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Cheyenne Bottoms . . .

A Rite Of Courtship

THE BUCK STOPS HERE

Our prairie chicken biologist describes the sights and sounds of greater prairie chickens

The shrike doesn't hide its role as a predator.

It pins its prey to thorns and barbed wire

booming on the lek. by Kevin Church

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I Remember

Butcher Bird

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Dr. Tomanek

Dr. Gerald W. Tomanek, Commission Chairman for the Kansas Department of Wildlife and Parks, talks about himself, the Commission and the Department's future.

Ghosts Of The Prairie

A covote's song of the night is explained to a frightened 6-year-old, who learns that the music is nothing to fear. by Mike Blair

Sallery 38by Mike Blair

Confessions

Of A Crappie Catcher

When Paul Miller talks fishing, fishermen listen. Here's how he consistently catches spawning crappie. by Mike Miller

HIGH GROUND

45 by Tom Mosher The Appeal Of The Eel



About The Covers Front: Mike Blair pho-tographed this booming greater prairie chicken at greater prairie chicken at rest during its morning dance. Blair used a 600mm lens, set his aperture at i/8 and shutter speed at 1/125. See the cover story on Page 2.

Back: A Lyon County covered as the service as the coyote gives voice as day blends into night. Mike Blair used a 400mm lens and set his aperture at f/3.5, shutter speed at 1/125. See re-

lated story on Page 32

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

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THE BUCK STOPS HERE



Homeward Bound

I ve been doing a lot of reminiscing lately . . . about home. The lure of family and longtime friends that I see for ever-so-quick holiday visits and weekend trips grows stronger each year. After a little more than eight years of calling New York, Alabama and Kansas home, I'm convinced that a new mailing address is in order, that the pull of family, longtime acquaintances and hometown memories is beckoning bittersweetly.

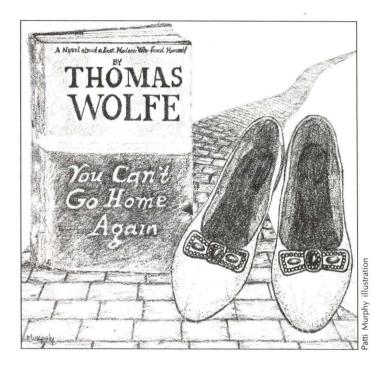
By the time you read this I'll be back in St. Louis, most likely still sorting through boxes of stuff both delicately placed and alternately jammed in a 17-foot U-Haul truck.

But no doubt, somewhere on the road — maybe on the way to Hutch, possibly eastbound on Hwy. 50 — I'll realize once again that I'm trading one home for another. I'll be thinking about the pride you have in your home state, your own love of family and how good you feel about the friends you keep. I'll be thinking about our times together and three year's worth of pleasant thoughts . . . Bergie's west pond, Buck's buck and a Brittany named Buck, shuffleboard and pizza tacos at the Chapeau, Brunsky, scaled quail on the Cimarron National Grassland, a chocolate malt I had in Bird City, Mike's double on lessers, Hwy. 160, deer camp in Coffey County, the talks we've had, the laughs we've shared.

Seeing how important your family is to you has strengthened my own sense of home and family. Literature provides many concepts of this ideal, and two extremes come to mind: those of the late Thomas Wolfe, he the hard-living, 20th century novelist, and Dorothy, she the mythical Kansas farmgirl with a hankering to get home.

Published two years after Wolfe died in 1938, You Can't Go Home Again is the culmination of Wolfe's probe into the human spirit. An expert on Wolfe and his writings, Dr. Robert Meyers, a retired Wichita State University professor, says Wolfe "had ambitions (the folks in Asheville didn't share), experiences they hadn't had. The literal meaning of You Can't Go Home Again is that Thomas Wolfe couldn't go back to Asheville, N.C. The universal meaning is that no human being can go back. You can find the old friends, but they're not the same."

About the time Wolfe's last novel was being published, American moviegoers were treated to yet another writer's version of home, this one through the eyes of a fictional Kansas farmgirl. Dorothy's odyssey takes her to a new land, as we all know, but before *The Wizard Of Oz* concludes, Dorothy steps over to the Yellow Brick Road, clicks those ruby slippers and utters the famous line: "There's no place like home." My own thoughts, frankly,



lie pretty close to what Dorothy said.

Dorothy's candor notwithstanding, I feel warm inside about Kansas — Pratt, in particular, and its family of 7,000. And I'll miss hearing from you, the reader, and reading what you have to say. What's important to you is also important to me . . . that's why I'm homeward bound. I may be returning to Missouri, but I'll always be a Kansan.

For now, take good care.

Paul

Paul G. Koenig Editor

P.S. Mike Miller, who grew up fishing the farm ponds around Greensburg, is the new editor of KANSAS WILD-LIFE & PARKS magazine. Mike's work is familiar to most of you. His name has been in the masthead ever since he joined the Department more than five years ago — first as the magazine illustrator and more recently as the associate editor.

All the best, Michael.

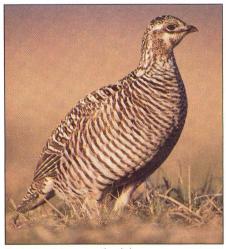
Rite Of Courtship

y thoughts changed with every bump. moment One thought of myself buried warm and deep within a mountain of guilts; and the next, I envisioned a scene from Aldo Leopold's A Sand County Alamanac, with the sun rising on a clear frosty morning. The reality of the situation was that I was bouncing down a country road in the middle of the night in an old school bus, packed with like-minded people who would have killed for the chance to drink, as opposed to wear, the hot coffee they were spilling on themselves and neighbors. While quite normal at other times, each traveler was driven by the common goal of viewing one of the most spectacular sights in natural history — the courtship display of the greater prairie chicken (Tympanuchus cupido cupido). After two hours, the bus screeched to a sudden halt and two sleepy passengers stumbled off into the

A close encounter with greater prairie chickens booming on the lek.

by Kevin Church Small-Game Project Leader Emporia

photos by Mike Blair



Spring pairings on the lek: a greater prairie chicken hen (above) and a cock (at right).

darkness. Several stops later my partner and I grabbed our thermos, spotting scope, binoculars, camera, flashlight and map and stepped out into the cold. The door slammed shut behind us, and the bus sped off.

Our next charge was to somehow get to the blind located approximately one-half mile to the east. This would have been simple had it not been for the electric fences, ditches and plowed fields. After what seemed like three miles we finally spotted what was generously described as "a blind." We crawled inside and waited.

I have since repeated this scenario on many occasions over the last 15 years, from Wisconsin to Texas. During this period I've evolved from casual observer to student of prairie chicken courtship. This insight has contributed greatly toward my understanding and appreciation of this fascinating bird. What follows is a brief description of some of the court-







From preceding page: a booming greater prairie chicken in full display. The scar on the air sac is the result of battling with a competing male for lek dominance.

ship displays and an interpretation of the behavior common to all greater prairie chickens.

To make a genetic contribution to the next generation, a male prairie chicken must exhibit an elaborate combination of athletic moves and symphonic sounds. Each element of this display has been finely tuned by his forefathers' abilities to simultaneously avoid predators, out-compete other males and attract females.

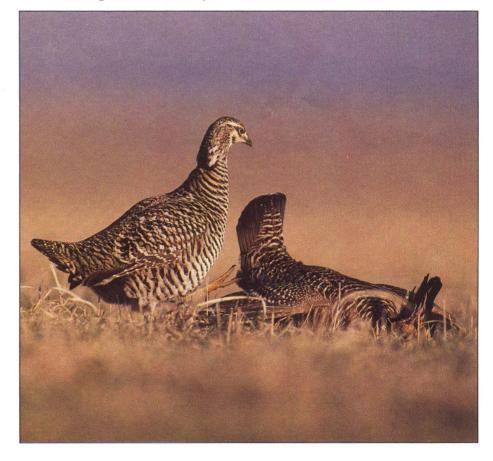
The breeding process begins in October when males gather at traditional display areas technically referred to as leks, or booming grounds. To the casual observer, these areas of about 50 yards by 50 vards appear indistinguishable from the rest of the landscape. At closer inspection, however, it becomes apparent leks are strategically located on slightly elevated, flat terrain with short, sparse grass. Ridgetops, for example. These locations afford good visibility for spotting predators and enable displaying males to be heard by females well over a mile in all directions. Throughout much of the Flint Hills, a lek per square mile is not unusual.

In fall, mature and experienced males reestablish territories they held the previous spring. The ultimate goal of each male is to occupy a territory of about 500 square feet in the center of the lek, where most of the breeding is done. Although young males visit the lek, they tend to stand around on the periphery and seldom display. This will continue until finally giving way to the long nights and cold temperatures of December.

y the following March, some territorial shifting may occur due to overwinter deaths, but the basic order of the lek is formed in fall. The



The final stage of courtship involves ritual behavior by the hen. Dancing intensifies as she selects a male. At the peak of courtship, the male spreads prostrate and the hen steps on his back. Mating occurs immediately.



intensity of displaying is much greater in spring than in fall; and activities will continue well into June. The number of males using a lek can range from one to 75, but the average is nine.

Lekking is a collective term for the sequence of vocalizations and posturing a male prairie chicken exhibits to announce territorial residence to other males and to attract females. During lekking, the tail is elevated, the hornlike feathers (called pinnae) on the neck are raised over the head, and the wings are lowered with the feathers spread. The bird then begins stamping his feet while moving forward a short distance, followed by a series of rapid tail snapping and fanning. At the same time as the tail is clicked open and shut, a whoom-ah-oom sound is given as the bright orange air sacs on the neck are inflated for maximum exposure.

A second major display is flutter-jumping with associated cackling calls. The male jumps several feet into the air, sometimes uttering a *chilk* note as it takes off, flies forward and lands. In so doing, the bird advertises its presence as well as the location of the lek. Flutter-jumping is typical of peripheral males when females are near the center of the display ground.

When defending territories

against other competitors, males display several postures and calls. Frequently, ritualized fighting occurs with short jumps and striking feet, beak and wings. Between fights, males commonly "face-off" lying prone a foot apart and calling aggressively. Calls during face-offs include a whining and nasal quarreling that sounds like nyah-ah-ah. Displacement sleeping and feeding as well as 'parallel running" displays occur at territory boundaries. A white shoulder spot is often evident in these situations.

Early April is usually the peak of activity and the time when most of the females arrive at the lek. Prior to then, males may display for several weeks without a female ever attending the lek. A female will typically fly to the edge of the lek, and after considerable fanfare, will slowly begin walking toward the center. When she enters a male's territory, his behavior changes greatly. Lekking is performed with high frequency and extreme posturing, particularly as to erection of pinnae and enlargement of the yellow eyecomb. The male will display in circles around the female, attempting to show all aspects of his plumage. Between displays, he will sometimes stop and pose before the female while facing her.

When the female is ready for

copulation, she squats with wings slightly spread, head raised and neck outstretched. The male then grasps the female's nape, lowers his wings on both sides of her and quickly completes copulation. The female then usually runs forward a few feet and stops to shake. Males lack any conspicuous post-copulatory displays and often begin lekking again within a few seconds.

The sights and sounds of prairie chickens lekking at dusk and dawn are enjoyed by thousands of outdoor enthusiasts in a handful of states each spring. People often go to great lengths and mount major excursions to witness the spectacle. But unlike those from other states, Kansans are fortunate in that they need not go to such extremes to experience this performance. With a little advance scouting, many Kansans need only take a short drive to a local pasture.

To spend a brisk morning watching, listening and photographing the courtship display of the greater prairie chicken is an experience that never fails to fill people with awe and delight. I encourage Kansans to take advantage of the opportunity and enjoy this unusual part of their natural heritage. It's an experience you'll long remember and probably want to repeat.

Please turn the page for details on where you can observe booming prairie chickens



Booming Grounds: Where They Are

or more information about where and when to observe greater prairie chicken courtship behavior, contact:

Konza Prairie Research Natural Area Coordinator, Division of Biology Kansas State University Manhattan, KS 66506 (913) 532-6620

El Dorado Convention and Visitors Bureau 383 East Central P.O. Box 509 El Dorado, KS 67042 (316) 321-3150

Kansas Department of Wildlife and Parks 1830 E. Merchant Box 1525 Emporia, KS 66801 (316) 342-0658

And for viewing lesser prairie chickens, contact:

USDA Forest Service Cimarron National Grassland 737 Vilynaca P.O. Box J Elkhart, KS 67950 (316) 697-4621

Kansas Department of Wildlife and Parks RR 2 Box 54A Pratt, KS 67124 (316) 672-5911

Kansas Department of Wildlife and Parks South Star Route Garden City, KS 67846 (316) 276-8886



When defending their territories, males display several postures and calls. Frequently, ritualized fighting occurs with short jumps and striking feet, beak and wings.



KANSAS' OTHER PRAIRIE CHICKEN

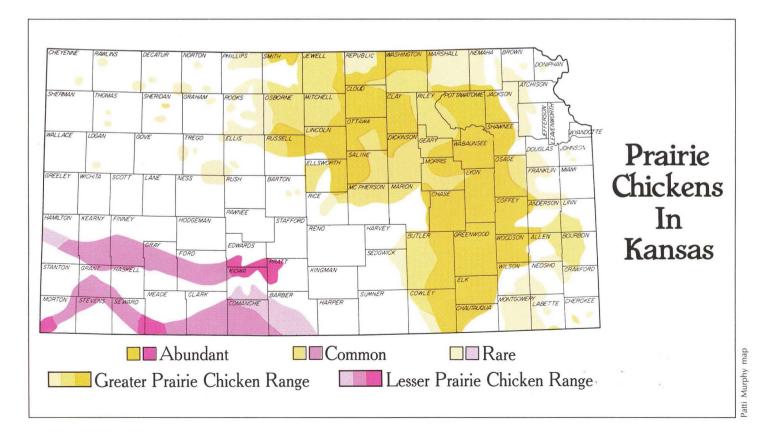
ansas has two subspecies of prairie chicken, the greater prairie chicken (Tympanuchus cupido cupido), featured in this article, and the lesser prairie chicken (T. c. pallidicinctus). In comparison, lesser prairie chickens are slightly smaller and lighter in color than the greater prairie chicken. Courtship display is similar between subspecies, with the noted exception that lesser prairie chicken males have red rather than the vellow-to-orange colored skin covering the air sacs on the neck, and the yellow combs over the eyes are more conspicuously enlarged than those of the greater prairie chicken.

