

# KANSAS

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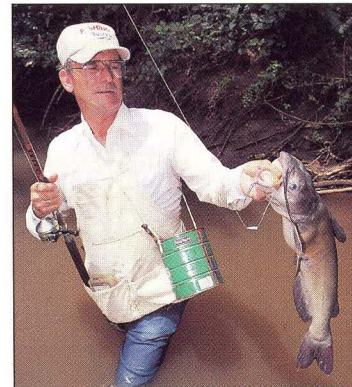
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**About the Covers**

**Front:** In his daily excursions, Mike Blair caught this thirteen-lined ground squirrel gathering nest material for a new burrow. 400mm lens, f/11 @ 1/125. **Back cover:** The yellow-headed blackbird is common on Kansas marshes. Blair shot this one at Quivira National Wildlife Refuge. 600mm lens, f/8 @ 1/250

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**Editorial Creed:** To promote the conservation and wise use of our natural resources, to instill an understanding of our responsibilities to the land.

**Equal opportunity to participate in and benefit from programs described herein is available to all individuals without regard to race, color, national origin, sex, age or handicap. Complaints of discrimination should be sent to Office of the Secretary, Kansas Department of Wildlife and Parks, 900 Jackson St., Suite 502, Topeka, KS 66612.**



## Friends In The Field

I am a lucky man. I live in Kansas where a great variety of outdoor recreation is readily available. I live in a small town, and a 10-minute drive will put me along a river bank, a farm pond, a pheasant field or a wood lot. Nothing makes my life more satisfying than to spend a morning hunting turkeys, bass fishing, searching for shed antlers or bowhunting deer. And even though I've got it made, there's something that makes these times even better: Good friends.

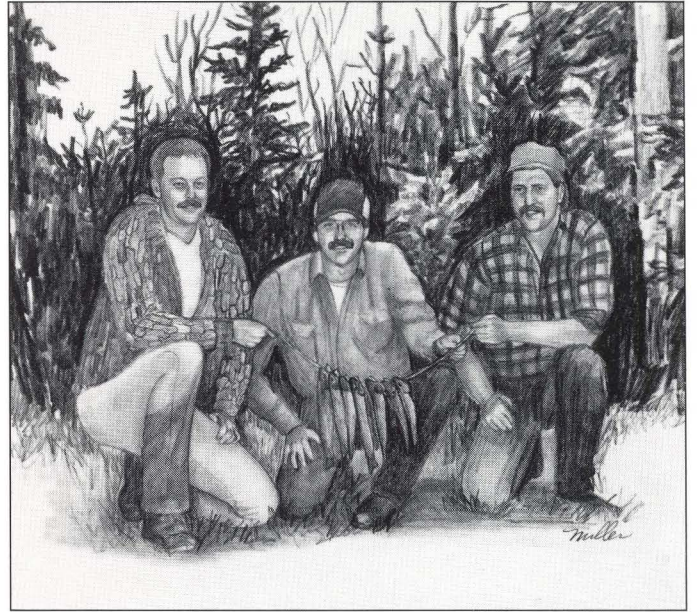
Friends who spend time afield together form a special bond. Kind of like your best friend in the third grade. For some reason it's gratifying to know that someone else feels exactly the same about something as you; to know that when that tom gobbled, the man next to you felt the same tinge of excitement as you; or to know that a friend will get just as excited as you when you tell him about the big buck you saw from your tree stand.

I know loners who have the same thirst for the outdoors as I but experience it alone. It seems they're missing a small piece of the puzzle. I hunt and fish alone at times, but I would much rather enjoy those experiences with good friends.

When you've spent years in the field with certain friends, they become more than just acquaintances. Time together outdoors teaches you about yourself and your friends. You get to know them much better than you would at dinner parties or softball games. You're comfortable knowing that you can depend on them if something goes wrong. You don't have to worry about where their gun barrel is pointed. You know what they're thinking or what they might do next. You work together in a pursuit without really talking about strategy. And the experiences and good times will always be with you and your friends.

I recall an elk hunting trip to the mountains with a good friend. After stalking through the pines for three long days, we were tired and frustrated at finding few elk. We sat resting on a mountainside near timberline when one silly comment caused us to laugh until tears were running down our faces.

I remember deer camp pranks like the garter snake in the "sack of candy bars." I recall a mean pack of yellow jackets scattering four of us through the woods in panicked



abandon. And I'll never forget a 7-pound bass a friend caught on a favorite farm pond. I enjoyed that fish nearly as much as he, although my hands weren't shaking like his as he released the fish back to the pond.

I am fortunate to have several friends like this, and they make the outdoors that much more enjoyable for me. These special friendships will stay with me the rest of my life, whether I'm here with these friends or away in another town or state. And I know that someday, we'll sit around the coffee table and reminisce about the good old days. Shoot, we do that already. Why, I remember that trip to Colorado three years ago when the three of us hiked five miles up to the "best cutthroat trout lake in the state," only to find it was still covered with ice. Wet from plowing through snow drifts, cold and exhausted, we cussed and laughed. We still laugh and cuss about it today. And what about that white bass run on the Smoky Hill two years ago . . . ♡

**Mike Miller**  
Editor



# Frog Tales From The Dark Side



by Mike Cox

*chief, Education and Public Affairs Division*

photos by Mike Blair

Hunting bullfrogs requires only a pair of tennis shoes for wading, a burlap sack and a flashlight. Wading along the shoreline of a pond after dark can be a little creepy, but also exciting, and it might produce some unusual adventures.

**I**t was a cool mid-July night at Douglas State Fishing Lake as I prepared to take my wife of only two months on her first bullfrog hunt. She grew up in a large metropolitan area and was a little hesitant to join in all my hunting, fishing, camping and frogging expeditions, but she seemed to enjoy these new outdoor experiences.

As we started to work the west shoreline, a chorus of big croakers growled in the night. Judging by the sounds of it, hunting would be good. Our first two frogs came easily, and as I was dropping the second into the bag, I told Barb what good eating they would be.

I guided the boat into a large cove and above the croaking, I could hear the squeals and grunts of a large bullfrog, which meant it was in trouble. As we silently approached the noise, I saw one of the largest diamondback water snakes I had ever seen, wrestling a huge bullfrog. Showing off a little, I casually grabbed the snake, removed the frog from its jaws and we went on our way.

I heard my somewhat rattled wife grumble something about nuts. I'd forgot to bring any food, but anyway, she must not have been too impressed with my bravado if she was thinking about eating.

Two hours later, we had our limit of eight frogs apiece and started back for the boat ramp. It was a beautiful moonlit night with just enough breeze to keep the mosquitos away. It had been a great initiation trip for Barb, until . . . we started across the mouth of a big cove, and I could see a large water snake illuminated by the moonlight. It was swimming directly for the boat. As the snake got closer, it didn't veer from its path, as if it was on a mission. I brushed the snake away with an oar, but it kept coming. Then the big snake tried to crawl over the gunnel into the boat. I knocked it off with another swipe of the oar, but the snake still came. Finally, I slapped hard with the oar, and the bewildered reptile retreated. I turned to see Barb clinging to the opposite side of the boat, looking as if she was about to demonstrate her state champion swimming speed back to shore.

As a trained and educated wildlife biologist, I tried in vain to convince



Frog hunting is best after dark when the large amphibians can be found along pond or stream banks. With head lamps or flashlights, scan the water's edge for the glow of eyes. Keeping the light on the frog freezes it while you approach for a grab.

Barb that the snake was confused and mesmerized, attracted to the boat light. It probably wasn't even the same snake I'd upset earlier at supper time. Besides, I reasoned, no water snake, no matter how large, would take on a grown man for a bullfrog. Would it? At least I took her mind off the snake encounter. She was hungry again as I heard her grumbling something about nuts.

Amazingly, my wife still hunts frogs with me on occasion, and our whole family enjoys the delicious ta-

ble fare.

Over the years, we've enjoyed many interesting experiences hunting bullfrogs. (Although I can't say I've mugged any more water snakes.) One July evening several years ago, we were hunting a series of small ponds close to home when I discovered the biggest bullfrog I'd ever seen. I took my time and carefully stalked within grabbing range. I struck down hard with my hand, but the frog was so big, I didn't get a grip. I got another chance later that



night, but again, its girth was big enough that I couldn't make the grab.

I decided that, sometime during the season, I'd catch that frog. I went after it the next evening and missed again. I would have to wait until the following weekend for another opportunity. I considered trying to catch the frog with a hook and line, but this had become a challenge of my frog hunting career. I would catch it by hand or not at all.

On the next opportunity to hunt,

I found the frog was getting wise to me, and I didn't even get a hand on it. The next night, I was serious. With fresh batteries in the flashlight, I spotted the big croaker easily. I kept the light in its eyes and slipped around behind it. Just as I got within striking range, I put the flashlight in my mouth and readied for a two-handed grab. As I crouched to strike, the big bull turned to face me. This had never happened before and I was momentarily stunned. I gathered my composure and made a blind

lunge. I slapped one hand down on the frog and pinned it with the other. My momentum, however, carried my body past the frog, and I ended up face down in the mud with the butt of the flashlight nudging my tonsils . . . but I still had the big bruiser pinned under my body.

I could hardly wait for Sunday evening's meal. It would be a gourmet's delight: fried frog legs, baked potato, green salad, all the trimmings. The monster's legs were reserved for me, and I could hardly wait to enjoy the



A fishing pole can also be used to catch frogs, even during the day. A small, colorful lure dangled in front the frog can often entice a strike. Other methods include gigging with a small barbed spear, hand grabbing or bow and arrow during daylight hours.



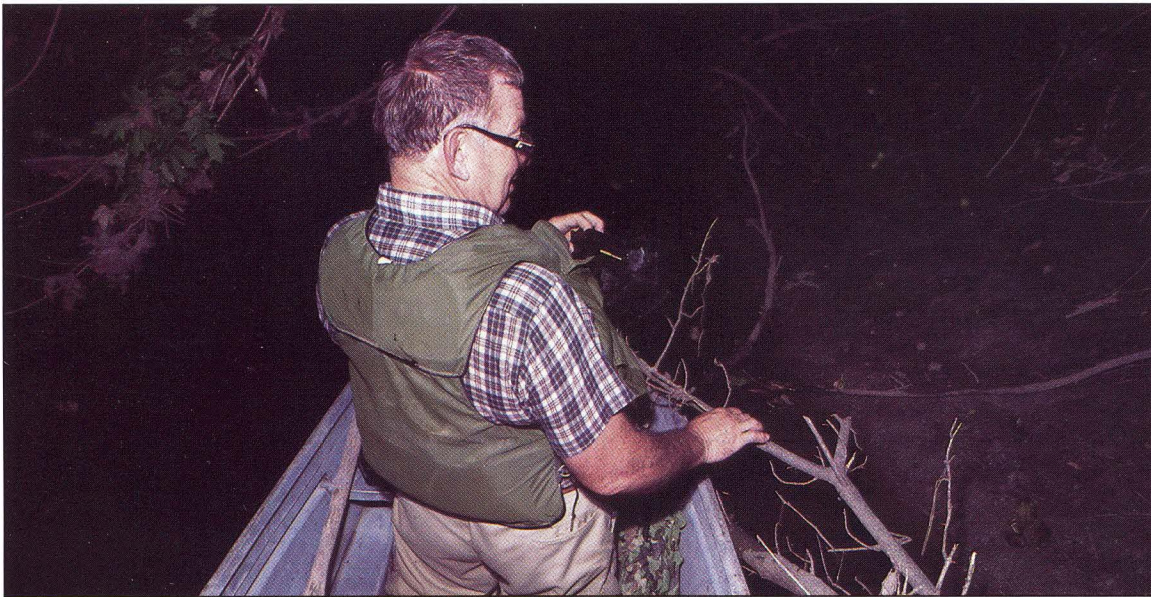
fruits of my labor. After a sip of wine, I bit into the golden brown leg . . . it was tough as a piece of inner tube. But I caught it and I was going to eat it. As the rest of the family thoroughly enjoyed the meal, I tried to hide the immense effort it took to eat the meat as I chewed and chewed and chewed . . .

The Kansas frog season opens July 1 and runs through Oct. 31. The daily limit is eight per person and the possession limit is 24 after the third day. You are required to have

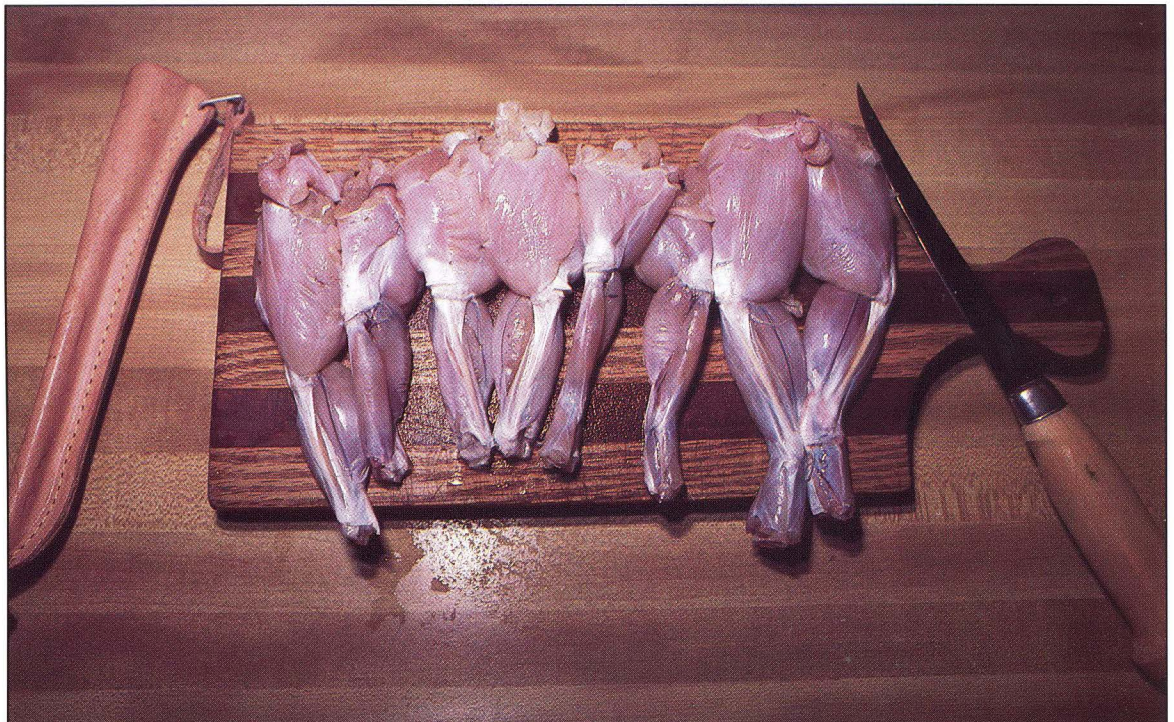
a fishing license, unless exempt by law. Legal methods for taking bullfrogs include hand, dip net, hook and line and bow and arrow (during day light hours only). And this year, for the first time, Kansas froggers will be able to use gigs.

