KANSAS Wildlife & Parks

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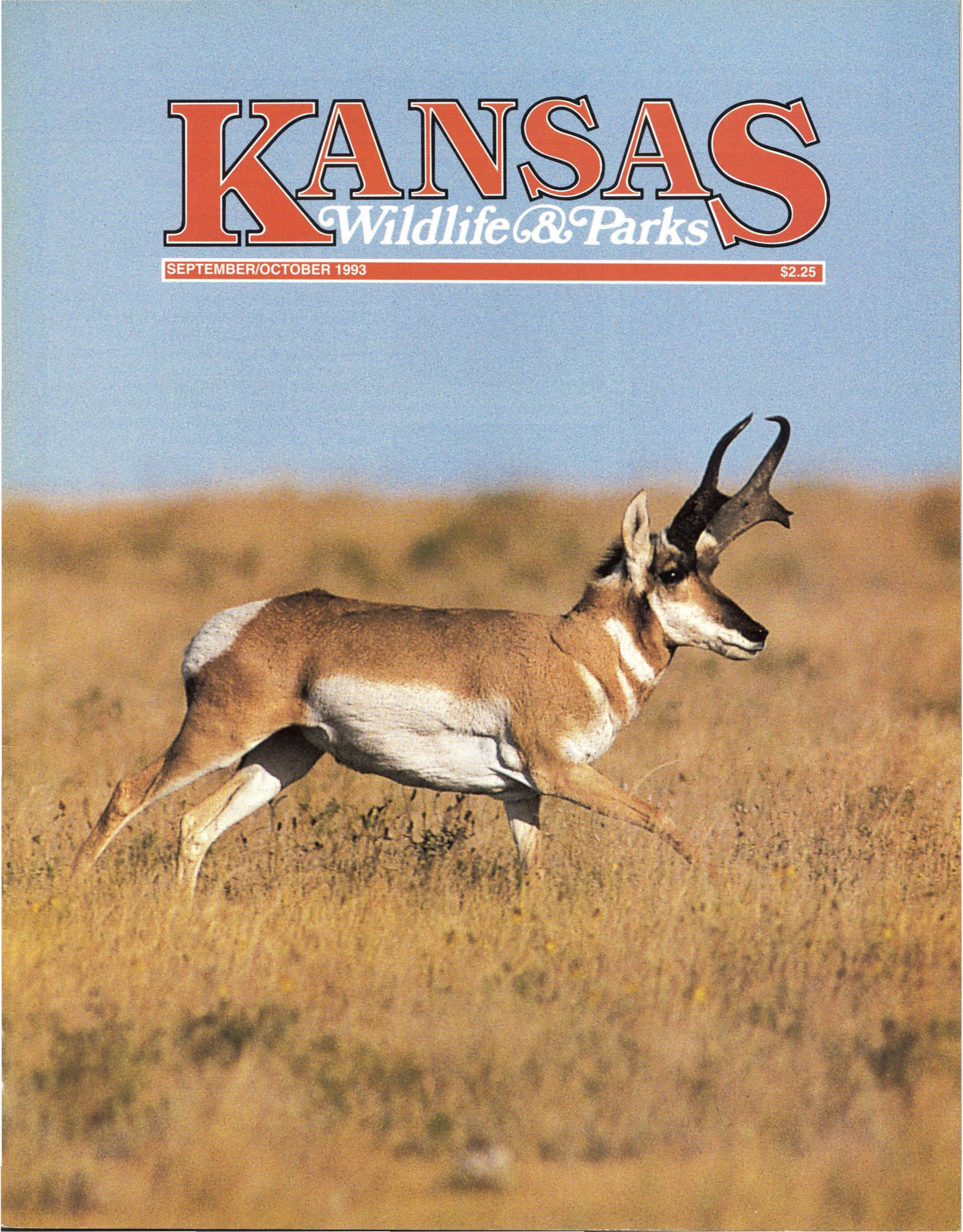

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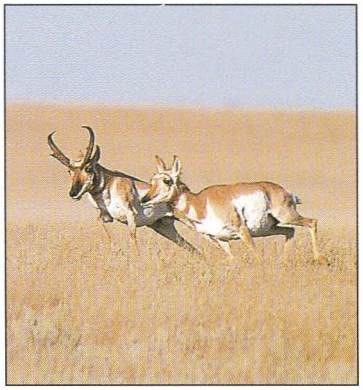

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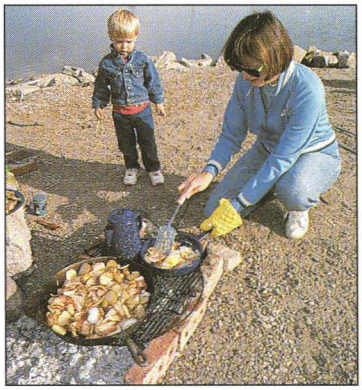

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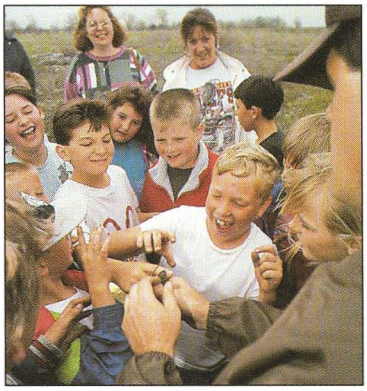

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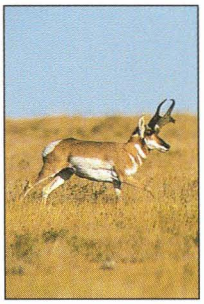


About the Covers: **Front:** A spectacular pronghorn buck lopes across the Kansas prairie. Mike Blair froze the scene with a 400mm lens, f/11 @ 1/500. **Back:** In fall youngsters get anxious to spend time in the field, but they must first complete a hunter education course. Mike Blair caught this father/son team with a 200mm lens, f/16 @ 1/250.

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

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

An Introduction

Editor's Note: *This issue of Kansas Wildlife & Parks represents the end of "The Buck Stops Here" and the beginning of "From The Secretary's Desk." Since his appointment as head of Kansas Wildlife and Parks in August of 1992, Secretary Ensley has worked to increase communication, both within and outside the agency. In this and future issues, this column will serve as an avenue for Secretary Ensley to communicate his message concerning our state's wildlife and park resources.*

Mike Miller illustration

The Kansas Department of Wildlife and parks is charged with managing the state's fish, wildlife and state park resources. In most cases, this means talking, listening and cooperating with people in order to manage a natural resource. Throughout my career in public service and as Secretary of Wildlife and Parks, I have always believed that communication is of the utmost importance. To be effective as a public agency, we must take every opportunity to relate what it is we do as an agency and the purpose behind our actions.

The mission of the Kansas Department of Wildlife and Parks is to; Conserve and enhance Kansas' natural heritage, its wildlife and its habitats — to assure future generations the benefits of the state's diverse, living resources; Provide the public with opportunities for use and appreciation of the natural resources of Kansas, consistent with the conservation of those resources and; Inform the public of the status of our natural resources, to promote understanding and gain assistance in achieving this mission.

It is my responsibility to provide the leadership and direction necessary for Wildlife and Parks to accomplish this mission — but we can't do it alone. I intend to use this column to help accomplish the last part of our mission; to provide information and to gain your understanding and support.

To be able to communicate effectively, I think it's important you know a little about who I am and where I come from. Growing up on a farm in Marshall County near Vermillion, I understood at an early age the direct relationship between the quality of life and nurturing and caring for our natural environment. The experiences I had growing up in a rural setting helped shape the person I am and influence how I approach my position as Secretary of Wildlife and Parks.

I attended Kansas State University and graduated with a degree in biology with an emphasis on fisheries management. I put my education to use in the Topeka area and over the next 31 years developed a multifaceted park and recreation department in Shawnee County. I learned a number of hard lessons as part of this process. Perhaps the most important one is that public business *must* be conducted in a public forum.

To create a broader medium for public comment, I have expanded, and will continue to expand the role of the Wildlife and Parks Commission to deal with more of the issues which face the Department. Coming issues of this magazine will bring many of those issues to your attention through this column. I believe it is essential that our public know the issues and are afforded an opportunity to have meaningful input as policy is developed.

As a Commissioner and now as Secretary, I am continually impressed with the talent, professionalism and dedication of the employees of Wildlife and Parks. This agency will be judged largely on the accumulation of each contact we make with the public. I am confident that our staff will meet the public in a positive manner, and the skills we bring to our work will be evident.

I also want to take this opportunity to recognize *Wildlife and Parks* editor Mike Miller for his contributions to this column and for the continued excellent quality of the magazine. Mike's thoughts and commentary will still be present in coming issues as will his considerable editing skills.

Communication is a two-way process. Feel free to write or call and tell us about those things that are important to you.

Until next time, so long from the Secretary's desk . . .

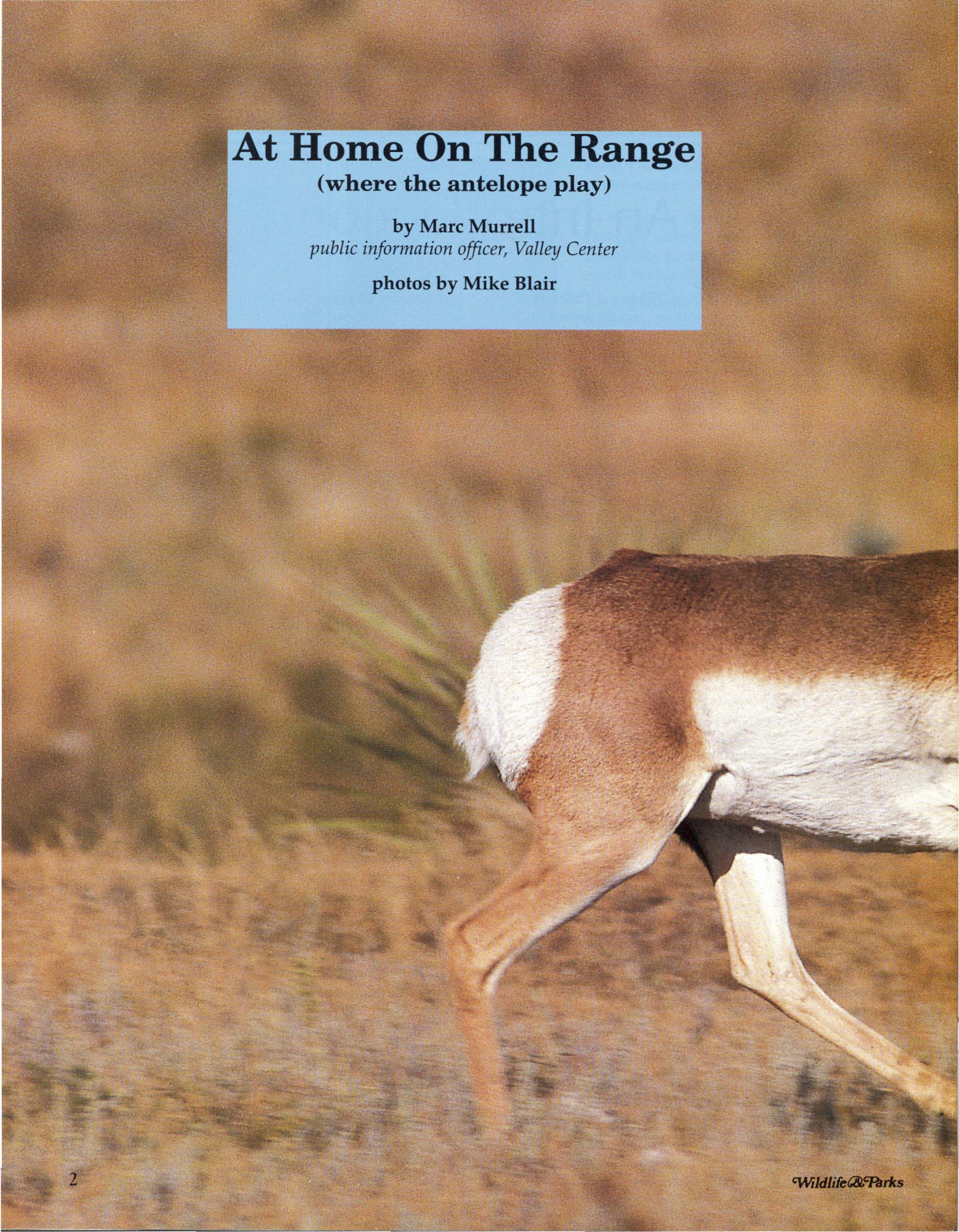
Ted Ensley

At Home On The Range

(where the antelope play)

by Marc Murrell
public information officer, Valley Center

photos by Mike Blair



The pronghorn is a true American original. Once millions roamed the Great Plains, but they were nearly gone by the turn of the century. Today, healthy populations again roam on existing grasslands, making pronghorns a true comeback story.

