KANSAS
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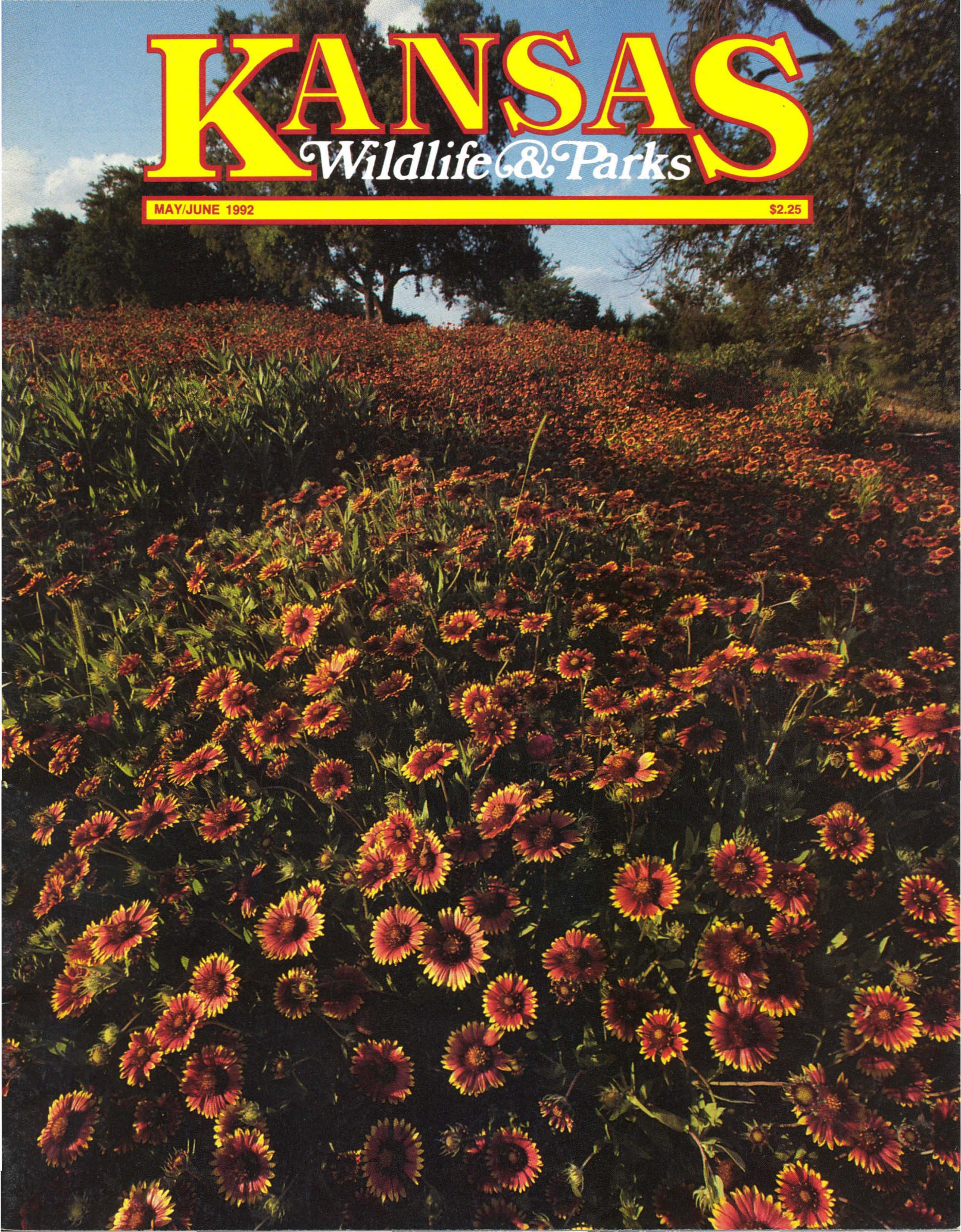

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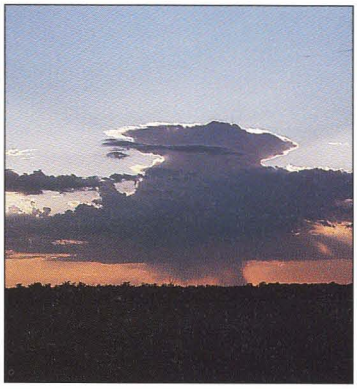

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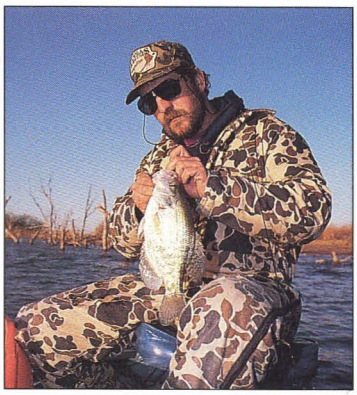

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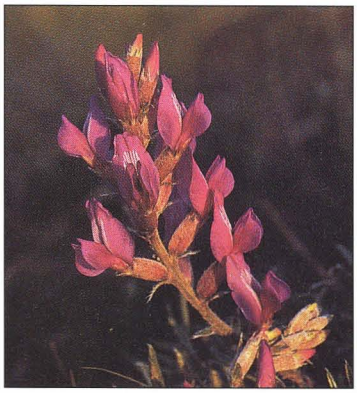

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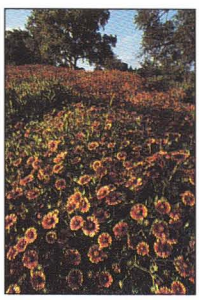

About the Cover: A carpet of rosering gallardia, or Indian blanket, brightens the landscape in Barber County. Mike Blair photographed the scene with 13mm lens, f/22 @ 1/30 sec. **Back Cover:** Connie Hahn unhooks a nice spotted bass caught on Grouse Creek. Mike Blair caught the scene with 24mm lens, f/8, @ 1/60 sec.

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

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An Old Man's Creek

"I used to shoot ducks 'round that bend," the weathered old man reminisced as he pointed to a winding stream channel. "This crick always ran back then. And when everything else froze, the mallards would flock in here 'till there wasn't room for 'nother damn duck. I wish my grandson could have seen that.

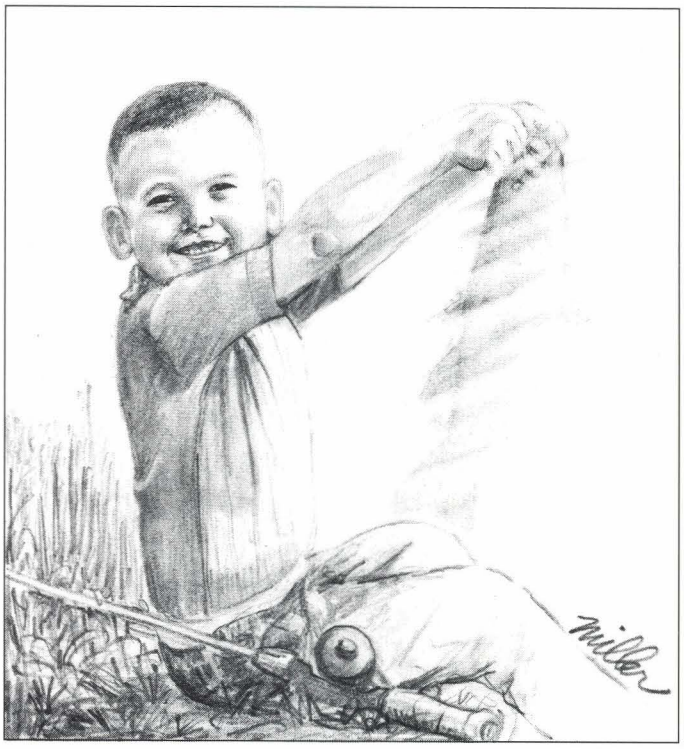
"You might not believe it now," he said convincingly, "but when I was a boy, me and the neighbor kid used to skinny dip 'bout a mile down from here. There was a big swimmin' hole with a giant old cottonwood standing over it. We'd swing off a branch and hit that water . . . but it was deep — way over my head then. Doesn't seem possible now.

"Don't know what I would have done without this crick when I was a boy. Spent nearly all my days down here rompin' around. That is, when Dad didn't have me on a tractor. My boy did pretty much the same when he was younger. Back in those days, the timber along this crick was about the only place you could find a deer. In '67, my boy shot his first deer here. He was sure proud of that little buck."

The old man steadied himself with a sand plum branch as he eased down the sandy bank to the dry creek bed. "It happened slow at first. We didn't hardly notice it was going dry." He stooped to pick up a white stick that still showed a beaver's teeth marks. "It got so it only ran in the winter and spring. In the summer, the only water'd be in the beaver ponds. It was then I came to realize what we were losing. Just a few years before that, I'd bring the boy down on Sunday afternoons to fish. We were just about guaranteed of catching a mess of 2- and 3-pound channel cats in the deep water along that overhanging bank. And there was bass in the beaver ponds . . . they'd tear up a little spinner. That boy sure loved to fish.

"But then the water quit running, and the channel cats and bass died out. My boy and his cousin from town would fish the crick then, but all they ever caught were bullheads and a few carp. Hell, I'd be tickled to see a carp today!" But the old man knew it might be years before water again ran through the sandy creek bottom. And maybe years after that before the fish returned.

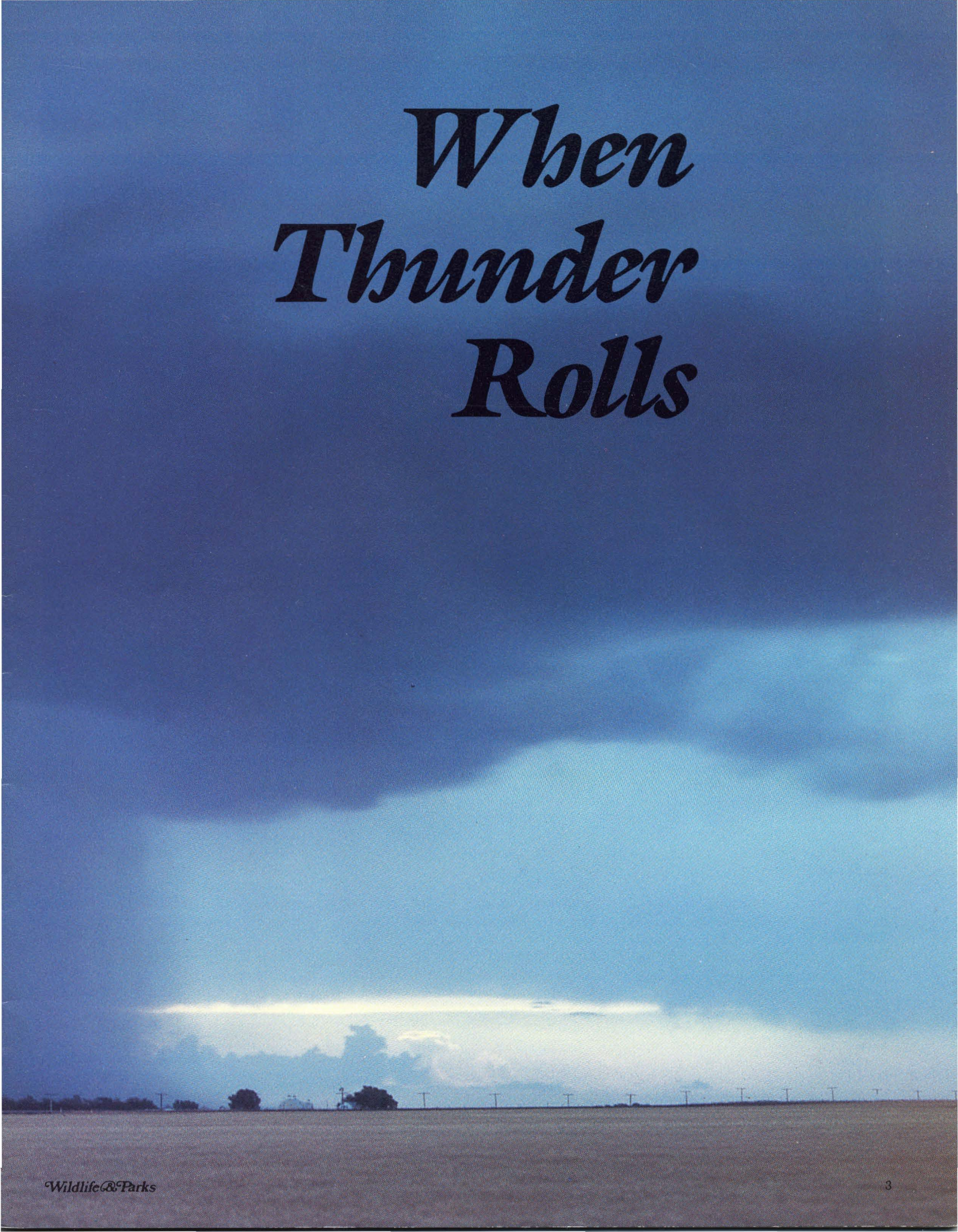
"I hope it does come back," he said in an optimistic tone. "I prob'ly won't live to see it, but I've had my day on this ole crick. It'd be nice if the grandboy would get a chance to fish and hunt deer and turkeys and quail in this bottom. The turkeys used to be thick. Still are quite a few deer, but the turkeys thinned out after the water quit runnin'. I sure got a kick out of watching those hairbrained birds when I fed cattle down here in the winter."



The old man took his hat off and wiped his brow, wishing he could still dunk the hat in cool creek water before putting it back on. Instead, he slapped the dust out of it on his leg and returned it to the groove on his head. The sweet, clear water was a memory . . . and a dream. New restrictions were placed on water usage in the district along the creek. It was a long time in coming in his opinion, but at least it came. Someday, he hoped, the water would again flow, and his descendants would know and love the creek he grew up on. And . . . he wondered . . . maybe they'd take better care of it, knowing how quickly it disappeared just a generation before.

Mike Miller

When Thunder Rolls



by Jennie Blair
sixth grader, Pratt

photos by Mike Blair

We've all watched in wonder as the sky rolled with thunderstorm fury. Understanding the forces at work makes watching the storms more interesting.

Bare fields absorb more heat than surrounding vegetation, and updrafts develop above them. If enough moisture is present, cumulus clouds, seen here, begin to form. If clouds build high enough, they may form a thunderstorm cell.

"Awesome! Did you see that?" I yelled to my dad, who was taking pictures a short distance away. Lightning streaked through the night sky, bright enough for me to read my watch; 12:30 a.m. For the past hour we had watched and filmed an advancing storm from a remote country road, free of farmstead lights. Now, the spectacular lightning display was close and intense.

At the next strike, I calculated how close the lightning was. The distance in miles to a lightning strike is figured by counting the seconds between flash and thunder, and dividing by five. This rule works if you are closer than 15 miles. However, farther than that, you probably won't be able to hear the thunder.

"Thirteen, fourteen, fifteen . . .," suddenly, the earth beneath us shook as thunder roared through the sky. The lightning was only 3 miles away, and it was starting to rain. We packed our gear and headed for safety.

What we had just seen is a common and inspiring sight in Kansas. Lightning is one of the many things that come from thunderstorms, along with rain, wind, hail and tornadoes. Every feature may not be present in every storm, but each storm is a fascinating study of nature's power. Kansas normally has 50-60 thunderstorm days each year, which gives lots of time to study the storms. But watching thunderstorms is more exciting when you know how the storm works.

A thunderstorm is complex, though it forms rather simply. First, air must contain adequate water vapor, an invisible form of moisture. Water vapor comes from several places including evaporated soil moisture, evaporation over bodies of water and transpiration (water given off by plants). The main source of water vapor important to Kansas thunderstorms is moist air carried by winds from the Gulf of Mexico, or sometimes from the Pacific Ocean.

For a thunderstorm to form, moist air must be lifted and cooled. This can happen several ways. Warm air rises when sunshine heats the earth. Bare dirt heats faster than grass or other vegetation, so updrafts often form over dirt fields. Another type of lifting occurs when a cold front wedges beneath warm air, forcing the moist air upward.

As air rises, it cools. The higher air goes, the cooler it gets. This is true throughout the troposphere, a layer of relatively unstable air where nearly all weather is formed. The troposphere can be as much as 50,000 feet deep in the summer. Above this lies the stratosphere, a layer of more stable air that may be slightly warmer than the top of the troposphere.

As air rises and cools, its water vapor condenses, forming tiny visible droplets — a cloud. The cloud builds, and the droplets get bigger. If the cloud builds high enough, it

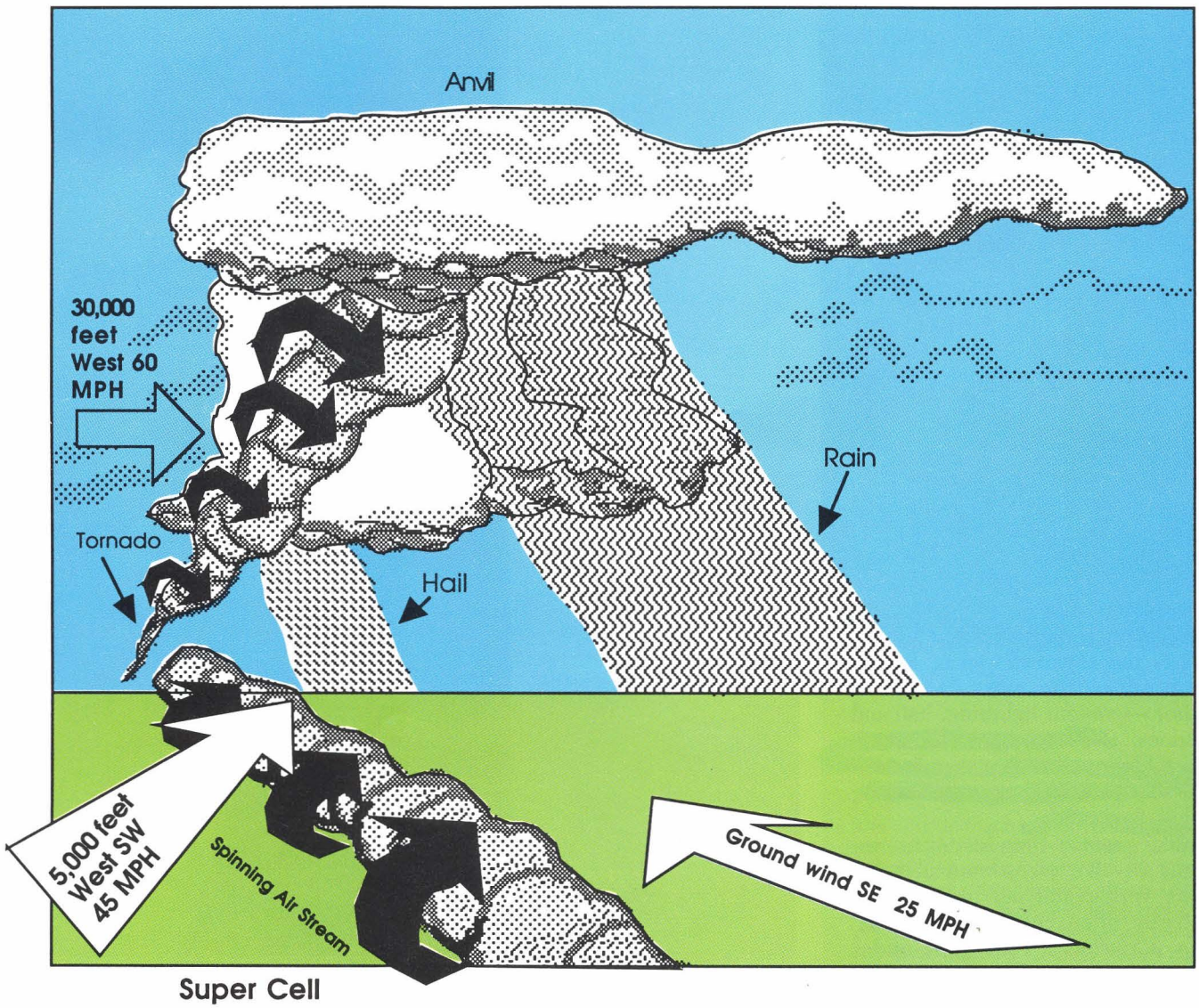
may become a thunderstorm cell.