Frog hunting is a great way to cool off after a hot summer day. Most serious froggers hunt after dark when the large amphibians move into the open along pond and stream shorelines. Using a flashlight with a bright, concentrated beam, scan the

shorelines for the glow of frog eyes. Once you spot a large frog, keep the light on its eyes. The light freezes the frog and allows you to approach close enough for the grab. But even with the light, a cautious approach is necessary. Excessive movement or splashing will spook the frog before you get close enough. It's challenging and great fun for the whole family. I would advise, however, to leave dining water snakes alone. ♡



Deeper ponds may necessitate the use of a small john boat to get to your quarry. Whatever your technique, frog hunting is a great way to cool off after a hot summer day. And the results of a successful frog hunt are delicious on the table.





# Fire In The Sky

text and photos by Mike Blair  
*staff photographer*



**T**hey ride Shawondasee, the south wind, to the nighttime prairie. By darkness they steal, a pair of warriors searching for Nepahwin, the spirit of sleep. Silently they stalk him, waiting to attack. By torch and war drum, they spring to battle. They are known and feared wherever they pass: the mighty Waywassimo and Anameekee—lightning and thunder.

To American Indians, they were living entities, the power of the heavens. Watching dark clouds strike their war clubs in blinding flashes, it's easy yet to view these awesome forces as personalities.

But lightning and thunder are simply natural phenomena created by electrical tensions that develop in the atmosphere. As thunderstorms are born, negative electrical charges build up near the bottoms of clouds, while positive charges build near their tops. At the same time, positive charges also develop on the ground, and these "follow" the clouds like a shadow.

The opposite charges between earth and cloud attract each other. As the attraction grows, positive forces on the ground strain up trees, buildings and people. Negative forces in the clouds strain downward to meet them.

When the attraction is great enough to overcome the poor conductivity of air, a stream of electrons arcs to the ground and the visible lightning bolt rushes from the ground back into the clouds.

The bolt has awesome power. A channel of pulsing electric energy two inches in diameter, it travels at a speed of 90,000 miles per second. In an instant, the surrounding air is superheated to 50,000 degrees Fahrenheit, and the explosive expansion of the heated air causes the sound of thunder. The bolt strikes with 125 million volts of electricity.

Lightning and thunder occur at the same time, but since the speed of light is about a million times faster than sound, the sound of thunder appears to follow the flash. This makes it possible to estimate the distance

Lightning strikes the ground 100 times each second worldwide. However, the odds of being struck are less than one in 2.5 million.



in miles to a lightning strike by counting the number of seconds between flash and thunder, and dividing by five.

Lightning can occur between cloud and ground, or cloud and cloud. The sight of forked lightning streaking through a nighttime sky is one of nature's most breathtaking spectacles.

Lightning can be dangerous to humans caught outdoors in a thunderstorm. From 1959-1982, 40 Kansans were killed by lightning. Even so, the odds of being struck are less than one in 2.5 million. Remarkably, two out of three lightning victims survive.

Worldwide, lightning strikes the earth about 100 times a second. In the U.S., there are 100,000 thunderstorms each year, each generating electricity in the form of lightning. Kansas ordinarily has 50 to 60 thunderstorm days each year—making Waywassimo and Anameekee famil-

iar visitors. Their show is dazzling but demands respect.

Humans are most vulnerable to lightning when isolated in open areas where taller objects are not present. Pleasure boating and fishing are particularly dangerous, since boats represent the strongest positive forces on the water. As many as 100 boats are hit by lightning each year in the U.S. For similar reasons, golfing on open fairways is hazardous.

The safest practice in a lightning storm is to move inside protected shelters, but this is not always possible. The following precautions will reduce the danger of lightning.

\* Don't be the tallest thing around. If caught on land, avoid seeking shelter under trees, since they are likely targets. Move instead to a more open area and lie flat on the ground until the storm passes.

\* If boating, make every effort to get off the water before an electrical storm arrives. If caught suddenly,

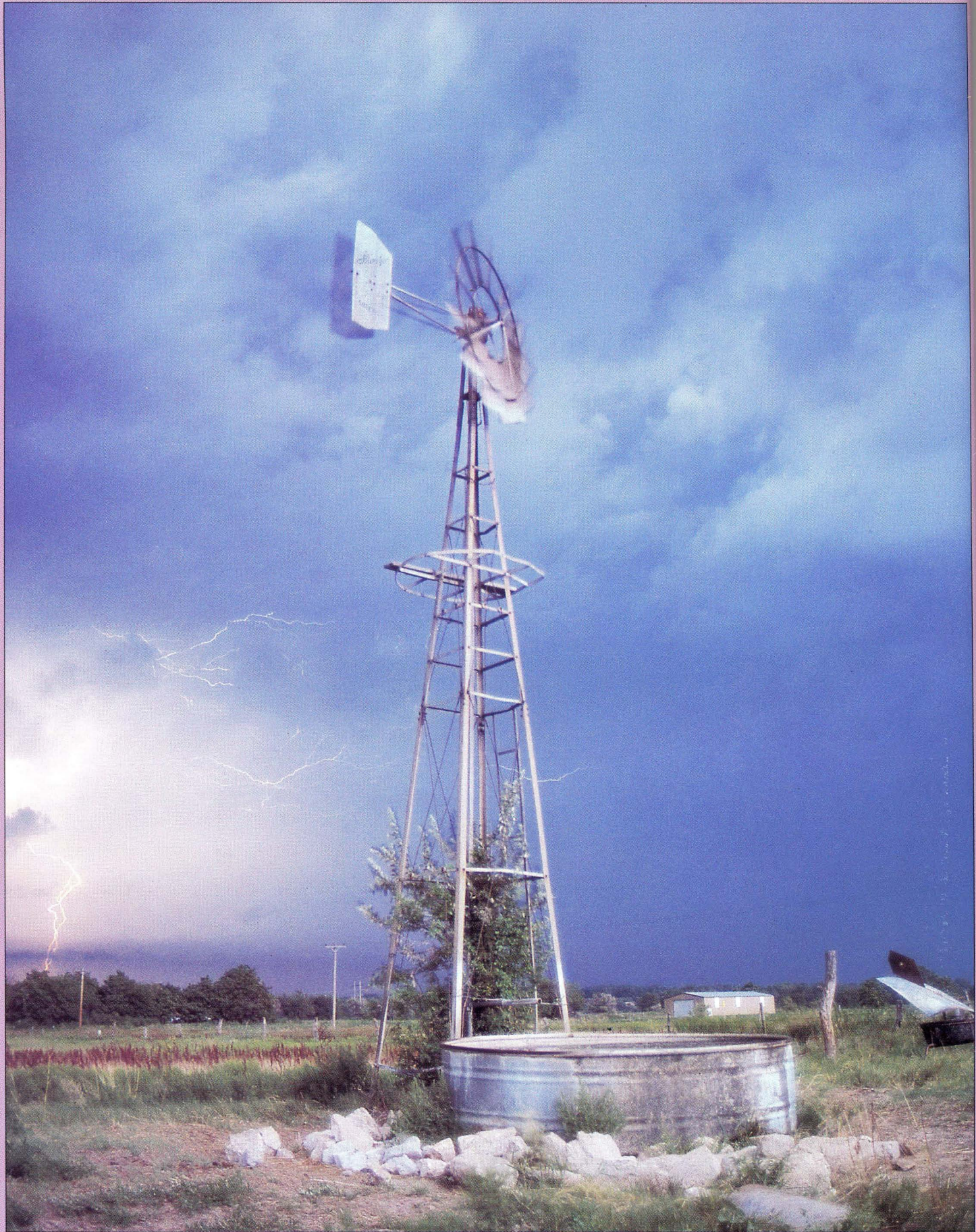
turn off radios and electrical devices and squat in the bottom of the boat with head bent forward, hugging knees. Tubular lightning rods with submersible grounding plates are sometimes present on large boats, and these should be erected. Otherwise, lightning will enter a radio antenna or other high point on the boat. To avoid excessive contact with the boat hull, don't kneel, lie flat or get on all fours.

\* Always put down anything you are holding during an electrical storm, especially guns, fishing rods or golf clubs. They increase the level of positive charge which is attractive to lightning.

\* Lightning is often forewarned by a tingling sensation of the hair and scalp. If this sensation is noticed, immediate precautionary action should be taken. ⚡



Lighting up the prairie landscape, lightning is an awe-inspiring sight. A pulsing channel of electric energy two inches in diameter, lightning travels at 90,000 miles per second. Kansas experiences 50-60 thunderstorm days a year.



With 125 million volts of electricity, lightning lights the late-night scene on the opposite page to almost sunlight intensity. The bolt superheats the surrounding air to 50,000 degrees Fahrenheit. The explosive expansion of air causes the sound of thunder. Lightning storms demand respect. From 1959 to 1982, 40 Kansans were killed by lightning. Remarkably, two of three victims survive.









# Bird Brain's Quiz

text and photos by Mike Blair  
*staff photographer*

**Editor's note:** Birdwatching is one of the most popular American outdoor pastimes. Though identification is difficult enough, the varied behaviors among species make deeper study a fascinating hobby. The following bird quiz will test your knowledge of this diverse group of animals.

### Questions:

1. The tail of a bird acts as an important steering mechanism during flight. However, one agile flier lacks a functional tail and relies on wings alone for amazing aerial maneuvers. Name it.

2. Some birds hibernate. True or False

3. As a rule, birds migrating across extensive water areas fly at altitudes (A) above 8,000 feet (B) between 2,000 and 5,000 feet (C) less than 50 feet.

4. Birds have complex respiratory systems including lungs and airsacs. Large volumes of air are used in flight, though scientists know that only about 25 percent of the air inhaled is used for breathing. What is the other 75 percent used for?



5. What one feature separates birds from every other group of animals on earth?

6. Long, narrow wings are best suited for (A) flapping flight (B) soaring flight (C) fluttering flight.

7. Which Kansas bird has the longest tail?



8. The knee of a bird bends the opposite way to that of man. True or False

9. The "horns" of some owls and horned larks increase the efficiency of hearing. True or False

10. Canada geese mate for life. True or False

11. It is illegal to collect abandoned bird nests. True or False

12. Does the color of an egg remain the same throughout incubation?

13. Wild birds sometimes die of heart failure when handled by humans. True or False

14. What proportion of nests are successful? (A) less than 20 percent (B) 50 percent (C) more than 75 percent.

15. Which of the following qualifies as a true nest? (A) a hollow limb (b) a straw dwelling (C) a mud platform (D) an unlined depression in the earth (E) all of the above.



16. What is unusual about this nesting situation?

17. Bird song is used to mark territory and attract a mate, and because of this only male birds sing. True or False

18. The brightly colored monarch butterfly is an easy meal for birds yet is routinely avoided. Why?

19. Since birds have no teeth, they must eat soft foods. True or False

20. How does the metabolism of birds compare to that of humans?

21. If a bird accidentally loses a feather, how long does it take to grow back? (A) a few weeks (B) three months (C) not until the next molt.



22. What is wrong with this bird's eye?

23. What bird is champion among nest parasites in Kansas?

24. What is the largest bird that migrates through Kansas? (A) whooping crane (B) trumpeter swan (C) California condor

25. What is a cosmopolitan bird species?

Answers on page 29.



# center section

Edited by Mark Shoup



## LETTERS

### SUCCESS DEFINED

Editor:

Last year was my first to hunt deer, and I only had two days to hunt. Though it was a short experience, it was magnificent. The feelings that one has after walking to a chosen spot before first light are electric.

After you sit quietly minute after minute anticipating the coming sunrise and what it may bring, your senses sharpen; you become more a part of your surroundings. At times, you wonder if the deer can hear your heart beating, it seems so loud in your ears. The tops of the trees begin to turn a glowing orange as the sun rises and you're immersed in the activity of squirrels, coyotes, birds. . . and deer.

I could hear deer just out of sight behind a veil of trees. Every now and then I could catch a glimpse of a deer as it passed through the trees -- always fleeting, never near enough for a safe shot, but thrilling just the same. Then, just as I was looking right at a fork in the game trail, fifteen yards away, a doe appeared. I was never aware of her walking into view, she just appeared. She was beautiful, sleek, alert, but she couldn't make me out. I was sitting in plain sight, a tree breaking up my blaze orange outline, but the wind was in my favor and she decided that I was harmless. After a moment, she called to her fawn; they crossed in front of me and walked away.