"Home On The Range" is the title of an old song about the Kansas prairie . . . "where the deer and antelope play." Most Kansans would agree that plenty of deer, both whitetails and mule deer, do play on the Kansas range. But many Kansans have never seen a Kansas antelope and probably don't realize that the state does boast a healthy, if somewhat limited, antelope population.

The animal commonly called an American antelope is native and unique to North America. In fact, it's not really an antelope, not being related to the true antelopes of Asia and Africa. The correct name is pronghorn, and it's not related to any other living form of ungulate (hoofed animal). The pronghorn is separated into a family called *Antilocapridae.*

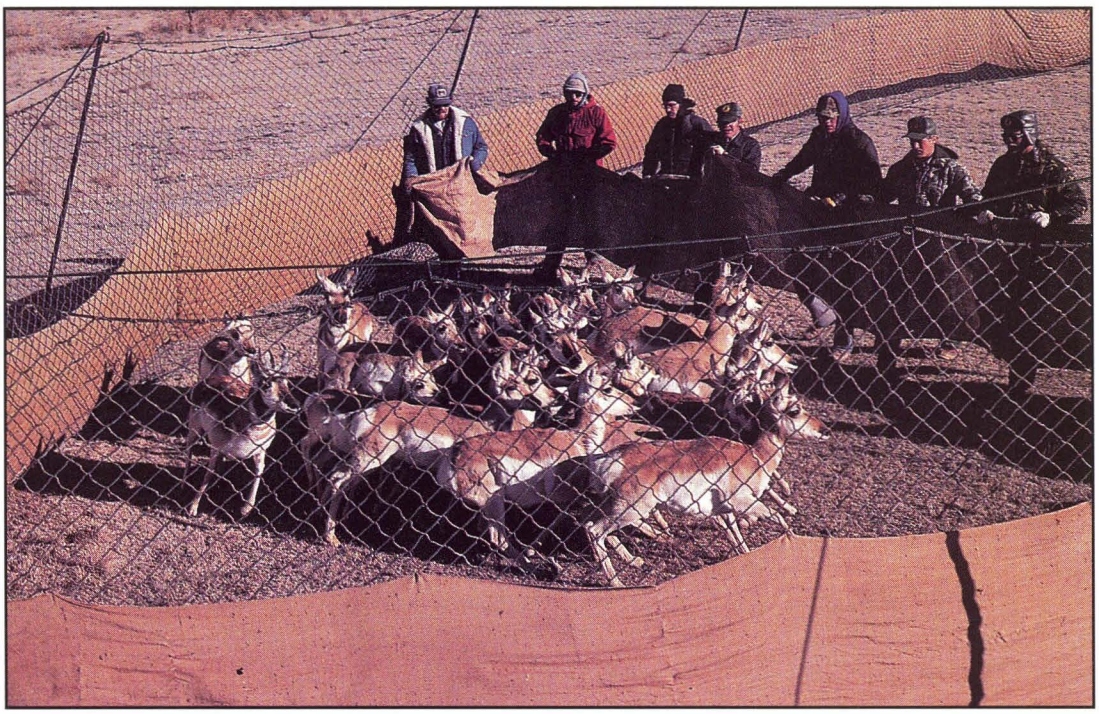
Prior to settlement of the prairie, 30-40 million pronghorns roamed the grassland from southwest Canada to central Mexico. Historically, the western two-thirds of Kansas was prime pronghorn habitat. But pronghorn populations crashed as the settler population increased. Market hunting and unregulated subsistence hunting took a massive toll on the population, and that coupled with land development like railroads, highways, livestock competition and agriculture reduced the numbers of pronghorns to dangerously low levels. At the turn of the century, pronghorns were absent from Kansas.

From 1930 to 1950, conservative game management programs were developed, and the pronghorn slowly made a comeback in states with still unbroken tracts of grassland such as Wyoming, Colorado and New Mexico. A 1962 aerial

The Kansas prairie really is where the deer and antelope play. While the highest populations of antelope, or more accurately, pronghorns, are in Wallace and Logan counties, at least small herds are found in Gove, Trego, Scott, Ness, Lane, Morton, Comanche, Clark, Barber and Chase counties.The statewide pronghorn population is estimated at 2,000.

survey of Kansas found 56 pronghorns in Sherman and Wallace counties. The department began planning to introduce wild-trapped pronghorns from other states to bolster this population.

On Thanksgiving Day of 1964, 75 pronghorns, trapped and transported from Montana, were released in Wallace and Sherman counties. Other releases were subsequently made in Morton, Chase and Barber counties. Today it is estimated that about 2,000 pronghornsl ive in Kansas. The major concentration is in Wallace and Logan counties. Other counties in this region with pronghorns include Gove, Trego, Scott, Lane and Ness. There are still about 40 animals in Barber, Clark and Comanche counties.



When a remnent population of pronghorns was found during a 1962 aerial survey, plans were made to bolster this population. Wild pronghorns, trapped in Montana, were first released in 1964.

Recent supplemental efforts have been made in Morton and Chase counties. To understand more about pronghorns in the Flint Hills, two graduate students from Emporia State University, Brad Simpson and Shannon Rothchild, have studied the animals released in Chase County. Some of the pronghorns trapped in Colorado were fitted with radio transmitters, allowing the researchers to follow their movements through the year. The study focused on mortality, habitat use, behavior and home range of both the fawns and adults.

To learn more about why previous pronghorn releases in the Flint Hills have failed, researchers are following recently released animals through radio telemetry.

Results indicate that the region of tallgrass prairie exceeds the vegetative and grass cover requirements of pronghorns. In addition, while the region's annual precipitation exceeds that found in areas with high pronghorn populations, it did not affect fawn survival.

Coyote predation was the primary cause of fawn death during one portion of the study. At least 17 percent of fawn deaths were caused by coyotes, and as much as 54 percent may be linked to coyotes. Combined factors of weather and predation may be suppressing recruitment at this and other restoration sites.

The uniqueness of the pronghorn is added to by its striking beauty. Upper parts of the body are reddish-brown to tan. The neck has a black mane, and the belly, rump and bands under the neck are white. Males have black cheek patches on

Pronghorn bucks have a noticeable, dark cheek patch and are larger than does, weighing 90-140 pounds. Does occasionally have horns, but they are usually shorter than their ears. A mature doe will weigh 63-100 pounds.The headgear are true horns and grow continually, however, the outer sheath is shed each winter leaving a boney core.

both sides while females do not.

Adults stand 31-40 inches tall at the shoulder and mature males weigh 90-140 pounds. Females are slightly smaller weighing in at 63-98 pounds. Pronghorns possess large eyes approximately 2 inches in diameter. The protruding eyes give them not only excellent peripheral vision, but also extremely acute vision, estimated to be equal to a man looking through 8-power binoculars. Pronghorns can detect movement at a distance of 4 miles.

Bucks, and some of the does, have true horns, unlike antlers found on deer and elk. The horns grow continually and are composed of an outer sheath that drops off each winter, leaving a bony core. A new sheath quickly grows back. Bucks' horns average 12 inches in length and have a short branch, or prong, jutting forward from the upper half of the horn. Does' horns, if present, are generally shorter than the ears.

Pronghorns have a unique coat adapted to life on the open, windswept prairie. It is full and deep with long, tightly packed hairs. The hairs are filled with a soft, sponge-like substance that insulates well.

Although not vocal animals, pronghorns employ an unusual method of communication. The white hairs on the rump are longer than the rest of the coat, and the roots of each hair are embedded in special muscular sheaths allowing them to be erected. When an animal senses danger, it can erect the rump patch, flashing a warning to other pronghorns.

Perhaps the pronghorn's greatest adaptation for living on the prairie is speed. Clocked at 60 m.p.h., they are North America's fastest land mammal. Physical adaptations include light, but very dense bones that can withstand the tremendous forces exerted on them at high speeds, and large, efficient respira-

Acute vision and the ability to outrun predators are the pronghorn's main defenses. They have been clocked at 60 m.p.h.

While not vocal animals, pronghorns do have unique communication methods. When alarmed, the longer rump hairs, which are in special muscular sheaths, can be erected. The result is a white "flash" that warns other animals of potential danger.

Pronghorns are grazers and feed on grasses, forbs, cacti and shrub browse. They will also occasionally feed on green agricultural crops.

tory and circulatory systems that allow the animal to maintain speeds for long runs.

Pronghorn food habits vary greatly, but they are all grazers, eating grass, forbs and browse. During years of succulent growth, antelope need only a quart of water per day, while in dry years, they may require up to 1 1/2 gallons each day. They drink from springs, streams, lakes, water catchments, stock tanks and snow.

In spring and summer, when food and water are plentiful, herds may travel as little as 1/2 mile. During fall and winter, due to reduced quantities of preferred forage and the breeding season, herds may move 2-6 miles daily. Most pronghorns have a home range of 5-10 miles in diameter.

Mating occurs in late summer after dominant bucks have established harems, some including up to 15 does. The mating season lasts two to three weeks, and the bucks will defend their harems aggressively from subordinate bucks. Long, high-speed chases can be followed by the dust trails as the dominant buck wards off younger competitors. Although doe fawns occasionally breed, pronghorns usually mate for the first time at 15-16 months and breed annually for the rest of their lives, usually 7-10 years.

The gestation period is 250 days, which is about 30 days longer than deer. The longer gestation period helps ensure fawn survival by

Water requirements vary according to the moisture in the vegetation pronghorns feed on. During dry periods, they may drink as much as 1 1/2 gallons daily. Here, two young bucks drink from a stock tank runover.

making them more precocial and ready to "hit the ground running" at birth. Does seek a secluded area to give birth and typically have a single fawn the first year and twins thereafter.

Fawns average 5-7 pounds at birth. During the first week of life, fawns are inactive, growing and gaining strength from the doe's nutrient-rich milk. After five days, fawns can outrun a man and begin nibbling on vegetation in a few weeks. The fawn's chief defense from predators during the first few weeks is camouflage. The doe hides the fawn while she eats, and the fawn lies perfectly still. It is also thought that very young fawns have little or no odor, making it difficult for predators to find them. By three months, they resemble the adults and can run and feed with the herd.

Predators include coyotes and bobcats, but coyotes are the biggest cause of fawn deaths, and does may defend their fawns aggressively. These two does chased this worried coyote for more than 1/2 mile.

The first few weeks of life are the most dangerous for pronghorns. Coyotes and bobcats are primary predators of fawns in Kansas. Predation by golden eagles occurs but is likely rare.