Thunderstorm cells often build at tremendous rates. The updraft that feeds the cell draws air from the surrounding area, sometimes pushing the growth rate to hundreds of feet per minute. The cloud builds until it encounters the warmer layer of the stratosphere. Then it flattens out on top. This familiar cloud structure is called an anvil.

This is the basic formation process of all thunderstorms. Common to all are rain, wind and lightning. Rain falls when condensing water droplets get heavy enough to escape the thunderstorm updraft. Wind is always present and varies from light to severe. Lightning occurs in all thunderstorms, as electrical charges build up between clouds, or between clouds and the ground.

Kansas generally has three kinds of thunderstorms that may become se-

The small vertical cell, anvil and rain shaft mark this as a typical *summer thunderstorm*. Since rain falls directly through the updraft, cooling quickly kills the cell. The graphic below illustrates a dangerous *supercell*. Wind fields — differing wind speeds and directions at increasing altitudes — cause the updraft to spin. The winds also cause it to lean, allowing rain to fall without affecting the updraft dynamics. Rain, hail and tornadoes tend to occur in predictable sections of the *supercell*, as illustrated.



Super Cell

vere. The weakest are known by meteorologists as *summer* thunderstorms. These are considered mild, though some may be locally strong or severe.

Summer thunderstorms, as the name implies, usually develop in hot months during periods of light wind. As the northern hemisphere seasonally tilts toward the sun, it receives more direct heating. As a result, the jet stream (a band of fast-moving air near the top of the troposphere that pushes weather fronts easterly across the U.S.) typically shifts northward to the Canadian border.

With the jet stream out of the way, prevailing southerly winds carry Gulf moisture into Kansas. This wet-air mass provides the main ingredient for thunderstorms. Normal summer heating develops relatively weak storm cells that produce *summer* thunderstorms.

These storms are short-lived because they tend to form on calm days when surface winds do not affect their updrafts. A storm cell builds straight upward, condensation occurs and cold rain falls directly back through the updraft. The updraft then becomes a downdraft, killing the cell. The cold downdraft hits the ground and spreads in all directions for several miles. This cool wind lifts warm air nearby, sometimes making new cells and repeating the process.

Though *summer* thunderstorms are usually weak, they may produce locally violent conditions. Sometimes, fierce vertical winds known as downbursts are formed. A downburst is a sudden blast of 70-100 mph wind that falls straight out of the sky. It is formed when the difference between ground and cloud temperature is extreme. Fortunately, downbursts affect small areas and quickly weaken as the parent cell dies.

A second type of Kansas thunderstorm is the *supercell* storm. *Supercells* produce the most dangerous weather — violent lightning, hail and tornadoes. *Supercells* are the result of unstable weather patterns formed when warm and cold air collide along weather fronts.

Unlike *summer* thunderstorms, *supercells* involve jet stream activity. During spring and fall months, the jet stream often cuts across Kansas. When it pushes a cold front under

Jon Davies photo

A frightening sight for even life-long Kansans, a tornado looms over the prairie. Tornadoes are produced by *supercell* storms and usually occur near the center of the updraft at the south or southwest side of the storm. Winds of more than 300 mph have been measured in tornadoes.

The tornado that hit Andover last May was particularly devastating, taking a heavy toll on lives and property. But the tornado is not prejudice, mowing down literally everything in its path, including thousands of trees and wildlife homes along the Walnut River in Butler County, shown above.

warm, moist Kansas air, the moist air is violently lifted and cooled to produce severe weather.

Wind plays an important role in supercell formation. Because of the differences in pressure and temperature when weather systems collide, strong wind fields may be present. Wind fields are conditions of varying wind speed and direction at different altitudes. For instance, near the ground, wind may be 20 mph from the southeast; at 10,000 feet, it may be from the south at 50 mph; at 30,000 feet, it may be westerly at 50 mph. These variable forces affect the storm.

A wind field acts on a supercell updraft several ways. Prevailing winds push on the updraft as it rises, causing it to lean away from the wind. Variable wind directions at different altitudes "twist" the leaning updraft. This causes it to rotate, setting up the dangerous possibility of a tornado. And finally, the prevailing wind pushes the entire cell, causing it to move across the state at moderate speeds.

A *supercell* updraft is constantly fed fresh, moist air through its base. The ascending column may climb 50,000 feet or higher as it builds, but due to wind action, the top or anvil may spread miles downwind of the base.

Unlike the vertical *summer* storm cell which kills itself by raining directly through the updraft, a leaning *supercell* maintains a healthy updraft by raining downwind of the storm base. The storm can continue to grow and sometimes lives for 100 miles or more. That is why it is called a supercell storm.

Updraft velocities are extremely powerful in a *supercell*. Hail is formed when rain freezes and is juggled against the updraft. Depending on storm forces, hail stones may grow as large as grapefruits, before falling.

Under typical Kansas wind patterns (prevailing wind from southwest), the largest hail usually falls on the southwest side of a storm, near the updraft of the storm cell. This is because it is heavier than rain, and less easily carried by winds within the storm. Rain may fall many miles to the northeast of the cell's base, since it is easily carried by winds aloft.

A thunderhead builds like so much billowing smoke. The strong updraft required for this formation is usually caused as the jet stream pushes cool air under warm moist air.

Lightning is common in many storms as electrical charges build from cloud to cloud or cloud to ground, as in this photo. Lightning is usually more violent in *supercell* storms.

Hail is common in a *supercell* storm and is formed as the moisture, driven quickly upward, cools and freezes. Weak updrafts may produce pea-sized hail; violent updrafts may juggle hailstones until they're big as grapefruits. Hail signals that the base of the updraft is very close, and a tornado may be nearby.

If the storm produces a tornado, it usually develops in the center of the updraft at the south or southwest side of the storm. Tornadoes often descend from a low hanging wall cloud, which may be present near the moist air intake feeding the updraft. Hail signals that the base of the updraft is very close, and that a tornado may be nearby. In such situations, be prepared to take cover.

The last type of Kansas thunderstorm is the *derecho* (pronounced day-raycho). This phenomenon is rare in the central plains, usually occurring only two to eight times a year. Derechos are straight lines of thunderstorms that develop along a long front and produce straight-line winds from 75-100 mph. They are fast-moving squall lines that may travel as far as 1,000 miles before losing intensity.

A severe *derecho* occurred in Kansas on June 19, 1990. This storm started near Pratt and blew through Wichita with winds as high as 114 mph. It leveled trees and houses, blew vehicles from roads and caused $50 million in property damage. The storm was widely and incorrectly labeled an inland hurricane. It traveled across eight counties before diminishing.

Derechos usually form in early summer when temperatures are 90-100 degrees. Dozens of thunderstorms form side by side along a front and advance together pushed by strong winds. Weak tornadoes may occur, but most damage is caused by the speed of the storms and strong downdraft winds. Since the storm is much wider than a tornado, property damage is usually more widespread. Fortunately, derechos do not occur every year in Kansas.

Though thunderstorms may be dangerous and destructive, they are thrilling to watch, and best of all, they're free. Kansas storms occur often, giving frequent chances to study them. Treat them with the caution and respect they deserve and learn from their beauty. A thunderstorm is dynamic and powerful — a breathtaking demonstration of nature's forces.

Editor's note: Jennie Blair is a 12-year-old sixth grader at Liberty Middle School in Pratt. She is working on an independent weather study as part of her school work and often accompanies her dad on weather photography trips.


PEPSI

Clearing The Water On Crappie

by Don Gabelhouse, Jr.
fisheries research coordinator

Emporia

Responding to angler cries for crappie fishing restrictions, biologists studied the white crappie in eastern Kansas reservoirs and gained some interesting insight.

If you are among the thousands of anglers who "live" on eastern-Kansas reservoirs during May, I hope you have found time to read this article because torrential rain has put a damper on what had been a good crappie run. While this may seem an inappropriate wish from a fisheries biologist, there is more to the story; a silver lining behind those cumulus clouds, so to speak.

The cold spring rains that temporarily drive crappies off the banks are indirectly responsible for the size of crappies caught the following year and the number of crappies available three years later. These, and other enlightening discoveries, are products of a six-year Department study that identified factors affecting white crappie reproduction, growth, and mortality in eastern-Kansas reservoirs. This study also exploded many of the myths and dogma often used to explain how crappie populations function.

In the early 1980s, many Kansas anglers expressed concern that crappie harvest should be restricted in the state's large federal reservoirs, particularly those in eastern Kansas

Mike Blair photo

Crappie fishing is a big draw on eastern Kansas reservoirs. When the crappie are biting, word quickly gets out, and large numbers of fishermen congregate over the best spots.

Mike Miller photo

where fishing pressure was high. This sentiment was fueled by the outdoor media and followed the Missouri Department of Conservation's imposition of creel and length limits on crappie in some of their reservoirs. High harvests of crappie from then new Clinton Reservoir contributed to the prevailing attitude that restrictions were needed.

Rather than arbitrarily impose harvest restrictions on crappie, the Department (then Kansas Fish and Game Commission) decided to study how angling and other factors affect Kansas white crappie before making any decisions. It was hoped that, at the very least, the study would provide information necessary to predict the quality of crappie fishing years in advance. Biologists also hoped that the need for restrictions would be either established or rebuked by study results.

The study targeted six reservoirs in eastern Kansas. From 1985-1989, white crappie populations were sampled each fall at Clinton, Perry, Pomona, Melvern, Fall River and Marion reservoirs. The study was extended an additional year at Clinton, Perry, Pomona and Melvern. Each fall, 24 trap nets were set at each impoundment and recovered the following morning. Lengths and weights were recorded for each crappie caught, and scales were collected. Impressions of scales were later prepared and magnified to determine the age and growth of individual fish.

In August of each year, young-of-the-year (YOY) gizzard shad were sampled by shoreline seining. Twenty hauls with a 50-foot bag seine were made at each reservoir to assess the abundance of shad, the most important prey of adult white crappie.

Angler creel surveys were conducted from March through October, 1986-1989 at all study reservoirs, and through 1990 at Clinton and Melvern. Effects of angling on crappie populations were further assessed through a tag program. Reward tags were attached to white crappies 8 inches and longer during April 1988 at Melvern, and during the fall of 1989 at all study reservoirs except Marion.

The results have given biologists a clearer picture of factors affecting reservoir crappie. The word cycles is often used in connection with crappie. Anglers expect the numbers and sizes of crappie to change from year to year, presumably due to the built-in dynamics of crappie populations. This study indicated that crappie populations cycle only as much as the weather cycles. If appropriate environmental conditions occur, sustained quality crappie populations can be produced in large federal reservoirs in eastern Kansas indefinitely!

One of the factors examined by the study was population density. The average number of adult crappies captured per trap net was used as an indicator of population density. Of course, the weather and water level can affect the efficiency of trap nets, but through the course of the study, it became apparent that some reservoirs annually produced more crappies. The highest catch rates of adult white crappies occurred at Pomona and Perry, with Clinton and Melvern producing somewhat lower catch rates. Fall River, and especially Marion, produced the lowest number of crappies per trap net. Fall River and Marion have the lowest Shoreline Development Index values of the study reservoirs, meaning they have few coves, the typical habitat of crappie. Fall River and Marion also have the lowest and highest storage ratio values, respectively.

Storage ratio value indicates the amount of discharge that a reservoir typically produces in relation to its volume. Among study reservoirs, Fall River has the highest flushing rate and Marion has the lowest. It appears that white crappie benefit from, or at least tolerate, high flow better than most sport fish, to a point. Too much flow-through (like that typical of Fall River) may limit production or even flush crappie from the lake, but too little inflow (like that at Marion) may favor other fish species, and those fish compete with and even out-compete crappie for available prey. This may, in simple terms, explain why our best white crappie fishing occurs in eastern Kansas, and the best walleye and white bass fishing occurs farther west. Walleye generally do poorly in reservoirs with high flow-through.

The future of any creature is, of course, a function of its reproductive success. In some cases, the reproductive success of wild animals is controlled by the density of adults—too few or too many adults result in low production of young; moderate adult densities produce the highest number of young. White crappie reproduction was not, however, related to adult density. A strong year-class was not necessarily followed by a weak year-class. Rather, the average number of YOY white crappies

Don Gabelhouse photo

The author pulls in one of the trap nets set during the study. Nets were set at each reservoir each fall to examine the number of crappie present, size and age structure of the population and the general condition of the fish.

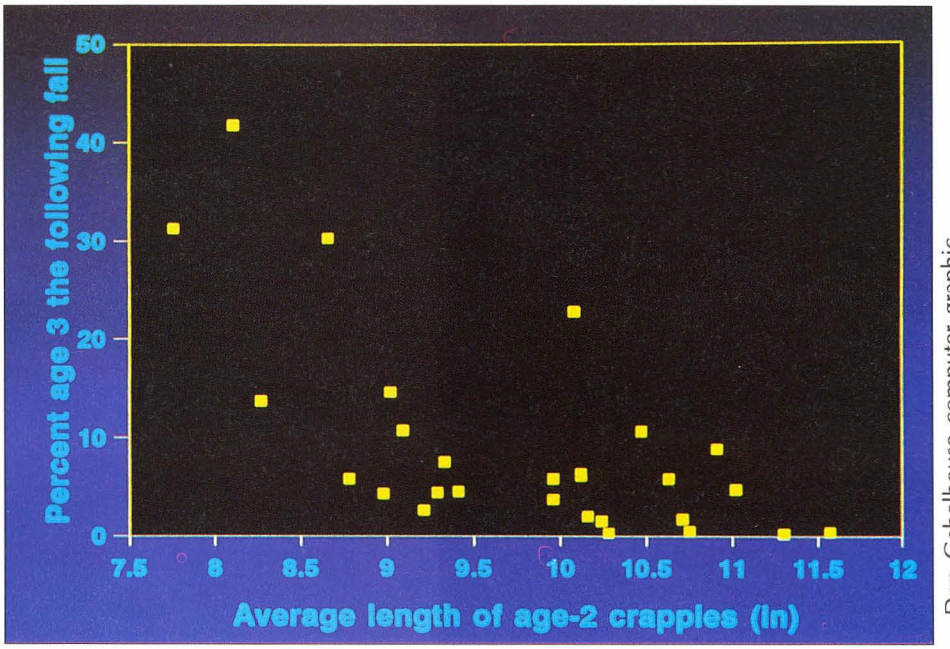
caught per trap net in the fall was related to the reservoir water level the previous spring. When water levels in May were high, trap nets caught high numbers of YOY white crappies later that fall.

A high catch rate of YOY in the fall did not, however, necessarily mean a high catch rate of yearlings one year later. In all impoundments but Fall River, the size of YOY crappie caught in the fall was a factor in the number of yearlings caught the next year. If high numbers of YOY 4 inches and longer were caught in trap nets, the number of yearlings caught per trap net one year later was also high. If most YOY were less than 4 inches, the number of yearlings caught the following fall was low.

Production of large YOY was related to water level in May. If water levels were below conservation pool elevation, few YOY of any size were produced. Water levels 4 feet above conservation pool level produced the most YOY, but flooding conditions in the spring probably limit production of zooplankton, the primary food of young crappie, resulting in poor growth. The strongest white crappie year-classes were produced when water levels were at or just above conservation pool level. At Fall River, size of YOY crappie may have been unimportant because winter conditions were not as harsh at this most southerly of study reservoirs.

The sizes of white crappies captured in trap nets during the fall provide a predictor of the sizes of fish anglers will catch the following winter and spring. Ideally, 20 percent to 50 percent of the white crappies caught in trap nets should be 10 inches and longer. Fall River typically produced a lower than desirable portion of crappies 10 inches and longer, and the proportion fluctuated with year-class strength at Marion. The four northeastern reservoirs all produced high-quality white crappie populations in the early to middle portion of the study, but the proportion of large fish dropped thereafter, with a modest recovery in 1990 at Clinton, Perry and Pomona. Many anglers blamed this decline in quality on overharvest, believing that too many young fish had been taken.

In reality, the four northeastern reservoirs produced white crappie populations with about the same age structure throughout the study. A change in growth rate was actually responsible for the change in the sizes of crappies present. In the early to middle portion of the study, 2-year-old fish in these four reservoirs averaged longer than 10 inches at the end of their third growing season (in the fall). Toward the end of the study, they sometimes failed to average 8 inches by the end of three growing seasons.



Don Gabelhouse computer graphic

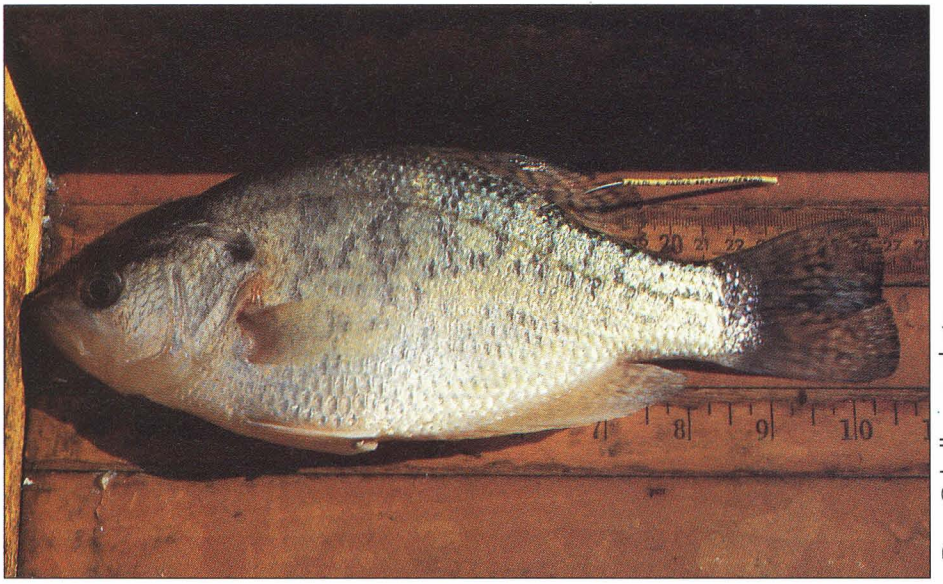
Most crappie caught in fall samples were less than 3 years old. Three-year-olds typically comprised sizeable portions of fall populations only when they had been too small the previous spring to interest fishermen. (Each point represents an individual reservoir and year.)