They would be the only deer I would see under these ideal circumstances during my hunt. I had a permit for either sex, and the fawn was quite old enough to survive on its own. But I held my shot. I had slowly drawn my rifle up and sighted behind her left shoulder, but I just watched.

Perhaps I hoped for a buck, but this was my first deer hunt, and a doe would have filled my tag. I think what held me back was that I didn't want my hunt to end two hours after sunrise on opening day.

I have measured the success of all my hunting experiences by the feeling I have tried to describe here, and they have all been successful. I had plenty of pheasant hunting left after my deer hunt, but I was already looking forward to next year's deer season.

David J. Drew  
Wichita

### MYSTERIOUS MOUNDS, WASTED TIME

Editor:

I have been going to western Kansas pheasant hunting for a good number of years, and each year I have good intentions to ask about the little round sand mounds, usually about 12-15 inches in diameter and 9 or 10 inches high. Are these mounds made by animals, insects or mother nature? Wind devils? Please satisfy my curiosity.

P.S. Hunting pheasants has been a waste of time and money the last two years. I feel we need better surveys leaning to the sportsman's needs.

Steve J. Doyle  
Pittsburg

Dear Mr. Doyle:

From your description, I cannot positively identify the mounds that you

have seen. What you are most likely seeing is the action of pocket gophers, which periodically push up mounds of earth while burrowing beneath the surface.

Our upland bird surveys are completed four times each year. We do all that budget and available manpower allow. These surveys are designed not only to benefit the sportsman, but to help us better manage the resource. --  
Shoup

### WALLEYE EGGS

Editor:

You stated in your article in the March/April 1990 issue of KANSAS WILD-LIFE AND PARKS (Page 23) that there is a shortage of walleye eggs, so the new length limits are necessary.

I fish Melvern Reservoir a lot, and in 1986 or 1987 the walleye eggs were taken and traded to Missouri for turkeys. The next year, the walleyes were scarce, but not from length limits. There were plenty of eggs, but Missouri had them.

D.V. Osborn  
Chanute

Dear Mr. Osborn:

Walleye egg-taking is a common practice in Kansas (and most other states with a walleye fishery). In almost every case, these eggs are hatched and the fry stocked in other Kansas Lakes. This is how Melvern got its initial walleye population.

The eggs taken from any lake are insignificant to the total spawn. However, because hatch rates are much higher in a hatchery, the resulting fry stocked back into that lake is significant.

Walleye eggs taken from our lakes

are only traded to other states after all in-state requests have been filled. I think it is important to remember that wall-eye first came to Kansas lakes when we traded abundant Kansas species, such as channel catfish, for walleye from lakes in other states. --Shoup

## RECYCLE "CS"?

Editor:

I've enjoyed looking at the wonderful color pictures in KANSAS WILD-LIFE AND PARKS magazine. Because the "Center Section" has no color photos, I was wondering if it might not be possible to print this section on recycled paper? Just a suggestion that I hope you'll consider.

Aaron Myers  
Hillsboro

Dear Mr. Myers:

Your suggestion is a good one, and one which we are considering. One problem at this point is that the magazine is currently printed on paper large enough to carry 16 pages. Because the "Center Section" is only 12 pages, using recycled paper would create four feature article pages with different texture than the rest of the magazine.

Increased expense may also be a factor, but we are considering this switch. --Shoup

## NONRESIDENT TAXPAYER

Editor:

I am the owner of two medium-sized farms in Pawnee County, as well as a home in Larned. The home was built by my parents in 1925, and one of the farms has been in the family since the mid-30s. Even though I own a home and spend the majority of my time in San Diego, Ca., I pay taxes on both of the farms and the house in Larned, and pay Kansas income tax. Of course, I also have to pay Califor-

nia income tax. The point of all this is that nonresident landowners are not "carpet-baggers" who want to hunt in Kansas at the expense of residents. I believe that as a landowner and taxpayer, I pay a share of Kansas wildlife programs and should be able to share in the hunting.

At the present time, I am limited to hunting deer on my own land. This is somewhat restrictive when I return to my home in Larned and want to hunt with some of my friends who live there. They can hunt with me on my land, but I cannot hunt with them on their land.

Perhaps the fair solution would be to allow landowners to be treated as a residents for the purposes of fishing and hunting. They would then be required to buy a resident fishing or hunting license and apply for a deer tag along with other residents.

Daniel W. Fox  
San Diego, Ca.

## OZONE RESPONSE

Editor:

I recently purchased the March/April issue of your magazine. I was delighted with the fine writing and outstanding photography.

I would like to offer a comment in response to the article, "Lost in the Ozone." The article contends CFCs (chlorofluorocarbons) are used in the production of styrofoam containers. Since Amoco is a member of a number of plastics manufacturing societies, I wanted to let you know that virtually no one in the styrofoam industry uses CFCs at this time.

Our concern with the effects of other variables on "ozone high" extends to gasoline vapors as well. Changes in Reid Vapor Pressure (RVP) levels in gasoline can correspondingly affect ozone levels. Recently, Amoco and a number of other gasoline manufacturers announced plans to voluntarily reduce gasoline RVP levels in the Kansas City area. Projections by the Mid-America Regional Council indicate this will significantly improve Kansas City's clean air measurements.

The message in your articles and this letter is the same -- clean air is the responsibility of everyone.

Dave Abshear  
Amoco Corporation, Shawnee Mission

Dear Mr. Abshear:

Under the 1986 international agreement commonly known as the Montreal Protocol, U.S. manufacturers of styrofoam cups and other food packaging items have ceased using CFC's. However, according to the Environmental Protection Agency, manufacturers of styrofoam insulation were responsible for 30 percent of all CFCs used in the U.S. in 1989. This compares to 16 percent for car air conditioners and 16 percent for other refrigerants.

Another point about ozone depletion and styrofoam production should also be made. The chemicals used to replace CFCs in the manufacture of some styrofoam products are known as hydrochlorofluorocarbons (HCFCs). The essential difference between CFCs and HCFCs is that HCFCs contain fewer chlorine atoms per molecule. Therefore, HCFCs, according to *Scientific American* (April 1990, Page 77), "deplete ozone only 2 to 10 percent as much as CFCs do." Unfortunately, these compounds are persistent in the stratosphere. According to *Time* magazine (Jan. 2, 1989, Page 42) a single chlorine atom can destroy an estimated 100,000 ozone molecules. The ozone-depleting action of any of these compounds can continue for a century.

While a large reduction in the rate of ozone depletion is better than the current rate, any depletion is undesirable. According to the *Time* article cited above, the ozone layer protects us from ultraviolet radiation that can cause cancer, cataracts and weakened immune systems. Such radiation could destroy a wide variety of life on earth if it weren't for the ozone shield. --Shoup

READERS: See "Ozone alternative" in "ISSUES" for more information on CFCs and ozone.



# THE LAW



## MISSED THE POINT

Conservation officer Tim Schaid, Olathe, received a call last winter from a Johnson County farmer complaining about someone shooting at deer from the road near his house. The farmer was so upset that he had chased the subject's pickup at high speed for several miles to obtain the license plate number. He told Schaid that poachers were frequently shooting near his house, and he wanted it stopped.

Schaid and conservation officer Johnny Ray, Ottawa, visited the suspect's home in Ottawa. The suspect admitted shooting from the road, but he said he was shooting at a coyote. The officers explained that shooting from the road without permission of the adjacent landowners is not only unsafe, but illegal. A citation was issued for illegal discharge of a firearm.

When the subject appeared in court, the judge asked what he was shooting at. He replied, "A coyote."

With this, the judge replied, "Case dismissed. Out west where I come from, we pay people to shoot coyotes." Obviously, the judge did not consider the safe and legal handling of firearms in a populated eastern county a priority. The issue was not shooting coyotes, but discharging of firearms from the roadway, near a home and without landowner permission. --*Tim Schaid*

## POACHING MAZE

On Nov. 30, 1989, Sedgwick County conservation officer B.J. Thurman received a call from Bob Funke, conservation officer in Wilson County, regarding possible deer violations. The violations apparently occurred in Wilson County, but the deer were being stored in the Wichita area.

With the assistance of conservation officers Mac Beadles, Bill Tillman and Verle Warner, allegations against several Wichita area residents were investigated. The first stop was in Wichita at the home of the primary suspect. The suspect's wife told officers that the deer were hanging at a friend's house in Rose Hill. Nobody was home at the Rose Hill residence, so officers returned to Wichita that evening and questioned the man sought initially. They found two skinned, headless deer carcasses in his basement. Both deer had apparently been tagged after skinning, and the suspect did not have the heads to verify that the two deer were bucks as the tags indicated.

Upon further questioning, a maze of violations began to unfold. During the process of the investigation, it was discovered that a total of nine deer had been shuffled from house to house, tagged with other people's tags. Some had been taken to a local meat locker for processing.

The officers solved the complicated puzzle in just a few days, and the solution

didn't look good for the violators. A total of seven people were charged with various wildlife violations and fined a total of \$4,749 plus court costs. Three individuals were sentenced to four years in jail, but were granted probation. --*Marc Murrell, Region 4 wildlife information representative*

## GOOSE HOGS

On the last day of the 1989-1990 goose season, conservation officer Shane Cathey, Glen Elder, was contacted by concerned hunters. They had watched a group of poachers shoot more than their limits of Canada geese and still continue to shoot. The concerned hunters had confronted the poachers and were able to secure identification and an illegal goose from them.

After being contacted, Cathey obtained a search warrant for one poacher's home and business. With the help of conservation officer Gary Heskett, Mankato, a number of dressed Canada geese, belonging to several different people, were found. Some had been given to other people, and none of the geese had identifying parts remaining, as is required by law, or carried the name, address and other information required when geese are given to another.

Citations were issued for over limit, failure to leave identifying parts on geese, failure to correctly tag game left with another and wanton waste, for a goose that the poachers hid when confronted by the concerned hunters. --*Shane Cathey*

## LAWYER OPEN SEASON

A panel in Virginia's legislature has unanimously approved a bill to begin limited hunting and trapping of attorneys, reports the March 1 *Washington Post*. The bill, reported out of the Virginia House Committee on Conservation and Natural Resources, allows "taking of attorneys with traps or deadfalls."

A harvest is necessary, says the bill, because "the proliferation of attorneys [has resulted] in their classification as a nuisance species." The bill places strict limits on harvests: hunters may not use currency as bait or shout "Whiplash!" "Ambulance!" or "Free scotch!" to attract attorneys. --*The Land Letter*



# ISSUES

## CHEVRON AWARDS

For 1990, the Chevron Conservation Awards has honored 20 individuals and five organizations for protecting and enhancing the environment. Two of these individuals are from Kansas. Jan Garton, of Manhattan, and Dr. Dwight Platt, of Newton, joined the other honorees May 16 for award ceremonies in Washington, D.C.

### Jan Garton

Garton is noted for her efforts to save Cheyenne Bottoms, recently named a "wetland of international importance" by international accord. The Bottoms is considered by many to be the most important wetland area in the Western Hemisphere. It is estimated that 45 percent of all the hemisphere's migrating shorebirds use the area annually.

In 1983, she began, through the Kansas Audubon Council, a public awareness campaign to help Cheyenne Bottoms. Plagued by water shortages and lack of state funding, things looked bleak for the area. Garton coordinated a task force comprised of representatives of eight different conservation organizations in the state. Through these groups, the news of Cheyenne Bottom's importance was spread to the public and the legislature. The news was heard. In 1985, using general treasury funds and license fee and Chickadee Checkoff funds from the Fish and Game Commission (now the Department of Wildlife and Parks), the state conducted a biological and hydrological study of the area. This was the first step in a number of moves that led to more than \$3.4 million dollars in appropriations for Cheyenne Bottoms restoration.

"I was the pot stirrer," Garton said. "It was an issue that was ready. It just needed leadership. This was a grassroots effort, and everyone really worked hard. It just goes to show that when people work hard, they can get things done." In her mind, there are three important things to come out of this effort: awareness about state wetlands was raised; public money

was used for a major conservation effort; and diverse conservation groups worked together toward a common goal.

Garton's satisfaction in this effort is, however, tempered by thoughts of work yet to be done. "We spent seven years trying to save 12,000 acres of wetlands at the Bottoms. In that time, the country lost two and one-half million wetland acres. We can't allow that trend to continue."

### Dr. Dwight Platt

Dr. Dwight Platt's campaign for the environment encompasses over two decades of quiet dedication and accomplishment. In 1965, he established the Sand Prairie Natural History Reservation, an 80-acre tract of natural Kansas prairie in western Harvey County. As part of his work as a biology professor at Bethel College in Newton, he conducts fieldwork at this reserve. In 1970, he founded Bethel's environmental studies program, a pioneer program for the state. With the help of his students, he has recreated prairie on a one-half-acre plot in front of Kauffman Museum on the Bethel Campus. More than 120 species of prairie plants have been transplanted to this site.

In addition to his work with the college, in the mid-1970s Dr. Platt was a member of the ad hoc committee that wrote the Natural and Scientific Areas Preservation Act. This legislation established a statewide system of areas (on both private and public land) important because of their natural wildlife habitat or historical or geographic features. These areas are now administered by the Kansas Biological Survey.

In the early 1980s, Dr. Platt served as chairman of the newly created Nongame Wildlife Advisory Committee, a private consultation group that works with the Department of Wildlife and Parks nongame program. The list of service goes on. He was Chairman of the Scientific Advisory Committee for Save the Tallgrass Prairie, and he is past chairman of the Kansas Academy of Science's Conservation Committee.