The vocalization associated with foot-stomping only lasts about one-half second and sounds more like a "gobble" in lesser prairie chickens, in contrast to a two-second "booming" sound in greater prairie chickens. This abbreviated call results in more difficulty in hearing and locating lesser prairie chicken leks from distances greater than one-half mile. — Kevin Church

The lesser prairie chicken is found on the sand-sage prairies of southwest Kansas.



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Wildlife & Parks

9

The shrike doesn't hide its role as a predator.

he shrike is a forthright bird. It readily — perhaps proudly — reveals its position as a predator. The shrike doesn't mask its killer role in some trophic contortion, as do the world's herbivores and scavengers. It candidly displays the bloody reality of its death-for-life existence. Some creatures, with more guile, covertly kill by grazing or crowding other life into starvation and freezing. These more gradual, more unkind systems of life-taking go largely unrecognized by the unseeing human masses. But the shrike refuses to hide the grim truths of life in the wild.

People are the most paradoxical and hypocritical illustrations of death denial. Some are frank about their unalterable positions as consumers of other animals. Others, however, strut clothing without leather and food without meat — bogus evidence of their predatory chastity. A few condemn the hunter for his admitted pleasure in taking prey. This ignores the firm gospel that all humans take life to gain pleasure, comfort and ease of life. Luxurious homes, accommodating roadways and the world's finest foods leave wild animals to starve, freeze and choke on agriculture's and industry's poisons. The shrike poses no such deception.

No living creature, human or otherwise, can remove itself from the process of killing to survive . . . or killing for quality of life. The shrike makes no such pretense.

Ornithological texts proudly boast of 25 true shrike species. They are the only predatory songbirds. Two of those species compliment the Kansas prairies with their presence. The northern shrike, *Lanius excubitor*, is robin-sized and only occasionally seen in the state. The slightly smaller loggerhead shrike, *Lanius*

by Rob ManesWildlife Education Coordinator
Pratt



From preceding page: A loggerhead shrike presents a young snake to hungry nestlings.

ludovicianus, is more common and sometimes confused with the mockingbird. Both species are gray with white bellies and dark wings. Most striking of their marks is a distinct black mask over the eyes and above the bill. This mask is broken just above the bill on the northern shrike. In profile, these birds show oversized heads and heavy, powerful bills. Pleasant, fluid voices make them kind to the ear, though they also use raspy cries.

The shrike is no kin to hawks or owls, but equally lethal are its predatory tools. Its killer prowess has earned it such nicknames as "butcher bird" and "nine-killer." Literally translated, the northern's Latin name says "watchful butcher."

Hunting only by day, the shrike frequently kills and eats other birds nearly half its size. Other shrike menu entree's include mice, voles, lizards, snakes and insects.



The loggerhead's habit of using spiny larders to hold its dead prey is reason enough to call the shrike "impaler bird."

The shrike often strikes flying prey, such as a Harris' sparrow, from the air with a sharp blow from its heavy bill. It quickly returns to sever its floundering prey's vertebrae, using additional blows as needed. Smaller in-flight meals may be snatched skillfully with the feet, and airborne insects may be gulped whole in-flight. Lizards, grasshoppers and snakes are clutched in strong, clawed feet and shredded with a hawklike beak, which features a hard "tooth" on the end. A very hungry shrike may swallow prey (as large as a young mouse whole) and later regurgitate a pellet of indigestible hair and bones.

shrike generally avoids using its feet to subdue a mouse, using instead its deadly beak, and keeps its more frail legs and feet away from the mouse's slicing teeth. Like other prey too large for one gulp, the mouse is usually taken to a thorny roost, such as a locust tree or plum bush, where the shrike impales it on a spike for safekeeping. This habit of using spiny larders gives the shrike another of its bynames, "impaler bird." Its gory food stocks can be seen where suitable perches are near open hunting grounds and adequate hanging spikes.

The shrike's haunt may include grisly scenes of large insect prey still squirming to kick free of impending death. When the shrike is particularly hungry, it often eats its prey immediately. But some victims are left hanging for several days before being eaten. Observations indicate that these birds don't forget where they've left food, even after a week or more.

The shrike carries large prey, such as a vole or sparrow, in its bill. This testifies to the great power of its neck and wings. Starting from the ground, it may struggle with its prey to a low shrub a few feet high. Then the shrike falls into a faster flight, using the momentum gained to attain a higher perch. This may be repeated until it reaches a satisfactory impaling site.

Shrikes are known to hover skillfully, too, dropping suddenly on grasshoppers or other ground prey. Studies have revealed that these birds can



The barb of a wire fence serves as a meat locker for a loggerhead shrike. Hanging on the hook: one freshly-impaled beetle.

identify a mouse meal from more than 300 feet away. And they can spot territorial invader shrikes from more than 1.000 feet.

More resourceful than some avian predators, the shrike may resort to ground hunting. It hops among low shrubs, attempting to flush tight-sitting birds into the open. This technique also yields lizards and other meaty dividends.

As with most predators, the shrike's diet varies with the season, insects being the most common menu items. Studies have indicated, however, that more than two-thirds of its winter meals are birds and mice. Only about one-third of its meals include warm-blooded creatures during summer, when grasshoppers are favored entrees. Shrikes have also been known to dine on small fish, crayfish, snails and frogs. A shrike watcher in Florida reported seeing two small water moccasins hanging from the same shrike's impaling post.

Shrikes are adamantly territorial, driving off others of their species. Solitary except during the mating season, shrikes don't tolerate potential competitors in their habitats. The shrike's preference for open hunting grounds makes cemeteries and shel-

terbelts likely hangouts. They generally avoid densely wooded areas.

During the mating season, the male and female work together, building a nest of twigs, bowl-shaped and plushly lined with feathers or other cushioning material.

The southern shrike's habit of using cotton to line its nest earned it the colloquial title "cotton picker." Consistent with its other habitat preferences, the shrike's nesting site is often in a thorny tree. The shrike nest generally holds five or six nearwhite eggs with gray-brown spots. The male doesn't incubate the eggs, but feeds its mate until the chicks hatch after about 16 days. Both parents feed the young birds during their 20-day fledgling period. Recorded Kansas loggerhead nesting dates range from early April through late June, with the peak laying period in late April. Some observers have reported double-nesting shrikes, but more reliable reports indicate they only re-nest if the first clutch is destroyed. Shrikes, of course, are fearless defenders of their nests.

The loggerhead nests as far south as the southern plains, but the northern species nests only in Canada. The loggerhead fall migration takes it as far south as Florida and Mexico. A few loggerheads winter in Kansas. Northern shrikes seldom venture much farther south than Arkansas, and this species is also found in Scan-

dinavia, Russia, Africa, India, China, Japan and the British Isles during winter. Loggerheads are found only in North America and Mexico.

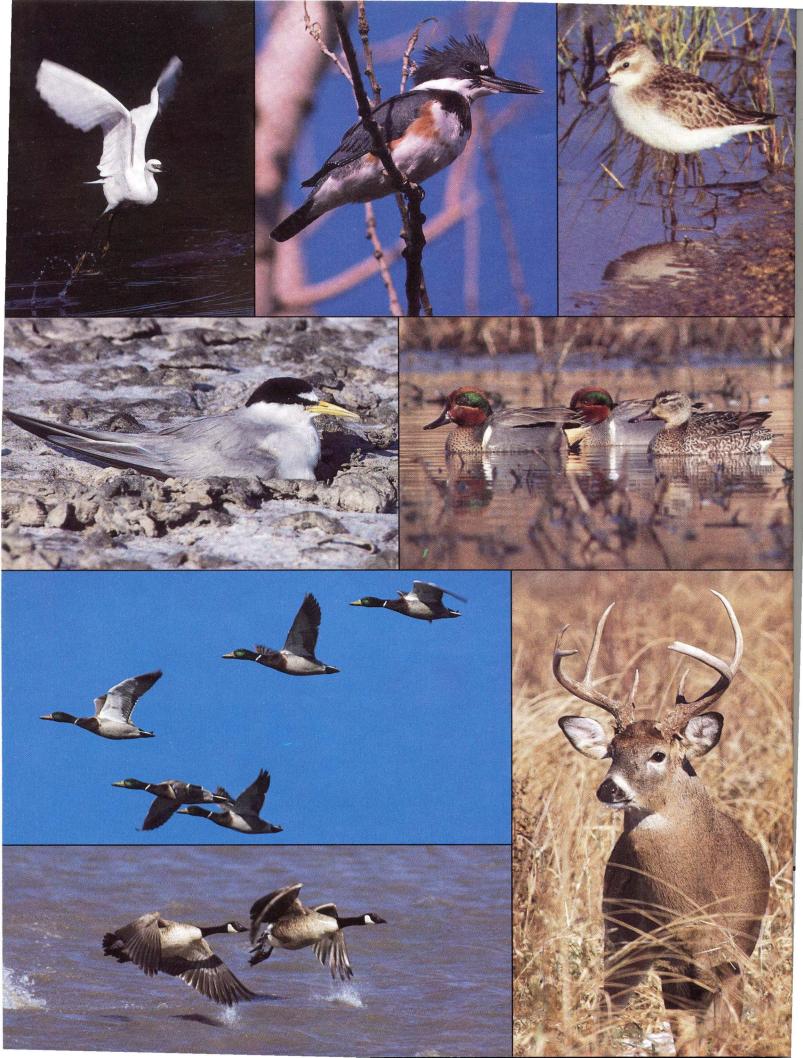
Wherever the shrike is found, it provides, for those who understand, a ruthlessly accurate portrayal of life's struggle — death for the slow, the

feeble, the unwary — life for the keen and the strong. The watchful butcher knows no hypocrisy in this regard. Its gory larders aren't meant to awe or appall anyone. They're only the shrike's stark reminder of the omnipresent death-for-life trade-off, which embraces us all.



Nestlings: they fly the birth site about 20 days after hatching. Below: fledging and parent.





CHEYENNE BOTTOMS

I Remember

The Bottoms, a 20,000-acre Kansas wetland, is the source of precious memories for a former towheaded youngster.

by Rob Manes Wildlife Education Coordinator Pratt

Photos by Mike Blair, Gene Brehm & Ron Spomer

remember Cheyenne Bottoms . . . I remember shivering nervously in the chilly fog that lay on the water and cattails. A soft northwest breeze barely stirred the mist so that it looked like a friendly mingling of gray and white ghosts. I imagined the duck blind, built of brown cattails, was somehow helping to block the damp cold from my bare face and neck. It was my second waterfowl hunt at the great, sprawling marsh. Southward-migrating ducks appeared as countless squadrons of boldly colored fighter jets — blue-winged teal, mallards, wood ducks and many I couldn't name. I took four teal that day — a full blessing. Then I sat with my companions and watched the heart-wrenching wild drama in full motion and color as it played on a whirling stage around us.

remember Cheyenne Bottoms . . . I remember a spring Sunday afternoon drive through the great wetland. My wife and I watched in silent awe as the delicate and cheerful courtship of feathered creatures unfolded. Ruddy ducks bobbed comically, long-legged shorebirds trotted and dodged together, and kestrels touched intimately in midair.

"Are they in love?" my wife half-wondered out loud. "Maybe," I muttered without thinking. Doubtless, we were in love with this wild area in central Kansas' heavily farmed flatlands.

remember Cheyenne Bottoms . . . I remember myself a towheaded youngster, chasing crayfish and catching bullheads with my father and granddad. I remember the rich, warm marsh mud between my boyhood toes. I smelled of nature and of life.

remember Cheyenne Bottoms . . . I remember someone saying that migrating whooping cranes are often sustained by the Bottoms during their north-south journeys. Other vanishing wild animals also cling to the Bottoms for survival — bald eagles and least terns, to name only two.

remember Cheyenne Bottoms . . . I remember a crowd of gunless hunters, bent on

photobagging a wintering bald eagle. The eagle was bent only on ripping loose pieces of its mallard supper. I remember a peregrine falcon, too. It peered knowingly down into my duck blind as it shot across a dim-lit fall sky.

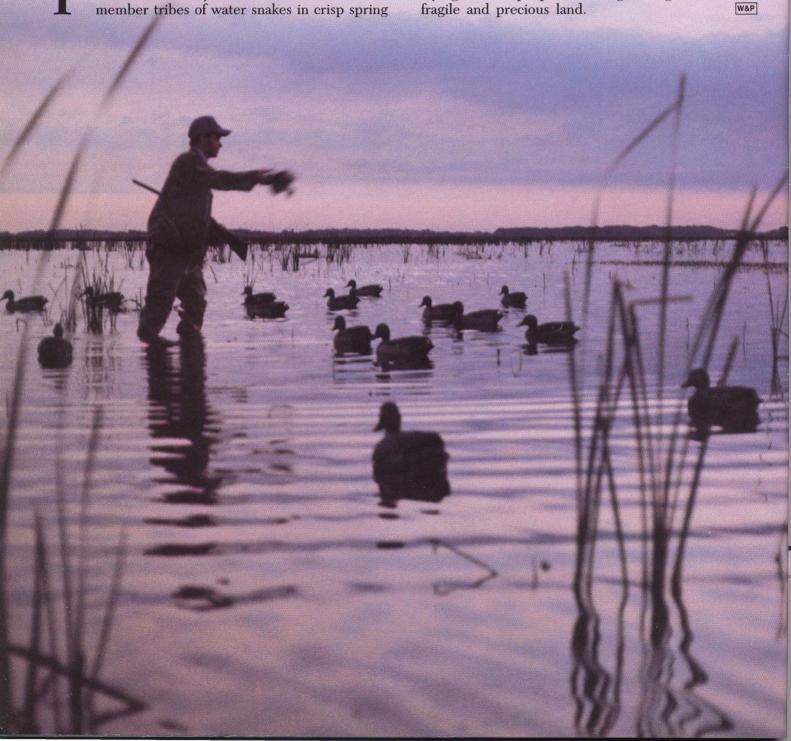
remember Cheyenne Bottoms . . . I remember sunsets, blood red and gold gold, doubly powered by the water's mirrorlike reflection. The sunsets are often so vast in the great Cheyenne Bottoms sky that they appear to wrap around the appreciator.

