's influence, water and air pollution, and the inability to control the area immediately surrounding it. For example, the Florida Everglades is totally dependent upon the water that flows into this area from the north. When there is a severe drought, other agencies and private individuals may divert this much needed water for other purposes before it reaches the Everglades. In addition to protecting habitat, other direct measures may be needed to ensure the survival of a species. For example, the Hood Island tortoise (*Geochelone elephantopus hoodensis*), a very rare race of giant tortoise found on one of the islands of the Galapagos, reached such low numbers (14 individuals) that mating did not occur because the turtles were too dispersed on the island to ever encounter each other frequently. Therefore, they were taken to a zoo, and placed together. This resulted in successful mating. 3) captive breeding may result in genetic deterioration. This is a problem that must be considered in any captive breeding program to ensure healthy young. A species which is on the brink of extinction may require drastic measures. It is not always possible to breed animals from different lines, ie. ones that are not directly related to each other. Although this is not the ideal, it may be necessary to preserve the species. We must realize that extinction is the ultimate form of genetic deterioration. 4) problems with reintroducing captives into the wild. This can be done successfully if certain precautions are taken, especially with mammals. Reptiles and amphibians are usually easy to reestablish. 5) the money that is used for captive breeding programs can be used to but suitable critical habitat instead. This is an unrealistic assumption, since funds usually come from several different sources, so both courses of action can be taken without one goal interfering with the other. 6) a captive breeding program is a monoculture, and as such, is very susceptible to disease. This is a valid criticism which can be dealt with as needed. Man has engaged in monoculture for thousands of years, and, in general, he has been successful. When disease occurs, the sick individuals should be isolated and treated by a veterinarian. New animals should be quarantined so that parasites or other organisms are not introduced into the colony. 7) often breeding in captivity doesn't take into account the subspecific status of the animals. Different subspecies may be crossed, resulting in genetic "pollution." This problem can usually be overcome by securing animals from the same population. Dr. Pritchard summarized his discussion

by relating a classical example of captive propagation saving a species from total extinction. A black softshell turtle (Trionyx nigricans) apparently does not exist in the wild, but a captive colony has survived in a small pond next to a shrine of the Sultan Bagu Bastan in Bangladesh. Although the individuals are tame, they survive here and no place else.

Following Dr. Pritchard's appropriate remarks, numerous presentations relating to the successful breeding and maintenance of reptiles and amphibians left the audience with a very satisfying feeling - a feeling that major advances are being made which are already increasing the world's supply of rare herps. Although it is not feasible to include a summary of each paper that was presented, some of them will be discussed in the next paragraph. Any KHS member wishing to obtain a copy of the abstracts of all the papers that were given should write to the KHS editor, whose address is on the inside cover of this newsletter.

Alan Kardon, assistant supervisor of the reptile department of the San Antonio Zoo, gave a very interesting slide presentation concerning various techniques that he has used to induce breeding in a variety of reptiles, mainly by manipulating the photoperiod and temperature. Temperate species are hibernated in a Coca Cola Cooler by placing specimens individually in a plastic shoe box and periodically misting lightly. No water bowl is placed in the container. He has found that a rapid drop in temperature for several hours in the evening may induce mating in many boid species. Mating behavior has been observed in the African spurred tortoise (Geochelone sulcata) when males and females are placed together in an outside enclosure just before a storm.



Marty Capron

Quentin Bloxam, curator of reptiles of the Jersey Wildlife Preservation Trust in the Channel Islands, described the successful breeding of the plumed basilisk (Basiliscus plumifrons). These are territorial animals, so it is best to house one male with two or more females. The young can be raised together until they are about six months of age. The diet consisted of baby mice, crickets, bananas and grapes. Successful incubation of the eggs requires very high humidity. Many of the surplus young have been given to several zoos in Europe.

Tom Crutchfield, president of Herpetofauna, Inc. located in Fort Myers, Florida, discussed the captive propagation of the American crocodile (Crocodylus acutus). He noted that the females are very protective of their egg nests in captivity, although others have reported that they aren't protective of them in the wild. Several hatchlings still retained a very large yolk sac, so they were placed in a non-stick teflon pan of shallow water until it was absorbed.