Pronghorns are remarkably disease resistant. This might be partially explained by their constant daily movements, changing feeding and bedding locations and infrequent use of moist areas, all of which can increase disease transmission.

Natural deaths such as getting stuck in mud, drowning and locking horns take a small toll each year, but severe winters, especially those with deep snows, are the greatest cause of natural deaths. Road kills can be substantial in states with large pronghorn populations, but Kansas road kills are insignificant.

Fences can be a problem for pronghorns, as they don't naturally jump over them like deer. Some fences in western states have altered migration movements during severe winters but in Kansas, local herds have adapted to livestock fences, and most belly-crawl through or under the bottom strand.

A limited firearms hunting season for pronghorns has been held in Kansas since 1974. Through the last 20 years, an average of 700 applications have been received for approximately 200 allotted permits each year. Firearms success rates have been terrific, averaging 92 percent of tags filled.

Fawns are precocial at birth and can feed and keep up with the doe within a few weeks.

An archery season was added in 1976. Since less than 100 bowhunters apply each year, there is no limit of permits available. Filling the archery permit is much more difficult. An average of about 14 percent of the bowhunters have taken pronghorns each year. Permits for both firearms and archery are either sex, but only 12 of the 166 pronghorns taken in 1992 were does or fawns.

To see these beautiful animals run, or to hunt them on the open prairie is truly a privilege for Kansans. And the fact that today there are more than 1 million pronghorns in the U.S. is amazing, since in 1924 it was estimated that only 13,000 were left. The comeback of the North American pronghorn, administered by state wildlife agencies and paid for by sportsmen is truly one of our greatest recovery stories. As a result the pronghorn is a unique treasure that future generations of Kansans will be able to enjoy.

The pronghorn is a true symbol of the American Great Plains. While the Kansas prairie has been altered to the point that pronghorns will never return to historical numbers, the remaining tracts of unbroken grassland can sustain healthy populations. Kansans are lucky, indeed, to get the chance to see these beautiful speedsters run across the prairie.

An Elk Hunter's Dream

by Carol Dugan Foveaux
as told by Wilbur L. Dugan
Leonardville
photos by Mike Blair

The hunter dreamed of hunting elk, but the dream didn't seem possible until one day when his fortune changed.

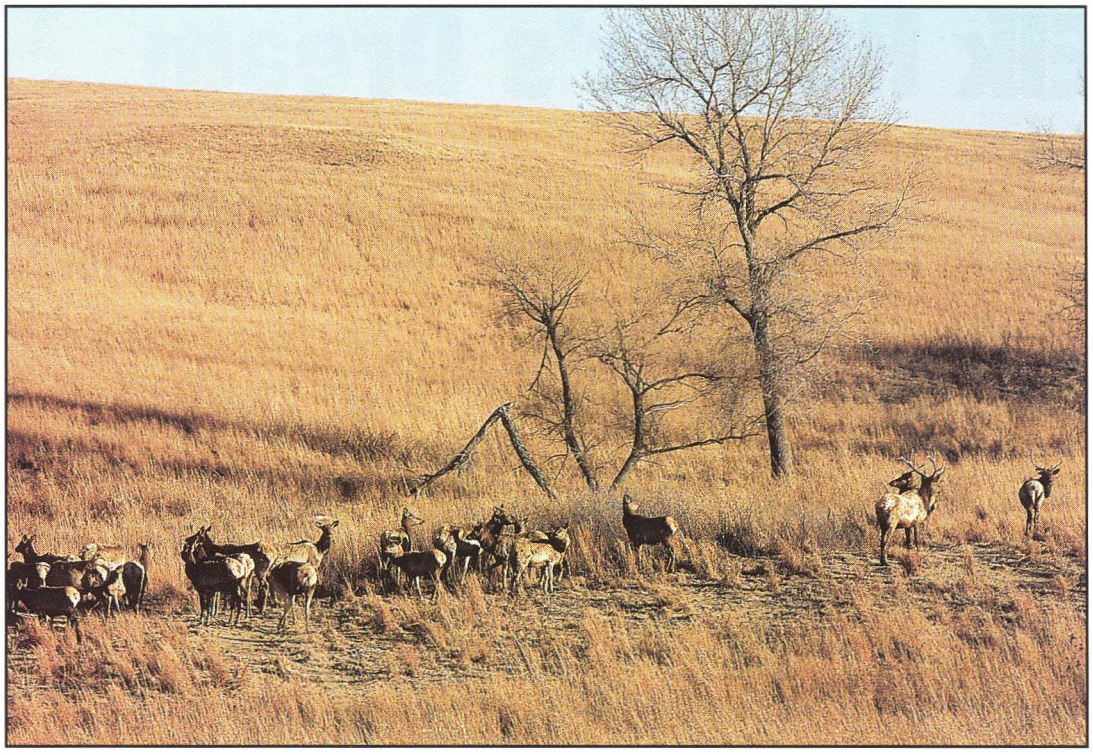
The phone call I received last August was a dream come true. "Congratulations. You have drawn an elk permit for the 1992 Ft. Riley season."

". . . Yes. I'm still here," I said after a stunned silence. I could hardly believe what the voice on the telephone had said. I'm sure I sounded as if I'd just won the Kansas Lottery. That's right, Kansas. I would be hunting Kansas elk this fall!

I had traveled to Wyoming in past years to hunt elk with my son Don, who was a resident there. Although I never drew a non-resident permit, the thrill and excitement of watching my son bring down a big bull sent my heart racing and was not something I would forget.

Since then, I admitted that my chances of hunting big game such as elk were unlikely. I would be 65 in May, and my health isn't as good as it used to be. I can't seem to keep up the pace I once did hunting whitetails. Yet when my son suggested that I apply for a Kansas elk tag, I found myself imagining how grand it would be if my name was drawn.

Once native to the Kansas prairie, elk disappeared from the state around the turn of the century. Today, Kansas has two free-roaming elk herds that provide limited, once in a lifetime opportunities



Once a common prairie species, elk were quickly pushed out by early settlers. While the biggest concentrations are in the mountain states today, Kansas does support two, small free-roaming herds. One is on the Ft. Riley Military Reservation and the other is in Morton County.

for Kansans. One herd roams the Ft. Riley Military Reservation north of Junction City, which covers 70,000 acres. The elk herd numbers about 60 animals, and each fall a few lucky hunters are drawn from a pool of applicants to receive permits. The other herd is in the very southwest corner of the state in Morton County, and it also provides a few lucky hunters a chance to hunt elk in Kansas.

The Ft. Riley season opened Nov. 1, so we made several scouting trips in October, looking for signs of rutting bulls and tracks. We found plenty of sign, and often heard the distinct sound of bugling bulls. On one scouting trip, I saw one of the most beautiful sights I will ever see. As Don and I waited quietly one early morning, hoping to see what a Kansas elk really looked like, we got more than an eyeful. They came across the hill on the horizon, first the lead cow, then the rest of the herd, single file. Nearly 30 cows crested the hill before we saw what we had waited for: the prettiest 6-point bull either of us had ever seen. Sunlight glistened off the bull's mahogany-colored antlers, the ivory tips polished to perfection. I couldn't take my eyes off the bull as it walked proudly through the prairie grass. My gaze was broken when Don insisted, "There's gonna' be a bigger one. Watch the end of the herd."

Sure enough, there it was at the end of the line. We counted eight points on one side. The eighth point on the other side was clearly broken off, perhaps in battle with another bull. We watched in awe as the herd filed north.

Opening day of the season came and went without any sight of elk. On the second day, however, as we sat huddled behind a cedar tree, we watched a herd move out of the timber, around a milo field and cross the road. The herd had several bulls including a couple of 5-points and a 6-point. If I hadn't seen the big bull before the season, I would have taken the 6-point, and my hunt would have been over early.

Ft. Riley officials close and open different areas to hunting through the season. Since we usually had only three days advance notice as to which areas were open, the hunt became a game of hide and seek. It never ceased to amaze me how we could get so close, yet be so far from actually taking an elk. I realized that getting a bull in Kansas would not be easy.

My daughter Carol accompanied me on many hunts, and we covered a lot of timber together. Several times, we found bedding areas and even got close enough to smell the musky, pungent odor of elk, but we just couldn't get a glimpse of one. One morning, as Carol and I stillhunted through the brush, we crossed paths with a huge 10-point white-tailed buck. The long tines of its antlers were snow-white. The big buck paused, looked us over, then walked slowly away through the timber.

Moving on, we noticed rubs, obviously elk since the bark was rubbed off above our heads. We listened carefully, thinking we might hear elk in the nearby timber. (Carol and I often joked that we were a truly great team with my good eyesight and her keen sense of hearing.) Then Carol tugged on the back of my jacket hood, and I could tell by the excited look on her face that she had heard something.

"Over to the right, I can hear clacking. It sounds like an elk rubbing its antlers on a tree." She grabbed my arm and we moved in the direction of the sound. Then, it came again, and this time I could hear it. We could now tell it wasn't an antler on a tree, but antler on antler. As we stalked closer, we watched two huge bucks fighting. Not a breath of wind was blowing through the trees, and the sound of the bucks' hooves pounding the ground seemed almost eerie. After about four rounds of battle, one buck retreated, racing through the

Even on the seemingly open prairie, elk are challenging quarry. They are wary and have a superb sense of smell that allows them to avoid predators. Hunter Wilber Dugan's first hunting efforts were usually rewarded with fleeting glimpses. Hard work and persistence is necessary of any elk hunter, and the Kansas hunting experience proved to be no different.

brush with the other close behind. We decided that if we didn't see a single elk that day, what we had just witnessed would make it all worthwhile.

As my hunt continued through November, the weather deteriorated. Just when we thought the roads couldn't get any worse, they did. The week of Thanksgiving brought the season's first big snow. Don and I had a hunch that the strong north wind would keep the elk holed up and our chances of seeing them would be slim. We should have followed that hunch and stayed home. On our way to the hunting area, we realized just how bad the roads had become, but we were part-way there, so we decided to continue. As we started across a bridge, I felt a gust of wind shift the truck, and we started sliding. I could see the guard rail coming, but there was nothing to do at that point but hold on. I could only imagine what the side of my truck would look like. Thankfully, we came to rest on the road and not off the side of the bridge. Both left tires were blown, but we managed to make it back to Leonardville. On another trip, my son Larry and I spent several hours stuck in an army tank track. We soon learned which tank tracks to avoid.

Over the next several weeks, we hunted hard. Just when we thought the elk had moved out, we'd find a huge set of bull tracks. Carol and I finally decided that if we got an elk, it wouldn't be by walking.

We spent mornings watching the bedding areas, thinking we might catch them coming or going. One morning we crouched in an old fox hole. Even though there was a small hill in front of us, we were sure we could see both ends of the bedding site and would see elk if they used the tank trail. Once again, Carol had me by the arm, telling me she heard at least three animals getting up. They were close, but an old rock fence and row of thickets blocked our view, and that was where they walked. Learning a lesson, Larry and I returned the next morning and set up on a hill that allowed us to see up the tank trail. There, at the edge of the trees, stood a bull. He looked like only a 4- or 5-pointer, so we watched him slowly blend into the timber.

As December came, so did the realization that our hunting time was slipping away. The season lasted two months, but with the areas opening and closing continually, we only ended up with one month actual hunting time. The elk continued to give us the slip. We covered different areas and were either a day late, judging by the sign, or there was no sign at all.

With either my daughter or one of my two sons with me all the time, we covered a huge amount of territory and got to know the reservation intimately.