Dr. Platt thinks that his greatest accomplishments have been his work in education. Recognizing the importance of educating young people about the environment, he conducts a June workshop on prairie ecology for elementary school teachers. "Education is the area of greatest environmental concern for the future -- both formal and citizen education," he states. "We've all got to learn what living within the needs of our common environment means." --Shoup

## SAVING STREAMS

In what could be a model for other midwestern states, the Missouri Conservation Commission found a vehicle for stream protection and restoration. Called Streams for the Future, the \$1.3 million project will provide monetary incentives, technical assistance and equipment to landowners in selected watersheds who agree to protect and manage streams on their lands and who grant the Conservation Department riparian habitat easements.

Several demonstration projects will be set up throughout the state to give landowners some exposure to the concept before committing to it.

Jerry Presley, director of the Missouri Department of Conservation, hopes that these voluntary projects "will be an inspiration to all streamside landowners to improve the health of their streams."

Under the agreements, landowners would bid the price per acre they would take for enrolling land adjacent to streams, much like the federal Conservation Reserve Program (CRP), which retires erodible land from production for ten years. -Shoup

## MEDICAL IRONY

According to EPA officials, there is a seldom-mentioned source of chlorofluorocarbon (CFC) pollution: the medical supply industry releases freon when it is used as a propellant of ethylene oxide in sterilizing a wide variety of medical supplies. CFCs destroy stratospheric ozone, the layer of atmospheric gas which shields the earth from ultraviolet radiation. Such radiation causes skin cancer and is thought to damage crops and destroy marine phytoplankton, organisms comprising the base

of the aquatic food chain. --Shoup

## CFC ALTERNATIVE

It is now known that chlorofluorocarbons (CFCs) are damaging the earth's protective ozone layer.

The sources of CFCs are also generally known. CFCs are made from such chemicals as carbon tetrachloride and anhydrous hydrogen fluoride. The air conditioning and refrigeration industry is the most common source of CFC pollution. Styrofoam production is also responsible for some release of CFCs. Another major source of CFC release is CFC-solvents used to degrease parts and clean the electronic sensors in automobile systems.

As the search for alternatives to CFCs begins, several possibilities have come to the fore. HCFCs, as discussed in the "Letters" section of this issue (Page 17), are not the answer because they still carry some chlorine atoms to the stratosphere. Congress may consider banning these chemicals, and this puts manufacturers in a bind. How can they consider a switch to a technology that may be outlawed in the near future?

The most desirable solution at this point seems to rest with hydrofluorocarbons (HFCs), which contain no chlorine and do no damage to the ozone layer. Dupont Chemical plans to market an HFC called 134a by the late 1990s, and General Motors is currently testing automobile air conditioning compressors that might handle HFCs.

This is promising, but there are drawbacks to HFCs. As coolants, they last about half as long as CFCs, are more expensive to make and don't work with existing equipment. --Shoup

## LAND ADOPTION

During April's Earth Week, the Parks and Public Lands Division of the Kansas Department of Wildlife and Parks introduced a pilot litter control program called "Adopt a Public Land." The concept is modeled after popular "Adopt a Public Highway" programs in Colorado, Kansas, Missouri and Texas. However, instead of adopting miles of roadway, the volunteer organizations participating in

this new program will be assigned zones within a Kansas state park, wildlife area or state fishing lake.

Visitors to participating public lands will discover wooden signs that list those schools, scout troops and civic groups that have volunteered for one-year periods. Each of these groups is assigned a specific zone, such as a picnic area, campground, beach or section of shoreline. The groups will agree to make at least three excursions to their adopted site during the year to collect litter. The state will provide the volunteers with the necessary trash bags and litter dump sites. Materials collected will be sorted for recycling.

The following southcentral public lands will be the only participants in the program during 1990: Cheney and El Dorado state parks and wildlife areas, Byron Walker Wildlife Area, and Cowley and Kingman state fishing lakes. If the program is successful, other Department-managed lands could be included. As a result of Earth Week publicity featuring the program, the Department is already getting calls from interested groups. If your organization would like to help make Earth Day every day and help this program succeed, contact Roy Grimes, Region 4 Supervisor, Parks and Public Lands Division, 8420 N. Broadway, P.O. Box 317, Valley Center, KS 67147, or phone (316) 755-2711. --Roy Grimes

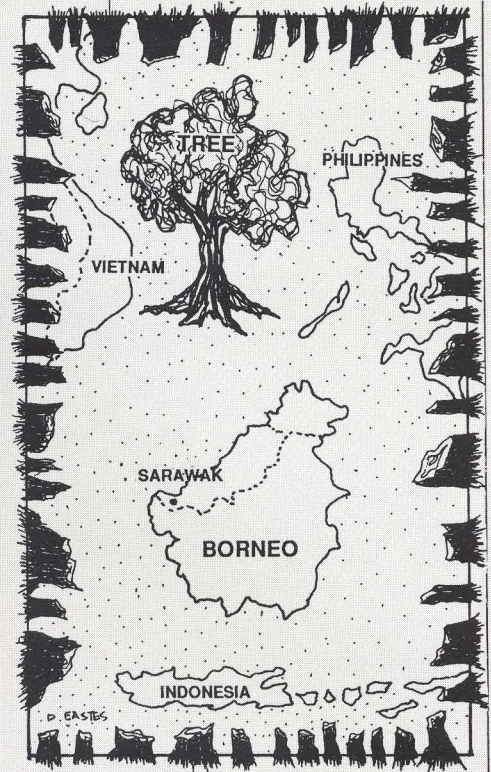
## ENVIRONMENTALITY

-- The 1976 Viking Mars missions cost about one billion dollars. This exceeds, by far, the total expenditures by the National Science Foundation, since its inception, to classify life on earth. It is estimated that we have named about one-thirtieth of all living species.

-- Fifty percent of your federal income tax goes to the military. Less than one percent goes to environmental protection. --Randy Winter, *Manhattan Mercury*

## FOREST DESTRUCTION

Nowhere on earth is there an older and richer ecosystem than the rain forests of Borneo, and nowhere is a forest being



destroyed with such ferocious speed as in Sarawak, the Malaysian state of northern Borneo.

So what is the value of these forests to the rest of us? Modern agriculture in Kansas and elsewhere is dependent upon genes from wild strains of crops to produce the disease-resistant strains constantly being introduced. Most of these wild varieties come from tropical forests such as those in Sarawak. Today, less than one percent of the world's tropical forest plants have been tested for pharmaceutical properties, yet 25 percent of all our modern drugs come from wild tropical plants. Seventy-five percent of all cancer treatment drugs come from rain forests. In addition, tropical forests act as giant "scrubbers," cleaning greenhouse gases like carbon dioxide from the air. Thus, they are our frontline defense against global warming.

In spite of these benefits, every day more than forty square kilometers of Sarawak's ancient forests are destroyed by logging -- the fastest rate of deforestation anywhere. If the current rate is allowed to continue, all of Sarawak's rain forests will be gone within three to five years. Sixty percent to 70 percent is already lost. -- *Western Canada Wilderness Committee*



# FISHING



## KANSAS RIVER TIPS

A smart fisherman hardly ever walks in the Kansas River. If he does, he should always walk upstream to avoid stepping into a sharp dropoff. Should he get into deep water, he can float back to where he started. The same goes for a fisherman in a boat. He should always fish upstream from where he puts his boat in the river. If the motor should fail, he can float downstream where he can take the boat out.

The Kansas River fisherman is out to catch channel catfish, blue catfish and flathead catfish. When not feeding, these fish are located under logs and rock outcrops, in deep holes and in pockets along the banks of the river.

I like to know the elevation of the river each day I fish. This is obtained by listening to the weather radio at 7 a.m. each morning. Good hot spots for catching fish usually change every time the river moves up or down a foot. When I catch a good fish in a certain place one day, there is a good chance of catching another fish in the same spot a few days later if the water elevation is the same.

Usually, I catch a fish just a few minutes after moving to a new place. If no fish are caught in one spot in 20 minutes, I move. Even if I do catch a fish, I move again after 20 minutes. Something usually scares the fish after awhile.

Shortly after a moderate or heavy rain and all the streams are flowing and the river is on the rise, the fish will feed until they gorge themselves. This may last a few hours or a few days. It is the right

time to go fishing.

A poor time to go fishing is when the river is dropping rather fast. Due to reduced velocity of the water flow, silt is being deposited. The desirable fish do not like this "dead" water where the river bottom is composed of soft mud.

On average, the good places to fish are 1) upstream from a log or drift pile, 2) in shallow water upstream from a deep hole, 3) at the downstream edge of a submerged sand bar where there is a sharp dropoff, 4) during times of high water in an inflowing stream where the current flows into the backwater, and 5) under a mulberry tree when it is bearing fruit.

Food fish are in the shallow water, and I catch more fish here than in deep water. --J.E. Fitzgerald, *Sportsman's News*

## IN A NAME

Next time you're fishing, check to see how many perch the guy next to you has caught. Theoretically he could encounter 20 different species and still be fishing in Kansas waters.

"Twenty species?" you'll ask. If you know your fish lingo, you might add "What does Kansas have besides the walleye and an occasional yellow perch?" If you're not up on perch, you may be thinking, "Yeah, there's bluegill, green sunfish, long ears and a bunch of others." But bluegill, green sunfish, and several related species are all sunfish, not perch. Perch include the yellow perch, walleye and sauger.

There are 20 perch species in Kansas, including walleye, sauger and yellow perch. The tiny stream fish known as darters are also perch, related to the walleye and its other game fish cousins. The largest Kansas darters seldom grow to more than 6 inches. Many species are colorful (depending on their sex and maturity), and are generally associated with clean stream waters. The profile of a darter is much like that of the walleye -- a torpedo-shaped body outfitted with two oversized dorsal (top) fins. The front dorsal fin is spiny, and the rear one is soft-rayed. Perch also have relatively small scales, and are rough to the touch.

In fact, keeping perch names straight is confounded by the fact that a popular handle for the walleye is the walleyed "pike." The walleye, of course, is not a pike of any kind -- it's a perch. But who's ever heard of a "walleye perch?"

The trouble probably started when European settlers came to the New World and found sunfish that resembled their perch from back home. And the toothy walleye, with its sleek body, does look like a pike in many respects.

The sauger is believed to be the only perch sport fish native to Kansas. Ring perch and walleye are newcomers. The 17 native darter species (one is called a "logperch") are found mainly in the streams of eastern and central Kansas. Among them is the Arkansas darter, a threatened species.

The walleye, a top-tasting sport fish, is found in lakes and associated streams across the state. Walleye were introduced to Kansas about 1960.

Natives to Kansas, sauger are found in the Missouri River and occasionally in the Kansas River. The sauger bears a strong resemblance to the walleye and is fine table fare, as well. The sauger's spiny dorsal fins are distinctly spotted, compared to the unblotched front dorsal on the walleye.

The yellow perch was introduced to Kansas in the late 1800s. Its preferred habitat is the cool water of deep, clear lakes. Yellow perch can be found in only a few eastern Kansas impoundments.

Perch and sunfish are important sport fish and great eating, although they are quite different. --Rob Manes





# HUNTING



## BIG GAME SEASONS

*Statewide Archery Deer* -- Purchase permits July 1-Dec. 31. Season runs Oct. 1-Nov. 27 & Dec. 10-31.

*Unit Archery* -- Purchase permits July 1-Dec. 31. Season runs Oct. 1-Nov. 27 & Dec. 10-Dec. 31.

*Firearms Deer* -- Application period is July 1-July 13. Season runs Nov. 28-Dec. 9.

*Muzzleloader Deer* -- Application period is July 1-July 13. Season runs Sept. 22-Sept. 30 & Nov. 28-Dec. 9. -*Shoup*

*Fall Archery Turkey* -- Purchase permits July 1-Dec. 31. Season runs Oct. 1-Nov. 27 and Dec. 10-31.

*Fall Firearms Turkey* -- Application period is Aug. 1-Aug. 18. Season runs Oct. 10-Oct. 21.

*Elk* -- Cimarron Unit: Application period is Aug. 1-Aug. 18. Season runs Sept. 29-Oct. 7. Ft. Riley Unit: Application period is July 2-31. Season runs nine days in the Sept. 1-Oct. 31 time slot. Exact dates are to be determined by Ft. Riley.

(Application and season are the same for elk firearms and archery.)

*Antelope Firearms:* (Application period was June 1-15.) Season runs Oct. 5-8.

*Antelope Archery* Application period is June 1-Sept. 21. Season runs Sept. 22-30. -*Shoup*

## GOVERNOR'S ONE-SHOT

On April 20 and 21, the fourth annual Governor's One-Shot Turkey Hunt was held near El Dorado. A number of celebrities participated this year, including International Honeywell President Michael S. Bonsignore, Kansas Senate President Paul "Bud" Burke, Kansas City Chief defensive back Jeff Donaldson, former Minnesota Viking head football coach Bud Grant, Kansas First Lady Patti Hayden, TV fishing show host Jimmy Houston, country-western singer Melba Montgomery, Thai physician Dr. Ajva Taulanad and wildlife artist Wayne Wilis.

Since its inception in 1987, the hunt has brought to Kansas such notables as Dr. James "Red" Duke, former Kansas

City Royal Fred Patek and former major league baseball player and manager Hank Bauer.

In addition to the turkey hunting competition, events included a sporting clay shoot at Michael Murphy and Sons Ranch and the "One Shot Banquet" at El Dorado High School. Participants competed for two Baretta 12-gauge shotguns, one for "Top Gun," the largest scoring turkey, and one for the "Governor's Award," the sporting clay championship. This year's Top Gun was Shawn Viguerie, president of the National Wild Turkey Federation. The sporting clays competition ended in a tie between Adrian Hansen, a Maryland seafood wholesaler, and Jim Norine, director of hunter services for the National Rifle Association.