Edward Maruska, director of the Cincinnati Zoo, reported of his successes in rearing the Texas Blind salamander (Typhlomolge rathbuni). This rare, cave salamander produces between eight and twenty-one eggs per spawning. No parental care has been observed. The temperature of the water was maintained between 21 and 22 C, and the pH between 7.2 and 7.5. To date, no observations have been made of courtship or spermatophore deposition.

Keith Neitman of the department of herpetology of the Houston Zoo reviewed much of the literature pertaining to reptilian thermoregulation and related this to proper husbandry. For example, many reptiles choose different temperatures for different physiological processes. A higher body temperature is chosen when fighting off disease organisms and after feeding. Improper temperatures may prevent mating activity as well as eventually a decline in health.

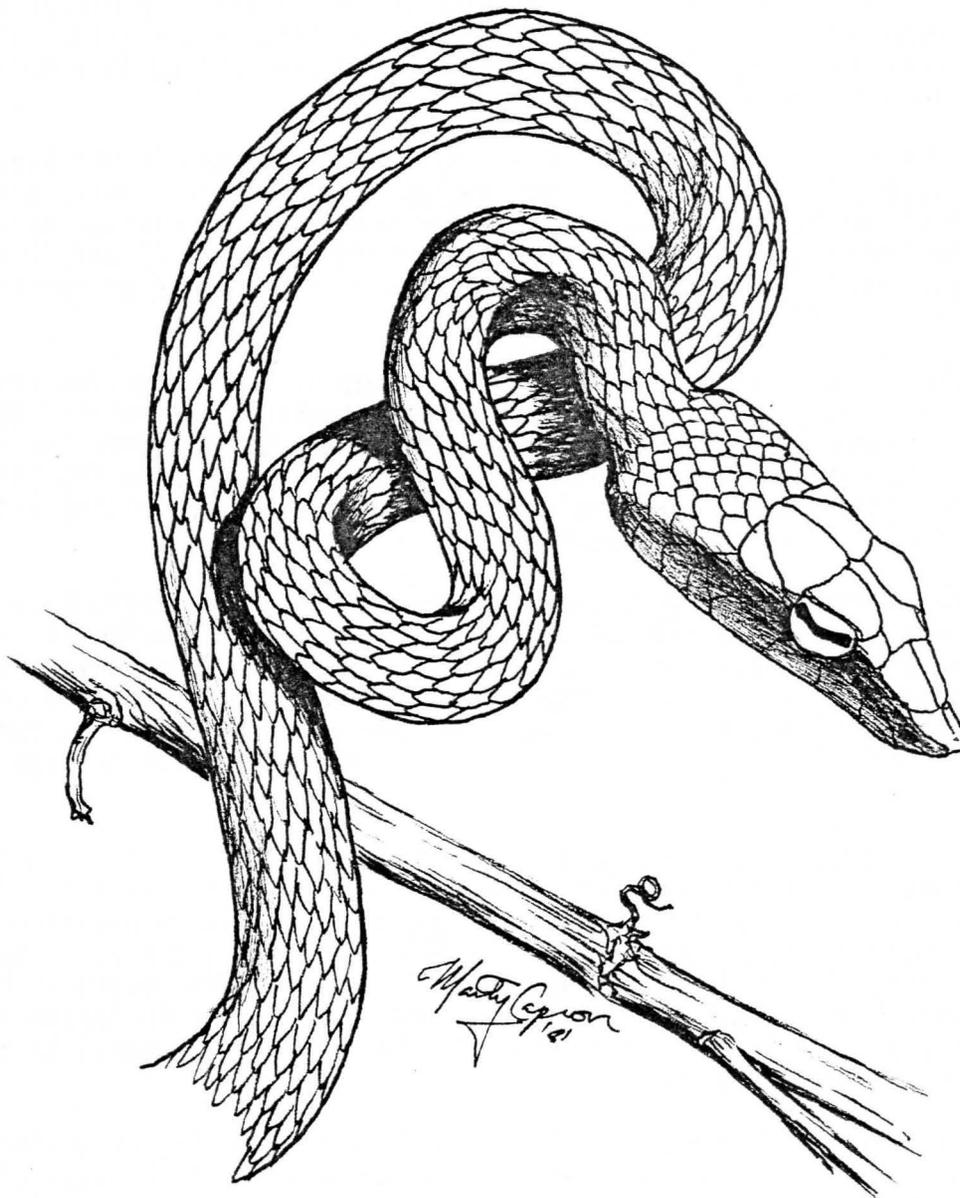
Dr. Richard Ross of the Institute for Herpetological Research, Palo Alto, California, showed us a unique film of his recent excursion to New Guinea. He took swabs of the mouths of snakes that were encountered in the wild, especially the green tree python (Chondropython viridis) to detect the presence of gram negative bacteria. None were found. However, most captive snakes have gram negative bacteria, such as Pseudomonas sp. Ross feels that this is significant in the treatment of disease of captive reptiles.