One Dec. 5, Larry and I had originally planned to hunt the west side of the reservation. On a spur of the moment, we decided to check southwest of Riley near a milo field where we had previously seen tracks. As it was just getting light enough to see, we glassed the area from a small knoll. We saw a cow elk as she raised her head up above the milo where she was feeding. Then, another movement behind her caught our eye. It was a bull! But we only saw him for a few seconds before he disappeared behind a hill. Larry got a glimpse of the bull's rack and was sure this was the one I wanted. I realized that it might be the last bull I'd see before the season closed.

I didn't have too long to ponder the thought, though. Within seconds, the lead cow came out in the open, just far enough to see us. The cow stood for what seemed like an eternity but couldn't have been more than five minutes. The cow looked back to the milo field, then to us, then started to move. Immediately, the herd was on the move, single file behind her. I knew I'd have to make a decision soon.

As Larry watched through binoculars, I stood ready to shoot. Several more cows followed, then a spike bull and two 4-points. When a nice 5-point came into view, I asked, "Is this the one we want?"

"No, don't shoot yet. I know I saw a bigger one," Larry replied.

I'll admit that since I'd not seen the bigger bull, it was hard for me to watch the 5-point pass by. But just as those words came from Larry, another bull came out. There was no doubt in my mind now. It was a beautiful 7-by-7 with nearly perfect antlers.

"This, Dad, is the one you want."

I guessed the bull at 200 yards and shot twice with my Browning .270. The bull didn't flinch, and I fired a third shot. I knew each shot was well-placed, and that the bull wouldn't go far. It walked about 50 yards and went down. As we walked to the bull, the rest of the herd slowly moved off.

It took Larry and I a good hour and a half, even with a come-along, to load the big bull in the back of my pickup. As we drove back to Leonardville, I was filled with excitement. The magnificent animal field dressed at 880 pounds. Yet, as I received many congratulations on my success, I couldn't help but feel a tinge of sadness that the big bull was gone. I also realized that a special hunt was over.

I learned to hunt and trap as a small boy with my dad and have had many enjoyable experiences hunting and fishing throughout my life. It was a once-in-a-lifetime chance to hunt elk within 10 miles of my home; to share that experience with my sons, my daughter and my grandchildren. Indeed, it was a dream come true.

Dugan's hard work and the diligent help of his sons and daughter finally paid off with a tremendous 7-by-7 bull that weighed 880 pounds after field dressing.

photo courtesy of author

What's Cookin' At The Campfire?

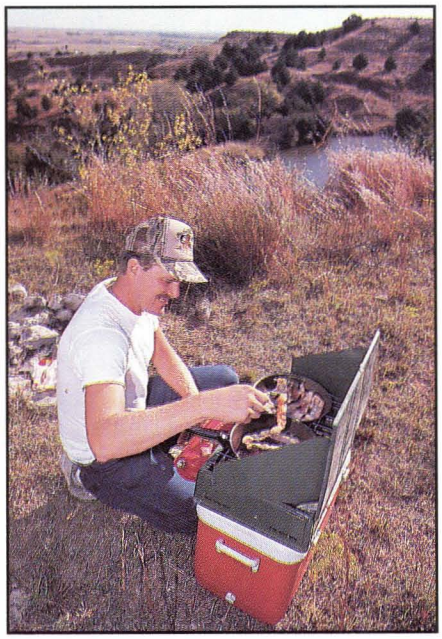
by Dana Eastes
illustrator, Pratt

photos by Mike Blair

The orange glow of the sun is starting to make sense of the darkness. As you crawl from your sleeping bag and emerge from your tent, the first step into the cold, wet grass signals to your body that a new day has begun. Being the first one up in the morning, in the moments of dusk before sunrise, can be a sacred event. But the silence is short and minutes later, the squirrels and birds are calling a new day, bodies are turning in sleeping bags and the sun spills over the horizon. Now, it's time to get cookin'.

The menu was planned weeks in advance; the tinder and firewood gathered the night before. Your supplies are laid out in easy reach; timing is everything when cooking over an open fire. Start by rubbing two sticks together . . . making sure one of them is a match (just wanted to see if you're awake). Actually, the first step is making sure it is safe and legal to build a fire. Most designated camping areas have fire rings, but if you're camping in a primitive area or on private ground and the surrounding vegetation is dry and the wind is blowing 90 to nothing, it's smart to use an outdoor gas stove.

Your location and style of cooking you plan determine the

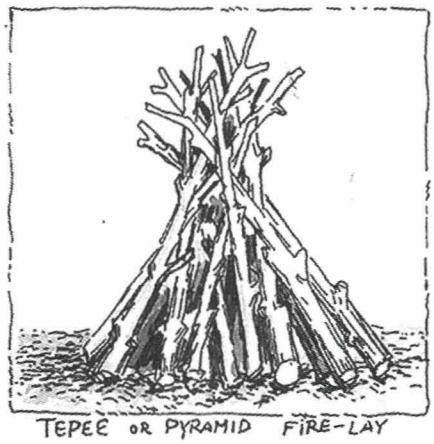


In primitive areas with dry vegetation or when winds are high, a gas cook stove should be used instead of an open fire.

type of fire you build. Manmade fire rings can be modified to suit your cooking, and in a primitive area, you can build your own fire ring with rocks and gravel. If you're in a grassy area, you can remove the sod from your fire ring then replace it when you leave.

Either bring wood with you, or collect it from dead and down trees. Never cut down standing trees on public ground, and only with the landowner's permission on private land. Make sure you have enough wood at hand to finish cooking the meal, and be sure to collect tree bark and dry grasses for starting tinder. Bark from a dead redcedar tree is excellent tinder.

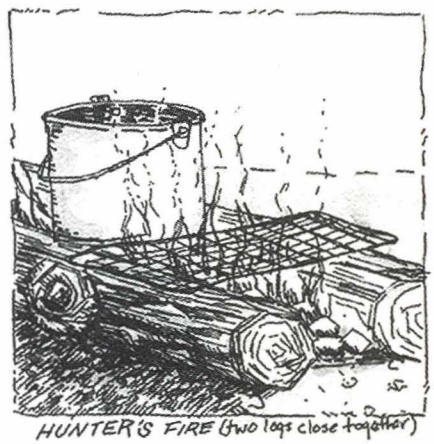
There are several different fire buidling styles. A good cooking fire is not a huge, blazing inferno. It's much better to build a compact fire, using twigs and sticks no longer than 12 inches and about the diameter of your thumb. Different fire-lays include the teepee or pyramid style, assembling the wood in a circular manner that resmebles a teepee. This fire-lay provides a quick-burning fire that is good for boiling. The criss-cross or log cabin arrangement will also provide quick coals for boiling. The relector, or half teepee fire-lay, makes a good



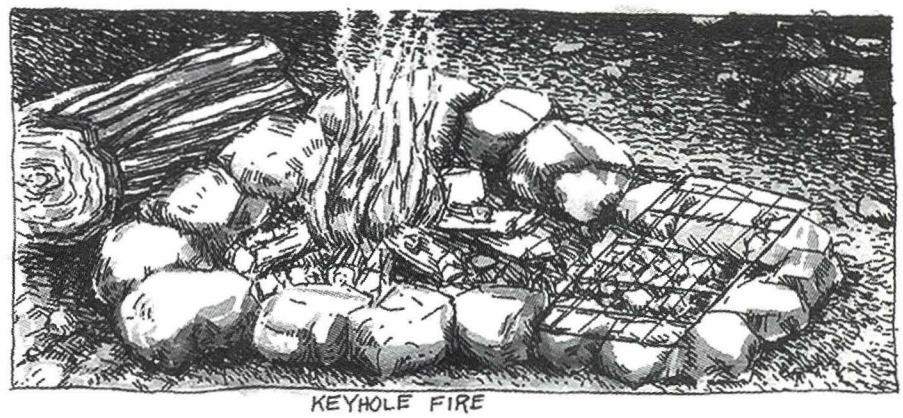
TEPEE OR PYRAMID FIRE-LAY

CRISSCROSS OR LOG CABIN FIRE-LAY

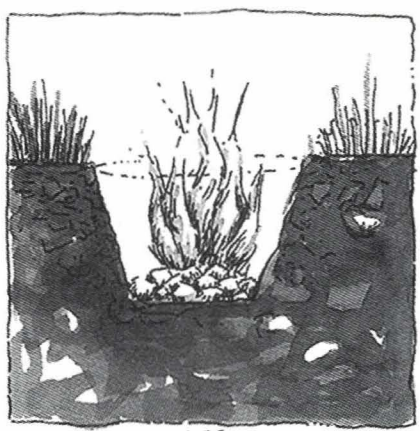
HALF-TEPEE OR REFLECTOR FIRE-LAY



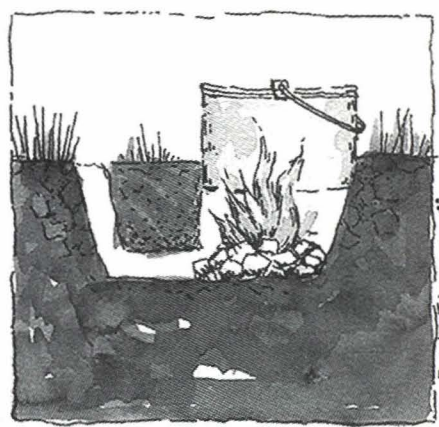
HUNTER'S FIRE (two logs close together)



KEYHOLE FIRE



INDIAN FIRE



DAKOTA FIRE

baking fire. The reflector fire-lay is built by leaning sticks against a wall of rocks or logs.

Cooking over the fire can be done in various methods. The western "keyhole fireplace is great for cooking, while providing a roaring fire to sit around and enjoy. You can sing around the circular campfire while drawing coals from one end to provide even and steady cooking heat. In open campsites, the Indian and Dakota (white man's version) fireplaces may be most useful. The Indian fireplace is basically a hole dug in the ground. The Dakota fireplace is for pot cooking. A chimney is added to allow air draft to the fire. Both versions are efficient, creating a bed of hot coals while making the element of pairie wind less of a factor.

Here are a few campfire recipes to tempt your taste buds:

Breakfast
Frying eggs without a pan is no problem.
As the fire is burning down to hot coals, place a flat stone on the top of them.When the stone is hot, sweep coals away and grease the stone. Drop egg in hole in slice of bread or between two slices of bacon.

Flapjacks for two.
2 fistfuls of flour
1 4-finger pinch of sugar
3 4-finger pinches of dry milk
2 1-finger gobs of crisco (canola oil if your watching your fat)
1 4-finger pinch of baking powder
1 2-finger pinch of salt
1 egg (optional)

Biscuits
2 fistfuls flour
2 2-finger pinches of salt
2 3-finger pinches baking powder
2 1-finger gobs of crisco
Enough water to make dough.
Shape dough into biscuits. Place on a greased sheet. A reflector fire works well when baking biscuits and bread.

Stews and pasta
Stew
Cut and saute meat in butter, cover with water and simmer. Add veggies, carrots, onions, potatoes etc. Season to your liking, add soup mix or gravy mix for added flavor. Simmer until veggies are tender.

Cajun Style Fish and Rice (Steve Comeaux)
16 oz. of fish fillets
1 lg. onion
4 oz. butter
2-3 cloves of garlic
1 tsp. salt
1 tbsp. red pepper
3 tbsp. black pepper
1 c. dry white wine, optional
4 c. white rice
water
Cook rice in water. Dice onion and garlic and brown in butter over medium heat for 10 min. add 1/2c. water (or wine) and seasonings to onion and garlic mixture. Cover and simmer on low heat for 30 min., stirring occasionally. Add fish, cover and simmer and additional 10 min. Don't over cook. Serve over rice.