The Governor's One-Shot hunt has been good for El Dorado and good for the state, both in terms of publicity and economic benefits. According to Governor Hayden, this hunt gives notable personalities from various walks of life "a chance to find out why this state is known for its warm, friendly hospitality." -*Shoup*

## NEW LAW

Kansas hunters will notice some changes in the rules applied to big game hunting this year as a result of a bill recently passed by the legislature and signed into law by Gov. Mike Hayden.

The changes include:

--Streamlining of the permit issuance process for landowners and tenants. In the past, landowners or tenants were required to apply for a regular landowner/tenant permit -- and be unsuccessful in a computer drawing -- in order to be eligible to receive a "Hunt-On-Your-Own-Land" big game permit. Under the new provision, landowners/tenants who wish to hunt on their own land can apply directly for the permit without having to go through the drawing process. Those permits will be available at a reduced fee from Department of Wildlife and Parks offices. The permits will be available for purchase throughout the applicable hunting season, and will be valid during any legal season (firearms, muzzleloader, or archery) with legal equipment.

--Due to the fact that these Hunt-On-

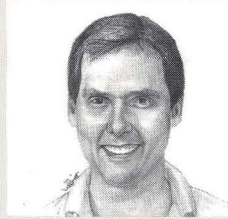
Your-Own-Land permits will be guaranteed available to landowners and tenants, the formerly required 50-50 split on deer permits allotted for general residents and landowners will no longer be in effect. All individuals would apply to hunt anywhere in the management unit as general residents, and all would have equal opportunity for being selected by computer drawing.

--A revised definition of "tenant." The change requires that tenants be actively engaged in agricultural operation of 80 acres or more of Kansas farm or ranch land "... for the purpose of producing agricultural commodities and who has a substantial financial investment in the production of agricultural commodities on such farm or ranch land and the potential to realize substantial financial benefit from such production." Under the former definition, some landowner/tenant permits were issued to persons not engaged in farming or ranching. Immediate family members living with a landowner or tenant will continue to qualify for landowner/tenant big game permits if they own or operate at least 80 acres per family member. The definition of "landowner" did not change.

--Provision for limited nonresident deer hunting. The Department could issue nonresidents up to two percent of firearms deer permits allotted in a management unit. In units in which unlimited permits are authorized, the total number of authorized nonresident permits would total no more than two percent of the firearms permits issued in that unit the previous season. Similarly, the total number of nonresident archery permits would be subject to a limitation of no more than one percent of the number of archery permits issued the previous season. Although the newly-passed legislation provides authority for these changes in nonresident permitting, the Department probably will not be able to implement those changes this year.

--Lowering the minimum age for big game hunting to 14, except that hunters 12 to 14 could receive a firearms turkey permit as long as they have successfully completed a hunter education course and are accompanied on the hunt by a person 21 years of age or older. --*Bob Mathews*

## FOR WHAT IT'S WORTH



### BIG SHOES

by Mark Shoup

grades K through 12.

In addition, Joyce also wrote a biannual newsletter distributed to every school in the state, travelled extensively giving workshops to teachers on how to use her materials, and developed a "Wildlife Reference Center Catalog" that educators can use to order materials.

Barb Theurer, who worked with Joyce for several years, can testify to the effectiveness of Joyce's efforts. "I have heard from a number of teachers who have said that, without Joyce's work, they would have had nowhere to go for wildlife education assistance. Her materials are wonderful," says Barb. "She will be missed."

Bob Mathews, who supervised Joyce when she first came to the Department, says, "One of her greatest strengths is her infectious enthusiasm." Anyone who has attended one of Joyce's workshops can attest to this.

In addition to the respect she has garnered from Department employees, Joyce was honored as the 1983 Conservation Coordinator of the Year by the Kansas Wildlife Federation.

There is more to this column than just another accolade for a departing, respected fellow employee. Joyce has worked for wildlife conservation where work is most needed -- in education of young people. At the root of all our environmental problems today is the increasing separation of people from nature. Urbanization of our society, television and a myriad of other distractions have contributed to modern apathy toward or ignorance about the natural environment.

Joyce has struck a blow against such apathy and ignorance. She has reached thousands of children whose closest encounters with wildlife had been "Bambi" or "Teenage Mutant Ninja Turtles."

You'll be missed around here, Joyce, and across the state. I don't mean to make any allusions to the size of your feet, but whoever takes your place will have some big shoes to fill.

When Joyce Harmon Depenbusch resigned from the Department last spring, Kansas lost one of its finest educators. We should all be happy for Joyce because she left to raise two children and help with the family farm in Kingman County. For hundreds of teachers and thousands of schoolchildren across the state, we bid a grateful, if bittersweet, farewell.

KANSAS WILDLIFE AND PARKS readers are familiar with Joyce's work through "Nature's Notebook," but few realize that the scope of her activities went far beyond the magazine. Joyce has degrees in wildlife biology and education. She taught third and fourth grade in Iowa before she came to Pratt in 1981. At that time, the Department had very little in the way of wildlife education. In nine short years, she developed a program that has reached every school -- public and private -- in Kansas and served as a model for many other states.

Central to her work was the development of a wildlife reference center from which teachers and civic organizations can borrow educational materials for use in classrooms and workshops. Joyce stocked this center with multiple copies of 122 films, 83 filmstrips, 31 slide shows, 95 learning kits, 20 game kits, 129 video tapes, 10 computer diskettes, 78 books and 61 pictures and posters. She also compiled "Skins and Skulls" presentation kits for the center. These materials describe nearly every species and ecosystem in Kansas, plus many other wildlife subjects.

Perhaps her greatest accomplishment during her stay with the Department was her "Wildlife Education Service Curriculum." Joyce designed and wrote this series of teacher-ready materials, including teacher's guides and student booklets with worksheets, bulletin board ideas and activities. This complete curriculum covers



# NATURE

## HABITAT RESEARCH

In a four-year program started last May, the Department of Wildlife and Parks and the Bureau of Reclamation began two cooperative research studies on the Cheney Wildlife Area (WA). The Bureau will fund both projects.

The first study uses models developed by the U.S. Fish and Wildlife Service and the Bureau to implement habitat management techniques that will improve pheasant nesting. Fifteen fields, consisting of 18-20 acres each, have been selected as study areas. Five study areas include a control, a clover and a fallow rotation.

The first phase of this project involved accumulating baseline information about nesting densities for ring-necked pheasants. Region 1 research biologist Randy Rodgers trained five people to conduct nest searches of the study areas, which began May 21. They quantified ring-necked pheasant nesting densities in agricultural fields and associated grasslands on the Cheney WA, evaluated alternative ways to locate and inventory pheasant nests, and they will assess success of pheasant brood usage on the same areas during late summer. Statistics will be accumulated throughout the study. Ken Garrigues, wildlife/park manager at Cheney, will coordinate the field research and work with all employees to ensure a successful program. Randy Clark, Fisheries and Wildlife Division wildlife biologist, will assist with the project as needed. Additional data will be accumulated for other game, and for nongame species, as well.

The habitat management models developed from this study can be used on other Department lands.

The second study will determine how shoreline vegetation affects the usage of Cheney's goose refuge. Approximately one third of the vegetated shoreline will be left as a control, while the other two-

thirds (except for erodible points) will be cleared. Geese browsing will be monitored to compare the control and cleared areas. This study should help improve the habitat of the refuge. --*Jerry Schmidt, field supervisor, Cheney State Park and Wildlife Area*

## SUMMER HUMMERS

For hummingbird lovers, summer is time to attract and enjoy one of the most fascinating birds in the world -- the hummingbird. Of more than 300 species of hummers, only two, the ruby-throated and the rufous, visit Kansas with any regularity. Even the rufous is quite rare, so when hummer lovers put out their feeders, it's usually with ruby-throated hummingbirds in mind. Ruby-throated hummingbirds usually arrive in Kansas around May 1 and remain until the middle of October.

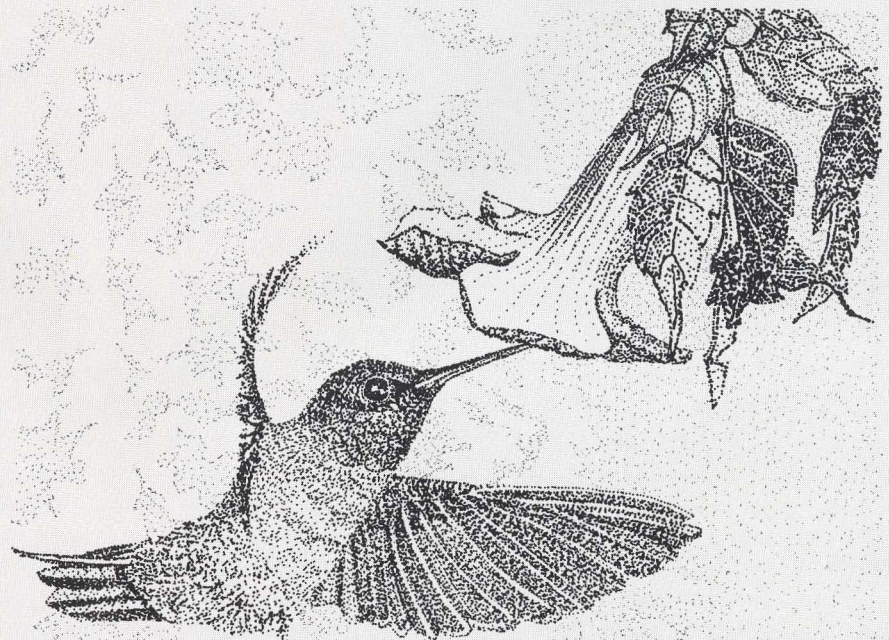
Not only does this tiny acrobat fly

2,000 miles nonstop during its migration, it is the only bird that can fly forward, backward, up, down, sideways, hover in one spot, and even fly upside down. Weighing around one-tenth ounce, hummingbirds must eat about every 10 minutes to satisfy the needs of their rapid metabolism. To reduce this metabolism at night, their body temperature lowers dramatically.

Homeowners feed hummers by boiling four parts water and one part sugar and placing it in a commercial feeder. (Honey should never be used because it can cause a fungal disease fatal to hummers.) Red feeders help attract the birds initially. It can take the birds a while to find a new feeder, but once they have discovered it, others may follow.

Feeders should be placed in a calm, shaded area and cleaned every four or five days. If insects invade the feeder, coat the wire suspending it with cooking oil or petroleum jelly. Bee guards will discourage bees and wasps.

To help late migrants store energy for their trip south, feeders should be filled until the middle of October. Trumpet vine, honeysuckle, azalea and other flowering plants can also attract hummingbirds and help supplement their diet. --*Shoup*



D. EASTES



# NOTES

## AG CONFERENCE

The "National Sustainable Agriculture, Natural Resources Conference" is scheduled for August 15-18, 1990, at the Hilton Hotel in Lincoln, Neb.

The conference's goal is to help foster a profitable agriculture that is environmentally sound, resource efficient, socially acceptable and sustainable for the indefinite future. The meeting will offer a national forum for information exchange on current sustainable ag programs in universities, state governments, federal agencies, agribusiness and the non-profit sector.

For more information on the conference, contact Dixon Hubbard, USDA, Extension Service, Washington, D.C., phone (202) 447-4341; or Jim Bushnell, University of Nebraska, Lincoln, NE, phone (402) 472-2966. --*Wildlife Management Institute*

## DUCKWEED

This summer, you may have seen mats of tiny green plants covering backwater areas near your favorite stream or pasture pond. Like miniature lily pads, these one-sixteenth- to three-eighths-inch floating herbs are commonly known as duckweed. This is but one of about 25 species of duckweed, the smallest of all flowering plants. Each pad will have one or more short roots dropping into the water. Although duckweeds sometimes reproduce by flowering and making seeds, reproduction is usually by a division of the plant body.

Duckweed gets its name because it is a favorite food of waterfowl. --*Shoup*

## IRON RANGERS

This outdoor recreation season, Kansas state parks have offered a new convenience. Self-service permit stations -- called iron rangers -- have been installed in many parks and will eventually

be available in all of Kansas' state parks. Visitors no longer have to search for an employee in order to pay fees to enter or camp in these state parks. The stations will supply daily camping and entrance permits and a drop box for payments.

Besides convenience for visitors arriving after office hours, the system costs less to operate than hiring seasonal employees. The savings will allow the Department to devote more resources to maintenance, interpretive programming, security and improvements to facilities.

Watch for our self-pay station when you enter a Kansas state park -- just one more example of our effort to improve service on our public lands. --*Kathy Pritchett, secretary, Division of Parks and Public Lands*

## OUTDOOR SURVEY

The U.S. Fish and Wildlife Service has published its *1985 National Survey of Fishing, Hunting and Wildlife Associated Recreation* and made free copies available to the public. The survey, conducted every five years since 1955, represents one of the oldest and most comprehensive continuing studies of its type. Copies of the 176-page document are available at no charge by contacting the Publications Department, U.S. Fish and Wildlife Service, 4401 North Fairfax Drive, Room 130, Arlington, VA 22201, (703) 358-1711. --*Shoup*

## PARKS POSTER

The Department of Wildlife now has beautiful color posters highlighting outdoor recreational opportunities in the state. The poster's theme, "Kansas Outdoors, America's Best Kept Secret," reflects the variety of outdoor opportunity in Kansas.

Photographs of the Flints Hills, geese rising from a marsh, a strutting prairie chicken and a sailboard rider create a stunning collage of Kansas images.