I remember Cheyenne Bottoms . . . I remember tribes of water snakes in crisp spring

air. Each snake stretched on the dark mud bank trying to warm its cold, sluggish body. I remember turtle parties convened on floating logs for the purpose of sunbathing and solving turtle problems.

remember Cheyenne Bottoms . . . I remember those who live near the marsh — some cursing it, more loving it, few understanding it.

remember Cheyenne Bottoms and wanting my grandchildren to remember it, too, and their grandchildren as well. I remember the Bottoms trying to tell people of a frightening future on a fragile and precious land.



the

center section

Edited by Mike Miller

LETTERS

WHOSE DEER?

Editor:

I have a question about deer hunting. This year I managed to get a shot at an eight-point buck. The deer jumped up as I shot, and my bullet hit the deer in the front leg. I was able to follow the blood trail for about a quarter of a mile. I found that another hunter had shot and killed my deer. I assumed the deer belonged to the other hunter, but a friend said that it was legally mine. Whose deer was it legally?

Cliff Crowder Kansas City

Dear Mr. Crowder:

We have no laws or regulations dealing with your specific situation. There are, however, ethical and traditional ideas on that subject. Some hunters consider the animal to belong to the one who hits it first, especially if the first shot would prove to be fatal. If the first shot is not determined to be fatal, the deer should belong to the second shooter.

Although each situation is unique, I think you did the right thing. If the second hunter had no knowledge that you had hit the deer, or he assumed the deer would escape, he acted in good faith. It is possible that you could have lost the deer had the blood trail not continued. Miller

SUMMER AID INFO

Editor:

I am currently a student at Colby Community College, and I am majoring in wildlife biology. I have been told that the

Department of Wildlife & Parks hires students during the summer to work with biologists. Could you please give me more information about this?

> Kevin Shriner Colby

Dear Mr. Shriner:

Department biologists do hire summer aides each summer. The aides help biologists with field work while getting valuable hands-on experience. Applications are available from the personnel section at the Pratt office. The application, along with a resume and copy of your transcript, should be mailed in and will be kept on file. It will be available to all Department personnel hiring temporary employees. Miller

CHICKEN CONVERT

Editor:

I was born and raised in Burns where my parents still live. Each year, I return home to hunt. This year, I brought a friend home with me, so he could experience both the excitement and frustration of prairie chicken hunting. Before our trip, I went back through my previous issues of KAN-SAS WILDLIFE & PARKS magazine looking for articles about prairie chickens for my friend.

In the November/December 1987 issue, I read the letter from Kurt Keller expressing his opinion regarding lifetime hunting licenses for previous long-time Kansas residents. I lived in Kansas for 21 years. When I left, there was no such thing as a lifetime hunting license. If there was, I

would have bought one. I have been gone for 17 years now and continue to come back and hunt each fall. Contrary to what a responder to Keller's letter suggested, I did not leave by choice. I left Kansas because the only job I could get (related to my college degree) was in Illinois. Since then I've tried to get back on several occasions but can't find a suitable job.

Regardless, my friend and I had a successful hunt, and my friend is now hooked on prairie chickens. Our total bag for the three-day hunt consisted of four chickens, six pheasants and 11 quail. That's not a large amount of game, but it is impossible to place a dollar value on our hunting experience.

I enjoy receiving each issue of KAN-SAS WILDLIFE & PARKS magazine and have not missed one since 1967. Keep up the good work.

Charles Clark Towanda, Ill.

STRANGE SIGNS

Editor:

While on a pheasant hunting trip northwest of Salina, my hunting party came across several signs that read "DUE TO THE KANSAS WILDLIFE & PARKS I WILL NOT ALLOW DEER HUNTING ON MY LAND." I was raised in the Pratt area and was associated with the Department of Wildlife & Parks throughout my college attendance and on into my present professional career. So you can imagine the feeling I had in my stomach as I viewed these signs.

Curiosity took over and I interrupted our pheasant hunt to find the person responsible for the signs. The search was successful, as we followed the signs to a small farmstead. As I approached the farmhouse, a man came out and said "I guess you want to hunt?" I think I caught him off guard when I replied "Nope."

I introduced myself and held out my hand anticipating a handshake. I anticipated right, as the gentleman extended his hand and introduced himself. I asked about the signs and he said that it wasn't much of a story, but that he'd make it quick. I assured him that I was a good listener. It seems that he didn't receive a firearms deer permit in the first drawing. He was then advised that there were 175 permits left-over and if he reapplied, he would receive one. Again he applied and for the second time, he didn't receive a permit. He said "If I can't hunt deer on my land, why should anyone else?"

As I walked back to the vehicle, the farmer asked if I would be interested in doing some pheasant hunting. Our party spent the rest of that day riding around with the man in his truck and hunting some of the best pheasant and quail areas I've seen in years. He even treated the entire hunting party to a meal at a local cafe. I offered the man payment for his services but he refused saying only that "It pays to be a good listener."

I hope this letter is printed in the magazine to show the farmer my sincerity and possibly answer some of his questions about deer permits.

> Billie Thompson Shawnee

Dear Mr. Thompson:

First let me say that I admire you for seeking out the person who posted the signs. I guess it proves that every cloud has a silver lining.

Your farmer friend was a victim of confusion. Because of our deer management program, and the fact that we have offered an increasing number of deer permits, our permit application process has become more complicated. But it has also accommodated the landowner more than ever. Not only do they pay half of the general resident fee and receive 50 percent of the available permits, but they're also guaranteed an opportunity to hunt on their own land. Many landowners didn't understand this new category and experienced the same frustration as your friend. But if he had put his last choice as a Hunt-on-vour-ownproperty permit, he would have

been successful in the initial drawing.

The firearms permit process is designed to allow the hunter the most chances possible. As Kansas hunters become more familiar with the system, our hope is that applicants such as your landowner friend will not miss out on another deer season. Miller

LIKES AND DISLIKES

Editor:

I am pleased to see that the 1988 deer season opened on a Wednesday. It's time that the landowner got the chance to hunt before the crowds arrive.

Also, why is it that Kansas Wildlife and Parks still refuses to acknowledge the fact that the drought of this past summer took a heavy toll on our pheasants? Anyone who is in the fields as much as I am knows that there are at least 50 percent fewer birds in this part of the state than there were last year. Your excuse of windy and warm weather as the reason for low hunter success on opening weekend appears to be poor. It gives me the idea that by not telling people there are fewer birds, you're only interested in selling hunting licenses, especially to nonresident hunters.

Randy Funk Otis

Dear Mr. Funk:

Our upland bird hunting forecasts are not made casually. Biologists review considerable survey data, and compare it to more than 20 years worth of survey records. In the past, this data has proved to be fairly accurate. If you had called in for a hunting forecast in 1984 or 1985, we would have told you that the season looked bleak for upland birds. In fact, many nonresidents thanked us for being truthful and saving them an expensive trip to the state when the hunting would not have been good.

This year, we again relied on our survey data. Our April and July surveys showed good numbers of pheasants and quail. In some areas, there was marked increase in both species. And our early brood counts also looked promising. Once young pheasants hatch and survive the first few weeks, they can usually survive difficult weather conditions through July and August.

I can assure you that we sincerely believed our early hunting predictions. We would like nonresidents to return and hunt here again, so being dishonest about the hunting would not be beneficial. Miller

POACHING

Editor:

I'd like to request an issue of your excellent magazine that addressed poaching deer and other wildlife. I know what I would read would increase my resentment toward poaching, and I may become sicker at heart, but many people don't seem to know the extent of poaching. Nor do they know of Operation Game Thief.

I'd be happy to help in any way I can. Let's educate our people.

> Bill Bailey Louisburg

Dear Mr. Bailey:

We've run several articles in past issues about wildlife law enforcement, and articles on the "The Law" page of the Center Section regularly document our officers' diligent work. We will most assuredly continue to educate the public about poaching and the need for cooperation.

Operation Game Thief is one way the public can help. If you see or know about wildlife law violations, call 1-800-228-4263. The number will put you in contact with law enforcement personnel or a local dispatcher, who can immediately radio a conservation officer. A simple phone call can sometimes put officers at the scene of a crime in time to catch the culprits. You may remain anonymous.

Each conservation officer has a large territory to cover. If the public helps by calling Operation Game Thief, officers can be much more effective in stopping poaching. Miller

THE LAW

WANTON WASTE

How much does it cost to shoot geese with a .22 caliber rifle, out of season, with no state or federal waterfowl stamps or permission from the landowner and then leave the geese lay? Ellsworth County District Magistrate Judge Dale Urbanek ruled that it would cost a Holyrood man \$904.

In late August, a sportsman friend of an Ellsworth County farmer encouraged the farmer to report the senseless goose shootings. Even though the complaint was a week old, conservation officer Val Haworth started an investigation.

Haworth searched the scene of the crime and found spent .22 shell casings, empty shell boxes and what the coyotes had left of three dead geese. The evidence was found along a county road near a farm pond where a small flock of Canada geese had been staying.

The Holyrood man who was seen leaving the area after the shootings was charged with six counts of state and federal waterfowl violations. The man denied any knowledge of the poaching when Haworth questioned him. Anticipating that his rifle would be seized as evidence, he hid the gun at a friend's house. But Haworth verified the man's ownership of the gun, the gun's serial number and the date of sale at the store where he bought it.

The man eventually produced the rifle and pleaded guilty to all charges. In addition to levying the fines, Judge Urbanek placed the man on probation for two years and revoked his hunting privileges for one year. A 180-day jail sentence was suspended pending completion of the probation. Val Haworth, conservation officer

CAUGHT IN THE ACT

On Nov. 24, Paola conservation officer David Ellis received a call from the Miami County sheriff's office about a deer being poached. Officer Ellis contacted the sportsman who had witnessed the poaching, and the man led Ellis to the area. While a Miami County sheriff's officer watched a suspected residence, Ellis began following a blood trail leading away from the shooting scene.

As he followed the blood, he heard movement ahead of him. Suddenly two men began running from Ellis, who gave chase and caught one of the suspects. Ellis had caught the men while they field dressed their poached deer. Two does had been shot, one with a 12-gauge shotgun and one with an 8mm rifle.

Ellis and conservation officer Johnny Ray escorted the two suspects to the sheriff's office and charged them with shooting deer without a permit, shooting deer out of season and illegal possession of deer. One of the suspects was wanted in another county on other charges. *Miller*

UNDERCOVER FEDS

Approximately 200 people will be charged for violations of waterfowl hunting regulations as a result of a three-year federal undercover probe. Federal agents investigated the violations in commercial waterfowl hunting operations in Texas.

Twenty-two people — all hunting guides or owners of hunting operations — were arrested in the sting by more than 100 Fish and Wildlife Service agents. Twenty-one of the suspects were arrested in Texas, one in Iowa. Indictments were issued to 52 other people, and 135 people in Alabama, Georgia, Maryland, Michigan, Oklahoma and Texas were issued notices for violations that occurred in Texas. The charges included felony and misdemeanor violations of the Migratory Bird Treaty Act and the Lacey Act.

The investigation, part of a continuing crackdown on waterfowl poaching, began during the 1985-1986 waterfowl season and concluded last fall. Fish and Wildlife Service undercover agents booked hunts with suspected guides and owners of commercial hunting operations. The operations

were charging from \$65 to \$500 per day for hunting on leased marshes and rice fields, as well as public lands along the Texas coast. The investigation focused on guides and owners who were killing waterfowl illegally and aiding and openly encouraging paying clients to do the same. Violations by hunters paying to use the areas also were recorded.

Forty-one commercial hunting businesses were investigated, and agents documented more than 1,300 violations. Violations occurred on 92 percent of the hunts observed by agents. Charges brought included shooting more than the legal limit; rallying, or stirring up waterfowl with a motorboat or airboat to drive them to hunters; use of lead shot in steel shot zones; wanton waste; use of recorded, amplified calls; taking birds during closed seasons; taking waterfowl over bait; shooting before and after legal shooting hours; sale of migratory birds; and tagging and record-keeping violations, often including tagging birds as belonging to someone who had not hunted that day, or falsifying dates when the birds were shot.

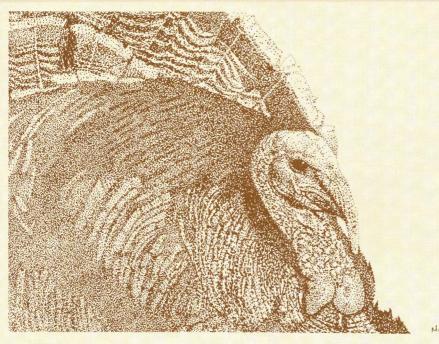
The violations involved snow and blue geese as well as large numbers of pintails, teal, redheads and many other species of ducks. In several instances, agents said raptors, herons, ibises and other nongame migratory birds were illegally killed or sold to undercover agents. U.S. Fish and Wildlife Service

A FINE MESS

A Longton man got himself into a fine mess, or more accurately, a mess of fines. He was charged with 18 counts of selling deer, 18 counts of possessing deer without a permit, 18 counts of possessing deer without a tag and 18 counts of possessing deer during closed season. The charges were a result of a year-long undercover operation by the Kansas Department of Wildlife and Parks.