Veggie Spaghetti (Kenneth M. Brink Jr.)
2pkg. ramen noodles
1 sm. zucchini
1 sm. onion
1 sm. can of tomato paste
1 tsp. Italian herbs
1/2 tsp. garlic powder
water
Start by thinly slicing the zucchini squash and thinly chopping the onion. Boil the noodles and zucchini together until cooked. Drain all but about 1/2c. of the water and add spices, tomato paste and onions. Stir and heat as desired. Makes 2 servings.

Aluminum foil cooking - Place foil packages directly on coals. Turn at least once, halfway through cooking. A simple way of cooking almost any foods in a campfire. When using foil, who needs cookware.

Fish in foil (Kathy Williamson)
Wrap one or two slices of bacon around the fish or fish filets. Add sliced peppers, onion, and other vegetables if you'd like. Dab of butter, season fish (packet of ranch dressing optional) and top with orange and lemon slices. Wrap it all up in a ample sheet of foil, toss in the hot coals, sit back and watch the kids play.
Easy, and tasty too.

Baked Birds
If you want a carefree day around camp. Wrap a chicken, pheasant or quail in foil (any game will do). Add

potatoes, onions, carrots, season and add a dab of butter and cover with wine if you like. Dig a hole under the hot breakfast coals and chuck the chicken inside, cover again with coals. Send the rest of the campers off fishing, hunting, hiking or whatever, while you curl up with a good book. When the crew gets back from the days outdoor adventure - wal-la, dinner is served.

Fruit-in-foil
Cut core out of apple sprinkle with cinnamon and sugar wrap in foil and toss in hot bed of coals. Works with most fruits, banana, pineapple, pear, etc. Makes a simple dessert.

Skillet Frying
NOTIN' BETTER than onion and potatoes.
Cut up onions, potatoes bacon. Start by frying bacon, add potato's and onions. Fry until crispy brown, eat'em while their hot. Yum, yum. Great for breakfast, lunch or dinner.

Quesa Noche' (Cheese Night) (S. Bud Solmonsson)
3-6 flour tortillas
1/2 lb. cheese of choice
1 onion
1 bell pepper
salsa to taste, optional
Cook tortilla over medium heat in pan. Sprinkle chopped onions, bell peppers and salsa over one-half of tortilla while it is cooking. Then put cheese over the same half, on top of ingredients. As soon as cheese starts to melt, fold the untouched tortilla half over to make a half circle. Turn the quesa noche' over until all cheese is melted and serve.

Fried Fish
Clean and batter dip fish, toss in hot skillet with oil, season.

Dandelion Salad
*The young leaves of this familiar weed are food in soups and salads. The older leaves need cooking - and butter, salt and pepper. Wine is made from the heads of the plant.

6c. young, tender dandelion leaves
4 slices bacon
2 tbsp. vinegar
2 tbsp. brown sugar
1/4 tsp. salt
1 tbsp. lemon juice, optional
1 hard boiled egg, optional

Cook bacon in skillet. When done, remove and cool grease. Add vinegar, lemon juice, sugar and salt to bacon grease and heat slowly while stirring. Pour hot bacon dressing over washed and dried dandelion greens. Add chopped egg and crumpled bacon to top and eat as you watch the clouds roll by.

If your high tech world is closing in on you and you're losing touch with the real world, the natural one, come outdoors. Leave the microwave and dishwasher behind, even your high tech camping gear can stay home. Supplies are simple, skillet, oil, foil, food, water and matches. Cooking over a campfire may be the connection between a primeval lifestyle that lingers underneath our overdone techno crust and the longing for simple ways in most of us.

The smoke rises. The coffee starts to perk. The sun is setting on a calm Kansas sky. Sit back and enjoy the atmosphere, while we prepare a meal over the campfire. There's something about outdoor cooking that makes your senses and taste buds come alive. Maybe you've fished all day, taken a hike, rode horses, or hunted, it doesn't matter what sort of Kansas outdoor fun you have participated in, there's nothing better than coming back to camp, eating a meal prepared over the fire and then sitting back to reminisce about the days adventure. A total experience that would rival any Four Star restaurant.

Veggie Spaghetti, Quesa Noche' and Cajun Style Fish and Rice recipes courtesy of Falcon Press Publishing Co. Inc., Helena, Mt. To receive a free catalog, or to purchase the Wilderness Ranger Cookbook, call 1-800-582-2665. If you're interested in cooking strictly what nature provides, look into the "Native Indian Wild Game Fish and Wild Foods Cookbook," Fox Chapel Publishing, 604 New Holland Ave., Box 7948, Lancaster, PA 17604.

Outdoor Classroom

text and photos by Mike Blair
staff photographer

Doug Whiteaker has seen his share of contempt for the outdoors. As a conservation officer, he's arrested game violators and confronted vandals. He's dealt with the unlawful sale of wildlife products, assessed pollution damage to streams and picked up trash left by thoughtless hikers. It's part of his job, and he's part of the cure.

But he, like some of his fellow officers across kansas, sees prevention as the greater part of his job. That's why each spring finds him actively participating in outdoor education through schools.

Whiteaker concentrates on his own district, becoming familiar to youngsters in Bourbon and Crawford Counties. He starts early, targeting elementary students between the first and fourth grades. By appealing to a young audience, he can foster early respect and appreciation for the outdoors, behaviors that reduced the difficult side of his job as the students mature. Healthy attitudes of youngsters often impact their older family members as well.

Whiteaker likes a hands-on approach to wildlife education and finds that elementary schools are enthusiastic cooperators. In past years, his in-class demonstrations with raptors and snakes have proven extremely popular with students. But even though live animals led to increased awareness of Kansas wildlife, they afforded little opportunity to deal with the critical matter of habitat. At the request of a teacher, the annual presentation was upgraded to a field day, where wildlife could be viewed and discussed in its natural element.

Whiteaker solicited help from other department COs and biologists to provide instruction for more than 80 fourth graders from Fort Scott in April 1993. The field day was held at Hollister Wildlife Area in Bourbon county. Events included rock-rolling, which uncovered various reptiles, arachnids and insects of the Kansas prairie, and aquatic sampling at a pond.

The field day gave the students the chance to learn how Kansas wildlife interacts with itself and its habitat. Whiteaker felt the exercise was particularly valuable given the general treatment of outdoor subjects in elementary science textbooks.

"Over the years, it was apparent that students had more knowledge about African wildlife and ecology than they did about Kansas resources. The field day is a way to help increase understanding about the needs of our own state," he said.

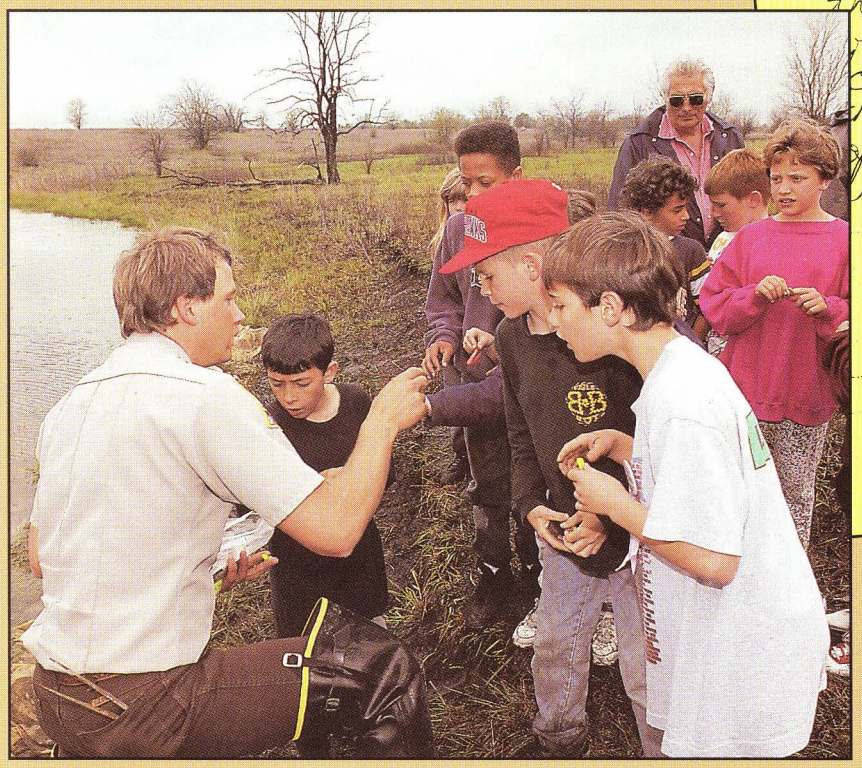
As part of the educational process, Whiteaker always asks his classes to summarize what they learned. This helps ensure that students are gaining from the discussions and points to areas that can be addressed in later classes. Comments are rewarding, insightful and sometimes funny. The following pages show a small selection of letters Whiteaker received:

Dear Mr. Whiteaker,
I loved the trip. The best part of the trip was when we rolled rocks. I hope we can come again in 5th grade. I learned that there ain't pearch in Kansas. I saw a snake I'd never have seen before. Thanks for the worm. Thank you for inviting us. ☺

Sincerly,
Vincent Willard

Dear Mr. Whiteaker,
My favorite part of the field trip was when we went down to the pond and that guy taught us about littering and life cycles. I think flipping the rocks over wasn't that fun until they found the snake. The worst thing was we got our feet all muddy. Thanks for the book!

Your friend,
Leesa

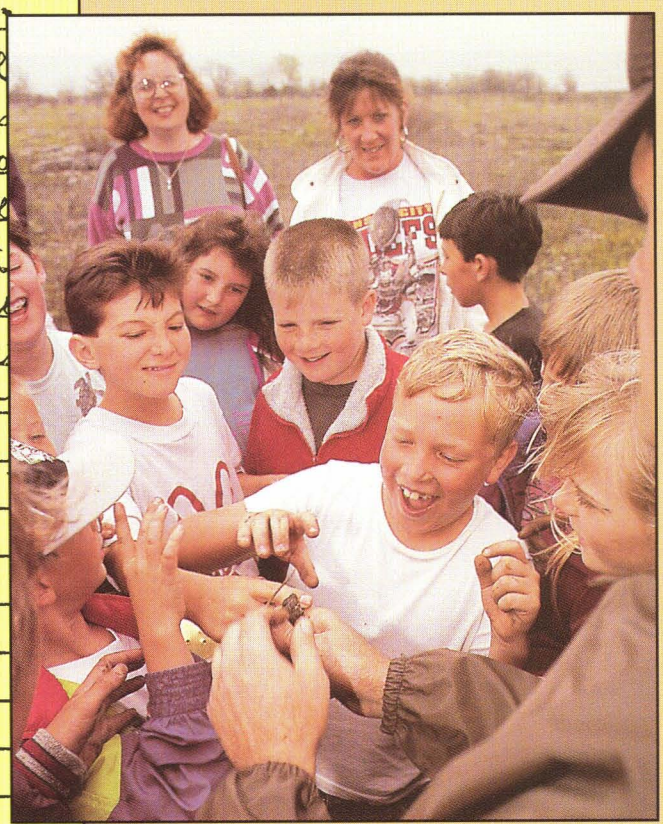


Dear Mr. Whitaker,
I liked the trip. It was cool. I like rolling rocks best. I thought the turtle was best. I also liked the tadpoles. I learned that there are no perch in Kansas. Thanks for the worm. I would really like to come next year.
Sincerely,
Arley Haskin

Dear Mr. Whitaker,

I had a nice time I hope will get to do it next year. Say to Mr. George for the rubber wo I liked rolling the rocks the be best part was when we found t snake. I learned that people ne take better care of the water beca we keep on polluting the water w not live long if we don't have water to drink