One might expect the best fish populations to exhibit the fastest growth rates, but this is not necessarily true. Growth that is too rapid, as occurred at Fall River and Marion, reflects low numbers. At the four northeastern reservoirs, growth of white crappies was related to the abundance of YOY gizzard shad, which in turn was related to May water levels. High water levels in May apparently provided good spawning habitat for adult gizzard shad. Good shad spawns resulted in good growth of white crappies. In many reservoirs, recent drought has limited shad reproduction, resulting in poor crappie growth and low proportions of large fish. The body condition of white crappies has also declined of late, so fish have not only been small, they have been skinny as well.

Analysis of scale impressions collected from white crappies revealed fish as old as 7 years. However, fish 3 years old and older seldom accounted for more than 10 percent of the trap-net samples. Typically, the mortality of fish from age 2 one fall to age 3 the next fall exceeded 80 percent; in some cases, even small size didn't prevent heavy mortality. But these fish weren't dying of old age. The capability of white crappies to live considerably longer than three years in Kansas lakes indicated that the primary source of mortality was due to angling.

The angling mortality was verified through a tagging project at Melvern. Of the 997 crappie tagged, 45 percent of those fish were caught and the tags returned within one and one-half months of tagging. By the fall, 55 percent of the tagged fish had been harvested, without considering tag loss by fish, death due to tagging or failure by anglers to return tags from fish caught.

This project produced an interesting insight regarding human behavior. Half of the tags were worth $5 and half were worth $20. Twenty dollar tags were returned an average of six days after the fish was caught, while it took an average of 11 days to return $5 tags. There was also a significantly higher return rate for $20 tags, indicating that $5 was not enough to guarantee that a tag would be returned. The subsequent tagging project used tags worth $5-



Don Gabelhouse photo

To understand more about the effect of fishing pressure on crappie, a tag study was done (note the yellow tag near this crappie's dorsal fin). The returned tags revealed that a large portion of crappie 8 inches or longer are removed by fishermen.

$100, based on a reward schedule, with the actual value unknown to the angler.

Anglers spent up to 31 hours per acre fishing for crappie at study impoundments; the number of hours exerted was directly related to the number of crappie caught per hour of fishing effort. If few fish were taken per hour, as was the case at Fall River and Marion, few hours were spent crappie fishing. When anglers could harvest an average of 0.5 fish per hour, the majority of reservoir's angling use (as much as 76 percent) was for crappie.

With high use, harvests of crappie were high, as many as 41 fish per acre. In the northeastern reservoirs, white crappie typically amounted to more than three-fourths of the total harvest of all fish by number and more than one-half by weight. Are such harvests excessive? It depends upon objectives. If the primary objective is to harvest crappies 8-10 inches long, there was no need to restrict harvest. If the objective is to consistently produce fish 10-12 inches long or longer, a reduction in the harvest of primarily 3-year-old crappies was feasible. How could this reduction in harvest best be achieved? Both length and creel limits were considered.

Creel Limits

Based on combined March through October creel survey data from all reservoirs in all years, we found that more than two-thirds of all anglers who harvested any white crappies took 1-5 crappies per trip; less than 1 percent harvested 30 or more per trip. Those anglers that took 1-10 crappies per trip were responsible for more than half the total harvest of white crappies; anglers taking more than 30 crappies per trip accounted for only 6 percent of the total harvest.

Unfortunately, the expense of conducting year-round creel surveys prevented us from collecting detailed angling data from the winter period, when harvests of controversial proportions often occur. The fall 1989 tagging project answered some of the questions regarding the consequences of winter crappie fishing. From questionnaires that were returned with tags, it was determined that winter-time anglers who caught tagged crappies harvested an average of 30 crappies per trip. However, only 0.5 percent to 5.5 percent of the available tags were returned from fish harvested during the winter at the five study reservoirs. Corps of Engineers data indicates that, typically, less than 10 percent of the total annual fishing use at study reservoirs occurs during the winter. Most anglers who fish during the winter harvest high numbers of crappies, but their contribution to the total annual harvest of crappie is small compared to the thousands of anglers who each take a few fish from March through October.

To produce a substantial reduction in the harvest of crappie, a creel limit would have to be in the single digits. The statewide creel limit of 50 crappies per day was imposed by the Commission for purely social/ethical purposes, with no expectations of biological benefits.

Length Limits

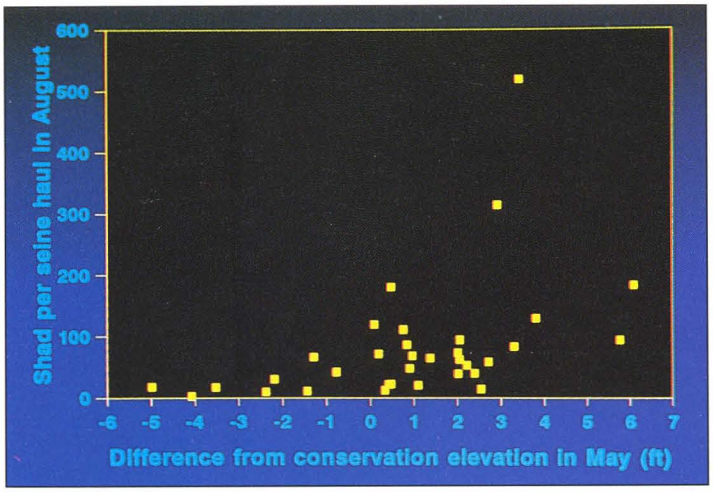
From creel survey data, we found that most of the white crappies 8 inches and longer were kept, while most of those less than 8 inches long were released. However, the sizes of fish released and harvested depended upon the sizes of fish present. When growth had been good and large fish were abundant, larger fish were released than when growth was poor and few large fish existed. A slow-growing year-class was thus not left entirely alone to survive another year. For example, if 10- to 12-inch fish were available, anglers released smaller fish, but if only 7- to 9-inch fish were abundant, those smaller fish were kept.

The projected impact of different length limits varied somewhat among impoundments, but a 10-inch minimum length limit was expected to reduce harvest by an average of more than 40 percent. By protecting small 3-year-olds and all younger fish, there was opportunity to increase the abundance of fish 10-12 inches long. This proposal was supported by most of those who attended public meetings held in Topeka, Ottawa, and Kansas City during the spring of 1990 to discuss crappie management.

Early Length Limit Results

On January 1, 1991, 10-inch minimum length limits on crappie were imposed at Perry, Pomona and Melvern reservoirs. The effects of length limits on crappie populations and crappie angling in these three reservoirs will be evaluated through 1994. At the same time, the crappie population will be sampled and creel surveys will be conducted at Clinton Reservoir to evaluate the effects of not having a length limit.

The 1991 creel surveys found anglers nearly abandoned the three reservoirs with length limits. Both the total angling hours and the hours of crappie angling dropped. At all three reservoirs, anglers spent only five



Young-of-the-year (YOY) gizzard shad are the most important food of adult white crappies. High numbers of YOY gizzard shad were caught during August shoreline seining when high water levels the previous May had created good spawning habitat for adult shad. (Each point represents an individual reservoir and year.)

Don Gabelhouse photo

hours per acre fishing for crappie. By comparison, crappie angling at Clinton amounted to 24 hours per acre, the highest crappie fishing pressure since 1987. Changes in use may also have been a function of the quality of the crappie populations present. White crappies 10 inches and longer amounted to only 8 percent of the fall 1990 trap net catch at Pomona and Melvern, and 11 percent at Perry. At Clinton, nearly one-third of all white crappies captured in the trap nets during the 1990 fall were 10 inches and longer.

During 1991, anglers took over 17 white crappies per acre from Clinton, the highest harvest since 1987. Anglers at Pomona harvested only 0.7 white crappies per acre, Perry anglers took 2.6 per acre, and 4.4 were taken per acre at Melvern. Reduction in harvest was even greater than anticipated because of reduced use and because poor growth in 1990 had limited the number of legal-length fish present.

Compliance with the length limit was excellent in 1991. Of those fish caught less than 10 inches long, anglers released 98 percent to 99 percent at each of the three reservoirs. Fish of illegal length contributed only 4 percent, 5 percent and 12 percent of the white crappie harvest at Melvern, Perry and Pomona, respectively. What good had been accomplished?

At Melvern and Pomona, low water levels in the spring of 1991 again resulted in poor shad production and poor crappie growth. The reduction of harvest during 1991 prolonged the longevity of fish present, but the size structure has shown only modest improvement at Pomona and is the worst on record at Melvern.

High water levels in the spring of 1991 produced abundant YOY gizzard shad at Clinton, according to August shoreline seining information. In the fall of 1991, trap nets sampled the highest number of adult white crappies recorded at Clinton; 15 percent were 10 inches and longer. Anglers began harvesting these fish during this past winter.

At Perry, the fall 1991 trap nets caught the most white crappies 10 inches and longer since 1986. Analysis of scales collected during 1991 revealed the existence of a high proportion of 4-year-old fish. Fish protected by the length limit during 1991 experienced good growth as a result of high water in the spring of 1991. This past winter, anglers began to reap the benefits provided by Mother Nature and the length limit.

We can only hope that the rains will come again this spring at Perry and elsewhere so that slab crappie will fill the livewells in 1993.

A Crappie Reservoir is A Crappie Lake Is A Crappie Pond — NOT!

Crappies are found in ponds and small lakes in addition to large federal reservoirs. However, crappie populations function differently in each water-body type because of differing influences on their reproduction, growth and mortality. These influences also dictate whether white or black crappie will be the dominant species. Large, turbid reservoirs usually contain primarily white crappies, but many clear ponds and smaller lakes (and western-Kansas reservoirs) contain black crappie.

Ponds and small lakes provide less hostile conditions than federal reservoirs, and crappie reproduction is usually higher in these waters. Gizzard shad may be present, but they seldom produce enough young to feed dense crappie populations. These conditions result in bank-to-bank paper-thin crappies.

However, many ponds and some small lakes do produce good crappie populations. In fact, most state-record crappie in the Midwest were taken from ponds. Ponds with good crappie populations invariably have one thing in common — high numbers of predators. Ponds that produce good crappie (and bluegill) are typically loaded with 8- to 15-inch largemouth bass, which eat most of the young panfish produced. The crappie that survive grow well.

Most small public lakes do not provide conditions necessary to keep crappie populations in check. Largemouth bass populations are subjected to heavy angling pressure and are usually not dense enough to control crappie numbers. In addition, diverse habitats make it easier for crappie to escape bass predation, and these small lakes often contain a variety of prey, some of which bass may prefer to crappie. Problem crappie populations are usually associated with these waters. Department fisheries personnel are trying to change this through a multi-state cooperative study to determine whether saugeye (a hybrid of the walleye and sauger) can improve crappie populations in small lakes, through predation. The study developed after Oklahoma found crappie to improve in an impoundment where crappie were an important part of the saugeye's diet. — *Don Gabelhouse*


Bananas
BUSCH
5-25-19

The Future Is Ours To Conserve

by Mark Shoup
associate editor

photos by Mike Blair

What kind of planet will today's children inherit? We can begin forming the answer with home conservation efforts.

Despite a decreasing standard of living over the past 10-12 years, things are still cheap in America. It's cheap to make things and cheap to buy them. That's both good and bad. It helps the single-income family of four, but it also encourages waste. More than any other factor, inexpensive goods and resources are why we waste so much. Many experts believe that if Americans continue on our present course, we'll waste ourselves out of our current lifestyle, and out of our natural resources.

Yet it doesn't have to be that way, not if we are conservative. Conservative as in "conservation." With a mind to conservation, we can live within the means of our earth, and live well. But conservation must be applied at all levels of society, whether business, public or private. It is in the private sector, however, that change must first occur if conservation is to become a way of life in America. Individuals — voters — who conserve in their homes will not long tolerate governments or businesses that waste and pollute.

But how to start? Home conservation can really be broken into four categories: saving energy, saving materials (recycling), reducing pollution, and saving water. By implementing these conservation measures, we can save money, influence our leaders and provide a cleaner, safer planet for man and wildlife alike.

Home conservation is comprised of many small efforts from recycling newspaper to building a compost bin. Another important home effort is water conservation, including using low-flow shower heads.

Energy

A Harvard Business School report entitled "Energy Future" describes conservation as "no less an energy alternative than oil, gas, coal or nu-

clear. Conservation," the report continues, "could do more than any of the conventional sources to help the country deal with the energy problem." According to Gary S. Owen's textbook, *Natural Resource Conservation*, Americans waste more energy than is consumed by most countries, including Japan, the world's third-largest industrial nation.

Much of this waste occurs in the home due to bad habits. We leave lights on when we're not using them; we crank up the heater or turn down the air conditioner far beyond necessary levels — and leave them running when we're gone all day. We turn the hot water up too high. Habit is not the only reason for home energy waste, however. Often, we are unaware of techniques and the latest technology that could improve home energy efficiency.

Let's start with electricity. Common sense can tell you not to leave unused lights burning, but what else can be done? Compact fluorescent light bulbs, which simply screw into conventional incandescent lamp sockets, last about 10 times longer than incandescents and save considerably on electricity use. Initially, they are more expensive, but the savings in replacement bulbs and electricity make them economically-sensible, as well as conservation-wise.

Refrigerators use about 7 percent of the nation's total electricity. If refrigerators and freezers operate 10 degrees colder than necessary, bills for these appliances will increase by 25 percent. Thirty-eight to 42 degrees is the optimum range for the fridge, and the freezer should be between 0 degrees and 5 degrees. To maintain efficiency, condenser coils should be cleaned once a year, and the door gasket should also be kept clean.

If you have a microwave oven, keep in mind that, recipe for recipe, your microwave uses one-third to one-half the energy of conventional ovens. On new gas stoves, electronic ignitions use 40 percent less gas than pilot lights.

When washing clothes, energy can be saved by washing only full loads and, for most clothes, using a warm wash and cold rinse. Clean the lint filter on your dryer after every load.

Of course, heating and air conditioning are the two biggest energy expenses in most homes. In addition to sensible heat settings (heat at 68 degrees, cool at 76), these expenses can be significantly reduced by close attention to the machines that control in-home environment and the home that checks external environment. Whether gas or electric, make sure your heaters and air conditioners re-

Conserving water in lawn care can result in beautiful native plantings. Native grasses and wildflowers not only require small amounts of water, they are also low maintenance. The little bluestem and switchgrass seen here add a touch of country to an otherwise suburban scene.

ceive regular maintenance. Change filters monthly during use, and have your system serviced yearly.

The next step is to ensure that your house is as airtight as possible. Apply weatherstripping to all doors and windows. Caulk any air leaks you can find, and make sure storm windows and doors are airtight. Remove or cover window air conditioners. To help reduce summer heat, use reflective film or shades on windows. On cooler days, shut your air conditioner down and open the windows.

For both heaters and air conditioners, a timer thermostat is a good investment. These thermostats can be set to automatically turn the system up during peak hours of need and down when you are gone or in bed.

Fiberglass insulation is inexpensive and easy to apply; use it where ever you see an opportunity, such as in the attic and around the water heater. Even if you already have insulation in your attic, you should probably lay fiberglass batting over what is there, especially if you have an old home. Most old homes also benefit from having insulation blown into the walls. Wrapping insulation around your water heater can really save energy — 20 percent of the home's energy is used to heat water.

Recycling

Although recycling will not reap great direct economic benefit in the home, the benefits to the economy as a whole and to the environment are without question. Local taxes for landfill development and maintenance and garbage collection are reduced. Individuals and businesses earn money by recycling, and recycling conserves many natural resources that will one day be scarce if used at current rates. When that happens, the price of goods that require those resources — from aluminum to paper to oil — will rise dramatically.

Recycling can also reduce the price of products because fewer new raw materials have to be mined to produce products or the packages they come in. Recycled goods also require less energy to produce. For these reasons, the Wisconsin Department of Natural Resources estimates that a 16-ounce pop in a returnable glass bottle costs the consumer 40 percent less than pop in a nonreturnable glass bottle and 56 percent less than pop in an aluminum can.

Compact fluorescent light bulbs, like the one in the salesperson's left hand, last about 10 times longer then conventional incandescents and save on electricity. More expensive initially, they are money ahead in the longrun.

Saving money is not the only reason to recycle. Larger metropolitan areas are running out of places to put landfills, and they are shipping their garbage to less populated areas, such as Kansas. According to the Environmental Protection Agency, all landfills will eventually leak toxins into the ground, with the potential of polluting streams and groundwater supplies.

Recycling is a timely idea, but many people still don't know how or where to recycle. Probably the best way to get started is to make a telephone call to the Kansas Business and Recycling Program, (913) 273-6808. Ask for a copy of the Directory of Kansas Recycling Centers and Programs. This booklet has recycling tips and lists all the places in Kansas that accept products for recycling. The Kansas Department of Commerce,

(913) 296-3483, is also a good source of information.

Some recycling centers have special requirements for preparation of recyclables, so your local recycling center should also be contacted.

Although many people already recycle paper, plastic and aluminum, many other items can be recycled. Appliances, vehicle batteries and oil can be recycled when they wear out. Many scrap metal businesses accept, or even pay for, used appliances for the steel and copper they contain. Old batteries are highly toxic, but they contain valuable lead that can be reused. Most battery dealers offer a trade-in refund for used batteries. Others will accept used batteries without trade-in. Many automotive service centers accept recycled oil, so call around until you find one rather than pouring oil on the ground. Used oil poured down drains or storm sewers, sent to landfills or discarded in alleys will pollute streams, wetlands and water supplies.

A compost bin not only saves hauling organic material to the dump, it also provides rich fertilizer and mulch for gardens and other plantings. City landfills are filling rapidly, and yard clippings and other organic matter are a problem.

Pollution

Every home has its share of household toxins, from cleaners to health care products. Not only are these chemicals dangerous to those who use them, pollution is created in their manufacture and disposal. They create problems for humans and wildlife by contaminating underground water supplies, streams and lakes. Their number can be reduced, however, by using simple alternatives.

Libraries, health departments and conservation groups are good sources of information on this subject. If no alternative to a toxic chemical is apparent, take care in disposing of it. For more information, contact The Earthworks Group, 1400 Shattuck Avenue, Berkeley, CA 94709, (415) 841-5866.

Household Alternatives

Toxin (chemical)	Alternative
Oven cleaners (lye)	water, baking soda and steel wool
Air fresheners (xylene, ethanol, naphthalene)	herbal mixtures or vinegar and lemon juice
Mothballs (paradichlorobenzene)	cedar chips or cedar oil
Window cleaner (ammonia)	vinegar and water
Cockroach killer (varies)	4 parts borax, 2 parts flour, 1 part cocoa

Water

Of all the conservation issues we will face in the 90s, water may be the most controversial. Are clean drinking water and running rivers in the future of Kansas? The following are some water-saving guidelines that can give each individual the power to have an impact.