The backside of the poster is filled

with information on virtually every Kansas state park and public land in the state. When folded, the poster becomes a valuable information brochure.

Unfolded copies of this beautiful 28-by 36-inch poster are available at Department offices for \$5. --*Shoup*



## 1990 BELT BUCKLES

Kansas Department of Wildlife and Parks 1990 limited-issue belt buckles are now on sale. The new buckles feature a white-tailed buck in a natural setting.

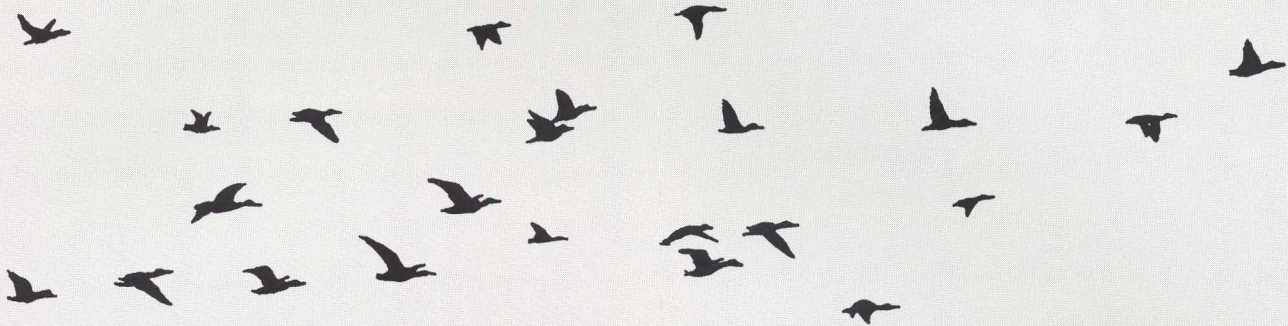
Because the Department did not sell all 1,500 of the 1989 buckles, only 1,000 buckles were made for 1990. If you purchased a 1989 buckle numbered one through 1,000, the same number in the 1990 buckle will be reserved for you until July 13, 1990. Those who purchased 1989 buckles numbered 1,001 through 1,500 will have first choice on the unsold 1990 buckles -- on a first-come-first-serve basis.

If you purchased a 1989 buckle numbered 1,001 through 1,500 and want to buy a 1990 buckle, you also must notify the Department by the July 13 deadline. After July 13, all buckles will be sold to the general public on a first-come-first-serve basis.

The 1990 belt buckles cost \$14, including shipping, handling and tax. Send check, money order or Mastercard/Visa number with order to Belt Buckles, Kansas Department of Wildlife and Parks, RR2, Box 54A, Pratt, KS 67124. Credit card orders can also be made by telephone, (316) 672-5911. Expiration date and telephone number must be included with credit card orders. --*Shoup*

# NATURE'S NOTEBOOK

by Joyce Harmon Depenbusch, Wildlife Education Coordinator



## FLYING HIGH

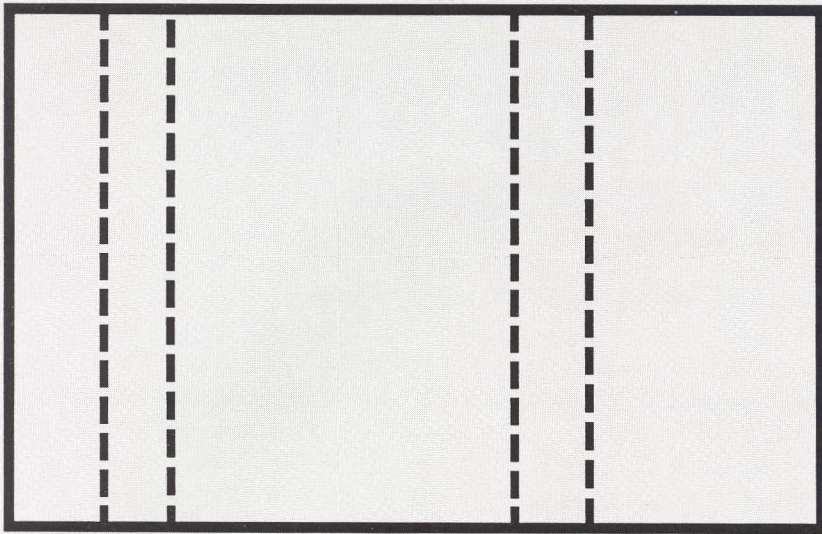
**MAKE A MOVING PICTURE OF A DUCK IN FLIGHT  
BY FOLLOWING THE DIRECTIONS BELOW.**

**MATERIALS NEEDED:** SCISSORS, STRAW OR PENCIL, TAPE, EMPTY MATCHBOX OR PATTERN ON FOLLOWING PAGE.

REINFORCE THE PICTURES  
WITH TAG BOARD OR HEAVY CONSTRUCTION PAPER.

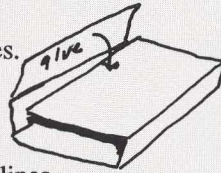
### **DIRECTIONS:**

- 1) Cut out all picture cards along the thick black lines.
- 2) Put the pictures in order from one to ten as shown in Diagram 1.
- 3) Tape the pictures in place with two strips of tape. Make sure the tape is pressed firmly in place.
- 4) Firmly tape a straw, pencil or stick to the back of Picture Number One.
- 5) Carefully slide the taped cards into the match box, or assemble the container on the following page by cutting on solid lines, folding on dotted lines.
- 6) Tape Picture Number 10 onto the box as seen in Diagram 4.
- 7) Use your moving picture by pushing the handle up and down. Can you see the duck flying high.



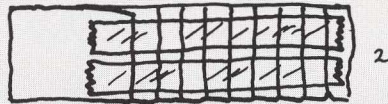
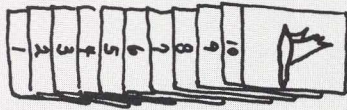
**matchbox pattern**

Cut around black lines and fold outward on dotted lines.

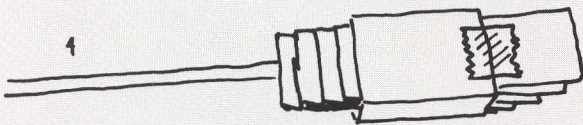
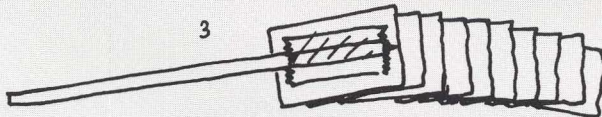


**HOW TO MAKE IT FLY:**

1. Cut out all ten picture cards along the thick black lines.
2. Line them up carefully in order from one to ten, as in this picture.

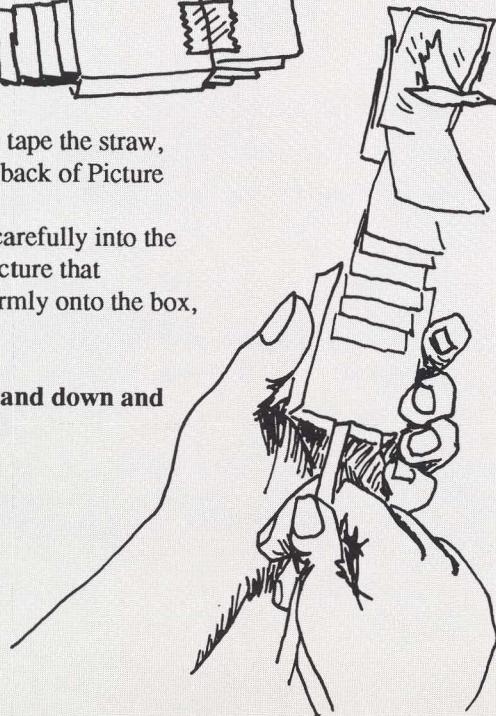


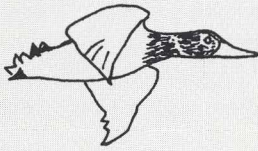
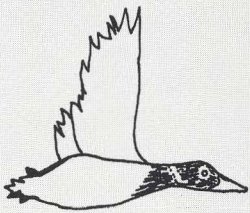
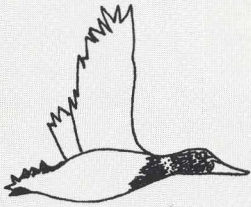
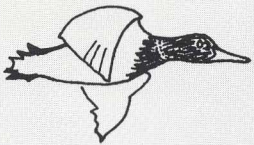
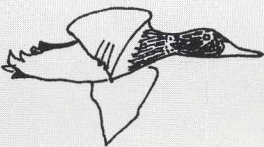
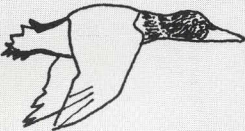
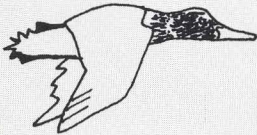
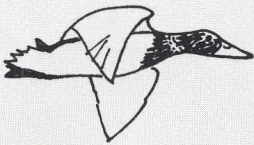
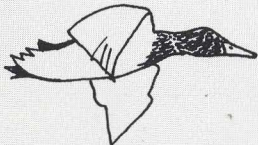
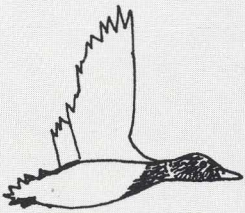
3. Hold the left side down with one hand as you place a strip of tape down the right side of the cards. Then tape the left side. (Use your fingertips and nails to press the tape firmly, especially where the pictures join one another.)



4. Turn over and firmly tape the straw, stick or pencil to the back of Picture No.1.
5. Slip the taped cards carefully into the box. Tape the first picture that comes out (No.10) firmly onto the box, as in the picture.

**Push the handle up and down and watch the duck fly.**



	
1	6
	
2	7
	
3	8
	
4	9
	
5	10

**Answers:**

1. Chimney swift. Grebes and kiwi birds also appear to have no tails, but neither are great fliers.
2. True. Goatsuckers, swifts and hummingbirds all may enter hibernating condition. In one case, a poorwill hibernated for a known period of 85 days.
3. (C) less than 50 feet. Not only water birds and shore-birds, but passerine species commonly fly just above the waves when crossing large stretches of water.
4. Cooling the bird.
5. Feathers.
6. (B) soaring flight; an example is the albatross.



7. Of native birds, the wild turkey has the longest tail feathers. But if naturalized birds are included, the champion is the ring-necked pheasant.

8. False; what appears to be the reverse knee of a bird is actually its heel. The joint that corresponds to a human's knee is concealed in the muscles of the thighbone. From the heel to the toes is often a long distance in a bird; the bird walks on its toes.

9. False; ear tufts of feathers have no effect on a bird's hearing ability.

10. False; though widely believed, there are cases of Canada geese changing mates for no apparent reason and many cases where the surviving member of a longtime pair remates.

11. True; it is illegal to collect any nest, abandoned or otherwise, unless a permit has been obtained from the U.S. Fish and Wildlife Service and the state wildlife authority.

12. No; the color often changes due to tarnishing and staining of the surface, and the actual color also fades over time.

13. True; small birds are easily frightened to death. Heart-rates on some stressed species go above 1,000 beats per minute, and fear resulting from human handling sometimes causes blood vessels to rupture.

14. (A) less than 20 percent of all nests successfully raise their broods to the fledgling stage. Weather, predation, disease and loss of parents are but a few reasons.

15. (E) no matter how primitive and undeveloped the place of egg incubation is, it is still considered a nest.

16. Mourning doves, common nesters in Kansas, ordinarily lay two eggs and incubate them so that both hatch at about the same time. This dove laid an egg, hatched it, and then laid a second egg whose hatchling was ultimately abandoned in deferral to care of the first fledgling.

17. False; though most female birds do not vocalize in what could be called recognizable song, a few species do. Notably, cardinals and several grosbeak species sing equally well in both sexes. In fact, male and female cardinals often engage in "counter singing," where the pair takes turns repeating calls. This is thought to help strengthen the bond between mates.



18. Monarchs are bitter and distasteful; birds learn this by experience.

19. False; birds have a specialized digestive organ called a gizzard, used to crush hard food. The walls of gizzards are so tough in some species that a steel needle can be bent without perforating the muscles. A turkey gizzard can crush a whole walnut without difficulty.


20. Bird metabolism is much faster than that of humans. A resting human averages a temperature of 98.6 degrees, a heart rate of 60-80 beats per minute, and a breath rate of 20-25 times per minute. Resting birds average a temperature of 107-113 degrees, heart rates approaching 500 beats per minute and breath rates of around 200 per minute. These rates may nearly double for birds during flight.

21. (A) Feathers completely lost are replaced very quickly. However, if a feather is broken, or clipped off, so that the base is left in the follicle, it usually is not replaced until the next molt.

22. Nothing; the nictitating membrane or "third eyelid" is temporarily covering the eye. The function of this semitransparent membrane is to aid in cleansing the eye, or to protect from wind, water or glare.

23. The brown-headed cowbird. An average female parasitizes 40 nests per season, removing the host egg and replacing it with one of her own while the nest's owner is away.

24. (B) The trumpeter swan is the largest wild bird in the U.S., males averaging 28 pounds with wingspans of 8-10 feet. Whooping cranes are the tallest birds, but weigh only between 8 and 17 pounds with wingspans less than 8 feet. California condors are not found in Kansas.

25. A cosmopolitan bird is found throughout many parts of the world. Examples are ospreys, marsh hawks and short-eared owls. 

*gallery*  
by Mike Blair





When a summer thunderstorm flooded a pasture draw, this thirteen-lined ground squirrel mother decided to pack up the family and move to higher ground. Mike Blair happened on to the event and captured these remarkable scenes on film.