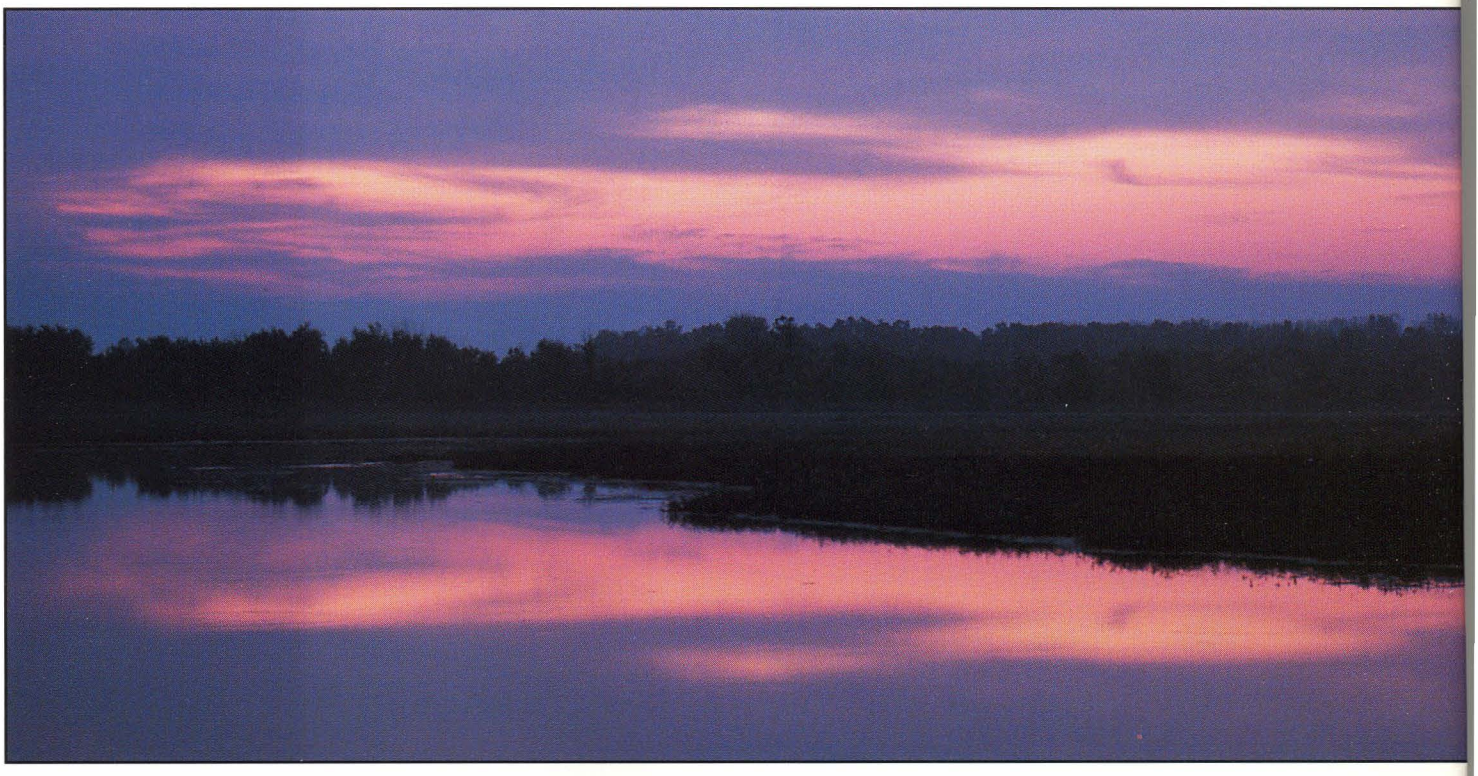
from,
Brian Lancaster.



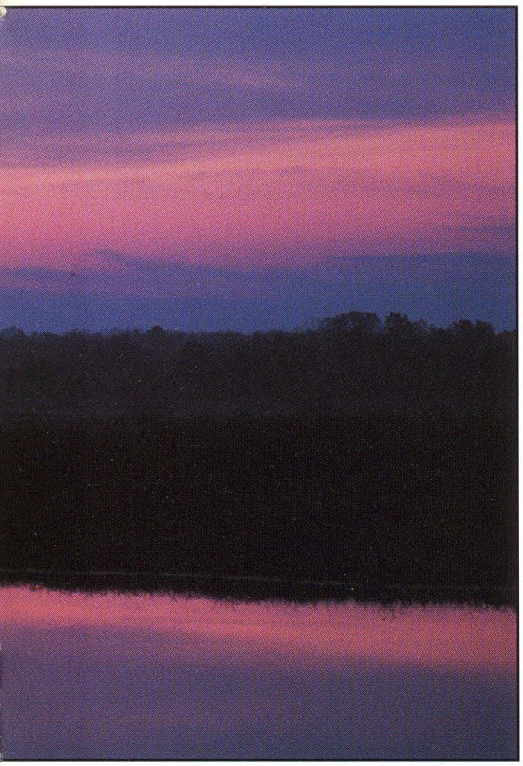
Gallery

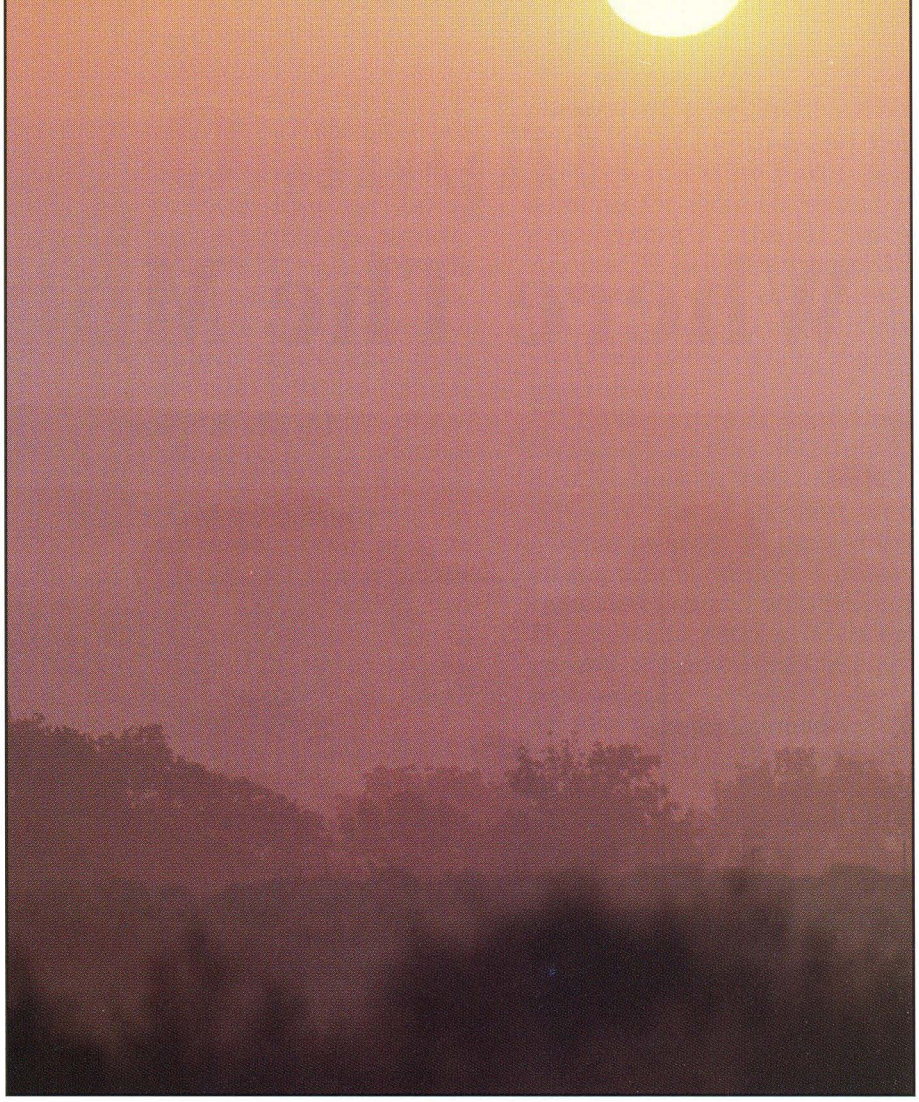
by Mike Blair

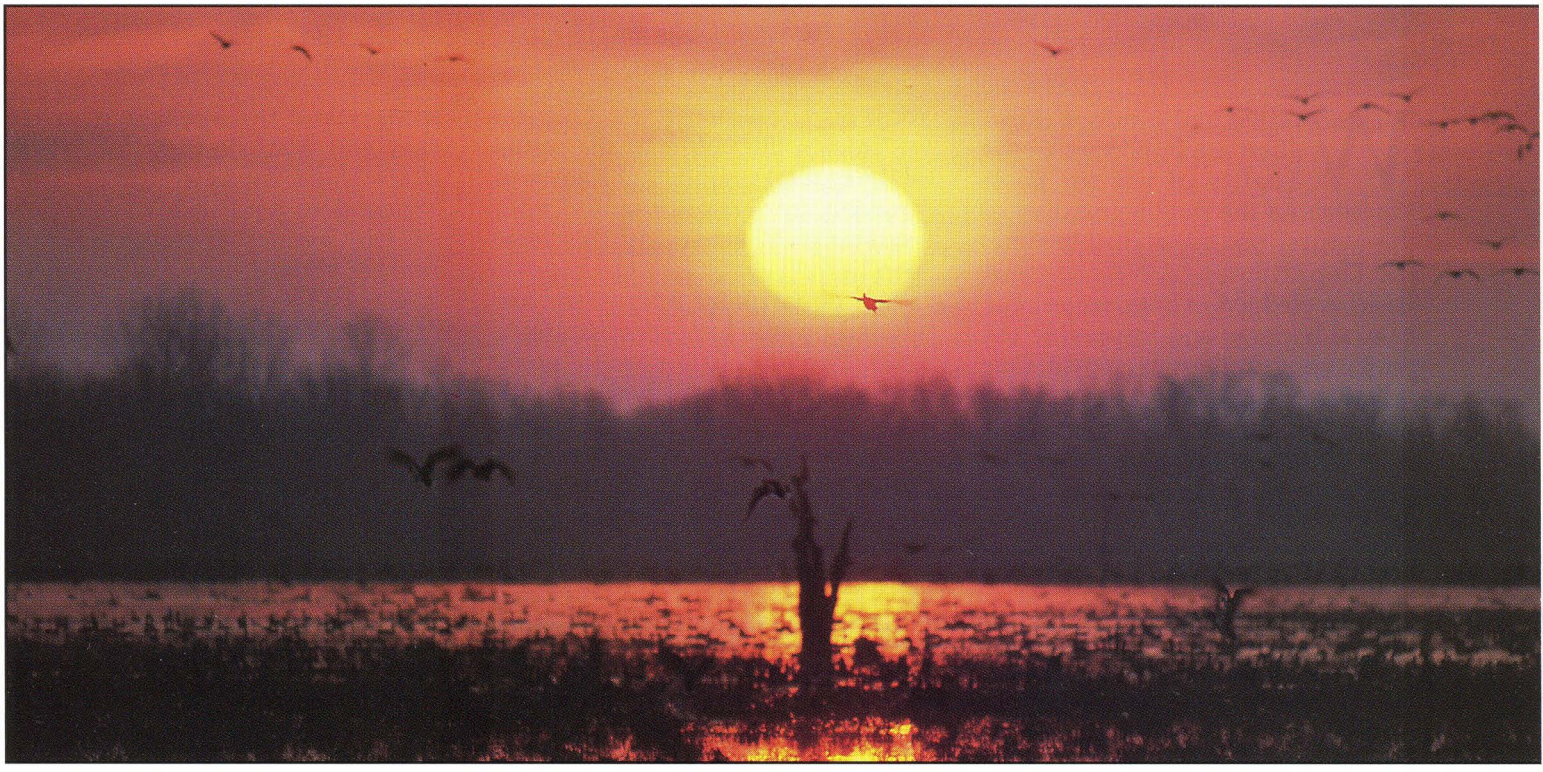
Dawn



Images at dawn include: Above: 55mm lens, f/2.8 @ 1/30. Above right: 400mm lens, f/11 @ 1/50. Lower right: 400mm lens, f/22 @ 1/30. Right: 400mm lens, f/3.5 @ 1/60.