In Elk County District Court, Judge Darlene Bradley took a dim view of the man's activities and fined him \$250 for each count. Lets see, that's \$250 for 72 counts. That comes to \$18,000. It just goes to show that crime really doesn't pay. The case is pending an appeal. Miller

HUNTING



TURKEY TIPS

More Kansans are discovering spring turkey hunting every year. As the big birds have increased their numbers and expanded their range, more turkey permits have become available. In 1988, nearly 10,000 hunters received permits. And this year, more permits than ever before will be available. In addition to Unit 5, Units 1 and 3 will have an unlimited number of permits available. Also, the season will last a week longer, beginning on April 19 and closing on May 7.

To the first-time hunter, turkey hunting can seem easy or extremely difficult. Here are some tips that may help you this spring:

* A good first step in turkey hunting is to find the turkeys' roosting area. That way, you can sneak close before sunrise under the cover of darkness.

*Get within 100 yards of a roosting tom. Toms are accustomed to calling the hens to them. Occasionally a tom will come to a call from a long distance, but it's always better to get as close as possible.

*Most hunters will wear full camouflage, including headnet or face paint and gloves. Turkeys have acute eyesight and will spot movement immediately. A hunter that

blends in with the background will be much less conspicuous.

*If you plan to call your bird in, possibly even using a hen decoy, you don't need a large shot load. In fact, only shot sizes 2 through 9 are legal. A good combination is to use a smaller load such as No. 6s for the first shot and a larger load for a second shot. Inside of 25 yards, 6s to the head and neck area are deadly. And the large number of pellets will ensure a dense pattern. Back this load up with No. 2s or 4s in case the bird does not drop and a running or flying shot might be needed. It's also important to pattern your shotgun with several different loads before the season. You'll learn where your gun shoots and how different loads perform.

*A mouth diaphragm call is handy because no hand movement is required. But the most important aspect in calling is finding and using a call you're comfortable with and sounds good.

*When setting up to call a bird, find a good backdrop of cover to lean against, such as a large tree trunk or cedar. Not only will this help you blend in, it's also safe. Your back will be covered if an unseen hunter approaches your call from behind. Miller

LOOKING FOR SHEDS

Deer hunters, especially bowhunters, often talk about finding sheds or drops. And they get as excited about these sheds or drops as they do when they talk about actual deer. What are drops or sheds? They're antlers shed or dropped by bucks each year in late January, February or early March.

Many hunters will look for sheds simply because they just like deer antlers. But finding a shed is much more significant. It can tell you where a big buck calls home, that he survived the hunting season and where to begin your scouting for next season. Sheds also make nice keepsakes and conversation pieces. Once in a while, a hunter will find an enormous antler from a buck that's never been seen. There's excitement in imagining what the buck actually looks like and deciding how to find him next year.

A friend of mine who walks many miles each March in search of sheds finds numerous antlers each year. And he's found quite a few matched sets. In 1987, he found a huge set of antlers in an area he later scouted. He saw the big buck several times through the summer, but couldn't find him during the early part of the bow season. Then on Nov. 27, he finally got a shot and made it good. The big buck's antlers were almost identical to the sheds my friend found the spring before.

Looking for sheds is a good way to get outdoors on a warm late-winter day and a good way to get more familiar with your hunting area. You might also find a new area or big buck to hunt next fall. *Miller*

TURKEY RECORDS

During the 1988 spring turkey season, the Kansas Department of Wildlife and Parks offered certificates for tom turkeys that scored at or above a minimum score. The scoring procedure is the same as that used by the National Wild Turkey Federation.

To score your bird, you must first have it weighed on certified scales. The weight, to the nearest eighth of a pound, is added to twice the length of the beard. Then measure each spur, add the lengths together, multiply by 10 and add that to the previous sum. The minimum score for a trophy turkey certificate is 60. To score 60, a tom would have to weigh 20 pounds, have a 10-inch beard and have 1-inch spurs. There is also a category for nontypical gobblers. A nontypical gobbler is one that has more than one beard. The scoring is similar, but the length of each beard is added together before multiplying by two. Weight +(2 x beard length) + (Right spur length Left spur length x 10) = SCORE.

Kansas' top typical bird bagged in 1988 scored 79 2/8 points. Wayne E. Brown of Wichita took the big tom in Wilson County. Brown's gobbler weighed 27 pounds, had a 10 4/8-inch beard and spurs 1 1/2 and 1 5/8 inches long. The number two typical bird was taken in Comanche County by Wichitan Don Dome. Dome's tom weighed 23 7/8 pounds, had an 11-inch beard and spurs of 1 3/8 and 1 4/8 inches for a score of 74 5/8.

The No. 1 nontypical gobbler was taken

by Ronald D. Pfeiffer of Leavenworth. The multi-bearded tom was taken in Leavenworth County on April 15. Pfeiffer's bird had three beards measuring 10 4/8, 9 1/8 and 7 3/8 inches. It weighed 26 4/8 pounds and had spurs of 1 3/8 and 1 2/8 inches long. The total nontypical score was 106 6/8. The No. 2 nontypical tom was taken in Clark County by Dale Losey of Oakley. Losey's bird weighed 24 4/8 pounds, had three beards measuring 9 1/8, 8 7/8 and 6 3/8 inches, and carried spurs of 1 1/8 and 1 3/8 inches for a score of 98 2/8.

By comparison, in the National Wild Turkey Federation's 1988 turkey records, the top-scoring Eastern turkey, taken in Ohio, was listed at 85 4/8. The No. 1 Rio Grande scored 78 4/8 and was taken in Texas. Contact your local Department of Wildlife and Parks office for more information on trophy turkey awards. See chart below for more Kansas turkey records. *Miller*

RECORD CORRECTIONS

In our November/December 1988 issue, we published the Kansas Top 20 lists for deer. The lists included the Top 20 Pope and Young and Boone and Crockett scoring bucks in all categories. But we inadvertently left a buck out of the typical mule deer archery category. The No. 18 buck was taken by Stan Christiansen of Hudson. The 1985 buck was taken in Reno County and had a score of 167.

Joe Schroeder of Haysville was incorrectly listed twice in the recent Kansas deer record listing. Schroeder's 1979 typical mulie buck, taken with a bow in Norton County, measured 165 6/8 points. KANSAS WILDLIFE & PARKS regrets the errors. Koenig

KANSAS TURKEY RECORDS

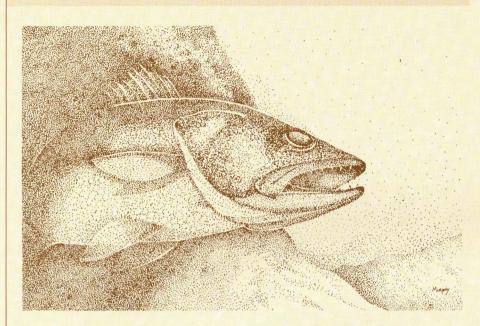
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	weight	beard	spurs	county	date	score
1. Wayne E. Brown, Wichita	27 lbs.	10 4/8"	1 1/2" & 1 5/8"	Wilson	1988	79 218
2. Don Dome, Wichita	23 718	- 11	1 3/8 & 1 4/8	Comanche	1988	74 518
3. Juan Munz, St. John	21 7/8	9 518	1 3/8 & 1 3/8	Stafford	1988	68 518
4. Stephen Brown, Beloit	25 518	9	1 1/8 & 1 2/8	Mitchell	1988	68 518
5. Barry McManaman,	21	10	1 3/8 & 1 3/8	Barber	1988	68 4/8
Great Bend						
6. Terry Cordes, Meade	23 318	10 7/8	1 1/8 & 1 1/8	Meade	1988	67 518
7. Walter Mathews,	23 518	10 5/8	1 1/8 & 1 1/8	Stafford	1988	67 318
Manhattan						
8. Curtis Penner, Lehigh	23 1/8	10 2/8	1 1/8 & 1 1/8	Marion	1988	66 1/8
9. Rex Heater, Coffeyville	21 5/8	9 4/8	1 2/8 & 1 2/8	Chautauqua	1988	65 518
10. Lonnie Matteson, Ellis	25 0/8	9 0/8	1 1/8 & 1 1/8	Trego	1988	65 418

Nontypical

Hontypical						
	weight	beards (inches)	spurs (inches)	county	date	score
1. Ronald D. Pfeiffer Leavenworth	26 4/8 lbs.	10 4/8, 9 1/8, 7 3/8	1 3/8, 1 2/8	Leavenworth	1988	106 6/8
2. Dale Losey, Oakely	24 418	9 118, 8 318, 6 318	1 1/8, 1 3/8	Clark	1988	98 218
3. Tom Taggart, Bunker Hill	24 0/8	12 0/8, 8 1/8	1 2/8, 1 1/2	Woodson	1988	92 0/8
4. Marla Bozarth, Norton	20 4/8	14 7/8 (2 beard total)	1, 1	Norton	1988	70 218
5. Brent Dean, Madison	19 0/8	6 018, 8 018	1, 1	Greenwood	1988	67 0/8

FISHING



WALLEYE SPAWN

If you're a hardy individual who loves to catch walleye, late March is a good time to be out on the lake. When reservoir water temperatures reach 50 degrees, walleye will begin moving into shallow water along rocky shorelines to spawn. In many reservoirs, this is usually along the dam.

Walleye are not extremely aggressive during the spawn, but they are concentrated in the shallow water. Cold March winds will weed out all but the most dedicated walleye fishermen, but those fishermen may be rewarded with big fish. It's not uncommon to catch fish up to 8 pounds.

Walleye have large light-sensitive eyes, so overcast days are usually best. And many fishermen have found that night fishing is even more productive. At night, the walleye may be right up on the bank. Night fishermen will cast shallow-running crankbaits along the rocky banks. During the day, deeper-running, slow-moving crankbaits or jigs are best. Start out casting dark-colored lures on overcast days.

Late-March walleye fishing may not be for every fisherman, but it is a great way to get rid of cabin fever. And it may even put a few walleye in the freezer before the really good walleye fishing starts later in the spring. *Miller*

BOAT CHECK

It's the time of year when fishermen are impatient to get back on the water. After the long cold winter, they'll usually jump at the chance to put their boat on the lake and get in some early spring fishing. But there are some things on a boat that should be checked before it's backed down the boat ramp.

Many fishermen will drain the lower-unit on their outboard motor before winter. Water will often seep into the lower unit, and a hard freeze may cause problems. If you drained yours, remember to add new grease. If you didn't drain your lower unit, it's still a good idea to replace the old grease. Check the prop for nicks and chips. Aluminum props can be filed, or if damaged badly, should be sent to a professional for repair. Check the carburetor hoses for cracks and leaks. Replace any hoses that look weathered. This could prevent a dangerous fire or explosion. Grease all zerks on the motor. Check your gas tanks for condensation that can build up through the winter. Also clean out rust and loose particles. Inspect the gas line from the tank to the motor.

Check your steering mechanism. It may lock up while sitting idle through the winter. Make sure it works smoothly before you back the boat off the trailer. Be sure your horn works or have a sound-making device on board. Inspect your drain plug. Be sure all batteries are fully charged. Inspect wires and wire connectors. A minor short could ruin your day at the lake. Make sure the trolling motor works and that the prop is on securely.

Check the trailer lights and wiring. Make sure the wheel bearings are greased and in good condition. Inspect the boat hull for damage, loose rivets or potential leaks. And make sure your life jackets and throwable device are aboard and in good condition.

Make a checklist and review it several days before your trip. If you plan on driving some distance, it might be a good idea to put your boat on a nearby lake first and make a trial run. It's frustrating to drive many miles only to find your boat won't run properly — not only for you, but also for the fishermen waiting behind you at the boat ramp. *Miller*

AVERAGE BOATER

The average American boater is a 42-year-old male with two children and an income of less than \$30,000 a year. He works in a blue collar or service-related occupation. The average boater owns a 14-to 16-foot boat with a 50-horsepower (or less) outboard motor. The average boat and trailer costs less than \$7,687. Seventy-five percent of all boaters use their boats to fish. In 1987, boaters spent \$16.5 million on boat-related items. National Marine Manufacturers Association

BASS STUDIES

In an effort to improve bass fishing for Kansas anglers, biologists are studying management techniques at El Dorado and Clinton reservoirs. The long-term investigation involves the stocking of 20,000 to

30,000 6- to 8-inch largemouth bass each year for three years. Biologists have found that small bass, whether stocked or naturally produced, have a rough time of surviving their first year. Through the investigation, biologists hope to learn if stocking the larger fish improves survival and effectively bolsters the reservoirs' bass population.

The short bass were stocked in the fall of 1987 at El Dorado and in the spring at Clinton. All stocked fish were marked by clipping the right pelvic fins. The fins will eventually grow back, but with wavy fin rays that are noticeable for years.

Objectives of the investigation are to evaluate the effectiveness of spring and fall stockings and effects of the stocked bass size, stocking location and existing bass population structure. Additionally, a postcard questionnaire will survey angler behavior, desires and beliefs.

Biologists will sample the bass population to assess size, length, age, recruitment, growth and mortality of both stocked and native largemouths. An important study component involves economic evaluation of bass stocking relative to angler benefits. Biologists are checking sampled bass for hook wounds to determine the proportion of stocked and native bass that were caught and released at least once. Anglers are also encouraged to keep track of the number of fin-clipped bass they catch from Clinton and El Dorado during the next four years.