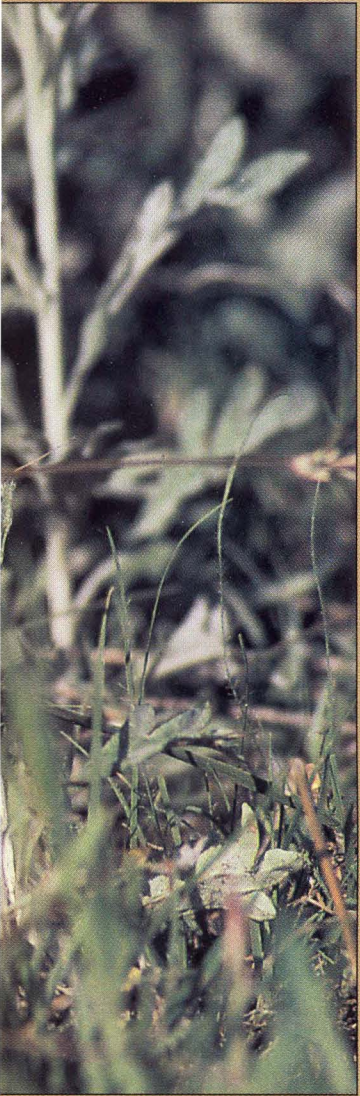
**Opposite:** 400mm lens, f/11 @ 1/125.

**Right:** 400mm lens, f/11 @ 1/125. **Below:** 400mm lens, f/11 @ 1/125.





After a new burrow was chosen, each of the young squirrels was carefully transported through the grass. When all were safe in the burrow, the mother busily gathered fine grasses to line the nest. **Above:** 400mm lens, f/11 @ 1/125. **Right:** 105mm lens, f/16 @ 1/125. **Opposite:** 400mm lens, f/11 @ 1/125.







# King of Fishers

by J. Mark Shoup  
*associate editor*

photos by Mike Blair

**With a double crest, heavy bill and tiny legs, the top-heavy kingfisher belies its appearance with grace and precision in the air. If you've ever ventured along a Kansas stream or pond, you've probably heard or seen this tenacious little fishing bird.**

**L**ove, death, creation and rebirth: these subjects have always fascinated mankind. We see them in our daily lives. We recreate them in our art. It is through nature, however, that we often interpret these events. From such observation is born the myriad of stories which fill our early literature. These stories often do more to illuminate the condition of man than the condition of beast. Yet in them, one can see a pre-scientific attempt to connect man to the magic and mystery that is nature. Such is the kingfisher's story.

They were born of gods, so when Halcyon married Ceyx, it was truly a match made in heaven. Ceyx was king of Thessaly, respected by all. Their love was strong and his reign was peaceful, but trouble did not escape them.

Believing that the gods were angry

with him, Ceyx planned a sea voyage to consult the oracle of Apollo. Halcyon pleaded with him to take her, for she had an evil premonition. Although Ceyx did not share his wife's sense of foreboding, his love for Halcyon was so strong that he refused to let her go, fearing that if something did go wrong she might be harmed. He sailed alone.

That night, a terrible storm battered Ceyx's ship. As a bolt of lightning split the ship's main mast, Ceyx was swept to his death in the sea with one last prayer on his lips: that his body be washed back to his beloved Halcyon so that he might be buried at home.

For days afterward, Halcyon, unaware of her husband's death, made offerings to Hera, queen of the heavens, for the safe return of Ceyx. Finally, Hera could take these vain offerings no longer. Morpheus, son



From a high lookout, the kingfisher watches the water intently. Spotting prey, the bird dives, hitting the water with surprising force and amazing accuracy. Returning to the limb, the bird often raps the fish against the limb to kill it, then swallows it head first.

of the god of sleep, was sent to visit Halcyon in a dream. He appeared to her in the form of her husband, drenched in seawater, and told her that he was dead. Halcyon ran from the palace to the sea, where she found Ceyx's body washed ashore. In desperation, she threw up her arms to cast herself into the sea.

But the gods were watching this time, and Halcyon's arms turned to wings and her body to that of a kingfisher. She flew low across the water, then returned to Ceyx and, in despair, folded her wings about his head. Moved by this sight, the gods took pity and revived Ceyx, also in the form of a kingfisher.

As the legend has it, these first kingfishers built nests which floated on the sea, and to bless the pair, the

gods made the seas calm and peaceful each year on the days of their brooding. Even in modern times, calm, peaceful days when cares are laid aside and man can most enjoy nature are known as halcyon days.

In modern terms, kingfishers are of the order *Coraciiformes*, which includes such exotic European and African species as bee eaters, rollers, hoopoes and hornbills. Of the 86 kingfisher species found worldwide, only six can be found in the New World. North of southern Texas, only one species of kingfisher can be found in North America: *Megaceryle alcyon*, the belted kingfisher. (*Alcedo atthis*, the common kingfisher, is the one the Greeks observed.)

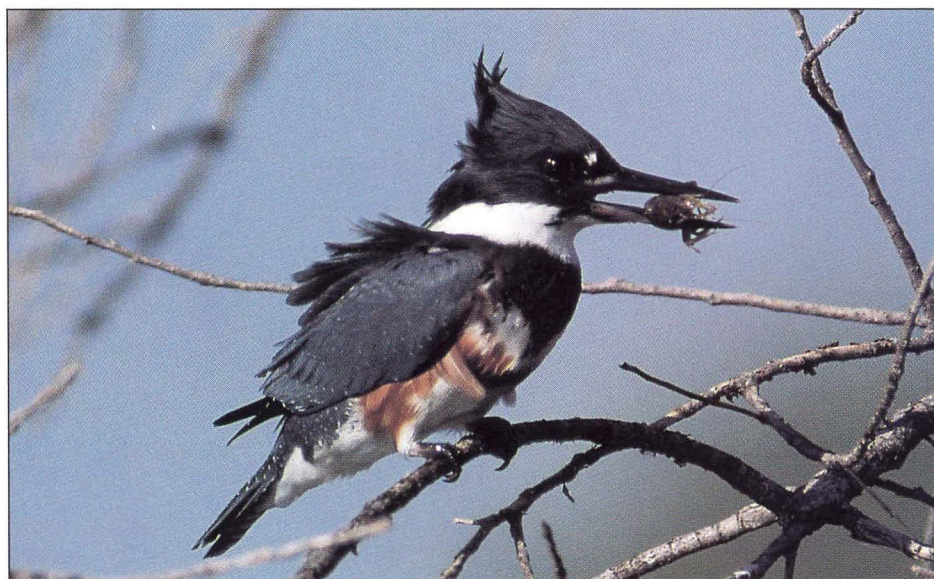
If the myth of the kingfisher is fascinating, the reality is more so. The

belted kingfisher is one of the few bird species with a female more colorful than the male. Slightly smaller than pigeons, they have steel blue heads, backs, wings and tailfeathers, and white breasts. However, the female has rufous flanks and a chestnut band across its breast. The belted kingfisher looks top-heavy, with a ragged, double crest; long, broad beak and body; and tiny legs and feet.

This delightful bird is a harbinger of spring, not because it is absent from Kansas during the winter. It is a common winter resident, but the first warm days of spring often bring us to some peaceful river bank or lakeside where the belted kingfisher is going about its business. It might first reveal itself with a gravelly call, described by John James Audubon "as of a New Year's Eve noisemaker." Then it appears, a top-heavy sentry perched on a bare limb, rigid but alert.

In a moment, it dives head first from its perch and hits the water with pinpoint accuracy and stunning force. (With the ability to spot small underwater prey from a great distance, the kingfisher's vision has been compared to a hawk's.) It disappears for 2 or 3 seconds, then emerges with a 3-inch gizzard shad in its beak. Back on the perch, the kingfisher beats the fish across the limb until stunned or dead, then flips it into the air and swallows it head first.

Kingfishers display a variety of interesting behavior. Although they usually hunt from a perch on a dead limb (often using the same ones re-



This belted kingfisher prepares to eat a freshly caught crayfish. While small fish make up most of the kingfisher's diet, other prey include mice, frogs, lizards, salamanders, insects and even small snakes.



Kingfishers dig a burrow into a dirt bank for nesting. This particular burrow was in a city park (inset). The male does all the fishing while the female incubates the eggs. After the young hatch, in about 24 days, both parents feed them.



Hungry young kingfishers keep the parents busy for about three or four weeks until they fledge. Here the male leaves the nest entrance after feeding its catch to the young. An average nest will contain five-eight young.

peatedly) and dive under the water for their prey, they sometimes patrol their territory, then hover 20 to 30 feet above the water before spotting a target. Then the wings fold halfway and the bird dives, grasping the fish in its heavy beak. The impact of these dives is so violent that kingfishers occasionally spear their prey, although this is rare.

While fishing from a perch, the kingfisher will sometimes make a premature dive, and its prey will disappear before the bird can reach it. This can create the appearance of indecision. The kingfisher will drop from its perch, fall a few feet toward the water, then make a sharp turn back to the perch. At other times, the bird will skim the water and simply dunk its head below the surface and snatch its prey.

Fish (minnows, chubs, shad and other shallow water species) comprise its primary food, but this bird is not single-minded about its diet. It will eat mice, frogs, lizards, salamanders, crawfish, insects and even small snakes. Aquatic beetles and invertebrates are also common prey.

More than one kingfisher has been found with its bill caught fast in the shell of a live mussel. In the past, kingfishers have been considered pests because they were thought to damage sport fish populations. Modern studies, however, show that a very small percentage of the kingfisher's diet consists of sport fish. In fact, Audubon proudly noted that a large portion of the bird's diet are "enemies of trout."

This adaptable bird will also utilize a variety of habitats. Although it loves rapid water, it will fish lakes and sea coasts. When it finds a suitable fishing ground, the kingfisher will defend its territory fiercely, driving other kingfishers away. When a human walks through the area, it will lead the way, scolding from limb to limb, then return to its original perch when it reaches the end of its domain.

Belted kingfishers can be found from Newfoundland to California and from northern Manitoba to South America. Although they migrate, they will winter anywhere water isn't frozen. As streams begin to freeze,

they will fly south until they find open water and may stay there all winter. Their actual wintering range is from Nebraska to Colombia, South America.

Above all, the kingfisher is a survivor. It is a fierce fighter and an adaptable predator and migrant. When outmatched, it will dive below the water's surface to avoid the attacks of other predators such as Cooper's and sharp-shinned hawks. But perhaps its most innovative survival technique is the architecture of its nest.

Ordinarily a solitary creature, the kingfisher is the model of cooperation during breeding season. Sometime during May, the male and female pair and begin digging their nest. They usually pick a spot at the top of a steep bank near a river, lake or pond—safely out of predators' reach. (On rare occasions, kingfishers will take up housekeeping in a hollow tree or stump.) For the next week or two, the couple will work constantly on their new home. Chiseling with their beaks and scraping with their feet, they dig a 4-inch





A young kingfisher cautiously peers from the safety of the burrow. After fledging, the young will return to the parents to be fed for two or three days. After that, they are on their own, leading solitary lives along Kansas waterways.

hole, slanting slightly upward for drainage, 3 to 10 feet into the bank. At the end, the tunnel will make a slight bend and open into a larger chamber where they will raise their young.

Once the customary five to eight eggs are laid, the male will busy himself with one or two shallower backup burrows while the female incubates. The male does all the fishing during the 18- to 24-day incubation period. A few days after the eggs are hatched, the chicks develop featherless quills, giving them the look of tiny porcupines. Both parents now provide for the young until they leave the nest, about 3 or 4 weeks. The young birds return to feed for several days after fledging until they can survive on their own. Then the two model parents go their own ways, continuing their solitary existence.

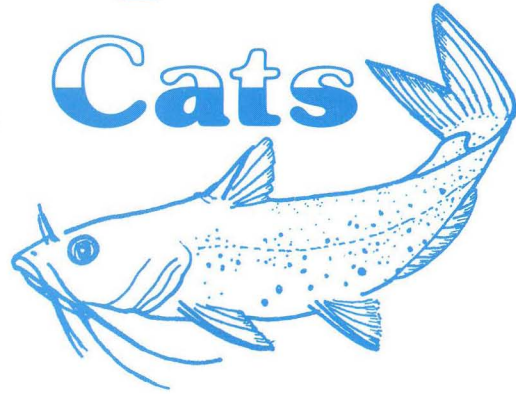
There is one more legend about this bird: that a kingfisher was released from Noah's Ark. As it flew west toward evening, its breast was burned the color of the sunset, and its back was dyed the color of the sky, colors which remain to this day. Such myths about the kingfisher fascinate us and draw us closer to this inherently entertaining bird.

The kingfisher reminds us of another time, a time when men, because of their closeness with nature, created myths to define the natural world around them—and to further identify with it. Today, such myths are a natural hook, especially for children. Some warm summer weekend this year, try the myth of the kingfisher on a kid. Take him or her down to the river bank, just fishing or picnicking. Watch the bare branches closely, and listen for the rattling chatter. Chances are you'll see that flash of steel blue hit the water and dart back up. It's time for nature to put on a show. It's time for the King of Fishers. It's time for a story. ♡





# Waist Deep In Channel Cats



text and photos by Mike Blair  
*staff photographer*

The lazy flow of a shallow stream in central Kansas probably wouldn't attract the attention of an eastern catfisherman. But for those who learn to read the river and are willing to wade in search of deeper holes, hungry catfish wait.

**B**luff Creek lay quiet at day-break, cooled by the night air. Several hours would pass before the July sun spilled over the cottonwoods and blasted the open water with its penetrating rays. In the meantime, channel catfish cruised the shallow holes in search of breakfast. Rusty Ryan was happy to feed them.