Input, Output: Where The Money Goes

by Mark Shoup
associate editor, Pratt
photos by Mike Blair

The Department of Wildlife and Parks is funded primarily through license and permit sales. All Kansans who fish, hunt and enjoy state parks help pay the bills, but few understand how the money is spent.

Wildlife and outdoor recreation are important to the quality of life for most Kansans. As the public guardian of the natural resources of this state, the Department of Wildlife and Parks is pledged to both protect our natural heritage and to provide the public opportunities to enjoy it. Our mission, outlined in *A Plan For Kansas Wildlife and Parks,* emphasizes this responsibility as follows:

"Conserve and enhance Kansas' natural heritage, its wildlife and its habitats — to ensure future generations the benefits of the state's diverse, living resources;

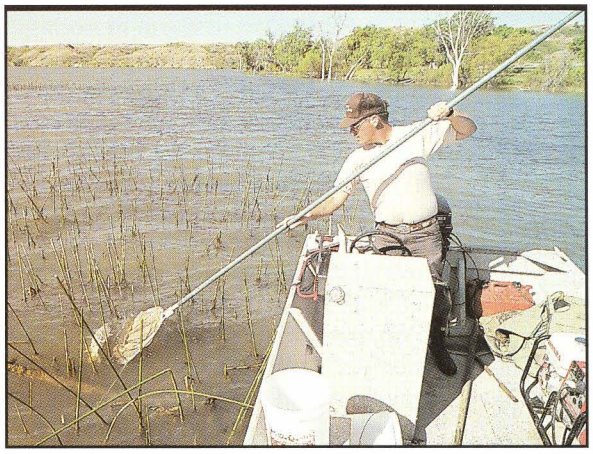
"Provide the public with opportunities for use and appreciation of the natural resources of Kansas, consistent with the conservation of those resources; and

"Inform the public of the status of the natural resources of Kansas to promote understanding and gain assistance in achieving this mission."

All department operations are guided by this long-term strategic plan. The plan lists specific goals and objectives established cooperatively by department employees, conservation and sporting organizations, and the public. Each year, department employees plan, through the budgeting process, what they want to achieve in the next fiscal year.

Although the strategic plan is a public document, and public contact Wildlife and Parks each day, many Kansans still don't really understand the agency: Who are they and what do they do? Where does their money come from? Where does it go? A brief overview of the agency's structure and budget should help answer these questions.

About 410 employees comprise the agency's five divisions: Administrative Services, Executive Services, Fisheries and Wildlife, Law Enforcement, and Parks and Public Lands. The Administrative Services Division oversees business management, accounting, data processing, education and licensing efforts of the department. Administrative Services staff develop and issue the licenses and permits purchased by hunters, anglers, trappers, boaters and park

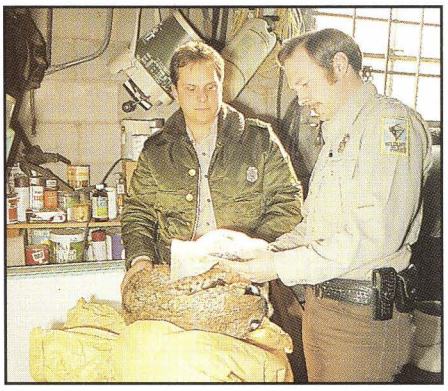


Fisheries biologists manage state waters and aid landowners in developing farm pond fisheries.

visitors.

The Executive Services Section is responsible for budget and planning, engineering, environmental services, legislative issues and public information. The engineering section performs technical services for construction and maintenance of recreational facilities. The environmental services section works with public and private developers to minimize environmental impacts of development and to ensure compliance with state and federal regulations. The Public Information Section produces brochures, ***Kansas Wildlife & Parks*** magazine, weekly news releases and a variety of other services in support of all divisions.

The Fisheries and Wildlife Division provides the technical expertise to manage fish and wildlife resources. Staff members evaluate fish and wildlife populations, conduct research, monitor environmental conditions and survey recreationists. Fisheries biologists work on public waters as well as private helping landowners manage ponds. Wildlife biologists provide technical assistance for wildlife management on public lands and help develop wildlife habitat on millions of acres of private land. Using information obtained through research and surveys, this division recommends adjustments in regulations governing the use of fish and wildlife resources in Kansas. The fish culture section produces and stocks fish in waters all across the state.



Conservation officers enforce all outdoor-related laws, but they also work extensively in education.

The Law Enforcement Division is comprised mainly of conservation officers, who are the most visible employees of the department. Their primary responsibility is enforcing laws and regulations pertaining to fish, wildlife parks and boating. These officers also assist with education programs pertaining to hunting, furharvesting, boating and wildlife interpretation. The Outdoor Alert program, which encourages citizen involvement in reporting wildlife violations, is also administered by this division.

Responsibilities of the Parks and Public Lands Division include development and maintenance of state parks, state fishing lakes and public wildlife areas. In addition to building and maintaining new facilities, employees in this division develop wildlife habitat, conduct educational and interpretive events for public lands visitors, and improve public access to these recreational lands and waters.

Of course, all this costs money. Unlike most government agencies, the Kansas Department of Wildlife and Parks obtains the majority of its income from fees paid by the constituents it serves — hunters, fishermen, park goers and boaters. The purchase of hunting and fishing licenses and state parks permits accounts for about 60 percent of the department's annual income. Another 22 percent is derived from excise taxes paid on hunting and fishing equipment, which is distributed back to the state by the federal government.

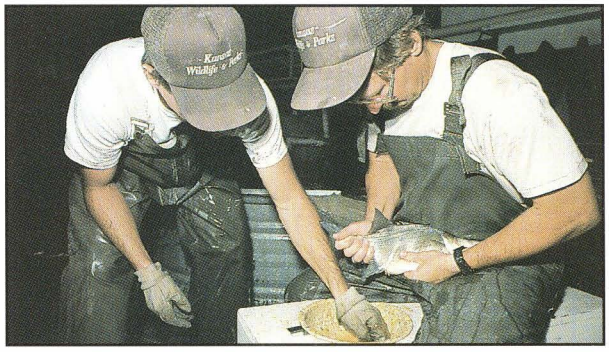
The department's total budget for Fiscal Year (FY) 1992 (July 1,1991 through June 30, 1992) was $31 million. Of this 37 percent went to wildlife projects, 12 percent to fisheries projects, almost 4 percent to combined fish and wildlife projects, 24 percent to parks projects and 23 percent to administration and support services.

FY 1992 Accomplishments:

*Acquired 2,471 acres of new land

*Cheyenne Bottoms deep-water storage pool completed

*Marsh developed at Clinton Wildlife Area



Fish culturists produce fish according to biologists' requests and stock them into state waters.

*Spring River land acquired in Cherokee County

*Cheney State Park renovated

*Ford County Lake renovated

*Hillsdale State Park developed

*Wetland and riparian areas research yields strategy for protection of essential wildlife habitat

*Major trails systems developed statewide

*100 pronghorns transplanted from Colorado to Kansas

*Urban fisheries program developed

*Paddlefish reintroduction program initiated

*Saugeye stocking program

Wildlife biologists help manage habitat on public land, develop habitat on privately owned land and conduct research to monitor wildlife populations.

developed

*Seasonal naturalists trained and placed in all 21 public land units

*The Outdoor Wildlife Learning Sites (OWLS) program developed 20 outdoor classrooms at schools across Kansas.

*Lowest number of hunting accidents in agency history

*12,500 students trained in hunter education

*200 new hunter education instructors added to pool of 1,500

Interesting Items

*Twenty-four state parks attract more than 4 million visitors each year.

*185,000 Kansas hunting licenses sold in FY 1992

*322,000 Kansas fishing licenses sold in FY 1992

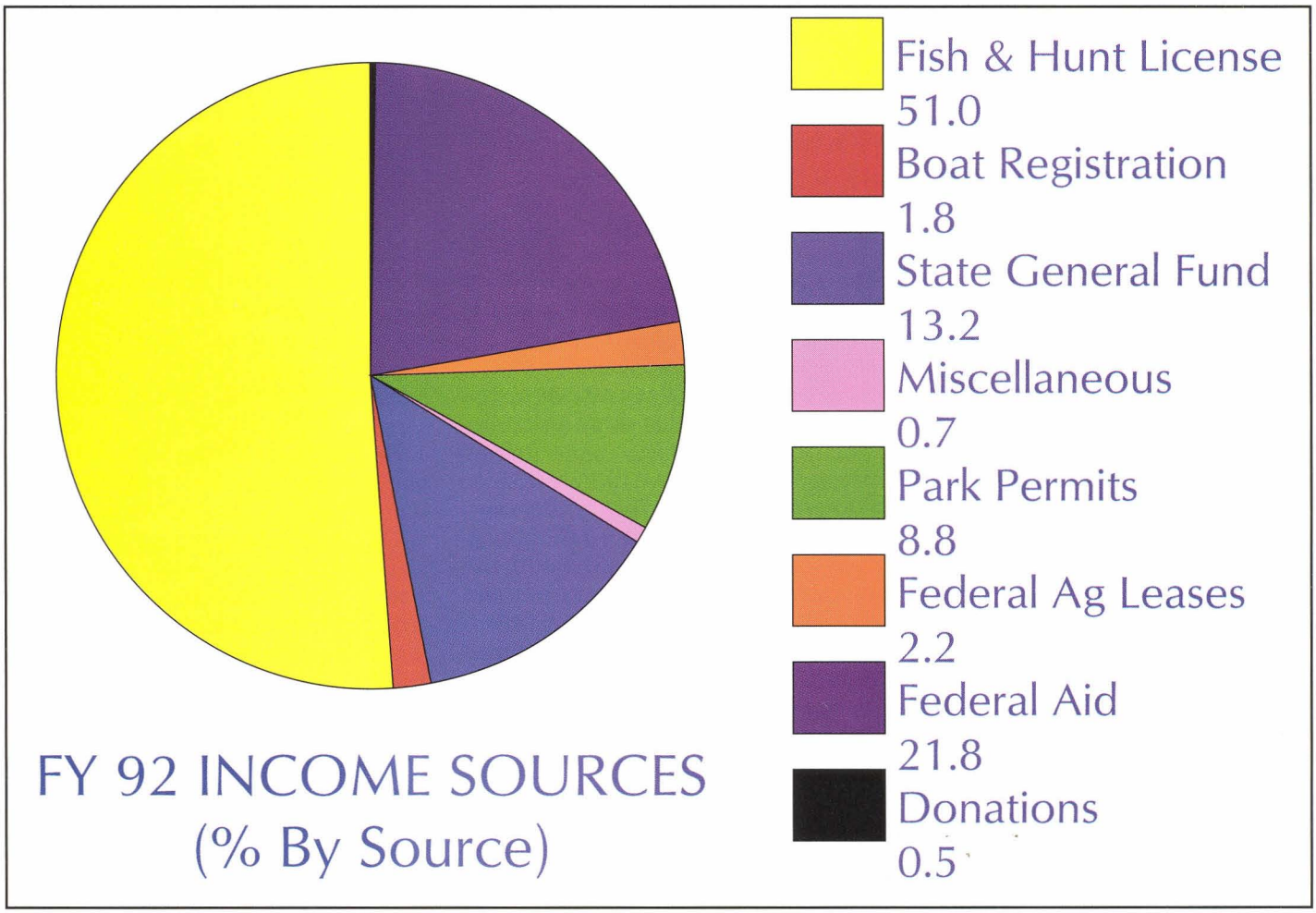
*About 19,600 Kansas taxpayers donated a total of $154,000 for wildlife enhancement programs through the Chickadee Checkoff Program in 1991.