Electroshocking crews sampled both reservoirs last spring and found increased numbers of young bass in both reservoirs. Stocked bass increased the number of bass less than 8 inches long by 39 percent at El Dorado and 89 percent at Clinton. The bass stocked at Clinton have the potential to create a year-class where essentially none had existed. Through these investigations, biologists hope to stock fish more effectively and improve the bass fishing in Kansas reservoirs. *Miller*

NEW LENGTH LIMITS

Fishermen are reminded that a new 18-inch minimum length for largemouth bass is in effect for Hillsdale, Clinton and El Dorado reservoirs. The length limit went

into effect Jan. 1, 1989. All largemouth bass less than 18 inches long must be returned to the water immediately at these reservoirs. The limit does not apply to smallmouth bass at Clinton and El Dorado reservoirs, where there is still a 15-inch minimum length limit on brown bass (Hillsdale does not have smallmouths). Miller

SPAWN MONTH

April is the month to watch for spawning runs, as two of the most popular fish in Kansas, the white bass and crappie, will usually start spawning. The actual spawning run is a factor of several different environmental factors including water temperature and photoperiod.

Water temperature is a gauge that's easy for fishermen to watch and is vital to the start of the spawning run. When the water temperature warms to 55-60 degrees, the white bass will begin to congregate near the upper ends of reservoirs. As the water continues to warm, the fish, usually the males first, will begin to move up tributaries. Other factors, such as water clarity and the amount of water flowing into the lake, will also influence the start of the spawning run.

White bass fishing can be fantastic when the fish are in the river. They will usually hold in the deeper pools, and if conditions are right, fishermen may catch several fish from a single pool. Two-pound female whites are not uncommon in many reservoirs, and they'll test any ultralight tackle. Light line and small jigs are recommended. And in many Kansas streams, a pair of hip waders will allow fishermen to walk upstream and search for fish-holding pools.

As the water temperature continues to warm, (63-65 degrees), the crappie will begin moving into the shallows to spawn. This usually starts in the smaller lakes and ponds, as they warm quicker. Crappie will also swim up streams, but many fish in the lower part of lakes will simply seek out shallow, brush-filled water over a rocky bottom. See the article on Page 40 of this issue for fishing techniques that work on spawning crappie.

Crappie and white bass are great panfish, both for fishing sport and on the dinner table. And it doesn't require expensive tackle or high-tech boats to catch them. They spawn in shallow water, easily reached from the bank. Keep track of the water conditions at your favorite reservoir and get in on the spawning run. *Miller*

SMALL FOR SPRING

Early spring fishing is either boom or bust. If weather conditions are right and the water has received enough warm sun, the fishing is fantastic. But if the normal parade of spring storms and temperature fluctuations have preceded your fishing trip, the fish may be finicky.

A good bit of advice to follow during early spring fishing trips is to think small when selecting lures and baits. This may not only be more alluring to finicky fish, but it will also let you catch a wider variety of fish. A large jig or spinnerbait will usually catch only larger bass. But a small jig or spinner will often catch big bass, crappie and bluegill. The panfish species may be more active when water temperatures are cool.

When fishing small baits in early spring, work them slowly. The cool water temperatures tend to make fish sluggish and fast-moving baits may not entice a strike. Even a lure that is simply suspended below a bobber may get a crappie or bluegill to strike. For bass, try a jigging motion, letting the lure fall slowly. Watch the line for the telltale movement of a strike. Fish will usually hit lightly in the spring and almost always as the lure falls.

One of the more popular early-season lures is a spinner jig. This jig, often called a horsehead jig, has a small spinner attached to the head and a rubber or marabou body. Tie on an eighth-ounce model if the wind is calm and go to a heavier jig if the wind is blowing. The more popular colors are yellow, white and chartreuse, but experiment with color combinations until you find one that works.

Fishing jigs on light tackle in early spring is great fun. You never know what you've got on the end of your line until it's in the boat. And you'll be surprised at how bigger bass will attack your small offering.

Miller

ISSUES

FIRE POLICY

The Departments of Interior and Agriculture have released an interagency report examining the federal fire management policies nationwide. The report is the first step in a thorough process that will include Congressional and public input and will culminate in a new federal fire policy before next fire season.

The severity of last summer's forest fires prompted the two agencies to team experts from major federal land management agencies and investigate potential shortcomings in federal fire management policies. Recommendations reported by the team apply to federal fire policies on all public lands but have special emphasis on the Greater Yellowstone Area. Yellowstone, where 249 separate wildfires drew daily attention from national press, has been the focal point for public concern and agency criticism.

Conservationists are concerned that all this hoopla is wrongfully giving prescribed burning and federal policies a bad rap. Fires in wilderness areas are natural. They are the most important means by which forests rejuvenate themselves to begin a new cycle of plant succession. Fires also can benefit wildlife. Mosaic patterns of firecreated openings stimulate new vegetation growth relished by big game and other wildlife.

Most problems associated with forest fires this summer stemmed from past agency policies that emphasized immediate fire suppression. Over the years, these policies led to an accumulation of dead wood and debris that became a tinderbox during this summer's drought. Had past natural fires been allowed to burn when practical, some of this fuel build-up would not have occurred, along with the catastrophic fires that followed.

The recent report recognizes that the objectives of current fire policies, which prescribe how some lightning-caused fires should be allowed to burn, are sound and

should be continued. However, the report was critical of inappropriate use of natural fire conditions and recommended several criteria for redefining and strengthening federal fire management policies. Wildlife Management Institute

WETLAND REPORT

A new Interior Department report entitled "The Impact of Federal Programs on Wetlands" has revealed a number of federal programs and policies that encourage wetland destruction. The report, which was requested by Congress in the 1986 Emergency Wetlands Resources Act, covers federal impacts on inland wetlands in the Lower Mississippi Valley and Prairie Pothole region.

Wetlands are disappearing at an alarming rate across the United States. In the Mississippi Valley, nearly 19 million acres of bottomland forests have been cut and drained, leaving less than 5.2 million acres of these valuable wetlands. And only about seven million acres remain of the original 20 million acres of U.S. prairie wetlands.

In both the prairies and Mississippi Valley, the report says, agriculture accounts for almost all wetland conversions. Federal agriculture programs have increased the profitability of draining wetlands. Agriculture production also has been the chief economic justification of continuing large federal irrigation and drainage projects.

The report notes that several recent laws—the Coastal Barrier Resources Act of 1982, Food Security Act of 1985, Tax Reform Act of 1986 and Water Resources Act of 1986—have the potential to reduce many of the economic and environmental incentives in federal programs that drain wetlands. The report also calls for greater consultation and cooperation between the U.S. Fish and Wildlife Service, other federal agencies, states and private conservation organizations. Wildlife Management Institute

BAN ON IVORY

The Department of the Interior has taken initial steps to implement the African Elephant Conservation Act of 1988. The Department announced an immediate ban on all imports of raw and worked elephant ivory from countries not party to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

African elephant numbers have declined an estimated 50 percent in the last 10 years due largely to illegal ivory trade. The African elephant is listed as a threatened species under the Endangered Species Act.

In addition to calling for a moratorium on ivory imports from non-CITES countries, the Act requires the U.S. Fish and Wildlife Service to review the elephant conservation and protection programs in all ivory-producing countries. Those countries that do not have adequate programs under criteria outlined in the Act also may be subject to an ivory import moratorium until their programs are improved.

Elephant populations in Africa have fallen from about 1.5 million in 1979 to a current estimate of 750,000. In some countries, native populations have been all but extirpated. It is believed that illegal poaching to supply the tremendous international demand for ivory is largely to blame for the dramatic decline. Many African countries are eager to put a stop to this killing, but are hard-pressed to find the funds required to combat well-armed poachers.

The African Elephant Conservation Act authorizes appropriations of up to \$5 million for the next five fiscal years to be deposited into a special African Elephant Conservation Fund. If funds are appropriated, they will be used to support approved projects for research, conservation, management or protection of the African elephant.

Last year, the U.S. Fish and Wildlife Service committed \$50,000 to assist African elephant conservation efforts. Also, the National Fish and Wildlife Foundation, a private organization, has approved a grant of \$100,000 to support elephant protection activities in Tanzania. Department of the Interior

NATURE

PINTAIL PROBLEMS

The pintail population has been in a downward trend since the 1970s. Over the past decade, the pintail has yielded its dominant role in the Pacific Flyway harvest to the mallard. The rate and duration of the pintail decline resembles that of the bluewinged teal. Pintails, however, are usually more abundant than bluewings. The declines in the pintail and blue-winged teal populations may result from several causes, but drought on the breeding grounds is common to both.

Throughout the year, the pintail prefers habitat that contains very shallow water. The mallard prefers to dabble or tip-up in water deep enough for ducks to swim. Pintails prefer to feed in standing positions and dig in moist soil or water not more than 1 or 2 inches deep. This association with shallow wetlands has resulted in several behaviors that distinguish pintails from other ducks.

Pintails are constantly on the move. Their strongest site attachment occurs at nesting and this interval is brief compared to other ducks. Pintails are quick to initiate nesting and quick to terminate it, as shallow surface water appears and disappears. Nesting in early spring, they are attracted to sheet water from snow melt that collects in areas previously dry. Their clutch size (seven to eight) is smaller than most other dabbling ducks and their incubation period (22 to 23 days) is shorter than other similar sized ducks. They seem to prefer sparse nesting cover. Their only protection against predators is a tendency to nest long distances from water. Pintail broods can be observed walking a mile or more from nest to water. Pintails are considered poor nesters, but it must be remembered that the species nests in areas where renesting is not a possibility.

Temporary wetlands have never ranked high on waterfowl habitat preservation efforts. It was not feasible to argue for the preservation of wetlands that were dry by mid-July and in some years contained no water in May. As a result, pintail breeding habitat has been destroyed at a higher rate than that of other dabbling ducks.

Historically, the pintail has not relied on successful reproduction each year. It appears that this species relied on "bumper crops" from time to time, and in very dry years makes little or no effort to reproduce. The worst possible explanation of the current trend in pintail numbers is that through destruction of temporary water throughout the prairies we have made it impossible for this species to periodically produce a "bumper crop" of ducklings. A more optimistic position would be that we're experiencing an unusually long dry spell, but pintail habitat will return and the downward trend will be reversed. The last explanation is becoming less believable each year. U.S. Fish and Wildlife Service

HERITAGE MONTH

Each March, Kansas Wildlife Heritage Month focuses attention on habitats important to the more than 20,000 wildlife species native to Kansas. This year the focus is on wildlife habitats in and around urban areas. The 1989 theme — "Urban Habitat: Living With Wildlife."

Most Kansans are urban residents. Based on the most recent figures from the U.S. Census Bureau, more than 70 percent of the state's residents live in cities or towns with at least 10,000 people. Urban Kansans, whether living in large cities or small towns, have unique opportunities to maintain and create wildlife habitat. Like the species common to rural areas, urban wildlife depends on habitat. Although urbanization causes major changes in wildlife habitat (by removing vegetation, covering soil with concrete and roads, and changing the water cycle by draining wetlands and channelizing streams), a surprising diversity of habitats are found around the state's urban areas.

1989 Heritage Month activities include a statewide conference on urban wildlife

to be held in Manhattan March 7-9. Wildlife Appreciation Day is scheduled for March 22 at the state Capitol, and several other activities are also planned for March. For more information on Kansas Wildlife Heritage Month activities in your area contact any Wildlife and Parks office. Charles Nilon, nongame project leader

FERRET UPDATE

Only a few years ago, some observers were ready to write off the black-footed ferret as extinct. Despite doom-sayers and disastrous events, the ferrets are still hanging in there. Last October, seven young ferrets were born in captivity in Wyoming and transferred to the National Zoo's research facility at Front Royal, Va.

Carefully selected to represent the genetic diversity of the 58 black-footed ferrets still known to be alive, the seven ferrets, along with eight others that go to the Henry Doorly Zoo in Omaha, Neb., will form the nucleus of two new captive breeding colonies. None of the animals will be on public display.

The black-footed ferret, the nation's rarest mammal, is an elusive, nocturnal hunter that lives in prairie dog burrows and preys on prairie dogs. It once inhabited the Great Plains region from southern Canada to Texas. After its discovery in 1851, it was 25 years before additional evidence of the species was found. Its range coincided with that of the prairie dog, and its radical decline is believed to have been caused by efforts to eradicate the prairie dog.

In 1981, a colony of 129 ferrets was discovered near Meeteetse, Wyo., and things looked promising until canine distemper struck. Many of the ferrets died, so scientists began to capture the remaining animals to start a captive breeding program. Finally, the entire colony was caught to save it from extinction. In 1987, two litters of ferrets were produced. In 1988, 13 litters, totaling 34 young, were produced. The number of ferrets in captivity now numbers 58. U.S. Fish and Wildlife Service

NOTES

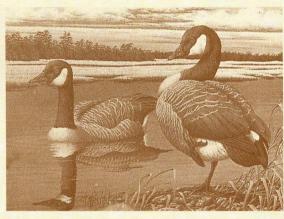
THE \$3.25 LICK 'EM STICK 'EM/WET AND WILD INVESTMENT

For a mere \$3.25, you can become a shareholder in one of the most important investments around. That amount will buy you a Kansas duck stamp. Funds derived from sale of the stamps are dedicated exclusively to enhancing wetland habitats in Kansas.

This year's stamp is based on a painting of a pair of Canada geese by Shawnee artist Ann C. Dohoney. The stamps are required of waterfowl hunters. However, wetlands being what they are — the richest wildlife habitat around — ducks and geese aren't the only wildlife species dependent on this type of environment. Endangered species such as whooping cranes and bald eagles need marshes. The same goes for many furbearing animals, and hundreds of nongame bird species.

There's one other species that's becoming more reliant on wetlands: human beings. Birders, wildlife photographers and nature observers are spending time at marshes in growing numbers.

Buy a duck stamp and invest in wetlands conservation. Duck stamps are on sale now through the end of June at Wildlife and Parks offices, sporting goods stores and county clerk's offices. Bob Mathews, audio visual supervisor



Mike Blair photo

WILDTRUST PRINT HELPS CHEYENNE BOTTOMS

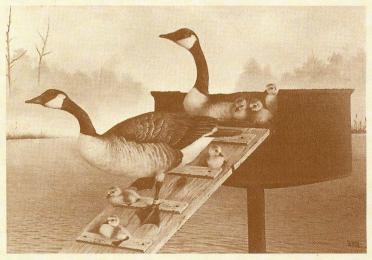
The family and friends of Margaret Taggart have established a Wildtrust Memorial that will benefit the Cheyenne Bottoms Wildlife Area. Kansas wildlife artist Wes Dewey donated an original oil painting, and memorial funds were used to produce a set of limited edition prints. Funds generated from sales of the print will go to Cheyenne Bottoms.