James B. Murphy, curator of herpetology at the Dallas Zoo, discussed various techniques that have been successful in the maintenance of pit vipers (Crotalidae) in captivity. Arboreal snakes, such as Bothrops spp., should be given stunned mice extended to them with endoscopic forceps. They will strike and hold on to the mouse. To induce feeding, especially in young Crotalids, place a dead mouse at the end of a plastic tube, then place the snake in the tube. When the snake reaches the dead mouse, he will usually swallow it. Murphy also mentioned the success he has had in reproducing many pit vipers and kingsnakes.

Joseph T. Collins presented his views on the interbreeding of different subspecies, emphasizing the problems that this can cause when the progeny of such matings turn up in preserved reptile collections. He suggested that only animals taken from the same locality at the same time be bred with each other in captivity.

The symposium was extremely enjoyable and very informative. The staff of the Oklahoma City Zoo deserves special thanks for all their efforts which were responsible for a great weekend. The behind-the-scenes tour of the herpetarium was especially enjoyable.

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SNAKE BREEDING SURVEY 1981

Dear Herpetologist,

It has come to my notice that you have an interest in reptiles and their associated biology. With protective legislation now enacted in all Australian States, the emphasis on breeding captive stocks has increased markedly. The importance of the captive breeding of Australian reptiles, particularly snakes, will without doubt, increase in future. Many herpetologists, particularly those new to the field, have no readily available source of literature available on how to breed snakes. This is a surprising state of affairs considering how many times snakes have been bred in captivity in this country. It is also surprising that next to nothing has been published on the subject.

This present Australia wide Survey hopes to collect and subsequently pool as much known information on captive breeding of snakes as possible. The results will be published in a similar format to that used by Richard Ross in his popular "Python Breeding Manual", an American publication.

In order for this survey to be a success, it requires the co-operation of all herpetologists including yourself. It would be appreciated that if you have bred any kind of Australian snake in captivity you could fill out one questionnaire. These questionnaires are necessarily lengthy due to the importance of collecting all relevant data. Please report all data as accurately as possible.

Please fill out a separate questionnaire per breeding if you have been fortunate enough to have bred snakes more than once. The results of this survey will probably be published in approximately one year.

If you know of other herpetologists who have bred Australian snakes, please ask them to fill out a questionnaire also. When filled out please return each questionnaire to:

- Snake Breeding Survey,
60, Arterial Road,
St. Ives,
N.S.W. 2075.
Australia

If more questionnaires are required, simply send a request for extra copies to the above address or phone (Sydney) 449 5771.

Thanking you for your co-operation,

Yours sincerely,

Raymond Hoser

SNAKE CAPTIVE BREEDING QUESTIONNAIRE

Species bred..... Date/s of mating/s.....
Were mating/s observed..... Mating stimulating factors.....

Time or date of birth or egg laying.....Number of eggs in clutch.....
Number of fertile eggs..... Time or date of hatching.....
Incubation temperature and humidity.....Number of eggs hatched.....
Cause of failure of eggs to hatch.....

Number of young born live.....Number and type of abnormal live young.....
Number of still-born (give reasons).....

Housing of specimens; State whether specimens kept separate. Specify cage size, type, average temperature, temperature ranges, humidity, basic set up and other relevant details.....

Any other relevant breeding details.....

For each breeding specimen fill in:

sex.....
date obtained.....
locality obtained.....
age when obtained.....
snout-vent length at time of breeding.....
total body length at time of breeding.....
dominant food in captivity.....
any distinctive or abnormal features.....
other relevant details.....