Save in the bathroom

1. Take shorter showers; use less bath water.
2. Install a low-flow shower head. They're inexpensive and will pay for themselves within a year.
3. Don't let the water run while brushing your teeth or shaving.
4. Repair leaks promptly.
5. The toilet consumes 45 percent of all water used in the home because five to seven gallons are lost with every flush. By placing bricks or plastic bottles in your toilet tank, you can save up to two gallons per flush. If you replace your toilet, install a low-flush unit.
6. Install aerators on all faucets throughout the house.

Save in the kitchen

1. Wash only full loads in your washing machine and dishwasher.
2. If you wash dishes by hand, don't let the water run.
3. Cool your drinking water in the refrigerator, not by letting the water run.
4. Don't use water-wasting garbage disposals. Make a compost bin.

Save outside the home

1. Use a broom, not a hose, to clean driveways, sidewalks and steps.
2. Use an "on-off" spray nozzle on your hose.
3. Wash your car with a bucket of water; use a hose only to rinse.
4. Water your lawn and garden only during the cool of the day. Water only the areas that need water, and do not over-water.
5. Use a water timer to avoid over-watering.
6. Plant water-thrifty grass, trees and decorative plants. (See paragraph below on landscaping.)
9. Add decomposing leaves, peat moss or compost to your soil for improved water-holding capacity.
10. Pull weeds.

Most people don't think about it, but landscaping is an important opportunity for conservation. Done properly, it can save water and energy while attracting wildlife to your yard. When planning your yard work, ask one simple question to determine whether or not your plantings are conservation-wise or wasteful: Does it require much maintenance once it's growing? If your lawn needs frequent watering to stay alive, you've got the wrong grass for your climate.

Unfortunately, Americans are addicted to water-loving bluegrass lawns, even in arid climates. This aesthetic luxury is a terrible drain on the country's water resources. There are, however, alternatives. For all but the eastern one quarter of Kansas, bluegrass and fescue require more water than nature can supply. (New strains of drought-tolerant fescue have been developed. Check with your local lawn and garden supplier.) Buffalo grass and blue gramma are natural choices and, once established, will require less work to maintain.

Taller native grasses such as big and little bluestem, Indian grass and switchgrass can make beautiful plantings to accent house and yard. Water-thrifty plants such as yarrow, butterfly weed, gayfeather, blanket flower and bearded iris rival any water-guzzling plants for beauty, and they're almost maintenance-free. Wildlife are attracted to drought-resistant shrubs such as fragrant sumac, Oregon grape holly (Mahonia), cotoneaster and Pyracantha. Cedar, hackberry, ash and locust trees also tolerate drought well. Besides saving water, deciduous trees planted on the south side of the house can save on summer air conditioning costs by blocking sunlight, yet they allow warming sunlight to reach your house in winter. Evergreens on the north side will block cold winter wind.

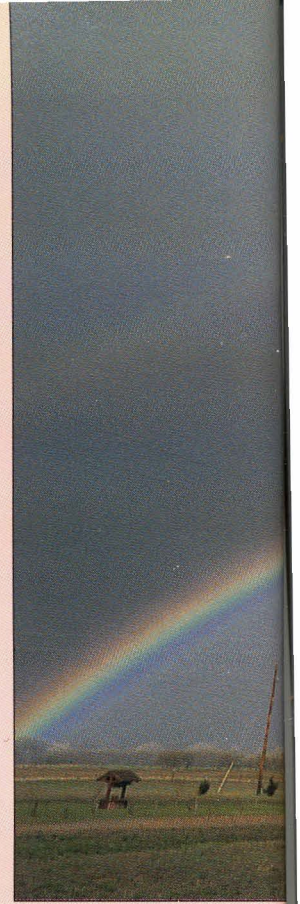
Planting drought-resistant yards in Kansas makes sense. It saves money, water and energy; it makes the yard look like it belongs in Kansas; it attracts wildlife; and it's easy to care for.

Everyone wants an Earth that our children can safely, comfortably inhabit, but there is a good chance it won't be that way unless individuals believe they can make a difference. After all, if American voters don't conserve in the home, how can we point the finger at big business, big farming, big government or anyone else?

It is time for all of us to get conservative, to conserve the earth. Although conservation — or exhaustion — of our natural resources is an issue that will be decided in the political arena, traditional labels of "liberal" and "conservative" don't fit neatly in this debate. The issue will ultimately be decided in the attitudes and actions of ordinary citizens whose efforts will be felt in our society from bottom to top. Let's hope our decision is to conserve — liberally.

Many communities have their own recylcing centers, and many community businesses have become involved in collecting recyclables. It may not seem like much of a difference individually, but when everyone chips in, the collective result is worth the effort.

Note: These are just a few of the personal conservation measures that can be taken in the home. For others, contact the Environmental Protection Agency, Region 7, 726 Minnesota Ave., Kansas City, KS 66101, (913) 551-7003; the Kansas Department of Health and Environment, Forbes Field, Bldg. 740, Topeka, KS 66620, (913) 296-1531; or The American Council For An Energy-Efficient Economy, 1001 Connecticut Av. NW, Suite 535, Washington, DC 20036.

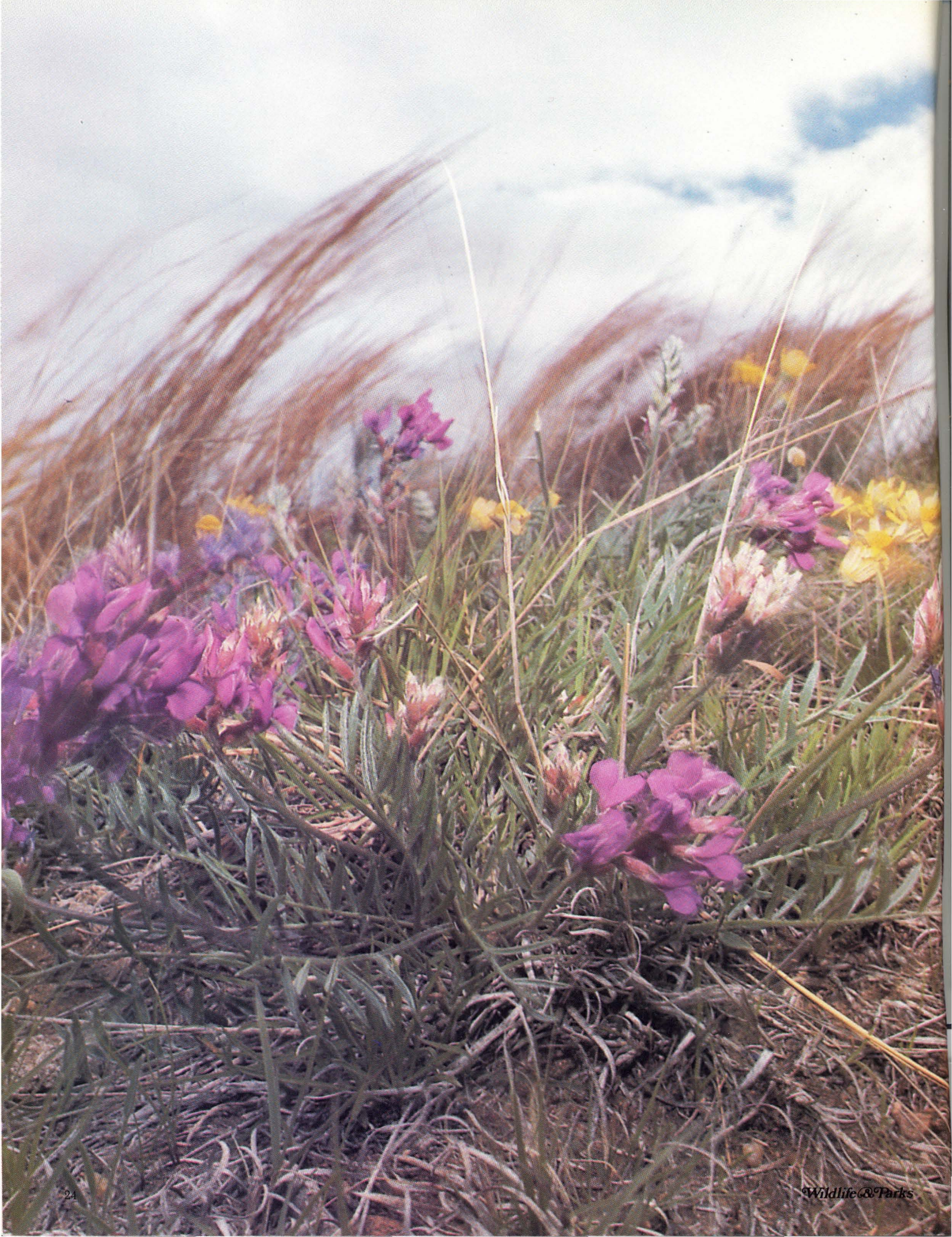


Gallery

by Mike Blair

Over The Rainbow

While thunderstorms can produce damaging weather, the moisture is nearly always needed in Kansas, and the beauty of a rainbow after the storm is a welcome sight. Produced by the refraction of light through water droplets, the rainbow exhibits a vivid spectrum of color. **Left:** 50mm lens, f/5.6, @ 1/125 sec. **Above:** 24mm lens, f/11, @ 1/60 sec. **Right:** 200mm lens, f/5.6, @ 1/250 sec.



Badland Beauties

by Jim Locklear
director, Dyck Aboretum of the Plains
Hesston

On wind-swept ridges, in rocky soils where little rain falls, you'll find western Kansas wildflowers.

They are the harshest of habitats: rock hilltops and ridges; buttes and badlands; river-carved bluffs and breaks. Windswept, sunbaked, possessing poor soils — not the sort of place for a garden. Yet some of the most beautiful Kansas wildflowers grow nowhere else, transforming these rugged settings into flower gardens on the plains.

To someone accustomed to the meadowlike exuberance of the tallgrass prairie, the western grasslands may seem dull by comparison. In the Flint Hills of eastern Kansas, for example, one finds a rich intermingling of wildflowers and grasses from hilltop to swale. In the arid western parts of the state, however, grasses exert stronger dominance over the prairie. Wildflowers can still be found; many have simply taken to the more difficult sites where the grasses are less competitive. It is in these unlikely places that the finest displays of wildflowers occur.

In the picturesque canyons of southern Comanche County, the mid-April air is fragrant with the scent of the Oklahoma phlox *(Phlox oklahomensis)*, its white flower clusters brilliant against the brick-colored soil of the Red Hills. The Easter daisy *(Townsendia exscapa)* is also in bloom at this date, a low growing plant almost completely covered with inch-wide flowers. These two are among the earliest of our plains wildflowers, blooming and setting seed before most plants, especially grasses, have shaken off winter dormancy. Appearing somewhat later in the spring, the golden daisies of bitterweed *(Hymenoxys scaposa)* are a common sight in rocky places in the Red Hills.

Farther west, Bluff Creek in Clark County derives its name from the steep escarpments that mark the northern limits of the Red Hills region. Lambert's locoweed *(Oxytropis lambertii)* is abundant along these

Mike Blair photo

Lambert's locoweed

bluffs, providing bright washes of rose-purple color against the rocks. The humble babywhite aster *(Leucelene ericoides)* is also present and would be easily overlooked if not for its habit of forming large colonies. Also growing on the bluffs is rock sandwort *(Arenaria stricta ssp. texensis)*, producing dozens of white, star-shaped flowers over low tufts of foliage. The leaves of rock sandwort are small and needlelike, a characteristic typical of plants living in dry, windswept environments whether on the plains or the tops of mountains.

Low, gravelly ridges outline the course of Walnut Creek as it winds through Ness County. In the springtime and early summer, the thin, rocky soil on the crests grows a wide array of wildflowers. The showy yel-

James Locklear photo

Oklahoma phlox

low flowers of the oval-leaf bladderpod *(Lesquerella ovalifolia)* are among the first to appear on these hills after winter. The leaves of this plant are densely covered by microscopic, star-shaped hairs which give the foliage an attractive silvery look and help diffuse and deflect the solar radiation which is particularly intense in exposed, rocky habitats. White milkwort *(Polygala alba)* blooms somewhat later, producing wands of pure white flowers that shudder in the strong spring winds. If the weather is favorable, narrowleaf bluets *(Hedyotis nigricans)* will bloom throughout much of the summer; the small, waxy flowers are best appreciated close-up.

The land is rolling where the North Fork of the Solomon River runs through Smith County in north-central Kansas. These limestone underlain hills, famous for yielding stone fence posts, also bear a flora that is unique to this part of the state. One of the sure signs that you are in Post Rock Country is the presence of Fremont's clematis *(Clematis fremontii)*, producing its leathery, bonnet-like flowers in late April and May. Another characteristic plant is Fremont's evening primrose *(Oenothera macrocarpa* ssp. *fremontii)* which only occurs in northcentral Kansas and a handful of locations across the state line in Nebraska. Resinous skullcap *(Scutellaria resinosa)* is also typical of the region. Like many of the wildflowers of rocky habitats, this species has a low, mounded shape which keeps it out of the wind and helps conserve moisture.

The rugged breaks and badlands along the Smoky Hill River in Trego, Gove and Logan counties provide

James Locklear photo

narrowleaf bluets

some of the most surprising scenery found in Kansas. Ironically, these harsh settings are also home to some of the most delicate wildflowers

James Locklear photo

Fremont's clematis

found in the state. Needleleaf gilia *(Gilia rigidula)*, with its bright blue flowers and compact habit of growth, would be a welcome addition to the finest of gardens, yet it is tough enough to endure the rigors of the badlands. Lavender-leaf evening primrose *(Calylophus lavandulifolius)* also finds a foothold in these barren soils, opening new flowers late in the afternoon to be pollinated that night by hawkmoths. Late in the summer the low-growing Fendler's aster *(Aster fendleri)* is covered with lavender daisies, closing out another growing season on the plains.

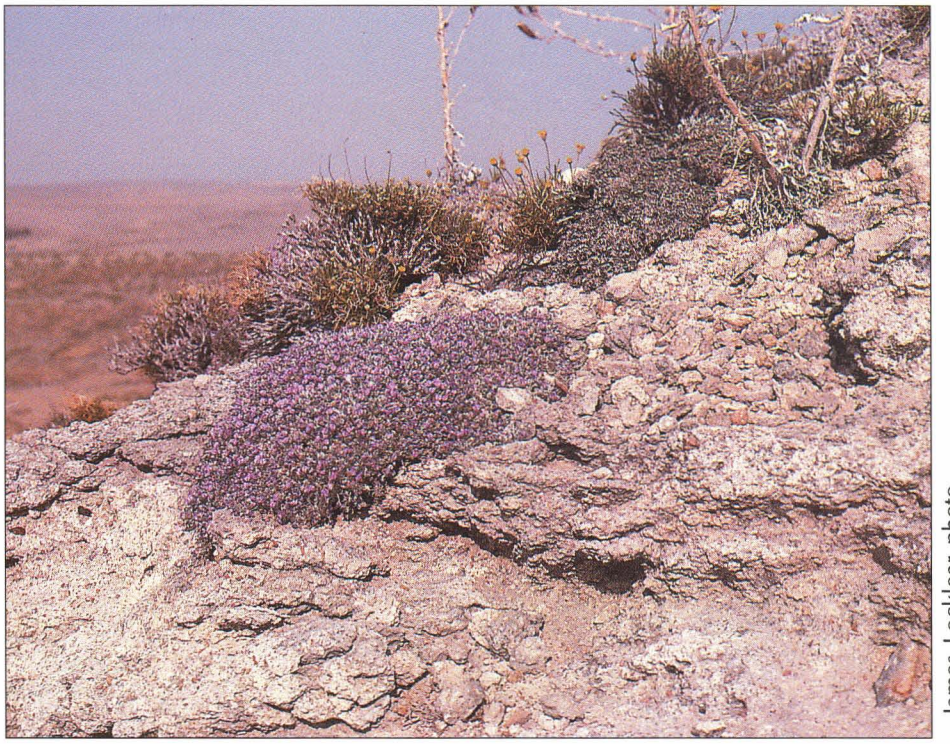
Habitats such as these occur throughout much of the Kansas plains. Not only are they places of beauty, they are also home to some of the rarest plants in the state.

Stand atop Point of Rocks in Morton County and you are linked to things Southwestern. From these rocky bluffs overlooking the Cimarron River you can see the route of the old Santa Fe Trail winding away toward New Mexico. Long before wagon trains creaked past this famous landmark, however, pioneers of another sort migrated to this southwest corner of the state. Jame's dalea (Dalea jamesii) and longroot wildbuckwheat *(Eriogonum lachnogynum)* barely enter Kansas here, being more common to the south in the desert country of western Texas and northern Mexico. Blackfoot daisy *(Melampodium leucanthum)* and Rocky Mountain zinnia *(Zinnia grandiflora)*, two other species with close ties to the Chihuahuan Desert, are also abundant along the bluffs.

James Locklear photo

Jame's dalea

A similar situation involving plants with affinities to another arid region exists in northwest Kansas. Scramble along the breaks cut by the Arikaree River through Cheyenne County and the silvery mats of silky orophaca *(Astragalus sericoleucus)* can be found on the rocky slopes, growing here at the easternmost limits of its range. Several other plants which are more common to the dry, high-altitude plains of Wyoming also occur here in very small colonies including alpine bladderpod *(Lesquerella alpina)* and draba milkvetch *(Astragalus spatulatus)*. As in southwest Kansas, these plants do not venture much farther into the state than this northwest corner. Such habitat, exposed to the sun and wind and with rocky soils that hold little moisture, are outposts of destertlike environment in the midst of the Kansas grasslands.



James Locklear photo

Avoiding competition with the western grasses, this silky orophaca grows on an inhospitable rocky crag. Some of the most beautiful Kansas wildflowers grow only in these habitats.