The painting depicts Canada geese using a man-made nesting structure, which has become a common symbol of goose restoration efforts. Cheyenne Bottoms is the site of the first Canada goose restoration project in Kansas.

The beautiful print alone is a valuable piece of art, but persons buying a print can also take satisfaction in the fact that they are helping one of Kansas' finest natural resources, Cheyenne Bottoms. Whether you have watched thousands of migrating birds from a duck blind, spied whooping

cranes through a spotting scope or are just concerned about saving Kansas' most important ecosystem, take this opportunity to donate. Send a check or money order for \$100 or more to Wildtrust, Margaret Tag-

gart Memorial, 900 Jackson, Suite 502, Topeka, KS 66612-1220. For your generosity, you'll receive the 18-inch by 20-inch print entitled "Future Flight."



Mike Blair photo

NATURE'S NOTEBOOK

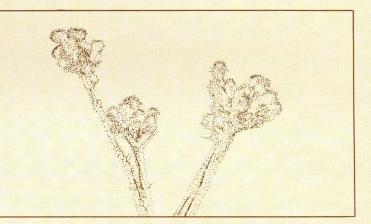
by Joyce Harmon Depenbusch, Wildlife Education Coordinator

WILDFLOWERS

One of the first and most attractive signs of spring is the color that wildflowers add to the landscape. Kansas has a variety of wildflowers that bloom from spring through fall. Below are a few of the wildflowers found in our prairie state and some information about them. Use the descriptions to color the pictures.

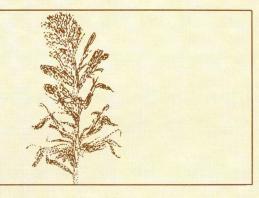
One of the first wildflowers to bloom in pastures and meadows is called pussytoes, or Indian tobacco. It blooms from March through April, producing a white flower that looks like a cotton-ball. The pussytoe was named after the female flower, which is shaped like five toes. The leaves are silvery gray. This plant grows in rocky soil.

(Antennaria plantaginifolia)



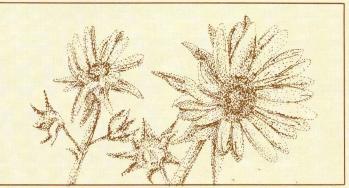
The cardinal flower, or scarlet lobelia, begins blooming in July and continues through October. It is found near streams and other damp places. This plant is named after its brilliant red blossom. Butterflies, moths and hummingbirds pollinate the cardinal flower.

(Lobelia cardinalis)



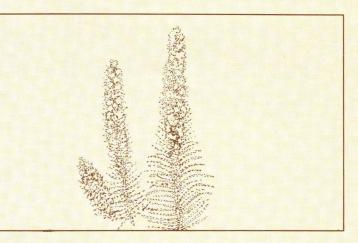
The compass plant, or rosin weed, is a common summer flower on the Kansas prairie. Blooming from July to September, this tall (5 to 9 feet) plant produces many yellow and orange flowers. It's called a compass plant because the leaf edges usually face to the north and south.

(Silphium laciniatum)



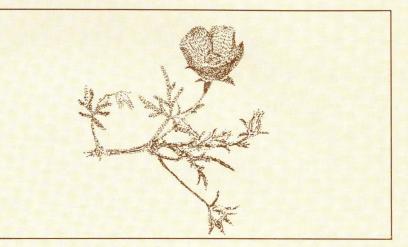
The gayfeather, also called the blazing star, is a beautiful blue and purple prairie flower that blooms during July and August. The narrow leaves have small bristles, and the blossoms consist of threadlike plumes. Plains Indians made medicine out of the gayfeather and used the creation on both themselves and their horses.

(Liatris sp.)



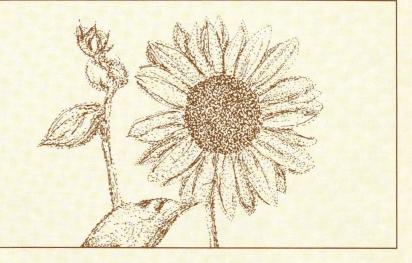
The poppy mallow, or ground mallow, grows close to the ground. It blooms from late April through mid-October. Depending on the mallow species, the flowers may be white, pink, red or purple. The poppy mallow is drought resistant and can be found throughout Kansas. Indians used parts of the plant for medicine.

(Callirhoe sp.)

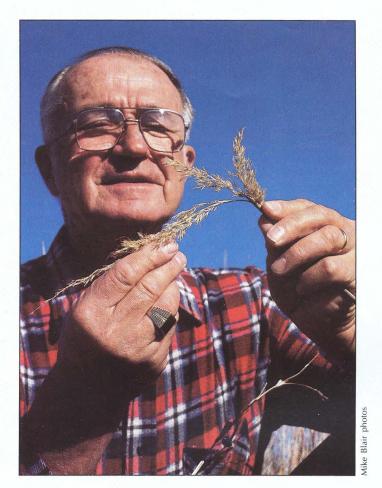


The common sunflower, our state flower, is just one of many species of sunflowers common in Kansas. The familiar yellow and orange flower can be seen from July though September. It grows well in wide, open fields. This tall plant has dark green leaves. The sunflower is a composite, which means each flower is actually made up of many small flowers. Each petal attached to the brown center is a separate flower.

(Helianthus annuus)



To learn more about wildflowers contact the Kansas Wildflower Society, Mulvane Art Center, 17th and Jewell, Washburn University, Topeka, KS 66621. You might also find out about wildflowers at the local library.



INTERVIEW DR. TOMANEK

Editor's Note: Dr. Gerald W. (Jerry) Tomanek, past president of Fort Hays State University (FHSU), retired from that post in May 1987. He became Wildlife and Parks Commission Chairman later that year.

Dr. Tomanek has both bachelor's and master's degrees from FHSU and the Ph.D. degree from the University of Nebraska. At FHSU, he climbed the academic ladder from instructor to

professor and, in 1976, to University president.

Dr. Tomanek's accolades are many. He was twice called to the Argentine to lend his grassland expertise, was a consultant for a prairie grasslands special by CBS-TV, is the recipient of numerous awards for his conservation practices and knowledge, and was named Kansan of the Year in 1978 by the Native Sons and Daughters of Kansas. He is a popular speaker and the author of many articles for professional journals.

Dr. Tomanek and wife Ardis are the parents of three married

daughters.

KW&P: You grew up in Collyer. Did you fish a lot as a youngster?

TOMANEK: Oh yes, in fact the first time I ever fished was in a small stream called Big Creek. I fished with an old willow stick, and the first fish I ever caught was a black bass ... a largemouth bass. Today that creek is so muddy that black bass would have difficulty living in it.

KW&P: What about fishing today? You've been retired almost a year and a half now. What kind of fishing do you enjoy these days?

TOMANEK: I enjoy all kinds of fishing. That's my favorite sport. I guess my favorite type of fishing is flyrodding for black bass and bluegill, but I like to catch walleye and other fish on the reservoirs.

KW&P: Do you fish mostly around home?

TOMANEK: I fish mostly within 100 miles of Hays, but my plans are to travel in our motorhome and visit some of the reservoirs in other parts of the state. We also want to visit the state lakes, community lakes and try to get better acquainted with them.

KW&P: We wanted to touch on some of the issues facing the Department of Wildlife and Parks today. First, can we talk a little about your responsibility as a Commission Chairman? What does that entail? TOMANEK: Mostly it entails conducting the monthly Commission meetings. I also work with Secretary Meinen in preparing an agenda for the meetings. In addition, I think one of the primary functions of the Commissioners is to keep in touch with the public. We are representatives of the public and should bring the public's opinion to the Commission meetings and to professionals in the Wildlife and Parks Department. Of course we can't support everything we hear, but we can be a listening post for the public. They feel like they can contact us — particularly people in their specific areas — and get their voice heard by the Commission.

I also think of the Commissioners as advisory to the professionals and as a sounding board for them as well. We have a completely different function than the old Fish & Game Commission insofar as we make decisions only on regulations, seasons and rules. We're primarily advisory to the Secretary and the Assistant Secretary on all other subjects. We're also a link between the Governor, the public and the Department.

KW&P: Speaking of the Governor, how far do you two go back? Didn't you teach Gov. Hayden at Fort Havs State?

TOMANEK: Yes, I had him in class. I think I had him in either one or two range management classes. He got his undergraduate degree at Kansas State and his graduate

degree at Fort Hays. I also served as an advisor on his master's thesis.

KW&P: What was his thesis on?

TOMANEK: His thesis was on the renovation of the Lake Atwood area, which as you probably know is now taking place. It concerned correcting the water level in the lake but primarily on how to improve the wildlife habitat surrounding the lake.

KW&P: You've kept fairly well in touch with the Governor ... socially, in hunting and fishing, wherever you can?

TOMANEK: Yes, we're good friends. We feel very close to both he and his wife Patti.

KW&P: Do you see the Department of Wildlife and Parks working more closely with schools, specifically conservation education programs and teaching about the importance of natural resources?

TOMANEK: I think the Department has done a good job in the past working with schools. But, naturally, being an old schoolteacher for 40 years, I'm really interested in expanding this effort.

KW&P: How so?

TOMANEK: Well, I think we should make a maximum effort to ensure that the young people are acquainted with the work of Wildlife and Parks, know about conservation efforts, know about Kansas and its environment and have some thoughts about the importance of conservation to the future of mankind. It is extremely important that we start developing the image of Wildlife and Parks at an early age with these young people. For too long, we (as the old Fish and Game Commission) have been looked upon as an enforcement agency rather than a conservation agency.

KW&P: Does our Kansas school system need beefing up in conservation coursework, or is that coursework the Department's responsibility?

TOMANEK: No, I think the primary responsibility is with the school system, from kindergarten through the graduate programs in our colleges and universities. I do think that we as a Department have a definite role in continuing to teach about conservation and its importance. It is important not only to our future and to the quality of life, but also to the general economy, which we hear so much about recently.

KW&P: To get things done at the state level, you have to work with the lawmakers. What role do you play and what role do you see the Commission playing in getting what the Commission and the Department staff deem important legislation for the future, such as the proposed Recreational Access Program?

TOMANEK: We should always be available for committee hearings or things of that nature. But I think the most important role we play is just working with individual lawmakers, legislators in our district or legislators that we know and with which we have established some type of rapport.

I also think we need to work with our legislators and develop the proper image of Wildlife and Parks ... what

the Department is all about. We have a big job in trying to change from the Fish and Game image ... which was not necessarily bad, but one, as I said before, that was always connected with enforcement ... to the Wildlife and Parks image, a much broader function than we used to have. Now we have a Secretary in the Governor's cabinet, so we have a lot more emphasis placed on conservation than we ever had before. We have a tremendous opportunity to become even a greater conservation agency than we have been in the past. We need to work closely with other conservation agencies, such as the Soil Conservation Service, the Kansas Water Authority and the Department of Agriculture, for example. We've worked with them on the Cedar Bluff project and other projects.

KW&P: You must be in big demand as a speaker with schools and organizations. What kind of topics do people want to hear you speak on?

TOMANEK: Well, I've just really gotten started on that. I've given a few talks on what Wildlife and Parks is all about, but I also like to give illustrated talks on the game animals as well as the nongame animals. I stress the importance of the plants and animals around us and how the appreciation of those plants and animals increases the quality of our lives.

KW&P: You mentioned "quality of life." Can you expand a little on that concept?

TOMANEK: Not everybody can be a biologist, but you can have some appreciation of biology. The greatest thing about being a biologist is when I drive from Hays to Pratt, for example, I notice all the hawks. I notice all the birds and other animals and try to identify them. I see the plants along the road ditches where they haven't mowed and notice the Indiangrass, the switchgrass, bluestem and other plants. It just makes life a lot fuller to be able to see these birds, mammals, plants and to have some knowledge of what they are and how they fit into the whole scheme of life.

KW&P: Part of the enjoyment must lie in passing on that appreciation to your audience.

TOMANEK: That's right. What I really like to do when I give speeches is to talk about the quality of life, about the importance of plants and animals.

KW&P: Your thoughts on Cheyenne Bottoms? Are you pleased with the direction the Department is taking on this, its first major conservation project?

TOMANEK: I think the Department has made a giant step forward. Two really important things have happened recently. One, of course, the purchase of that large amphibious backhoe, but the most important happening is the recognition of Cheyenne Bottoms for what it is — internationally important, an area for migrating wildlife. It has such a great history and it's such a nice place for people who are interested in birds and wetlands. Whenever I want pictures of birds, I go to Cheyenne Bottoms, especially for shorebirds of any kind, because you can find them there. Bird lovers really enjoy the area.

KW&P: Have you found as you talk to people that they're telling you the same thing? Have you run into



many people that have recently discovered Cheyenne Bottoms?

TOMANEK: Sure. And it is very recent, because of the recent publicity that we've gotten. Without that, many people may not even know about the Bottoms.

KW&P: Speaking of which, what else does the state of Kansas need to trumpet to this region, to the United States, that "It's here, we're proud of it, and you may not have known about it"?

TOMANEK: We need to remind them about our beautiful Flint Hills. I think we need to tell them that we're not just noted for pheasant hunting but that we have such a tremendous variety of plants and animals, right here in the heart of the country. We need to urge people to get off the interstate and go out and see the country. Often the interstate is built on land that isn't very interesting, although some parts are really scenic — especially through the Flint Hills and the sandstone areas. Kansas has a lot to be proud of, and it's just like I feel about Wildlife and Parks — we need to build our image and keep polishing it. Wildlife and Parks can be one of the vehicles for developing that positive image for the whole state.