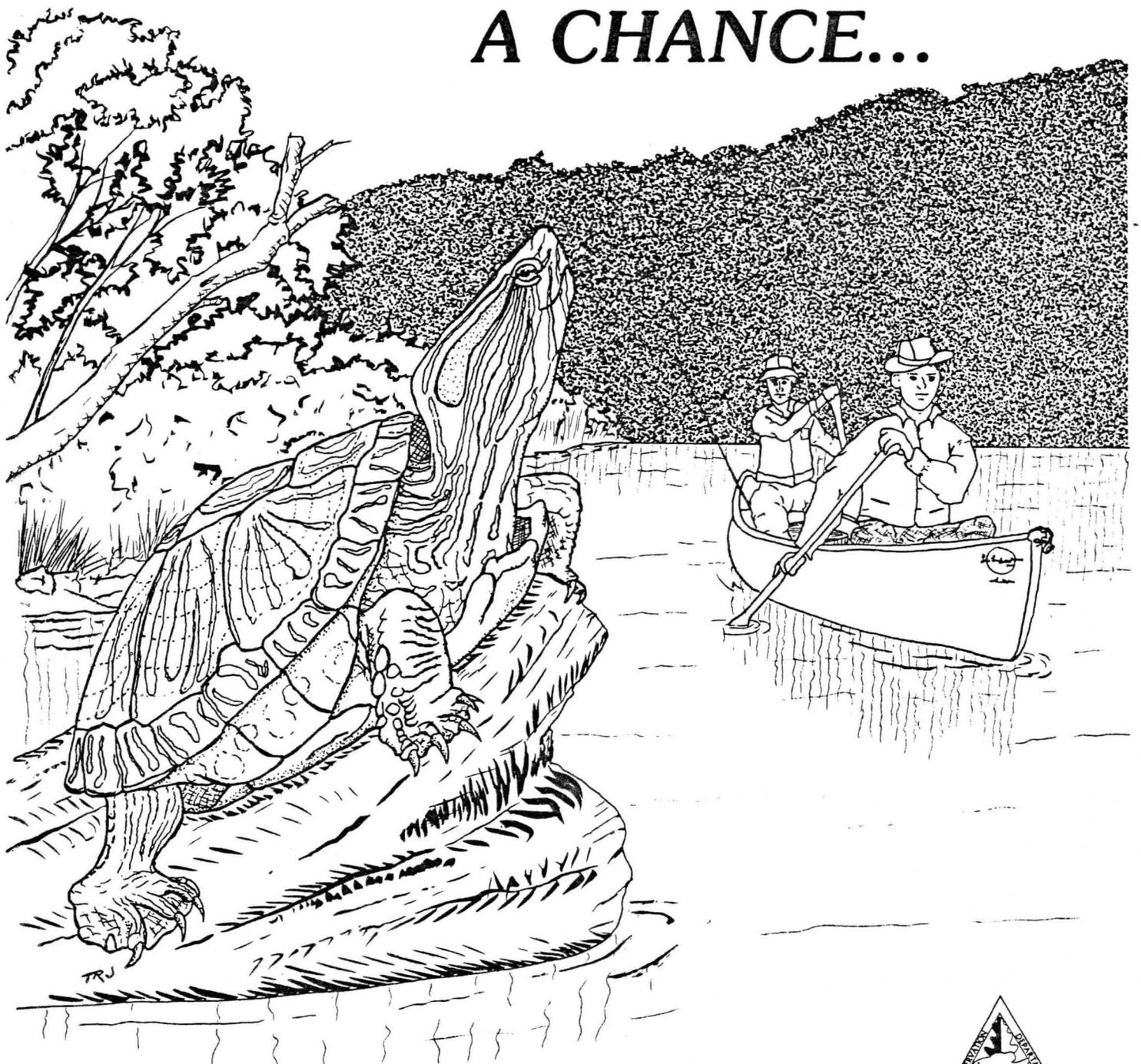
Name and address of breeder.....

Your help is greatly appreciated.

In addition, this survey is a very useful outline for KHS members to record data on any snakes they may have bred. This is very useful information which can be compiled to add to our knowledge of native as well as exotic species.

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GIVE TURTLES A CHANCE...



- Shooting turtles is prohibited.
- Turtles are no threat to game fish (they may at times steal a little bait).
- Missouri has 17 kinds; all but three are protected.
- Three kinds are considered game: common snapping turtles and two soft-shells, and may be taken by archery, hook and line or floating traps.
- Turtles are beneficial scavengers; they eat water plants, dead animals, snails, aquatic insects and crayfish.
- Swimmers should not fear turtles; they won't bite unless picked up.