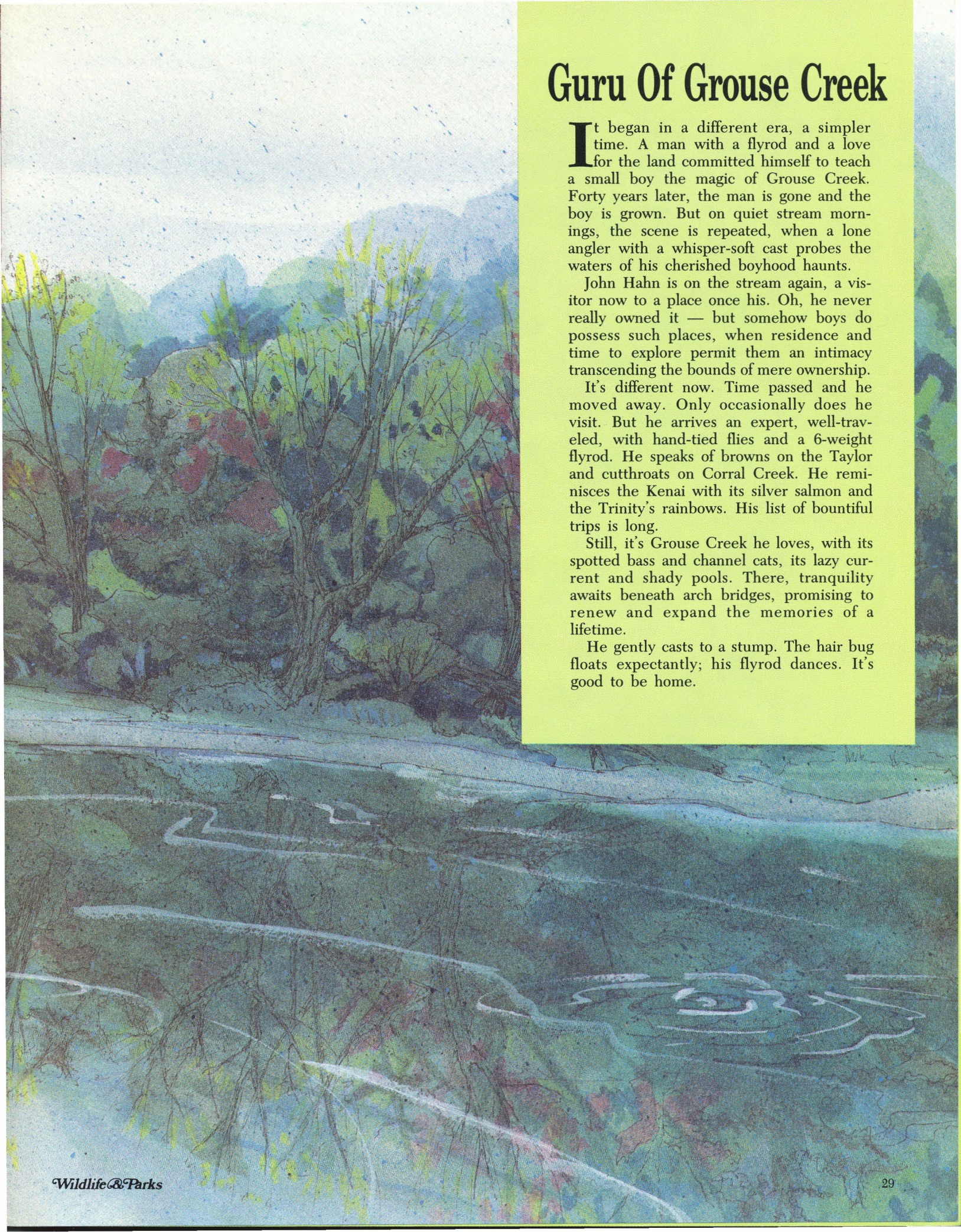
One might assume that these natural gardens can only be reached by considerable back-road travel. This is sometimes the case, but often they are as accessible as a road cut through a rocky hill. Take special note of areas which, from a distance, may look bleak and barren. If the season is right and the weather has been favorable, closer inspection will likely reveal a wealth of beautiful wildflowers.

Excellent wildflower habitat can be found at a number of publicly-owned areas in central and western Kansas such as Wilson Reservoir, Cedar Bluff Reservoir, Lake Scott State Park, Clark County State Lake and Hamilton County State Lake. The Cimarron National Grasslands in southwest Kansas also provides prime wildflower-viewing opportunities. May through mid-June is generally the best time to search for wildflowers in these areas.

It may come as a surprise that these rugged, harsh settings harbor some of the most beautiful wildflowers found in Kansas. Surprises like these, however, are among many natural wonders to be discovered on the western plains.

James Locklear photo

blackfoot daisy



Guru Of Grouse Creek

It began in a different era, a simpler time. A man with a flyrod and a love for the land committed himself to teach a small boy the magic of Grouse Creek. Forty years later, the man is gone and the boy is grown. But on quiet stream mornings, the scene is repeated, when a lone angler with a whisper-soft cast probes the waters of his cherished boyhood haunts.

John Hahn is on the stream again, a visitor now to a place once his. Oh, he never really owned it — but somehow boys do possess such places, when residence and time to explore permit them an intimacy transcending the bounds of mere ownership.

It's different now. Time passed and he moved away. Only occasionally does he visit. But he arrives an expert, well-traveled, with hand-tied flies and a 6-weight flyrod. He speaks of browns on the Taylor and cutthroats on Corral Creek. He reminisces the Kenai with its silver salmon and the Trinity's rainbows. His list of bountiful trips is long.

Still, it's Grouse Creek he loves, with its spotted bass and channel cats, its lazy current and shady pools. There, tranquility awaits beneath arch bridges, promising to renew and expand the memories of a lifetime.

He gently casts to a stump. The hair bug floats expectantly; his flyrod dances. It's good to be home.

text and photos by Mike Blair
staff photographer

John Hahn and his wife Connie opened their pickup camper, and unloaded armsful of gear. One duffel bag contained 15 flyreels, armed with lines for every fishing situation. In another were hundreds of hand-tied flies — not trout flies, mind you, but patterns for Kansas bass: Zonkers, hair eels, swimming frogs and deer-hair bugs. These are big lures, big as your hand, fit for hawg bass and stripers.

In tackle boxes were fly patterns to "match the hatch" for every Kansas aquatic prey from mayflies to shad. Catfish stinkbait and shrimp filled a small cooler. Another box held sinkers and hooks and leaders.

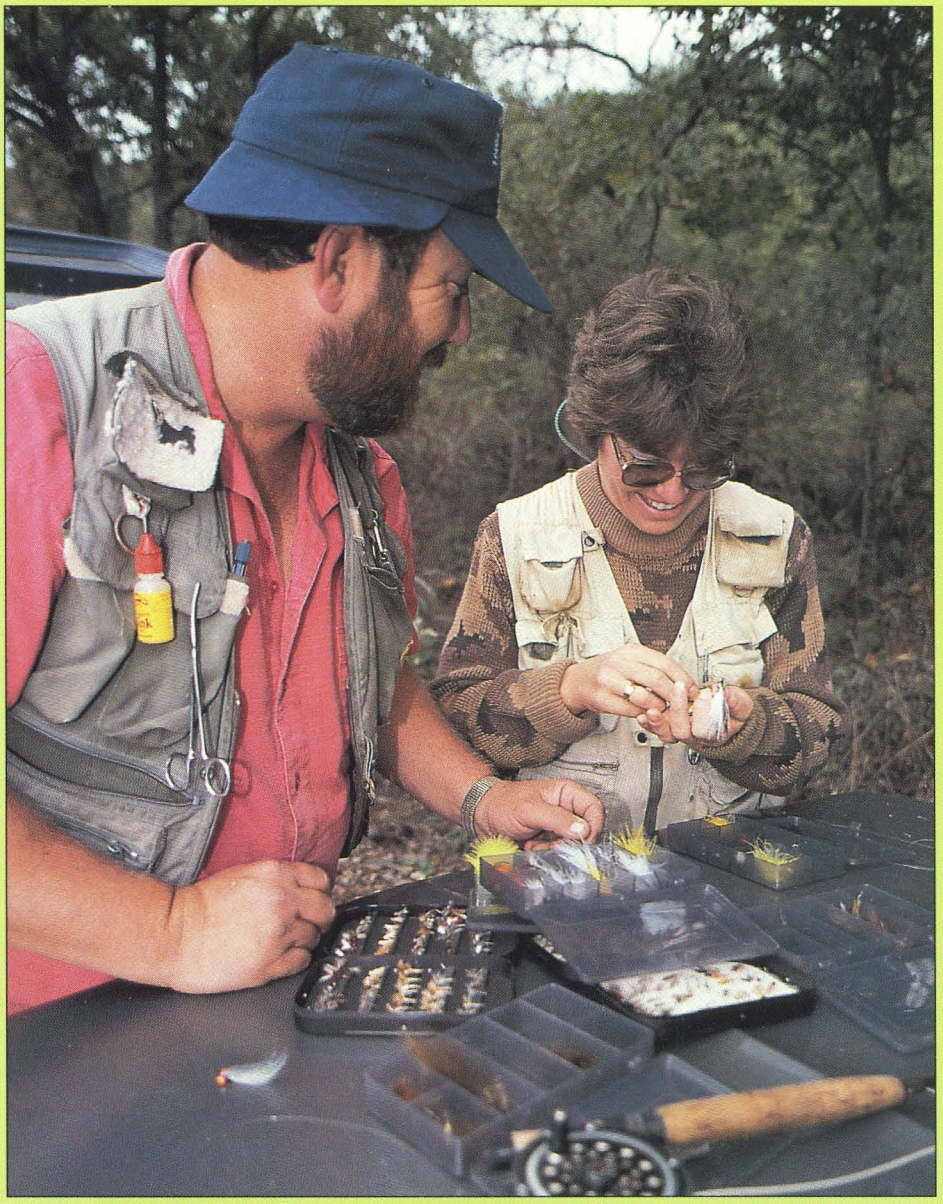
Hahn sorted through rod tubes for his favorite flyrod, a handmade graphite from a Colorado craftsman who considers him a flatland oddity. Partly in jest toward Kansas, but mostly with respect for the recipient's flyfishing skills, the rod bears the maker's inscriptions in handwritten gold: "John Hahn, The Guru."

Hahn laughs at the title but admitted a sense of mission in spreading the work about flyfishing to fellow Kansans.

"My dad was a purist in a time when few people knew what a flyrod was," he said. "I grew up with a flyrod, and today I believe it's the most productive fishing method there is. I catch virtually every gamefish in Kansas on flies, and the thrill of a big fish on a flyrod is unforgettable. Ask Connie!"

His wife agreed, citing her many stripers taken while flyfishing at Wilson Reservoir. Using float tubes to quietly maneuver, she and John stalk stripers with 8-weight rods and large shad-imitation streamers. A competent and successful angler, Connie has taken stripers weighing 15 pounds on the unconventional equipment. But she admits that John was her inspiration.

"Actually, John took me fishing on our first date," she remembers. "I sat on the bank and watched him flyfish the Elk River in Colorado. While he caught fish, I read Dave Whitlock's *Guide To Aquatic Entomology*. A few trips later, I started fishing with him, and I loved it."



The Hahns ponder fly rigs and tackle as they prepare to explore the waters of Grouse Creek in Cowley County. Since most of Grouse Creek is privately owned, permission from the landowner was the first order of business.

The anglers finished gearing up, a ritual that involves rod assembly, reel attachment, line cleaning and an Armorall line treatment. Care with the line improves casting and line performance on the water. Then they chose flies and tied them on.

John selected a 2-inch pearl prismatic shad, a fly with a slow sink rate that pulses with each strip of the line. The shad imitation is easy to cast and easy to fish — deadly on all gamefish.

Connie chose a 2-inch weedless Zonker, a minnow imitation with a moderate sink rate. Like the shad fly, it is a "wet" lure, designed to fish below the surface. Such flies are often fished with sinking flylines, but the Hahns rig them on floating, weight-forward lines and 6-foot-OX leaders. This arrangement lets a fly sink to moderate depths, and produces a tantalizing hop each time the line is tugged.

Ready for action, the pair donned chest waters and headed for water. Like many eastern Kansas streams, Grouse Creek contains clear water with a solid, rocky bottom. Much of it is wadable, but long, deep holes also exist. Float tubes are helpful.

The two anglers headed in different directions, each going to favorite spots. The morning air was cool as it drifted through the treetops onto glassy water. John waded in until

waist-deep, concentrating on a submerged tree limb. Ratcheting line, he smoothly laid a 60-foot cast to a perfect landing.

There was no talking now. The angler leaned forward expectantly, rod tip near the water and perfectly aligned with his lure. The line was stripped in, 6 inches at a time, in random rhythm: three fast hops, one slow; two long pulls, and a pause.

Nothing. A minute later, the line was cleanly lifted, the rod came back twice, and another target was hit. The initial expectation wore off as minutes ticked by, and John relaxed in the pure pleasure of casting, and of the river.

"Isn't it beautiful here?" he said, wading deeper into the hole. "You never see another person here. Out west, even the most remote spots are likely to hold trout fishermen. But no one fishes these Kansas streams."

Instruction resumed as the angler worked. "Fish don't hook themselves in still water. Your technique has to be right. Don't hold your rod tip up; keep it low, right on the water. After the cast, immediately take up slack line. That way, you feel the slightest bump, and each strip of the line makes the fly move.

"When you feel a strike, don't rear back and up with the rod — that forces the limber tip to set the hook. Instead, since your line is already tight, cant your rod about 45 degrees and jerk it straight back into your body. This forces the powerful butt of the rod to drive the hook into the fish's tough mouth. You'll lose a lot fewer fish that way."

Almost on cue, the first fish struck. "Feels like a crappie," Hahn said, watching the line draw Zs in the black water. His 6-weight rod nodded in the morning sun, and soon his guess was confirmed. He released the fish, as was his habit with all Grouse Creek game fish except channel cats.

"Sharp hooks make a difference, too" he continued, dropping another cast into a likely overhang. "For best hook-setting power, I pinch down the barb with a pair of pliers and hone the hook to needle sharpness."

The angler continued downstream, sometimes leaving the water to avoid deep holes. A small Kentucky (spotted) bass was taken from a brushpile, but the morning proved slow.

Soon Connie appeared, reporting several 1-pound spotted bass for her efforts. The couple decided to break for lunch, then drive 10 miles upriver to fish another stretch where they had permission.

"At the lower end of Grouse Creek, south of Silverdale, there are several miles of public access with good fishing," John said. "Sometimes in spring there are really good white bass runs there. But most of the stream is privately owned, so you must get permission to fish it."

After lunch, the afternoon turned

Each angler heads for favorite fishing holes, always hoping to find new, uncharted fish-holding pockets. The clear, flowing waters hold spotted bass and channel cats and provide an ideal setting for prairie fly fishermen.

The water boils as a fish takes the feather imitation. Hahn's 6-weight flyrod bows to the weight of a spotted bass in the current before the battle is over and the fish is released.

hot as the two made their way down a rocky bluff Hahn hadn't visited for years. But the shaded water was cool, and the fish were more cooperative. The couple waded together, fishing opposite sides of the wide creek.

Suddenly, John had a hit. "This is a good one!" he yelled, working the fish away from the bank. Taking his time, he enjoyed the fight on the limber rod. Though he recommends an 8-weight rod for big fish, he often uses a 6-weight on Grouse Creek—even though he's taken blue and channel cats weighing well into the teens there.

After a 4-minute battle, he proudly hefted a 5-pound channel cat that took his prismatic shad. "People don't believe you can catch catfish on flies, but we do it all the time on Grouse Creek."

Hahn inspected the catch and noted again the importance of a sharp hook. "The hook drove all the way through his bony upper lip. You can't do that with an unsharpened hook."

Channel cats began to bite sporadically, and during the next several hours, four more keepers were added to the string. Connie caught another spotted bass. It was a fine afternoon, when cicadas serenaded and swishing flyrods scratched the air along a mile of river.

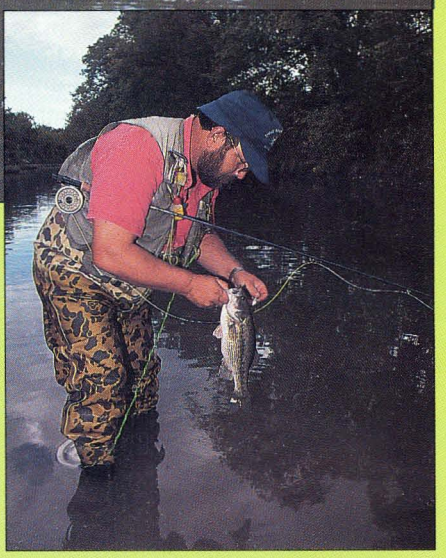
Evening began to fall as the pair waded through a riffle and fished a final hole. John waded deep, and cast to a stickup with the same concentration he had when the day started. The fly disappeared in a large boil, but instantly the fish was loose.

"He didn't feel the hook. I think he'll take it again," John said. Sure enough, a third cast to the same spot brought another good rise, but the fish missed again.

John moved on, while Connie caught several small spotted bass in the rocky tail of the pool. After 10 minutes of fishing, he returned to the stickup for a last try.

Casting beyond the log, he inched the shad fly through the strike zone, and suddenly set the hook as a nice bass somersaulted out of the water. Several powerful runs later, the fish was lifted from the water, red eyes gleaming in the soft light.

It was a good fish to quit on. The day hadn't been like some, when husband-and-wife team had taken 50 spotted bass. But like always, it was a special visit to a special place, offering the best of the Kansas outdoors. For the guru of Grouse Creek, it was a wonderful reunion.



Editor's note: This spring, Hahn will conduct a series of 3-day flyfishing schools at Spillman Creek Lodge near Sylvan Grove. The course includes classroom and field instruction on gear selection and assembly; knot tying; Kansas fish species and flyfishing tactics; casting instruction; float tube use and safety; lure selection and care of fish. For more information contact: John Hahn, Rt. 2, Box 153, Hoisington, KS 67544 (316) 653-7709.

WILD CURRENTS

letters

Edited by Mark Shoup

Pheasant Odyssey

Editor:

Having just read *A Pheasant Odyssey* (KANSAS WILDLIFE AND PARKS, March/April 1992, Page 2) by Randy Rodgers, I must say that I am both moved and deeply impressed by his well-researched article and the message therein. It would be wonderful if everyone who reads this article would make a point to pass it on, hopefully to the men and women who work the land and can make a real difference in the welfare of all wildlife. It seems obvious that the scenario applies to many species other than just pheasants.

I frequently drive through the Flint Hills area, and the everyday, ongoing destruction of habitat is appalling. The trend now seems to be the wholesale destruction of a great many of the old hedgerows, and it seems that even the smallest stands of timber are disappearing frighteningly fast.

Even by looking beyond the immediate issue of habitat destruction, some of the younger land managers might do well to remember why their grandfathers planted the shelterbelts in the first place -- to keep Kansas topsoil out of Nebraska.

May I also send along my compliments to Mike Blair. I've been a commercial photographer for nearly 20 years, and I've seen a great deal of work in everything from portraiture to nature photos. Mike's work is among the few that consistently knocks me out. Simply fabulous.

S.C. Dixon
Emporia

Coyote Attack

Editor:

On Feb. 13, Todd Barker and I were calling coyotes in a pasture spotted with sagebrush. The wind was out of the southeast. I was facing southeast behind a clump of sagebrush, and Todd was about 30 yards south of me facing south.

I had been blowing on a jackrabbit call for only a few seconds when I saw movement. Just as I looked around, a coyote came at me from the east side of the sagebrush. I threw up my left arm to keep him from hitting me in the face, and he landed with his mouth clamped around my arm and his feet kicking me in the left side. The next thing I knew, I was on top of him and had his head pinned on the ground.

I was afraid to let him up because he was good and mad, and I thought he would come back at me. I called to Todd to come help me. As he came closer, he saw that I was lying on the ground, but at first he couldn't see the coyote. When he saw the coyote tail sticking out from under me, he could hardly believe what he was seeing.

Since we both only had our high-powered rifles with us, Todd asked me what we were going to do. I had a pocket knife in my pocket, but of course I couldn't get to it, so Todd had to dig the knife out of my pocket. He then lay down on his stomach, got up under my left arm and cut the coyote's throat while I held it until it was dead. At the time it was a little scary, but we both had a good laugh after it was over.

The coyote punctured my arm pretty deep in two places. I had on a flannel long-sleeved shirt and a heavy hunting coat, but the teeth went through all of it to my arm. When we got home and I was telling my wife the story, she thought it best that I get a tetanus shot, so I saw a doctor and got a shot. The doctor told me to call our vet as soon as we got home, which I did. We had the coyote tested for rabies, but it was negative.