KW&P: How about your thoughts on the Kansas state parks system, now that the State Park and Resources Authority has merged with the Fish and Game Commission into a cabinet-level agency?

TOMANEK: Since the Governor linked both agencies, the state parks have received a lot better publicity. I'm

a great park user. We have a motorhome, and my wife and I love to use the parks. We really appreciate the developments that have taken place, and we look forward to even more development, but not to the point that it ruins the naturalness of the area. We all like to have our motorhomes and trailers hooked up to electricity where it's possible, but we don't want to take away from the beauty of the area.

KW&P: You've met a lot of governors and state legislators in your life. How does Mike Hayden's conservation and land ethic philosophy stack up? How does he compare with other state executives, other people in Washington?

TOMANEK: I think that probably he is the best equipped, best educated person in terms of conservation that we've ever had in the Governor's office, no doubt about it. And I think he can be a leader on a national scale, working with other governors, with other states. I'm sure that he is recognized as an outstanding conservationist. With him as Governor, Kansas has a marvelous opportunity to really develop some milestones or benchmarks for future conservation efforts.

KW&P: As we look to the future, what else is important besides conservation education in the schools, our nongame program, Cheyenne Bottoms, water rights in the state and most recently, the Recreational Access Program? The Department has a lot of things going on. Are there other areas we need to be in tune with?

TOMANEK: One of the things that I'm most interested in are the people who work for our Department and how they work with the public. I think our people do a great job of it. But the people who can do the most for our public relations are our conservation officers. The way they deal with the public certainly affects the image of the whole agency. So I think it's important that we continue to develop skills to better work with the public we serve.

KW&P: Any closing thoughts or comments?

TOMANEK: I'd like to give credit to the old Fish and Game Department, because I think they have done a tremendous job. If I can reminisce like an old man for just a little bit ... When I was a kid in the '30s, during the great drought of the '30s, the only things we had to hunt were jackrabbits and the migrating ducks. We didn't have ponds, and we didn't have reservoirs. We had some streams, though, and we'd hunt ducks on the streams or hunt jackrabbits in the grasslands.

Think how that has changed! Of course, weather has had something to do with the change, but primarily it's the work of our conservation agencies, primarily Fish and Game. They've done a tremendous job, bringing us to where we have pheasants, quail, wild turkey, mule deer, whitetail deer and prairie chickens, and now we're starting to get ruffed grouse, sharp-tailed grouse and elk, for example. For those people who are so young that they don't remember when the pheasant came into the northwest corner of the state, they must think we've always had them. I'm pleased with what the Fish and Game did in the past, but now that we're merged with State Parks and have a position on the Governor's cabinet, I think we can do even greater things.



Of The Prairie

A coyote's song of the night is explained to a frightened 6-year-old, who learns that the music is nothing to fear.

Story and photos by Mike Blair Staff Photographer

rom deep in the night it came, a weird concert of rhythms and pitches that splits cold air like an ax splits walnut. Between dreams, I raised on one elbow to listen. Out there across snowy fields, life was stirring while men slept. It was the scheme of things, and not uncomforting.

Across the hall in the quiet house, a door slipped open and I strained expectantly to see Jennie approach my bedside. For a while she stood, unaware that I was conscious and unsure whether to wake me.

"What's the matter, Jen," I asked, already knowing her answer.

She broke into sobs. "I heard some kind of a ghost noise, daddy."

I grinned in the darkness, suddenly thinking that's exactly what it must have sounded like to a 6-year-old. She wasn't afraid of the dark, and I'd never heard her mention ghosts before, but a sound like that — well, it could make you wonder.

"Come on, hon. I'll take you back to bed and we'll talk about it." So we spoke for a while of the coyotes.

"I like to hear them, Jennie. It's a special sound of the night, one you don't hear just anytime. Lots of people never get to hear coyotes singing under the stars. But where we live is part of their home."

I re-



called out loud the first time I heard them, on an Oklahoma farm when I was young like her. Grandpa had suddenly broken into the evening conversation with a sharp "Listen!" and through the screen door we all heard the strange serenade.

How close it had been! Just beyond the tractor shed, it seemed like dozens of the animals were joined together. Their chorus was like an old-time radio tuning up, with a piercing yowl that wavered up and down the musical scale. It sounded nothing like the coyotes that howled on TV.

I had looked at Grandpa as he listened, to see if I should be afraid. And I saw in his weathered stockman's face a certain admiration for the animals he lived and sometimes warred with. Ever since, I had listened with anticipation for those same voices in the nighttime hours, no longer fearing the coyotes.

34

Jennie's tears were dry now as we talked in the darkness. I told her about Chico, and Bonnie and Clyde, three coyote pups I had raised when I was a boy. And I remembered for her how their songs had lighted up the night outside my window as they answered their cousins in distant fields. Ultimately, it was these wild yearnings that forced me to let them go.

Drowsiness began to set in as I ran out of stories. The little girl wasn't afraid anymore. With a final hug, she turned over and went back to sleep.

It was a good lesson, I thought, one she'd always remember. As I lay down, again my mind returned to an Oklahoma farmhouse, and a man long since gone who had listened with pleasure to the wild music, teaching me there was nothing to fear.

And with that, I drifted off, lulled by the distant songs of the ghosts of the prairie.

The Coyote In Kansas

The scientist knows it as *Canis latrans*, the "barking dog." The naturalist considers it one of nature's most intelligent animals. The furharvester views it as a worthy quarry, a source of valuable fur. The stockman often calls it an economic threat.

Conflicting views of the coyote have made it one of the most abused animals in Kansas, but still it thrives. Adaptable and cunning, it has survived eras of bounty payments, poison baits, intensive trapping and indiscriminate shooting.

Technically classified as a "predator," the coyote enjoys neither the status of game animal nor furbearer in Kansas. It falls under no management guidelines and has no protection by hunting season or bag limit. In fact, it's one of a very few animals that may be legally shot from a vehicle.

In spite of these things, the coyote population remains a stable and important factor of the Kansas outdoors. Population densities may reach five or six coyotes per square mile, though one per square mile is about normal. During summer, as many as 300,000 coyotes may be found in the state.

Coyotes play a valuable role both as predators and scavengers, helping check rodent populations while removing dead animals from the landscape. Most coyotes prey exclusively on wild fare, but some routinely attack livestock. Because of this, many people mistakenly consider all coyotes villains.

Unlike wolves, which form true hunting packs, coyotes are basically solitary. When two or more are seen together, it is usually a loose-knit family group prior to dispersal of young, or simply a random encounter.

A coyote's home range is large, averaging 10-20 square miles. Pups do not stay in the home den area, but eventually disperse up to 100 miles to establish their own territories.

Wild coyotes may live 14 years or more, but the average age is 2-3 years. Sexual maturity normally occurs at age 2, but when populations are low, yearling females often reproduce. Average litter size tends to increase as well, so that the deficit is overcome.

Thus, nature seems intent on keeping the coyote around. All things considered, that's good news for Kansas. — *Mike Blair*

A coyote leaps and stabs is prey to pin it to the ground before killing it. Alert to possible danger, a coyote stands on hind legs (upper left) for a better view above the tall grass. A hungry pup trys to make a meal of an aquatic turtle but is unlikely to be successful.





Siblings fear no danger from the big eye of a zoom lens. Each breeding female produces 4-6 young.

Coyotes Naturally

COYOTE (Canis latrans) from Aztec word coyotl "barking dog"

Weight: 25-30 pounds

Color: gray mixed with reddish tint (range from gray-black to red)

FOOD HABITS

* Rabbits, mice and voles are the staple.

- * Feeds on fruits and vegetable (watermelons and mesquite beans).
- * Uses carrion when available.
- * Predation on livestock (especially sheep during the summer).
- * Occasionally intense on big-game.
 - (30 of 35 fawns in one study killed by predators, mostly coyotes; fawn survival increased after coyote control)

BREEDING

- * Mated pairs. Both adults contribute in care of young. Sometimes non-breeding adult pack members assist.
- * Produces 4-6 young per breeding female.
- * Gestation period 60-63 days.
- * Can breed when one year old (up to 80 percent of yearlings conceive).

MORTALITY

- * 9 percent of juveniles die during first 40 days.
- * 50 percent to 70 percent die before they are one year old.

- * 30 percent to 50 percent of adult population dies each year.
- * Human-caused mortality accounts for 90 percent of all coyote deaths after the animals are 5 months old.
- * Sarcoptic mange occurs in 20 percent of Kansas coyotes.
- * Viral diseases include canine distemper, hepatitis and parvo (rabies occurs rarely).

DENSITY AND HOME RANGE

- * Home range is a territory (defended area).
 - Inhabited by family group that includes members of two or more generations. Boundaries maintained by scent marking and possibly vocalization.
- * Size of home range:
 - 2 square miles in Texas.
 - 21-55 square miles in Washington; larger for solitary adults and transients.
- * Density as high as 5 square miles and as low as one-third square mile.

MOVEMENTS

Dispersal after 5 months (disperse alone).

- * 30 miles in Minnesota; 18 miles in Alberta.
- * 3-4 miles in Arkansas and California.
- * Maximum distance: 60 miles (longest 300 miles).

Active day and night

- * peak activity at sunrise and sunset
- * foraging greatest at night
- * daytime activity highest during breeding season Lloyd Fox, furbearer project leader



Hallety by Mike Blair

Copperheads (left) are found in rocky and timbered eastern regions of Kansas. Poisonous snakes are recognized by an elliptical pupil in the eye and a "pit" on the face that detects heat and helps target strikes. Shot with 105mm macro, f/11, 1/60. The eastern hognose snake, classified as threatened in Kansas, bluffs enemies by spreading a cobralike hood. If pressed, however, it rolls over and plays dead. The hognose (shown at right), which is also known as a spread-adder, preys on toads. Shot with 105mm, f/5.6, 1/125.



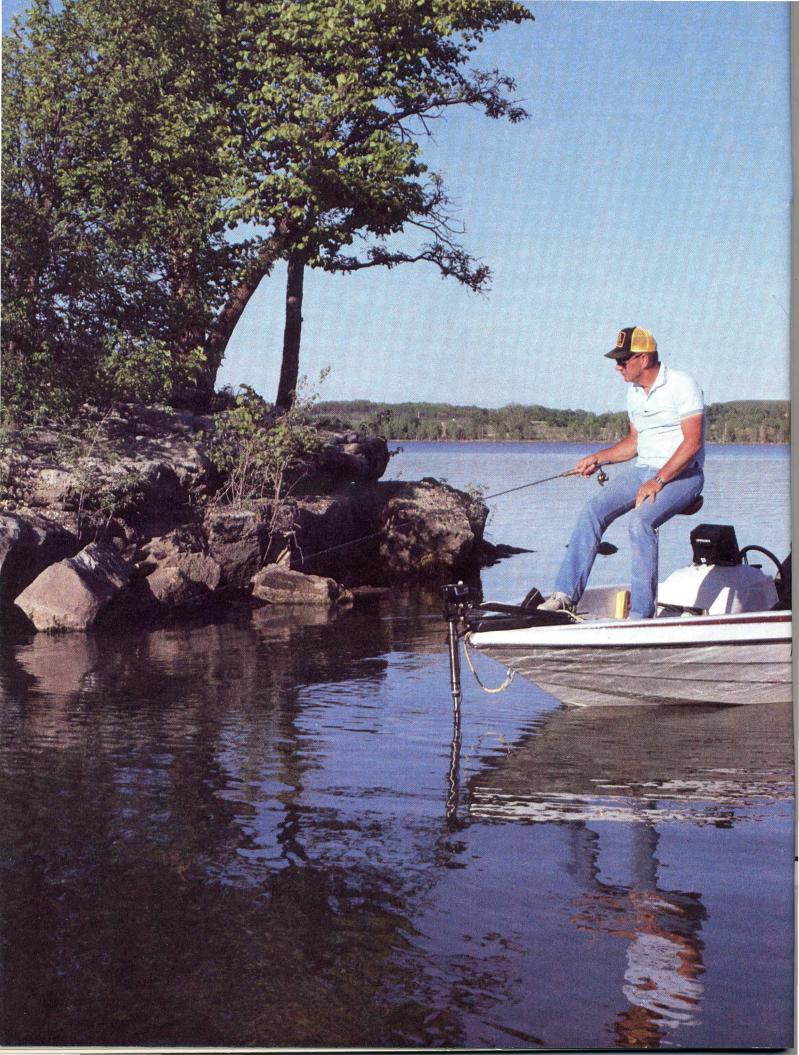




A young bullsnake kills a deer mouse by constriction. Snakes can "unhinge" their jaws to swallow prey larger then their own diameters. A big meal may satisfy the snake for days or weeks. Shot with 105mm macro, f/5.6 1/125.

Hissing and tightly coiled in the strike position, a large bullsnake appears formidable. Like most other non-poisonous snakes, it prefers flight to fight and threatens only when cornered. Shot with 105mm, f/11, 1/125.





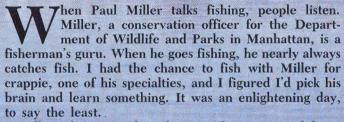
ONFESSIONS OF A RAPPIE (ATCHER

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by Mike Miller
Associate Editor

photos by Gene Brehm



Miller takes an analytical approach to crappie fishing. It's no accident he's so successful. I tried to take in every detail of the day, from the way he ran the trolling motor to the jigging technique he used. His old aluminum fishing boat shows thousands of hours of wear and tear. It has numerous hand-built modifications, and Miller fits into the front swivel chair like he was born to be there. We were fishing Council Grove Reservoir, which provided fantastic crappie fishing last spring, and we started on a small cove near the lower end.

"You see this bank right here," Miller said as he quietly maneuvered the boat along the shore. "This is perfect. The bank has rocks, the slope of the shoreline is about 45 degrees, and there's brush. Rocks are the key, though. Crappie like to spawn on rocks, and if there's brush, that's even better."