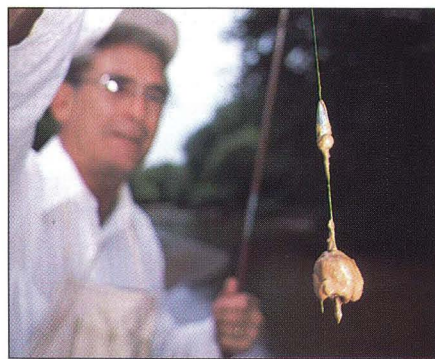
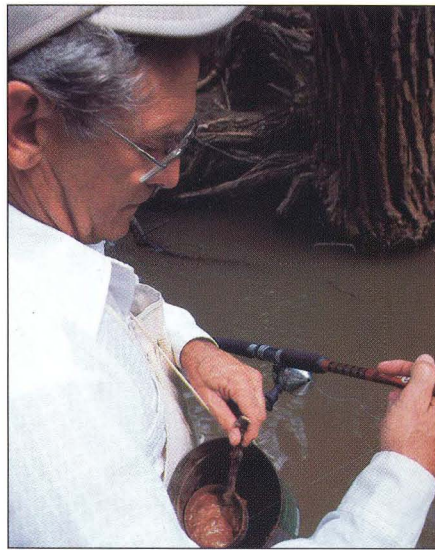
Wading in jeans and sneakers, the veteran stream fisherman quietly approached a web of submerged roots and stripped 3 feet of monofilament from his venerable flyreel. The 9-foot rod gave him plenty of reach, and a smelly spongebait was lowered into the current just upstream from the roots. Momentarily, the rod tip quivered, and Ryan sank the hooks into a 2-pound channel cat. Just like he promised, it was easy as pie.

"The creek's in good shape for July," he said, rebaiting his hook and wading upstream. "All these rains have raised it about 6 inches over the normal summer level, and the water is tinged just right for catfishing. Too bad a lot of the big fish are probably back downstream by now."

The angler referred to the post-spawning period, when mature fish, finished with egg-laying in upstream habitats, return to lakes and reservoirs. The upstream run, usually made in early April and culminating with spawning in May and June, is one of the best times for wade fishing. The technique, however, is productive through the summer and fall months as well. Midsummer often provides great fishing because the lower creek levels concentrate fish in deeper holes. However, it's best to fish early morning or late evening because midsummer's sun pushes channel cats into shaded seclusion.

Ryan's system is simple, though seldom imitated by Kansas anglers. Using either a flyrod or standard spincast outfit loaded with 12-pound line, he wades in search of holes that might hold fish. When he finds one, the spongebait is simply dabbled into the current where the scent is carried to waiting catfish.

"Catching fish isn't as much a problem as finding the holes in shallow rivers," Ryan said. "Eastern fisherman might not think a shallow stream could hold any fish at all. But where holes drop off from 2 to 4 feet



Stink bait is applied to a spongehook by dipping it into the jar with a stick. The nasty looking and smelling bait is attractive to channel cats, and the scent, carried with the stream's current, can make them bite in a hurry. The results are displayed on the facing page.

deep, channel cats will be there, and they'll bite in a hurry."

The angler's point was quickly proven as the water gradually deepened from 12 inches to waist-deep beside a logjam. Letting out only enough line to jig the spongebait slowly off the bottom, Ryan waited for a strike. Thirty seconds later, a one-pound channel cat took the bait.

"You've got to be ready to jerk the fish out of a place like this," he said, as he freed the treble hook from the catfish and released it back to the stream. "Watch your rod tip, and as soon as you see a pick-up, set the hook hard. Most of the time, you can horse a big fish out if you can get the jump on him. But if he can wrap the line around something, you'll lose him."

Ryan tapped the No. 6 treble spongehook to remove excess water and dipped it in the foul-smelling bait he has produced commercially for 30 years. Developed out of his love for catfishing, "Rusty's Spongebait" ® now sells nationally at a rate of 40 tons per year.

To keep the smelly potion off his hands and clothes while wade fish-



ing, the angler carries the open bait container in a gallon coffee can strung around his neck. The spongehook is dunked in the bait with a stick and is instantly ready to use again with no mess.

"Let's try that spot again," Ryan said, dropping the bait back between the logs. "Sometimes, fish after fish will bite from a good hole."

Sure enough, a second strike came at once, this time yielding a 2-pound channel, the size good streams will average. Three more smaller fish followed in a period of ten minutes. Then the action tapered.

"Don't wait more than a minute or two before moving," Ryan instructed. "If a fish is there, it will quickly take the bait. The exception might be fishing under a wide band of floating trash, such as twigs and seeds lodged against a logjam. There, raise the rod tip and let the bait drift several feet back under the trash. It might take a few minutes for the scent to attract fish out of the deeper water."

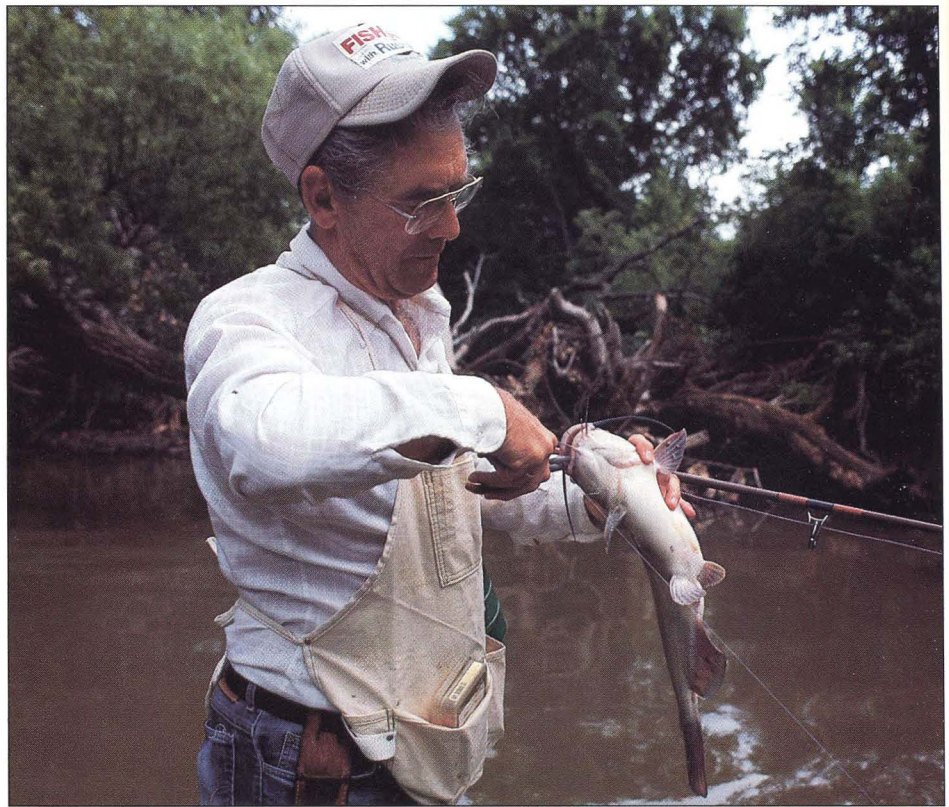
Ryan moved upstream to a downed tree lying across the current. He always wades upstream for safety reasons. "The way a river works, a hole is always deepest on the upstream side and may drop off abruptly. But it gradually shallows out on the downstream side," he explained.

Wading upstream also carries siltation away from the hole, preventing it from spooking fish before you arrive.

Reading currents around the fallen tree, Ryan dropped his bait into 2 feet of water near the bank. Experience has taught him that most fish stay along a stream's edges, even when conditions appear favorable toward the center. Holes gouged into the banks on outside curves are good fishing places, as are rocks, logs, or debris jams.

Ryan concentrated on his work, gently jiggling the line to sweep more scent under the roots. At the sudden sharp tug, he was ready.

Snapping the rod upward, he soon guided a 5-pound blue catfish into open water, where an exciting fight was won. It was the biggest fish of the trip, although Ryan has taken fish weighing 10 pounds in shallow streams.



Releasing most of his catch, Ryan sets the hook at first nibble to prevent fish from swallowing the hook. A pair of needle-nosed pliers makes unhooking easier.

As expected, submerged tree roots and logs cause many breakoffs. Because of this, Ryan loads his flyreel with monofilament line only, to prevent having to retie leaders after every hangup. He also carries 15-20 extra spongehooks on every trip.


When rigging baits, he ties a 2-inch loop at the line's end to form a hook sling. "Squeeze the loop together and pass it through the hook's eye, then pull the hook through the loop and cinch it tight," Ryan said. "It's fast and easy, and it doesn't reduce line strength, since the knot doesn't wear against the hook."

Since catfish are sometimes finicky about weight resistance when biting a spongebait, Ryan uses a slip sinker to hold the bait on the bottom. Depending on the swiftness of the current, a quarter-ounce sinker is usually a good choice. A small split-shot sinker is positioned two to three inches above the hook to act as a stop for the heavier slip sinker. This system holds the bait just above the stream bottom—perfect for a hungry catfish.

To prevent trouble and loss of time caused when a fish swallows the hook, Ryan strikes a catfish at its first

nibble. Hooked in the mouth, the fish can be easily removed with needle-nosed pliers. But if the treble hook is swallowed, freeing it often kills the fish. When swallowed, it's better to cut the line and let the strong digestive juices of the catfish dissolve the hook over time.

Throughout the morning, the sun struggled to burn away the threat of rain. It was ideal for summer wade fishing, since the intermittent clouds extended the feeding period of catfish into midday hours. Even so, Ryan was ready to call it quits. Any more, he wade fishes strictly for fun, releasing all catfish as soon as he catches them. The morning had yielded more than 30 channel cats, ten of which would have made a fine limit of 2-pounders or better. It was a satisfying outing.

Ryan believes many Kansas anglers are overlooking an excellent fishing opportunity by passing up shallow streams. They're accessible, easy to wade, uncrowded and permission is often an inquiry and handshake away. Tropy-sized fish are not uncommon. And the scenery and solitude caps a unique outdoor experience. 



## Locos: Lethal Outdoor Catalog Overload Syndrome

**S**id's wife asked me to go down to the hospital. It was lethal outdoor catalog overload syndrome (LOCOS), and I knew it wouldn't be pretty.

Sid Morton has been a neighbor of mine for years, and I'm to blame. I turned him on to outdoor gear catalogs.

He called me on the night of the attack. I could tell by the Vincent Price-like quality to his voice that it was LOCOS.

I found him on the floor, salivating and wild-eyed, surrounded by piles of catalogs. "Look at this," he shouted, "an electronic bionic ear earphones set. Listen: 'It picks up sounds with a sensitive microphone so you can hear what you can't see. Great for hunters listening for sneaky deer and elk. Good for surveillance. Home-owners and boaters may find uses too.' See, you wear it like a headset."

"Sid, it's OK . . ."

"Or look here," he stabbed at another page. "Our Scent Cord creates mock trails that will have your trophy galloping to you. Works with all liquid masking and attracting scents. Rescents line automatically."

"Sid, I know a doctor . . ."

"Lookit," he panted. "Doe-in-Rut Buck Lure. Listen: 'Includes doe secretions and urine collected at the height of the estrus cycle. Undiluted.'"

"Sid, what are you going to do with deer, uh, secretions?"

"Use it on my Scent Cord. Hey, look, 'Skunk Scent, very powerful masking scent, 100 percent pure. \$4.98.'"

"What . . ."

"You put it on your boots so that deer can't smell you. You soak these Scent Pads in it, see, they just cost \$7.98, and tie them to your boots."

In rapid-fire order, he went from two-way radios with headsets to automatic game feeders guaranteed to "bring big bucks to your gun" to freeze-dried deer droppings (which you reconstitute with doe-in-rut scent) to deer grunt calls to a conversion kit to "turn your ATV into a killing machine."

A week later, the sheriff delivered Sid to the hospital.

When the sedatives wore off and he could talk, his story went like this: He had hung his game feeder in a tree, spread his freeze-dried droppings, and blown his grunt call before he realized that he'd forgotten to lay the scent trail.

Sid hopped on the death machine to lay the trail to the killing grounds with his Scent Cord hooked to his belt. The cord hung up on a root. When it became taut, Sid panicked and held tight to the handle bars of the



Dana Estes illustration

death machine, pulling it over on top of him. The Scent Cord broke and sprang back, wrapping itself around Sid and the spinning wheels of the upside-down ATV, which pulled it tight and trussed Sid to the back axle. The bottle of doe urine in his pocket broke open when he hit the ground. The engine sputtered and died.

He said the worst part was that the bionic earphones amplified the heavy breathing of the love-starved bucks as they galloped toward him. He could hear them coming for a long time. "Do you know what those bucks were going to do to me?" he asked me. As several bucks closed in, Sid freed an arm, pulled the Skunk Scent from his shirt pocket and poured it over his head while shouting, "I'm not a deer! I'm not a deer!" The bucks lost interest in the nick of time, and the search party found Sid three days later. Another hunter had reported hearing, "I'm a skunk! I'm a skunk!" being screamed into the night, followed by peals of hysterical laughter.

LOCOS has a high recidivism rate. On a later visit to the hospital, I saw the corner of an outdoor catalog sticking out from underneath Sid's pillow. I grabbed it. It was open to a page which featured camo toilet paper. It read: "Eliminates the flash of white that could be mistaken for a high-tailing deer."

The TP came in blaze orange, too.

"That's for when you want to be noticed." Sid said miserably. "You know that stuff could literally save your . . ."

"Life," I finished the sentence.

"Yeah. That too. You know, I ought to buy some of it before my next trip. Then there's this infrared sniper scope that I saw . . ."

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