Todd and I still enjoy coyote calling together and have gotten quite a few since this happened, but not in the same way. The nurse said she thought the moral of the story is that "grown up men shouldn't sit out in a field behind bushes acting like jackrabbits."

Byron H. Carr
Ulysses

Bird Seed Questions

Editor:

In the March/April issue of KANSAS WILDLIFE AND PARKS magazine (Page 41) I was interested in the article entitled "The Right Seed." I beg to differ with the 1980 report you quote. I used to feed niger at 99 cents a pound.

Then I noticed a decline in the number of American goldfinches that frequented our feeders. I asked someone why they didn't like my niger, and he replied that they liked what other people were feeding better. When I asked what that might be, he said, "Sunflower chip, at 49 cents a pound." I have since been feeding only sunflower chips in four feeders and black oil sunflower seeds in two.

Also, I have recently read that the house finch, which was illegally captured and sold in the East, has worked its way west, and the native type on the West Coast have met them in their eastward migration. We now have house finches year round.

Cecil M. Howard
Olathe

Dear Mr. Howard:

The article you mention does not claim that niger is the only seed that attracts goldfinches, only that it is one favorite of these birds and that it reduces competition from other birds that don't care for niger.

You are absolutely correct about the current status of house finches. (See article on Page 41.) --*Shoup*

New York Reader

Editor:

I have renewed a subscription to your magazine. I was introduced to it through a gift subscription. The magazine is excellent, and I enjoy it, each and every issue.

There is only one criticism possible, and it concerns Mike Blair. I am amazed at the range and breadth of his nature photographs. The complaint is about your masthead: Blair shouldn't be "staff photographer." He should be "best photographer" or "chief photographer."

Oscar W. Ruiz
New York, NY

Dear Mr. Ruiz:

Although he is not listed as either, Mike Blair is both. --*Shoup*

Thanks For the Ink

I would like to thank you for making such a fine magazine as KANSAS WILDLIFE AND PARKS available on recycled paper printed with soy ink. My chemical sensitivities have prevented me from enjoying many magazines printed with petroleum inks; they make me ill just seconds after opening them.

Please continue to use the soy-based ink so that I may enjoy your magazine in the future.

Martha Rall
Wichita

Furadan Response

Conservation officer Merle Heskett's opinion in the issues section of KANSAS WILDLIFE AND PARKS ("Furadan Threatens Wildlife," Jan./Feb. 1992, Page 36) is typical of the mindset towards agricultural chemicals. It was poorly researched and uses hearsay evidence and scare tactics to present a very unreal scenario to the reader.

Furadan is a very effective insecticide/nematicide when used according to the label. It is not labelled for the use of controlling predatory animals. Any such use is a violation of the law, and these people should be prosecuted, not written up as rumors in a fine magazine.

Furadan does not progress to four or five "victims" in the food chain as the organochlorines such as DDT did [does]. Its mode of action affects the nervous system as do most insecticides and cannot be identified by a distended raptor.

There is a very extensive network of agricultural professionals across the state and counties to ensure proper usage of ag chemicals, and I suggest that anyone having questions should contact them about these products.

Dan Filbert
President, Kansas Association
of Independent Crop Consultants
Seward

Dear Mr. Filbert:

Merle Heskett's article dealt only with carbofuran, not with agricultural chemicals in general, although other ag chemicals concern the public. I would argue, however, that legitimate concern about the misuse of dangerous chemicals can hardly be called "scare tactics." As suggested by the following letter from the makers of Furadan, the problem of Furadan misuse is indeed real.

Concerning the secondary effects of carbofuran poisoning, Heskett's article did not state that this substance is a persistent chemical that works its way up the food chain, only that successive poisoning can occur from one animal ingesting a poisoned animal. To put this in perspective, I quote the Furadan package label:

"This pesticide is toxic to fish, birds and other wildlife. Birds feeding on treated areas may be killed. Birds killed by carbofuran pose a hazard to hawks and other birds of prey; bury or otherwise dispose of dead birds to prevent poisoning of other wildlife."

The label further details the dangers of this chemical:

"Carbofuran is a chemical which can travel (seep or leach) through soil and can contaminate ground water which may be used as drinking water. Carbofuran has been found in ground water as result of agricultural use."

With these facts in mind, we must also remember that carbofuran can be applied through aerial application, a process that can affect non-target areas through drift.

Heskett does not suggest that all ag chemicals use be stopped. In fact, he makes the point in his final paragraph that most farmers in his region are aware of the dangers of Furadan and make limited use of it. Many chemicals, however, are toxic beyond need and dangerous to the environment. All chemicals should be used according to the labelled purposes. --*Shoup*

Editor:

I agree with the overall purpose of the article entitled "Furadan Threatens Wildlife." However, the article is unfair to the large majority of Kansas farmers who have used Furadan since 1969 in accordance with its labeled instructions versus the minority of farmers who may not have used it properly.

Proper use of Furadan has provided an excellent tool for insect and nematode control to the sorghum, alfalfa and corn growers of Kansas. I stress proper use.

FMC Corporation does not support use that is not in compliance with the label directions for any of our products. Indeed, FMC has fully cooperated with wildlife departments in pursuing and aiding in the prosecution of illegal use of our products. It is unfortunate that illegal use results in this type of reporting. I have attached a copy of a proactive letter dated May 31, 1991, that FMC sent to dealers in states where we learned about our product being used for predator control. [This letter states that FMC "products are being used for intentional baiting of predatory animals."]

Regarding the incident in Jewell County where hogs were evidently accidentally poisoned, without having additional details, it is difficult to comment. I would be interested in additional information. I would point out that federal law requires that pesticides be kept in their original containers to help avoid accidental poisonings.

FMC welcomes the opportunity to work together on issues such as that raised by this article so that valuable tools are not lost and the potential for adverse effects on the environment are reduced as much as possible.

Ted R. Warfield
Technical Service Representative
FMC Corporation
Omaha, Nebraska

Better Bird Seed

Editor:

This letter is directed to the various producers of bird feed. Most of the birds I see around my feeders are bluejays, cardinals, juncos and some types of sparrows and an occasional chickadee. I've noticed this year that all the bags of bird feed I've gotten have both milo and wheat in them, along with millet. The bluejays and cardinals eat mostly sunflower seeds.

All of them seem to scratch or kick out the wheat and milo; there's a lot of it on the ground around the feeders. If the wheat and milo could be put through a grinder, I'm sure it would be eaten better.

A couple of years ago, I purchased some feed that had ground up corn in the mixture, and that seemed to be eaten. I hate to see the wheat and milo wasted like this.

Dean Cassity
Junction City

Game Warden To CO

In Kansas and most other states, law enforcement officers charged with protecting natural resources traditionally have been referred to as "game wardens." However, as man's activities increasingly affect the environment, the demands on these officers have become more complex. Modern wildlife officers do much more than track down game poachers. They patrol parks, investigate threatened and endangered species violations and inspect game breeders. They also help enforce pollution laws.

To reflect this changing responsibility, the Department of Wildlife and Parks now calls its enforcement officers "conservation officers," or COs. In keeping with the spirit of this expanded mission, the Department's Law Enforcement Division has also renamed its law enforcement hotline program. Formerly called "Operation Game Thief," the program is now called "Outdoor Alert." Witnesses to natural resource abuse of any kind are encouraged to call 1-800-228-4263.

I asked Doug Sonntag, Law Enforcement staff assistant, if he could list a few cases that reflect this expanded mission. It didn't take long. The following "list" is Doug's reply. --*Shoup*

1) Vanderman Oil Company, Neosho Falls, was charged May 31, 1991, in U.S. District Court for taking 24 protected migratory birds. CO Don Clarke, Yates Center, and U.S. Fish and Wildlife Service (USFWS) agent Case Vendel recovered feathers, bones and carcasses of the birds from an uncovered open oil sludge pit owned by the company.

Scientist at the Museum of Natural History at Kansas University identified the bones of two wood ducks, one barred owl and one red-tailed hawk among the remains.

On Feb. 5, 1992, the company paid $2,050 for the violations. Vendel said the company had been warned five years earlier about the same pit.

2) Koch Materials Company, Salina, was charged June 15, 1991, for the deaths of 14 Canada geese. The geese had landed in a tar pit owned by the company. Nearby citizens watched as the geese floundered helplessly. The Salina police were called, and they contacted CO Tom Swayne, Lincoln, and several geese that were still alive had to be destroyed. CO Greg Salisbury, Salina, followed up the investigation.

Charges were filed in U.S. District Court, and on Jan. 8, 1992, the company paid a $1,300 fine and placed netting over the pit.

3) CO Larry Stones, Kirwin, investigated an open sludge pit in Sept. 1991 and found a great horned owl carcass. Baird Oil Company, Logan, was subsequently charged for the death of the bird. On Feb. 5, 1991, the company paid a $325 fine and eliminated the pit.

4) CO B. J. Thurman, Elkhart, also inspected an open sludge pit in Sept. 1991 and found two dead meadowlarks. On Feb. 5, Roemer Oil Company, Elkhart, paid a $400 fine for the violation. They have covered the pit with netting.

5) On Feb. 28, 1992, Susmio Oil Company, Yates Center, paid $550 for the deaths of four migratory birds on one of its open sludge pits. Agent Vendel and CO Don Clarke had investigated the pit and found the remains of a barred owl, a meadowlark, a red-tailed hawk and a red-winged blackbird. --*Doug Sonntag*

Officers Blanket Perry

Throughout the year, the Kansas Department of Wildlife and Parks targets areas for a concentrated inspection of sportsmen or boaters. Such activity, called "selective enforcement," is usually conducted in an area of high outdoor activity or because of complaints about illegal activity. Selective enforcement is a valuable tool for ensuring compliance with wildlife laws and for reducing accidents.

On Feb. 1-2, in response to complaints of length and creel limit violations, Department conservation officers conducted selective enforcement on Perry Reservoir. Exceptionally warm weather had kept ice off the lake, and fishermen had been out in force since Christmas. Seven officers, one on the bank and six in three boats, checked 119 boats and 293 fishermen during the two-day operation. Thirty-three citations and 22 warnings were issued.

Perry (along with Melvern and Pomona) is one of three reservoirs in the state with a 10-inch length limit on crappie, and five of the citations were issued for possession of crappie under the length limit. Other fishing violations included the following: three, fishing with more than two poles; four, fishing with no license; three, processing fish on the water; and one, over the creel limit.

Seventeen of the 33 citations were for boating infractions, including no life jackets, expired boat registration, no fire extinguishers and wrong numbers on a boat.

When asked about the rate of compliance in this operation, regional Law Enforcement assistant supervisor Rob Ladner was upbeat.

"Fishing compliance was good," Ladner said, " but this is a good reminder that boating laws apply to fishermen, too."

More selective enforcement operations can be expected throughout the state this spring and summer. Similar activities are also conducted to enforce game laws. --*Shoup*

Harry Retires

The first decoy deer in Kansas, dubbed "Harry" by its creators, was retired last winter to the Pratt Nature Center after four years of distinguished service. Conservation officers Dennis Knuth and Dave Ellis did the original taxidermy work on Harry in 1987.

At that time, no funds were available from the Department for the expense of building a deer decoy, so the officers improvised and built their own from scrap material. An old piece of boat dock styrofoam was used for the main body. A rectangular piece was cut out and carved into the body shape. The legs were wrapped with excelsior and string. The head and neck were made from an old sneak-mount head that was modified and turned up at a higher head position. The deer was designed to be set in the field 80-100 yards from a roadway. It looked kind of rough, but illegal hunters went for it.

Harry was first used during Kansas deer season on Dec. 5, 1987, in Wilson County. Six violators were apprehended that morning, resulting in 12 citations. The next weekend in Anderson and Montgomery counties, 22 citations were issued for illegally shooting at the decoy.

Harry's last case was made on Friday, Dec. 13, 1991, in Cherokee County. In its four years of service, the decoy was responsible for apprehending more than 130 violators and the issuance of more than 390 citations. --*Dennis Knuth, CO, Independence*

Cedar Bluff's Future

In the early 1960s, farmers below Cedar Bluff Reservoir formed the Cedar Bluff Irrigation District and contracted with the U.S. Bureau of Reclamation to secure irrigation water from the reservoir, which the Bureau owns. However, by the late 1970s, three factors combined to reduce Cedar Bluff's water level to a point that makes irrigation impossible: groundwater mining upstream from the reservoir, improved farming practices that prevent runoff, and drought.

The Irrigation District had incurred a large debt for water it would likely never receive.

In 1989, it appeared that the Irrigation District would soon gain relief from this unfortunate situation. To help relieve the burden on irrigators and provide greater wildlife and recreation opportunities in the area, the Kansas Department of Wildlife and Parks signed a contract with the Bureau, the Irrigation District and the Kansas Water Office assuming a portion of the Irrigation District's debt in exchange for the right to reservoir water. However, the contract required U.S. congressional approval, and a clause stated that this approval must come within three years.

Three years passed; Congress failed to approve the agreement; and the contract subsequently expired. Now the Bureau and the Irrigation District want Wildlife and Parks to extend the contract.

Originally, the agreement looked good for all parties. The Irrigation District could relieve its debt; the Bureau could recoup a portion money lost because it could no longer deliver water to the Irrigation District; and the state would gain a wildlife and recreation area. Unfortunately, Cedar Bluff Reservoir has dropped an additional 12 feet since the 1989 agreement, and future water levels are uncertain.

For this reason, the Department of Wildlife and Parks asked the Bureau to assess future reservoir water flows before extending the contract.

"We don't want to put ourselves in the position of paying for water that won't be there," says Wildlife and Parks Secretary Jack Lacey. "Once we have a reasonable, scientific assessment of Cedar Bluff's future as a viable reservoir, then we can decide if we want to extend this contract. Any action we take must benefit our constituents and the natural resources in the area."

All parties will evaluate the contract in lieu of more water-flow information. --*Shoup*

Corps Deal Nixed

On April 14, Jack Lacey, secretary of the Department of Wildlife and Parks, ended negotiations with the U.S. Army Corps of Engineers over the possible transfer of Corps-operated recreation areas to the Department.

"At this time, the proposed financial models, management plans and payment of up to four years of the Corps' annual operations and maintenance costs to Wildlife and Parks do not represent the best interests of Kansas citizens," Lacey said.

Newly-acquired areas would have been operated with interest from a one-time Corps payment to the state, plus user fees in the parks. --*Shoup*

Endangered Support

A national poll conducted by the polling team of Greenber-Lake and the Tarrance Group indicates that 66 percent of voters in every region of the country support the Endangered Species Act. Furthermore, a majority also support efforts to protect endangered species even at the expense of jobs.

The poll, commissioned by The Nature Conservancy and the National Audubon Society, was conducted in December 1991, at the height of the recession. The results indicate that voters equate environmental health with long-term economic health and are willing to make short-term sacrifices for long-term goals. Furthermore, those polled expressed doubts that species protection costs jobs in significant numbers.

Even in areas of the West traditionally most sensitive to the "jobs versus the environment" argument, majority support for the Endangered Species Act remains. Nationwide, partisan identification is scarcely relevant, with 66 percent of Democrats and 65 percent of both Republicans and independents saying they support the act.

Additionally, 73 percent say a candidate's stand for protecting endangered species is an important reason for support. Only 13 percent say it is a reason to oppose a candidate.

The Endangered Species Act was passed in 1973 and has saved numerous species from extinction and prevented the decline of threatened wildlife in the U.S. as well as abroad. The Act must be reauthorized in 1992 to remain in effect. --*The Nature Conservancy*

Weed Zaps Bugs

A viney weed from the Philippines called makahuhai is the source of an extract that shows promise as a biological insecticide. Applied to the roots of rice seedlings, a solution containing the extract helped seedlings ward off brown planthoppers, green leafhoppers and stemborers. Use of the extract could cut in half the amount of conventional insecticides used, according to University of Philippines scientists. --*The Furrow*

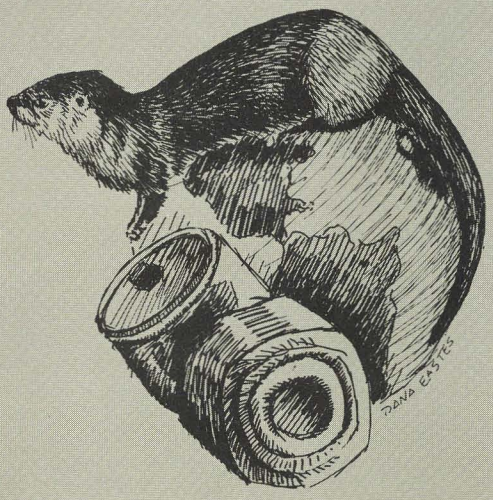
Recycle For Wildlife

Eighty percent of our garbage is buried in a dwindling number of landfills. Ten percent is incinerated, and only about 10 percent is recycled. This garbage is composed of 41 percent paper products, 18 percent yard waste, 9 percent metals, 8 percent food, 8 percent glass, 7 percent plastic and 9 percent from other sources.

The need to reuse and recycle has become a necessity as our ability to generate garbage has exceeded our capacity to properly dispose of it. Some progress is being made, but only 25 percent of our aluminum,

23 percent of paper, 9 percent of glass and 1 percent of plastics are being recycled. The commitment to recycle needs to be made by federal, state and local governments, but most of all by ordinary citizens. We need a system to recycle our own household trash -- sort it, store it and transport it to recycling centers.

What does this have to do with wildlife? Wildlife needs habitat, and habitat is where we get the trees to make paper, the bauxite ore to make aluminum and the great amounts of water needed in the manufacturing of these products. The more we recycle, the more we conserve and protect our natural resources and help wildlife survive. --*Utah's Nongame Bulletin*



Comeback For Trees

If you've considered planting a shelterbelt or a living snow fence but decided it wouldn't be worth the hassle, you may want to reconsider. New technology has made it easier to get trees started in tough environments. There's also plenty of evidence that planting trees can be well worth the effort.

Better yields. Several studies have disproved the old argument that field windbreaks take too much land out of production. Designers now know that just a single row of cedar trees may be all that's needed to provide adequate protection for crops. Usually, yield increases more than make up for any production lost on land given up for trees.

Experts cite several reasons for improved returns from cropland protected by windbreaks. One is that trees and shrubs slow wind-driven snow, causing it to fall evenly across a field instead of blowing on to pile up somewhere else. In summer, trees block hot, dry winds that steal needed moisture from crops. The combination of extra moisture from snow and reduced evaporation during the cropping season can make a big difference in yields in areas where precipitation is sparse.

In addition, a properly designed and maintained windbreak can protect soil from wind erosion for a distance of up to 20 times the height of the trees, according to experts with the Soil Conservation Service (SCS).

The economic returns from a windbreak can be dramatic. A recent study in Nebraska showed that a field protected by a windbreak produced 15 percent more wheat than a similar field that was not. Estimates projected an extra $22,000 in net income from each 160 acres of protected land over the life of the windbreak.

In several states, projects have been launched to study and promote living snow fences. These are basically special tree windbreaks designed to replace conventional snow fences.

According to the SCS, living snow fences should last about 10 times longer and capture as much as 20 times more snow than wood fences. They're also projected to cost less than one-tenth as much to install and maintain. In addition, trees provide shelter and food for wildlife and are pleasing to the eye.