The crappie at Council Grove were moving into the shallows to spawn, but we weren't randomly fishing the shallow water. Miller was looking for just the right ingredients. The right depth, the right angle of shoreline, brush and rocks.

'You can see up on shore that there's big and small rocks. That carries on into the water. Crappie like to spawn on the smaller rocks, but they like the bigger rocks for cover." Miller added as he scanned the shoreline.

By finding the right ingredients, we were saving ourselves hours of fruitless fishing. Crappie are school fish and spawn in groups. If you catch one fish, you'll probably catch more from the same area. And Miller takes note of the water depth and bottom makeup when he catches a

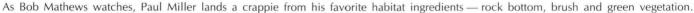
"I caught that fish in about 2 feet of water," he said as he flipped a 1-pound crappie into the livewell. "We'll keep fishing that same depth the rest of the day."

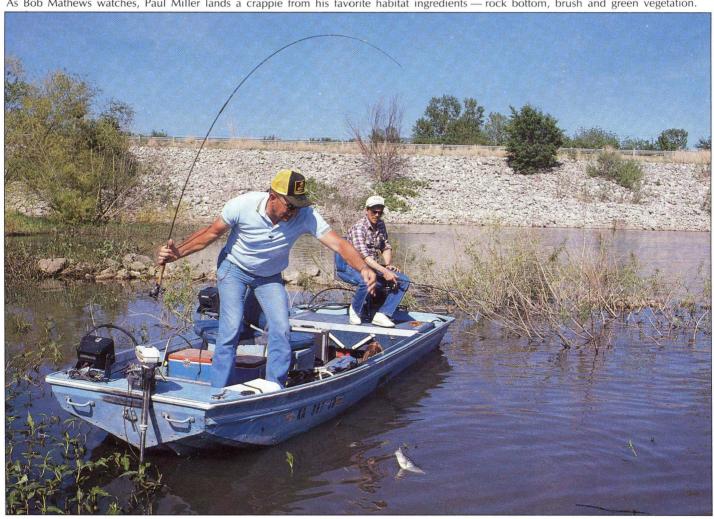
Miller's memory banks are full of fishing experiences, and he's constantly noting conditions and comparing them with previous outings. Crappie will often congregate in a small area, and you can return to that spot day after day and catch fish. He analyzes the areas where crappie prefer to spawn, even to the point of knowing what types of submerged trees they prefer.

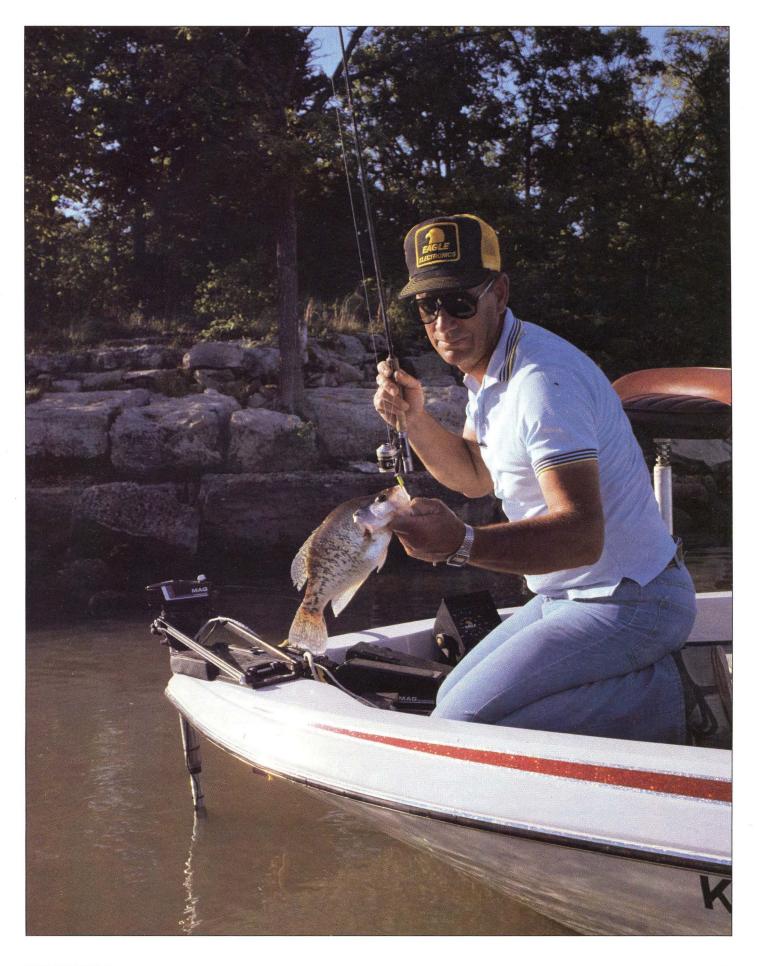
"They like hardwood trees the best," Miller said, pointing to a fallen hedge tree. "I like to fish around hedge, osage orange and locust trees. Cedar trees are also good, but hardwoods last longer in the water. And crappie dearly love green vegetation such as cattails, rushes or a newly fallen tree with green leaves."

iller fishes just about any time the weather and his work permit but says crappie are easiest to catch during the spawn. At other times of the year, they will suspend in deep water and are hard to find. It's when the water warms to more than 60 degrees that crappie move into the shallows to prepare for the spawn. Miller will begin looking for pre-spawn fish in the upper end of reservoirs. The shallow water warms up faster, sometimes as early as mid-April.

"In our Kansas lakes, the crappie spawn can last a







Wildlife & Parks

month," Miller said. "The fish will move up the tributaries in April, and you can find some awfully good fishing then. As the water warms down the reservoir, the spawn will continue. The fish along the dam will spawn last."

The smaller males are the first into the shallows. Males can be identified by their smaller size and dark coloration. They will also hit a lure aggressively. But if you're catching only small males, Miller cautions that you shouldn't give up on the spot. He's found that the big females are usually nearby. They'll hold out in the deeper water, waiting for the conditions to get just right. If Miller finds a concentration of males, he'll use a graph recorder to search out the deeper water. If he marks fish, he'll hold the boat over them and fish straight down.

When conditions get right, both sexes of crappie will be in the shallows. And shallow can mean 1 foot of water. Miller has found that water clarity dictates the depth at which the fish will spawn. In clear water, they may spawn several feet deep. In murky or stained water, they'll get right up near the bank.

Once he finds the right ingredients of water, bottom and brush, Miller begins fishing. And his fishing technique is just as meticulous as his searching. Instead of randomly casting into a likely looking bank, Miller will ease his boat up parallel to the bank and use a jigging technique called doodlesocking. His gear consists of an 8-foot flyrod and an ultralight spincast reel. He ties on a one-sixteenth- or one-eighth-ounce jig and drops it in near good cover. With the long rod, he can reach the cover without getting his boat too close. While holding the line between his fingers, he drops the jig straight down into the water, bounces it a few times, then moves to another spot.

hen jigging for crappie in the spring, fish the jig slowly. Sometimes fish will hit when the jig is merely suspended. Miller's large hands belie his delicate touch with the rod, and he constantly has a finger on the line to increase his sensitivity. At the slightest bump, the rod is quickly raised to set the hook.

As Miller dropped his jig down through a mass of submerged brush, he talked about the advantage of doodlesocking. "This is the only way you can fish right in the brush without snagging," he said. "You can drop the jig down, jig it a few times, then raise it straight back up. If you feel a bump on the way up, it's probably a limb, but if you feel a bump on the way down, it's a fish. Crappie will hit the jig on the way down 95 percent of the time."

Doodlesocking also keeps your jig in prime water. If you were casting into the bank, you would drag the jig through unproductive water much of the retrieve.

Boat position is also important. You don't want to get right into the cover, as fish in shallow water will spook easily. If the water is clear, doodlesocking might be impossible. Getting within reach of even an 8-foot flyrod might spook the fish. In that case, Miller will go to a bobber-and-jig combination. Adjusting the bobber on the line according to the water depth, Miller will cast the combo along the bank and slowly work it back. Sometimes just the wave action on the bobber will move the jig

enough to entice strikes. If the water is deeper than several feet, don't worry about fishing the jig near the bottom. In clear water, crappie will come up to hit a jig.

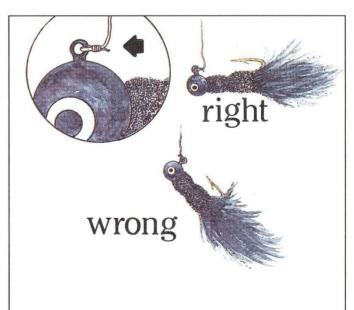
As Miller threw another keeper into the livewell, he talked about details such as tying the jig on. "If you slide the knot around to the back of the eyelet, the jig will hang horizontally in the water. That looks more like a minnow than if the jig is hanging vertically."

Miller continued to scan the bank for clues to where the fish might be. "You see that gully wash there?" he asked. "Rain will wash small rocks into the lake there and with the larger rocks around, it might be a perfect crappie hotspot."

Miller calls small areas where the crappie concentrate "hotspots." He'll fish those spots day after day, often catching fish there each outing.

On our day, the fishing was relatively slow. We found the crappie spread out but still ended up with a nice mess of keeper-sized fish. We worked only the water with the proper ingredients. It was May, so we were fishing toward the lower end of the lake. We looked for tiny coves, where Miller said crappie love to spawn. And we also concentrated our fishing near brush.

There's no way to ensure that you'll catch crappie every time out (unless you hide in Miller's boat). But Miller has unveiled much of the mystery of spring crappie fishing. You'll still need the right weather and water conditions, but some of these ideas will make you a more successful crappie fisherman even when conditions are less than perfect. You'll still have to find fish, but searching in the right places is much more productive. I can't wait for the crappie spawn to get here so I can try some of these ideas on my favorite lakes.



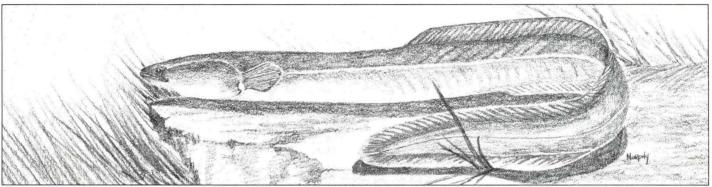
There's a right way and a wrong way to tie on a jig. Slide the knot toward the back (toward the hook) of the eyelet. This allows the jig to suspend horizontally, making it look more like a minnow. If the knot is tied at the front of the eyelet, the jig will hang vertically and look unnatural. atti Murphy illustration

HIGH GROUND



by Tom Mosher

The Appeal Of The Eel



Patti Murphy illustration, based on the "Fishes in Kansas" by Frank B. Cross an seph T. Collins

Because of its rarity, little is known about the habits or distribution of the American eel in Kansas. Eels are common, however, in most waters in the Atlantic coastal states and the Gulf of Mexico. Before large flood control dams were built, American eels were probably found as far west as the Arkansas River in Colorado and the Rio Grande in eastern New Mexico.

Like salmon, American eels are diadromous. That is, they live and mature in one aquatic environment and spawn in another. Unlike salmon, which are anadromous (live in the ocean and spawn in freshwater), eels are catadromous (live in freshwater and spawn in the ocean).

In the early 1900s, Johannes Schmidt, a Danish biologist and oceanographer, first tracked developing eels to their spawning ground in the Sargasso Sea east of the Bahamas and south of Bermuda. And although the general location is known, actual spawning has yet to be observed and recorded. It's assumed that eels die after spawning.

After hatching, young eels float within the north-flowing ocean currents as clear, leaf-shaped leptocephalus larvae. These larvae transform into elvers or glass eels that are also clear but resemble the adult eels as they approach the coast. Pigmentation of the elvers takes place after they reach coastal streams and begin their upriver migrations in May and June the year after spawning.

Elvers do not appear to "home" to a particular stream like salmon, nor do they prefer water from the stream where they were captured. Instead, observations have shown that elvers respond to freshwater by reacting to the odor of food or adult eels.

Once elvers enter coastal streams, they transform to the "yellow stage," so-called because of the yellow color of the ventral part of the eel. This is the growth stage of the eel and may last 5-10 years with some reports of eels being as old as 20 years.

Yellow eels migrate freely within freshwater systems. They may pass smaller dams during flood stage or leave the stream to migrate around larger dams or to landlocked ponds when the ground is damp. Much of their distribution and movement within estuaries and freshwater streams is seasonally and sexually oriented.

Female eels greatly outnumber males in freshwater rivers and ponds, and males are found almost exclusively in salty or brackish water near the coast. So those found in Kansas are probably females.

Eels eat almost anything but seldom eat rotten or decaying matter. Insect larvae, especially mayflies, stoneflies and caddisflies, are most often eaten. Crustaceans such as crayfish are also important food items, as are small, slow-moving fish.

Fully grown eels may range from 12 to 42 inches long. Females may average 2 to $3\frac{1}{2}$ feet, whereas males usually average 12 to 18 inches. Any eel longer than 24 inches is probably a female. Eels as long as 4 feet and weighing $6\frac{1}{2}$ pounds have been reported.

Most reports of eels in Kansas come from the Kansas River and its tributaries. The state record was caught at Manhattan. I captured one in the borrow pits below Milford Dam in 1987. Chuck Bever, a district fisheries biologist at Manhattan, receives reports of eels from the Rocky Ford area on the Blue River. Scattered reports come from the Arkansas River system. A Corps of Engineers employee told me eels were numerous in the Verdigris River when Toronto Dam was built. But their presence in the Arkansas River drainage of Kansas is probably prevented by large dams in Oklahoma.

If you're lucky enough to see an eel in Kansas, remember it has traveled more than 2,000 miles to make Kansas its home and must travel the same distance before it mates and dies.

Have you caught or seen eels in Kansas? If so, please contact Tom Mosher, Department of Wildlife & Parks, P.O. Box 1525, Emporia, KS 66801. Include date of sighting, size and both method and place of capture.