New technology. Recent technology is making it possible to establish trees in places where farmers probably would not have considered planting them before. A new weed barrier made of polypropylene fabric helps get field windbreaks started. The 6-foot-wide material is unrolled along a shallow, V-shaped trench and anchored in place with soil on each side. Then trees and shrubs are planted in small holes punched in a row down the center of the run.

The material is guaranteed to hold up for five years -- about the time it takes a windbreak to become well established. The slightly porous mat virtually eliminates competition from weeds and grasses and keeps most soil moisture from evaporating.

Any precipitation that falls on the mat is channeled directly to the trees and shrubs. The hope is that the material can be used to establish trees without irrigation. So far, it seems to be working. The survival rate of trees and shrubs in demonstration projects has been about 95 percent.

Help available. A variety of technical assistance and cost-sharing programs are available. The SCS is a good place to start looking for information [as are the Department of Wildlife and Parks and the K-State Extension office]. --*The Furrow*

Environmentality

Unless we change direction, we are likely to end up where we are headed. --*Chinese proverb*

Right To Know

The federal law that requires large companies to report the amount of toxic chemicals they release into the environment every year is proving to be a powerful tool for persuading the biggest polluters to clean up their acts. In fact, the Toxics Release Inventory has done more to reduce toxic air emissions than the 20-year-old Clean Air Act, says Deborah Sheiman of the Natural Resources Defense Council.

The inventory of emission data is available in more than 4,000 libraries nationwide and is widely used by environmental groups to compile lists of the worst polluters. Eager to escape such fingerpointing, industrial giants such as DuPont have made public commitments to reduce emissions. Conservation groups, meanwhile, are trying to persuade Congress to require companies to provide information on 500 chemicals in addition to the 300 they must now report. --*International Wildlife*

Artwork by Gene Wineland

Gene is an artist and art instructor from Pratt. His images deal with nature and man's destruction of the environment.

hunting

Youthful Bond

A cool northern wind blows across your face as you lower the tailgate to your truck. The hound dogs become restless as you unlatch the doors to their box. You release the dogs and head them up the creek bed.

Overhead, the moon peaks through the clouds as you listen to the treetops rustle in the wind. A V-shaped formation appears in the moonlight; the sound of giant Canada geese breaks the silence of the night. Joining the chorus of the geese, a pack of coyotes sounds off.

In the distance, you hear the bellows of your old black and tan coon hound striking the track of an old weary raccoon. You speed up your pace as you try to catch the hounds. As the hounds warm the track, their bark becomes more rapid, as does your heartbeat. Suddenly, there is a silence and you stop. Experience tells you that your hound is trying to locate the tree in which the coon has retreated. Suddenly, you hear the familiar chopping bark of the dogs, and you run to the sound. When you reach the dogs, you notice two big hollows in the top of a big cottonwood, and you know that this old coon is safe. You reward your dogs with praise and continue the hunt.

When I was a freshman in high school, my parents and I went to eastern Kansas where I bought my first coon hound pup, and a special bond began to grow between my father, me and my hound. For twelve years, I followed my dog through such chases, until he finally died. I spent many evenings with my father following my dog down a creek, learning to identify tracks, learning direction from the stars, and being taught about nature and its complexities.

Looking into the shadows of a cold winter night, you can see your breath while the struggle of life takes place between the coon and the hound in the creek below. You have a sense of pride for how the hound works and empathy for the racoon, which gives such a good race.

I sometimes have to think back to those times, not so much to remember the hunt, but to escape the fast-paced world. These moments allow me to realize how complex our natural world is, and to cherish the times many of us take for granted -- a sunrise or sunset, the sound of grass as it blows in the breeze, the bark of a coyote on a quiet Kansas evening.

Visiting our cities, I often wonder if the people who are surrounded by concrete ever know what they are missing. As for me, I hope the days I spent following my hound will always be a part of me. *--Dan Hesket, conservation officer, Russell*

Accidents Down

For twenty years, since hunter education courses became widespread, the number of hunting accidents has been steadily decreasing. According to recent statistics, hunting has become one of the safest activities in the United States. Hunter Education Association figures revealed 146 hunting-related fatalities in 1990 -- less than half of the 350 deaths attributed to bathtub drownings each year.

Other statistics from a National Safety Council Report put the issue of hunting and safety in better perspective. In 1990, the U.S. reported 93,500 accidental deaths from the following causes: motor vehicle accidents, 46,300; falls, 12,400; poisoning, 6,500; drowning, 5,700; fires, 4,300; choking, 3,200. All firearms-related deaths accounted for 1,400 of this total, less than 2 percent. Of these, 146 were hunting-related.

According to the report, the number of accidental firearms deaths declined more than 41 percent from 1970 to 1990 -- this, with an increasing population and gun ownership.

The trend in Kansas apparently reflects the nationwide picture, as well. According to Steve Stackhouse, hunter education coordinator, only 36 hunting-related accidents were reported in 1991, the lowest since 1986. Unfortunately, one of these was a fatality.

"I believe that such a low accident rate can be attributed to the hard work of our volunteer hunter education instructors," says Stackhouse. "The entire hunting fraternity owes them a debt of gratitude."

According to Stackhouse's annual hunting accident report, one-third of Kansas hunting accidents occurred when one shooter fired at a flushing bird and did not see that a person was in the line of fire. Other hunting-related accidents included factors such as the victim being out of sight of shooter and shot ricochets. One victim was mistaken for game.

Six accidents occurred when hunters were not actually shooting but were loading or mishandling their guns in cars. Two accidents occurred during illegal activity.

Nearly 20 million hunters and shooters have received safety instruction through state accredited hunter education programs. *--Shoup*

Squirrels, Antelope

Squirrel season opens June 1 and runs through Dec. 31. The daily bag limit is five and the possession limit 10.

Application for firearms antelope permits must also be made in June. The application period for the firearms season is June 1-12. The season will run Oct. 2-5 with a bag limit of one antelope of either sex. Three antelope units will offer a total of 180 firearms permits. Antelope archery permits may be purchased from June 1-Sept. 18. The archery season dates are Sept. 19-27. Unlimited antelope archery permits, one per hunter, will be available. The bag limit is one antelope of either sex. *--Shoup*

fishing

Saugeye Ancestry

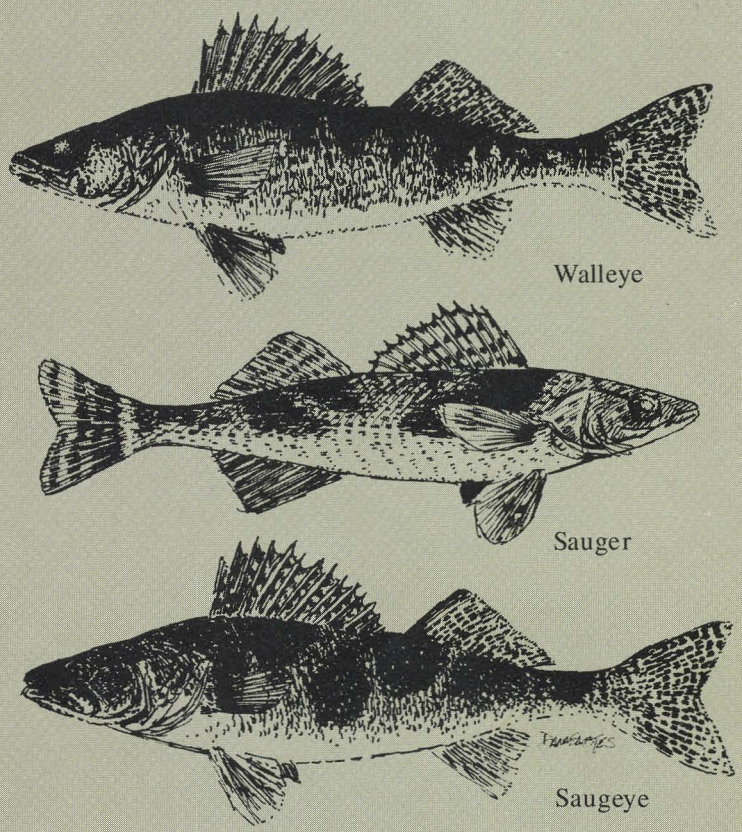
For many years, walleye fishing in Kansas has been a favorite of devout anglers. However, walleye fishermen may be confused if they catch either of two fish that resemble a walleye. Both the sauger and the walleye/sauger hybrid -- called a saugeye -- look similar to walleye.

The resemblance between walleye and sauger is quite important for fishermen at Melvern Reservoir. There is an 18-inch limit on walleye at Melvern but, because of their slow growth rate and naturally small size, the sauger minimum length limit is 15 inches. This makes it essential for fishermen at Melvern to be able to identify both walleye and sauger.

Fortunately, a check of a few key physical characteristics will quickly identify the catch. The front dorsal (top) fin of a walleye is a dusky grey color with a distinct black patch between the last two spines. (It may be necessary to extend the dorsal fin by gently pulling the front edge forward to expose the markings.) The sauger dorsal fin has rows of round spots with no dark patch. In addition, sauger have dark blotches on their sides and gill cover scales, which are absent on a walleye. Walleye also have a distinct white tip on the tail.

Walleye and saugeye, on the other hand, look so much alike that identification is difficult. This is not a problem for anglers, however, because length limits are the same for both species where they are found together and because the daily creel limit for walleye, sauger and saugeye is 5 fish -- single species or in combination. Council Grove and Elk City reservoirs contain walleye and saugeye, with a 15-inch minimum length limit for either fish. Sebelius Reservoir has an 18-inch limit for both walleye and saugeye.

Traditionally, Kansas anglers have shown great cooperation with length limit programs designed to improve the quality of their sport. A little time spent in confirming the species of fish caught should pay dividends in improved walleye fishing and the opportunity to catch an occasional sauger.



If you are uncertain about identification of these species, check with the reservoir's state park office before fishing. *--Marty Burke, wildlife information representative, Topeka*

Pond Weeds: Love 'em Or Hate 'em?

Everyone hates to pull slimy, green aquatic vegetation (more commonly called moss) from a lure. Many pond owners spend considerable time and effort ridding their private fishing holes from the hook-fouling weeds. But the fact is, most shallow ponds have heavy aquatic vegetation by midsummer, and generally, weedy ponds provide the best fishing, especially for bass.

Aquatic vegetation is an integral part of a pond's ecosystem, providing cover and food for insects and small fish and recharging the water with oxygen. Bass love the weeds. The vegetation is not only where most of the food is, it also provides the bass with natural hiding spots for ambushing prey. So, next time you pull a big string of water weeds from your lure, instead of cussing the stuff, modify your fishing method to the weedy water and catch more fish.

Obviously, heavily-weeded, shallow ponds aren't good places to throw crank baits with multiple, exposed treble hooks. But there are some lures that work well in weeds. Any weedless rig, with the hook point protected, is a good choice, and the plastic worm is one of the most popular. The worm, rigged Texas style, can be fished in virtually any weed cover. There are a few tricks, however, that will make the plastic worm a better bass catcher. In very heavy weeds, the worm and slip sinker may settle too deeply into bottom weeds for the bass to even find it. To put the worm above bottom weeds, either peg the sinker 2-3 feet above the worm with a tooth pick, or tie a barrel swivel just below the sinker, then tie 2-3 feet of leader down to the worm (called a Carolina rig). This allows the worm to be fished near the bottom, but while the sinker drags through the weeds, the worm rides just above them.

If the bass are in less than 4 feet of water, you can fish the worm without a weight. Simply rig it Texas style without the slip sinker, and work it slowly over the top and through weeds. On ponds with surface weeds, such as duck weed or algae, a twister-tail worm rigged without a weight is a dynamite surface lure. Retrieve the worm across the top of the weeds just fast enough so that the tail twists on the surface. In duck weed, strikes are violent and exciting as fish blow up through the vegetation trying to locate the disturbance.

The spinnerbait is also a great lure to work in weedy places. Because the hook is turned up, the spinner bait is less likely to foul. In shallow, clear ponds, the spinner bait is easy

to see, and you can visually steer it around heavy weed patches. But hang on as the throbbing blade passes a dark patch of vegetation, it may get ambushed by a hiding largemouth. If the spinnerbait hangs up on weeds, don't despair. Simply yank the lure quickly though the water to free the hook.

The spinnerbait can also be effective in deeper weeds. In clear ponds where deep weed growth is most likely to occur, you can generally see pockets or holes in the vegetation. As the spinner comes over one of these holes, pause the retrieve and let the lure free fall. Bass lurking in the dark pockets will often engulf the falling spinner.

Other weedless lures that catch bass include the soft surface plugs with the hooks upturned or protected by weed guards, weedless spoons and the jig-and-pig. Generally, the jig-and-pig combination will catch bigger bass, but you can have the problem of the heavy jig burying in the weeds. To fish the jig-and-pig in heavy weeds, use a lighter jig head and a larger trailer or pork rind to make it more buoyant. Rather than hopping the lure across the bottom as is traditionally done, slowly "swim" it above and through the weeds, letting it free fall into any open pockets. This swimming method can be deadly on big bass.

The best way deal with pond weeds isn't to exterminate them or avoid them. You can't beat 'em so you might as well join 'em. Learn to fish in the weeds, and you'll find more bass than you can shake a stick . . . er . . . pole at. *Miller*

Fishing Forecast Phone

Each fishing season, the Kansas Department of Wildlife and Parks anticipates the needs of anglers from across the state by furnishing up-to-date fishing information. One of the most popular and effective information sources is the weekly fishing report hotline, (316) 672-3158.

Callers who phone this number receive a breakdown on fishing activity for each major reservoir in the state. Prospects for white bass, crappie, walleye, channel catfish, black bass, striped bass, flathead catfish and wipers are included. These reports are updated weekly, so fishermen can get the latest on their favorite reservoirs with a weekly phone call.

The fishing hotline number will be in effect from April 1 through September 1. This is a toll call. --*Shoup*

UNDER CURRENTS

SON BREAKS WRITER'S BLOCK

by Mark Shoup

I'm sitting at my computer, trying to write this column, when in walks my 4-year-old son, Logan. All he's interrupted is this: *Keeping abreast of the times, it's high time for all thinking people to bite the bullet . . .*

I ask him to sit on my lap.

"I don't like what I'm writing," I say. "Maybe you can help me. What shall I write about?"

"Ninja turtles!" he declares without hesitation.

"I can't write about Ninja turtles."

"But why?"

"Because, it has to be a nature story."

"What is a nature story?"

"A nature story has to do with animals or fish or the outdoors. Now what can we write about nature?"

"Probably Ninja turtles."

"Look, Logan, Ninja turtles are someone else's story, so I can't write it. Besides, there are much better critters than Ninja turtles. Like legless lizards, mudpuppies, barking frogs, hognose snakes, even Olympic salamanders."

"Yuk! Mudpuppies. What are Olympic salamanders?"

"They're little salamanders, kind of like the tiger salamanders we kept last year, only without spots."

Logan looks thoughtful. Now I've got him, I think.

"Do Olympic salamanders have skis?"

"No, Bud," I laugh. "They don't have skis."

There's a long pause, so I begin typing with arms around my son . . . *and nip the tide of impending environmental destruction in the bud.*

"I want you to write me a story about Ninja turtles," he persists. I see this is hopeless.

"Go play in your room."

Logan sighs, then leaves without protest.

I'm worried. Have I failed my child? He's not bombarded with TV. Still, I try to foster a healthy interest in nature, and what do I get?

Ninja turtles.

Logan wanders back into the room with a box of little cars and begins playing quietly in the corner behind me.

Back to the subject at hand, whatever that is. The Wonder of NATURE? The Responsibility of Stewardship?

We cannot follow in the footsteps of our forefathers, letting the earth go down the drain like water off a duck's back.

Ouch! Logan thought mudpuppies sounded foul. I must be reading too many political pronouncements.

"How 'bout snapping turtles and ornate box turtles?" The room's silence is broken. Am I hearing things?

"Snapping turtles and ornate box turtles, Daddy."

I turn around. Logan is looking at me with those spacious hazel eyes, thoughtful, expectant, as if our conversation had never been interrupted. There is hope, I think.

"What do snapping turtles and ornate box turtles do, Bud?"

"They eat spiders," he says, relishing the emphasis on spiders.

"What else do they do?"

"They swim in the water."

"Can you tell me a story about snapping turtles and ornate box turtles?"

Logan stares out the window for a moment, then turns back to me with a look of sudden revelation, eyes wide.

"Loggerhead turtles live in the ocean!" he proclaims.

Then he grabs his favorite hot rod van and crawls out of the room, pushing the van ahead of him and yelling, "Varoom!"

I stare at the computer, dazed, as the van revs its pipes down the stairs to the cry of "Turtle Power!"

I start over: *Obviously, conservationists must learn to listen as well as we preach . . .*

Prairie Center

Originally purchased by The Nature Conservancy, The Prairie Center is a 300-acre oasis of prairie, hardwood forest, ponds and streams in the heart of Johnson County. It is currently managed by the nonprofit Grassland Heritage Foundation and contains 45 acres of undisturbed tallgrass prairie, as well as 75 acres of restored prairie.

Although located in a heavily populated area of the state, The Prairie Center provides a peaceful, natural experience. With more than 150 bird and 100 wildflower species, visitors can look forward to a new surprise every trip -- all this, within a stone's throw of the city.

Self-guided nature trails are open 365 days a year from dawn to dusk at The Prairie Center, and supervised activities during warm weather include nature education classes, programs for school field trips and guided hikes.

For those who have never seen a bald eagle or a prairie dog up close, the Prairie Center offers just such opportunity.

The Prairie Center is located just west of downtown Olathe on 135th Street (Prairie Center Road), one-half mile west of Lake Olathe at Cedar Niles Road. --*The Nature Conservancy*

House Finches: East Meets West

Once upon a time, there was a healthy population of house finches living around ranches in canyons and bottomlands throughout the American West. They lived contentedly until one day in 1939, when a bird fancier in Southern California trapped some of them and put them in cages. The caged house finches adapted well to captivity, thriving on a diet of canary seeds. They did so well, in fact, that the bird fancier trapped more and began selling them as "Hollywood finches" to pet stores in the East. The only problem was that house finches, like other American songbirds, are protected by the Migratory Bird Treaty Act and cannot legally be kept in captivity.

For that reason, one day in 1940 a U.S. Fish and Wildlife Service law enforcement agent raided a pet store on Long Island, New York, where house finches were being sold. But as the agent came in the front door, the store owner was releasing the birds out the back door.

The liberated house finches were seen on Jones Beach, on the southern shore of Long Island, on April 11, 1941, and in May 1943 they were found nesting in Babylon, Long Island.

During the 1940s and 1950s, the house finches did so well in their new Eastern habitat that they began to radiate out along the Atlantic coast, up major river valleys and down highways leading to communities where people maintained bird feeders. By 1961, the population of Eastern house finches had reached Pennsylvania; 1964, Ohio; 1972, Chicago; 1981, Missouri; 1985, Wisconsin; and by 1988 they had spread all the way to the Missouri River at Council Bluffs, Iowa.

Meanwhile, back at the ranch, Western house finches had spread eastward, as if reaching out to their wayward Eastern kinfolk. By the early 1980s, the Western population of house finches had crossed the Rockies and entered western Nebraska, heading east to the Missouri River. In the spring of 1988, after 40 years of separation, the two populations of house finches met on the banks of the Missouri River.

"This was their merging point," Ruth Green of the Nebraska Ornithologist's Union told me. Ruth, a bird bander, writes for the Audubon Society of Omaha. "I have tracked the Western house finches as they spread eastward across Nebraska to the Missouri, and the Eastern population as they spread westward across Iowa to the Missouri."

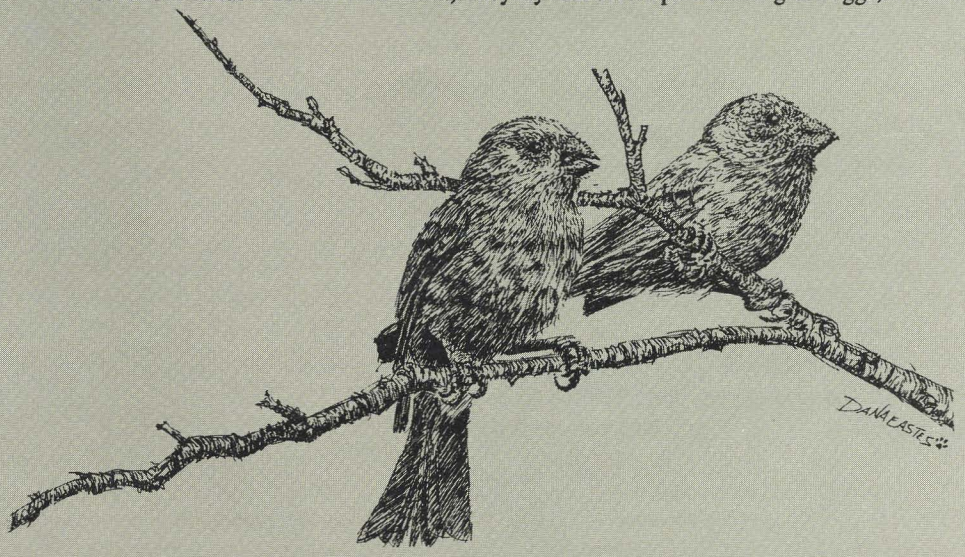
"When they met, did they drive a golden feather into the sand of the river?" I asked facetiously.

"No, but they had an explosion," she said. "The population of house finches in this area has literally exploded. There are house finches all over the Missouri River Valley."

This fairy tale of the house finch is not only true but unique in the annals of North American ornithology. This is the only time a species has been split into two continental populations and then reunited. And it all happened in the past 40 years.

House finch field guide: The house finch, or linnet, is a five- to six-inch-long, heavily-striped sparrowlike bird with red (sometimes orange to yellow, depending on age and diet) on the crown, bib and rump of the males; females and juveniles are streaked brown.

House finches nest in tree cavities, birdhouses and buildings. (I know of one that nested in a leftover Christmas wreath in Wisconsin.) They lay four or five pale bluish-green eggs, which the



female incubates for 12 to 14 days. They commonly raise two or more broods, which leave the nest 11 to 19 days after hatching.

Their diet is 86 percent seeds, including thistle, dandelion and noxious seeds from old fields. In the West, they may cause damage to flowers and fruit in orchards. At feeders, which they often take over, they eat sunflower and niger seeds. --*George Harrison, Sports Afield*

notes

Conservation Awards

On March 7, the Kansas Wildlife Federation presented its annual conservation awards. Winners are as follows:

Wildlife conservationist: Karl Grover, Great Bend, for work as manager of Cheyenne Bottoms; **conservation organization:** Kansas Power and Light, for a variety of energy saving, recycling and pollution control initiatives; **water conservationist:** Verdou and Helen Parrish, Derby, for work to save Spring Creek in Derby; **Land and soil conservationist:** Don K. Wiles, Dodge City, for work as County Extension Agent in Clark and Ford Counties; **forest conservationist:** Doyle Derrick, Hiawatha, for planting of trees and improvement of riparian areas on his land; **outdoor skills instructor:** Larry McAdow, Newton, for years of service as a volunteer hunter education instructor and member of the Hunter Education Advisory Committee; **conservation educator:** Twyla Sherman, Wichita, for 36 years of teaching environmental subject matter; **conservation communicator:** George Neavoll, formerly of Wichita, for contributions as editor of the editorial page of the Wichita Eagle; **youth conservationist:** J. D. Ham, for his activist role in trying to preserve wildlife habitat along Spring Creek in Derby. --*Shoup*

National Catamaran Championships

Aug. 29-Sept. 4, Prindle Catamaran Fleet No. 22 will host the 1992 Prindle Catamaran National Championships at Cheney Reservoir. The prindle, the largest catamaran sailboat made, is designed strictly for racing.

The event has already attracted international attention, with several national champions, Olympians and two world champions entered. Entrants from across the country will be joined by an international cast including entrants from Europe, Australia, South America and the United Arab Emirates.

Even more exciting is the possibility that this event could bring the World Championships to Cheney Reservoir in 1993. This could happen if enough sponsorship can be generated, according to Phillip Swart, vice commodore of Prindle Fleet No. 22.

"We feel we have a good program and a good lake," says Swart. "We have made a bid for the Nationals, which will be held in the United States next year, and there's a very good chance we'll get it. It's between us and Long Beach [Calif.] right now."

Swart adds that although Long Beach is near the ocean, Cheney has excellent wind for sailboat racing. In addition, organizers have made arrangements for recreational vehicles to be available for rental on the lake.

For more information, contact Jim Sammis at (316) 636-6869. --*Shoup*

Boating Guide Available

For the past several years, Kansas boaters have relied upon the Kansas Boaters Guide -- a pocket sized reference manual -- to answer their boating law and safety questions. This manual has now been revised to include all the latest changes in the law, and it's available from the Pratt Operations Office of the Kansas Department of Wildlife and Parks, all regional offices, state park offices and selected marinas and boat dealers.

"This is an excellent book," says Steve Stackhouse, boating education coordinator for the Department. "It should be kept in every boat's glove box. It will answer most questions boaters have about safety and boating in general -- from life jackets to boat operation.

The 48-page boating guide has sections on boat registration, safety and safety equipment, rules of navigation, and regulations. For a free copy, contact the Kansas Department of Wildlife and Parks, RR2, Box 54A, Pratt, KS 67124 (316) 672-5911. --*Shoup*

Kansas Project WILD

Project WILD was brought to Kansas in 1990 through the sponsorship of the Geary County Unified School District. It started as a district pilot program for the Geary County teachers.

In 1990, the Kansas Department of Wildlife and Parks consented to be the state coordinating agency for Project WILD in Kansas. The Department's wildlife education coordinator would serve as the state coordinator.

In April of 1991, a statewide workshop was held in Salina to identify a plan of action to advance Project WILD in Kansas. One of the suggestions that came forth was to divide the state into regions with each region having a regional coordinator to assist in the dissemination of information and materials. The coordinators would also assist in the planning and organizing workshops for teachers and future facilitators.

The first facilitator training workshop was held Sept. 12-14, 1991, at Camp Toma-Shinga, near Junction City. Workshops are now offered frequently to classroom teachers, 4-H leaders and others interested in wildlife education. A Kansas Project WILD information booklet is also available.

All materials in this program are free although the workshops require a $15 fee. For more information, contact the Wildlife Education Coordinator, Kansas Department of Wildlife and Parks, RR 2, Box 54A, Pratt, KS 67124, (316) 672-5911. --*Roland Stein, wildlife education coordinator*

Bowhunter Education

The Ninnescah Valley Bowhunters will offer a bowhunter education program on May 30 at Pratt Community College. All bowhunters, whether novice or experienced, are welcome to attend. The registration fee is $5, including books and handouts. There is no limit to the number of participants.

Contact Jerry Burkhart, 1121 Cedar, Pratt, KS 67124, or call (316) 672-2035 between 8 a.m. and 4 p.m. -*Shoup*

Nat'l Fishing Week June 1 - 7

One of the greatest bargains in the state is coming June 6-7. It's the Kansas Free Fishing and Park Entrance Days. For two days, boaters, fishermen and day campers will have free access to the 24 state parks (overnight camping not included). To ice the cake, fisherman will have a weekend of grace during which they will be able to fish without a license.

Kansas has one of the most diverse systems of reservoirs and waterways in the country, so this is also an opportunity to check out that lake or stream you've always wondered about.

This year's celebration is designed to coincide with National Fishing Week, June 1-7. For more information, contact the state park or Wildlife and Parks office nearest you. --*Shoup*

by Dana Eastes

"The Ballad of Rascal in a box in our garage"

And he can't get home. Oh' no, he can't get home.

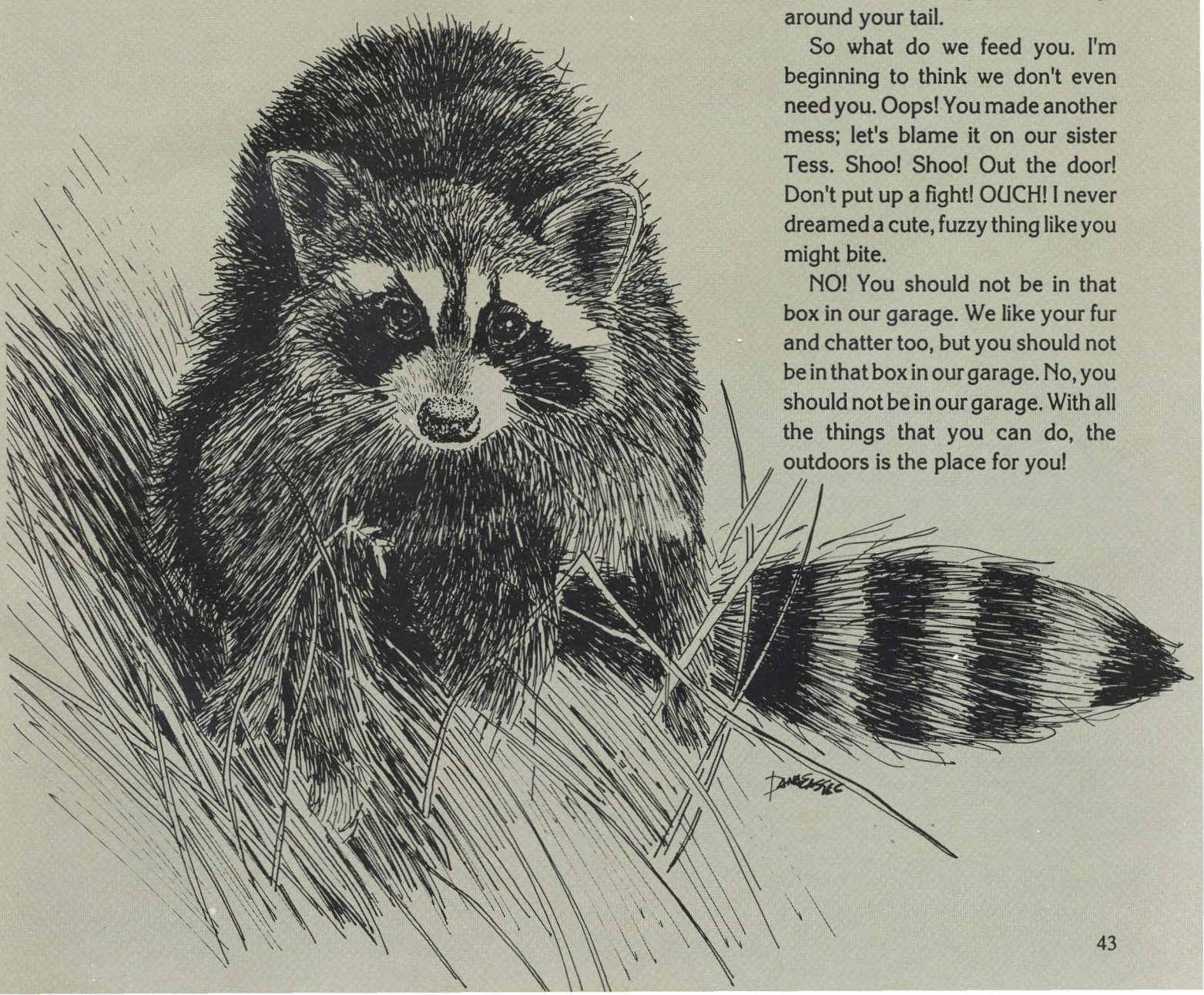
And we found him. He was just a wondering amongst the grass and the trees, cute as you please.

Look over there fellas. He's lost without his mother. Should we pick him up or let him roam? He's so cute and fuzzy, pick him up, pick him up; he needs a home!!! But what should we tell our parents? Oh well, it doesn't matter, he's lost, we'll pay the cost.

We like to listen to you chatter and when you run across the kitchen floor, your feet go pitter patter. You really kind of smell, but it's so fun to feel your fur and squeeze the rings around your tail.

So what do we feed you. I'm beginning to think we don't even need you. Oops! You made another mess; let's blame it on our sister Tess. Shoo! Shoo! Out the door! Don't put up a fight! OUCH! I never dreamed a cute, fuzzy thing like you might bite.

NO! You should not be in that box in our garage. We like your fur and chatter too, but you should not be in that box in our garage. No, you should not be in our garage. With all the things that you can do, the outdoors is the place for you!



Let nature take its course

Kind of a silly song, huh? Silly but true. You probably wouldn't be a bonafide kid if you haven't brought some living critter home to be kept in a box or jar. Still, we soon find out that this wild critter that we've brought to live in our nice home is usually more than we can handle.

Even though you think you're doing a wild animal a favor, you're not. It's a good idea to leave wild animals in the wild. Young animals that look lost and abandoned usually have a parent hiding nearby waiting for you to leave. If you think about it, how would you like it if something picked you up and took you from your parents and the comfort of your home?

The law of nature is survival, eat or be eaten. As cruel as it sounds a small animal that is truly abandoned -- and this is rare -- will be food for another animal's survival, and it's best to let nature take its course.

You should also keep your health in mind the next time you're tempted to take home a wild animal. Even though they may look cute and fuzzy, wild animals carry a number of things that may threaten your health. Rabies can be transmitted from a bite or saliva contacting a human's open wound. The number of rabies cases have greatly increased this year. Ticks can result in lime disease. A small number of cases have been reported in Kansas. This disease mimics a number of illnesses and is hard to diagnose. Not only are you and your family at risk, but so are your pets. Distemper and rabies are the most common illnesses that household pets acquire from wild animals.

Not only could it be harmful to your health, it is illegal to keep most wild animals. All migratory birds are protected by law. People can't resist helping a young bird that has fallen from the nest, but parent birds will continue to feed a fledgling on the ground until it is ready to fly on its own. Often the smallest bird is booted out by the larger ones because of the competition for food. Even if the bird is put back, it will probably lose its battle with the rest of the bunch.

If you come across an injured wild animal and are debating what to do, before you take it home, call the local Wildlife and Parks office in your area. They can give you some good advice on what to do. And the next time you find an animal that you think is abandoned, remember to keep the wild things in the wild. It is a greater thrill to observe a wild animal in its natural habitat than in a box in your garage.

Just for fun.

Silly Song Sing Along

Choose a bird, animal, or reptile. Go to the library and learn some fun facts about the animal you've chosen. Make up a simple rhyming song, using the information you've acquired (just a few lines will do). On a large sheet of paper draw a picture of the critter you've chosen and write your silly song beside the picture. Hang up your pictures for all to see. Go around the room. Each person can read or sing their song and talk about their critter drawing. By doing this, everyone can learn about your animal and you can learn about theirs.

HIGH GROUND

by Mike Blair

A Place To Be

The name of the stream was Crooked Creek. She used to play there, more than 40 years ago, in the icy water that raced through the hollows of northeastern Arkansas. It could have been a trout stream with its swift, clear water and polished gravel. But there were no trout. It was simply home. The place where a kid could go to skip rocks on the water and explore . . . and grow up.

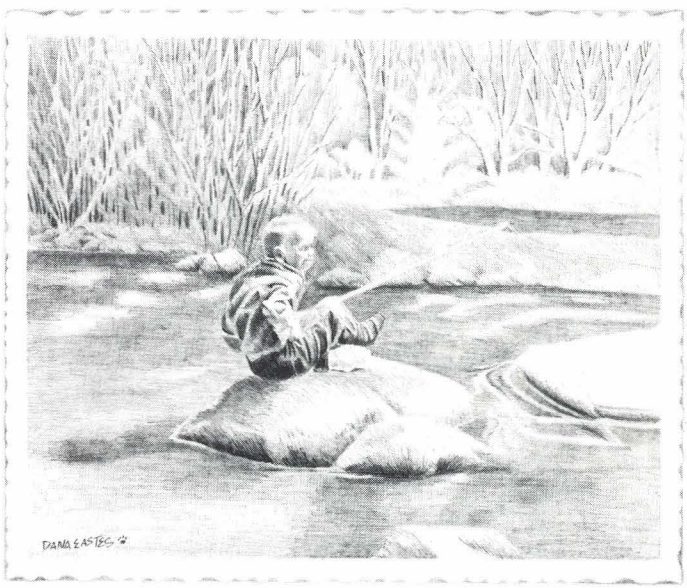
For many years she spoke of the place. Back then, only a decade separated the woman and the river, and it takes a long time to part with the cherished places of childhood. Her words fell on young and eager ears, wanting to learn of her past and wishing to hear of enchanted places. Few held the magic of Crooked Creek, painted in reminiscence.

Times had changed since her early years. Back then, a simple doll was a girl's best friend, and men made a living fishing the river. The mystery of the Ozarks hung in the air at dusk, warning youngsters not to stray. Summer days without shoes toughened bare feet until they flew over mountain gravel without pain. Lungs were strong from climbing the hills. It was a good place to grow up.

Crooked Creek was the focal point of the girl's early life. It invited her to wade through shimmering currents, searching for colored stone treasures. From beneath its rocks, the green flash of crawdads required hours of hunting. The creek was a refuge in times of trouble, whose trees understood the misgivings of an adolescent. Its murmuring song dispelled loneliness and it inspired dreaming. For a time, the creek belonged to the girl.

I was the boy who heard these stories, and the one who told them was my mother. And when I was older, together we visited the mountains of Arkansas and the place she called Crooked Creek.

It wasn't the same as she remembered. A steel and concrete bridge dominated the stream where she had played. Nearby, stores and buildings could be seen, and the sounds of traffic forever displaced the once quiet atmosphere of the forest stream. Curio shops and arcades



lined the scenic highways leading through the mountains. Progress had taken its toll.

In spite of it, she waded again in Crooked Creek. The water was still icy, and the crawdads were still there. Colored rocks still tumbled along the bottom, pushed by the swift water.

But there was a faraway look in my mother's eyes, as she remembered a girl and a creek in another time. The years had brought many changes; she and the stream had grown up, and it could never be the same again.

She hasn't spoken of Crooked Creek since. Time passed, I found a special boyhood place of my own, and years and miles are separating us just as surely. But I understand what she once felt.

I'll remember her creek not as the ordinary place it was, squeezed by the progress of man, but as a special niche once offering pleasures free and simple to a person dear to me.

And someday, I know she'll find such a place again.

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