Annual Activities

*In 1992, the department's fish culture section stocked approximately 45 million fry, 2.5 million fingerling and 432,000 intermediate-sized fish. Species included walleye, largemouth bass, channel catfish, bluegill, striped bass, wiper, sauger and saugeye.

*50 state fishing lakes and 24 department-managed reservoirs provide approximately 217,000 acres of recreational water in Kansas.

*The department reviewed approximately 1,100 development projects for threatened and endangered species concerns in 1992. Of that, less than 1 percent required



mitigation in order to proceed.

*Since 1972, when the Kansas Hunter Education Program began, more than 300,000 students have completed the course.

*More than 90,000 boats are registered in Kansas.

*85 conservation officers patrol 105 counties in Kansas and enforce fishing, hunting, boating, environmental safety, game breeding and other wildlife- and outdoor-related laws.

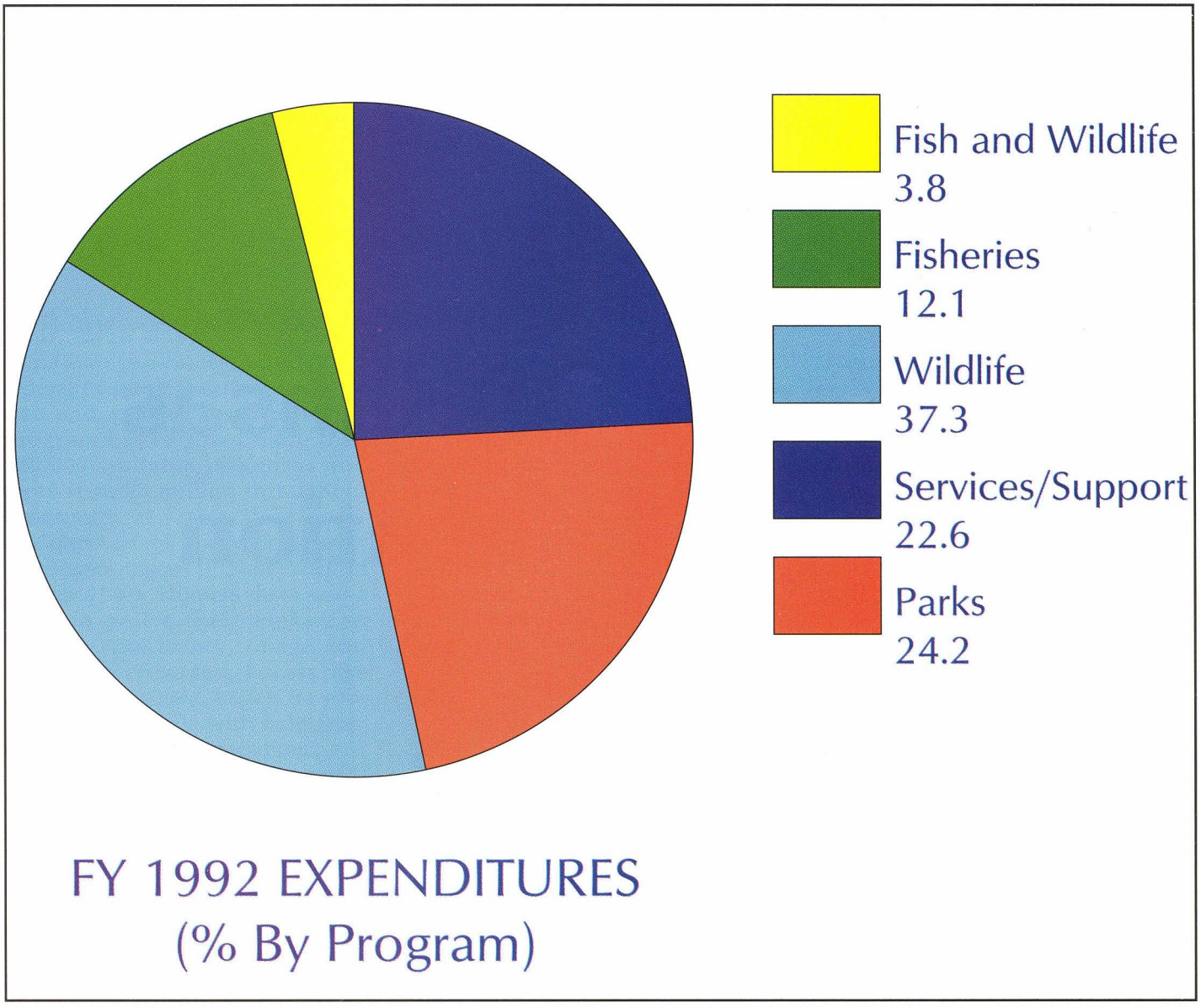
*82 trails on department-managed land provide nearly 350 miles of scenic hiking in Kansas

*Wildlife biologists have developed habitat (including more than 40 million trees!) on nearly 2 million acres of privately-owned land through the department's Wildlife Habitat Improvement Program (WHIP).

*The department manages approximately 275,000 acres of public hunting land on 137 wildlife areas.

*The department manages more than 22,000 wetland acres.

*Since 1960, many native species that were either absent or nearly absent from Kansas have been reintroduced by department biologists. Species include pronghorns, Canada geese, eastern chipmunks, eastern and Rio Grande turkeys, elk, golden eagles, river otters, and sharp-tailed and ruffed grouse. Many of these species now maintain viable, even flourishing populations.



20 Years Of Kansas Hunter Education

by Steve Stackhouse
education coordinator, Pratt
photos by Mike Blair

Since 1973, more than 300,000 Kansans have completed the hunter education course and through the efforts of volunteer instructors, 1992-1993 was our safest hunting year ever.

This year, Kansas proudly celebrates 20 years of mandatory hunter education. Promoted by concerned hunters and the then Kansas Fish and Game Commission, the statute requiring hunter education was enacted in 1973. The law requires anyone born on or after July 1, 1957, (except those hunting on their own land) to complete an approved hunter education course before hunting in Kansas. Through those 20 years, the course has evolved both in content and in duration; from four hours in 1973 to a minimum of 10 hours today. Two constants have been the enthusiastic participants, mostly youngsters between the ages of 10 and 14, and the dedicated volunteers who teach the courses.

The modern hunter education course requires at least 10 hours of formal instruction, much of it in the classroom. However, most of the courses provide 12 hours of instruction and may involve as many as eight volunteer instructors.

Hunter education is currently required in 47 states and seven Canadian provinces. Funded by federal taxes on firearms, ammunition and archery equipment, the program has certified more than 300,000 students in Kansas and more than 20 million throughout the country.

Hunter safety, now called hunter education, began in New York in the late 1940s. Hunters there saw a need to police their ranks and improve the safety, image and knowledge of hunters. Kansas, like many other states, began its program in the 1950s with help from the National Rifle Association.

In those early years, hunter safety was primarily just that, firearm safety. Today's hunter education program includes not only basic firearms safety, but also covers hunter responsibility, ethics, history of firearms, ammunition, alcohol and drug training, bowhunting, first aid, survival, boating safety, wildlife education, conservation and wildlife management. With such a diverse and comprehensive curriculum, it's no wonder that today's average class lasts at least 12 hours and has eight volunteer instructors.

The volunteers are the backbone of the Kansas program. Motivated by a deep desire to protect our hunting heritage and pass it on to future generations, instructors must undergo training to become certified to conduct courses. Each year nearly 900 instructors, from a pool of 1,500, teach in one or more of the 300 courses available throughout the state. In 1992, nearly 22,000 hours were donated by these individuals while they conducted 333 classes. When combined with the many hours of pre-service and in-service training they undergo, it's obvious that these men and women are dedicated to the Kansas Hunter Education Program's mission: to train safe, responsible, ethical and conservation-minded hunters.

Many of the same concerns that motivated the hunter safety pioneers are still a force today. One of those concerns naturally involved hunting safety. Statistics show that hunting-related accidents in the U.S. and Canada have been reduced by 52 percent since 1972, and a portion of the credit should go the volunteer instructors. Hunters in Kansas had the safest year on record in 1992 with only 21 accidents and no fatalities.

The danger of hunting, much touted by uninformed groups, is relatively overstated. Hunting is one of the safest outdoor activities. When compared to the number of injuries per 100,000 participants, hunting is safer than swimming, golf, tennis, fishing, ice skating, horseback riding, bicycle riding, soccer, baseball and football! A person is more likely to be killed by bees, lightning, suffocation or a home accident than by a hunting accident. Hunting accidents involving non-hunters are

Actual firearm safety and handling is still a major effort of the course, but much more is taught including widlife management and conservation, effects of drugs and alcohol, laws and regulations, survival, bowhunting safety and ethics.

Some of the more elaborate classes utilize outdoor courses that allow students to learn proper firearm handling procedures in a variety of life-like situations such as fence and obstacle crossing, hunters walking in a group and more. Where outdoor facilities aren't available, walk-through situations are usually reconstructed in the classroom.

extremely rare. In fact, a non-hunter is 20 times more likely to die from stinging insects than from a hunting-related accident.

Statistics, however bright, don't excuse even one hunting accident. All accidents can be prevented, and hunter education instructors believe that one accident a year is too many. A major emphasis of the course is placed upon the "10 Commandments Of Firearm Safety:"

1. Treat every gun as if it is loaded.

2. Control the gun's muzzle at all times.

3. Guns not in use are to be unloaded and stored with actions open.

4. Be sure the barrel and action are clear of obstructions and that only the proper ammunition is carried with every gun in use.

5. Be sure of your target identification before you pull the trigger and always know what lies beyond the target.

6. Never point a gun at anything you do not want to shoot.

7. Never climb a fence or tree or cross a ditch or other obstacle with a loaded gun; and never pull a gun toward you by the muzzle.

8. Never shoot at water or a flat, hard surface; and always be sure your backstop is adequate.

9. Store guns and ammunition separately, out of reach of people who are unfamiliar with safe gun handling.

10. Never handle a firearm or operate a vehicle while you are affected by alcohol or drugs.

If every student learned and followed these rules, accidents would be almost nonexistent. However, another factor that has probably contributed to the drop in accidents is the increasing use of hunter orange clothing. Poor visibility is a contributing factor in many accidents, especially in the most common accident in Kansas: hunters swinging on moving game. In many instances, the shooter claims to have not seen the victim because of the terrain, brush, or merely because the brown hunting attire the victim wore blended in with the surrounding cover. The wearing of hunter orange can often prevent this type of accident by making the wearer much more visible, especially in heavy cover and during low-light conditions.

Hunter orange is required in some hunting situations in many states. In Kansas, all deer and elk hunters hunting during the firearms season must wear a hunter orange cap (visible in all directions) and a minimum of 100 square inches of hunter orange on the front of the torso and a minimum of 100 square

inches on the back of the torso. While not required for other types of hunting, the Department and hunter education instructors strongly urge hunters to wear hunter orange voluntarily, especially hunting upland birds or other game that is not alerted by bright colors.

While safe hunting is still one of the primary goals of the program, the evolution of the course has included a greater emphasis in hunter ethics and responsibility. Instructors strive to pass on their passion for hunting, stressing that it is a privilege, not a right, and that hunter behavior is critical to non-hunters' perception of hunting. This is the future of the program. The segment of society most opposed to unacceptable hunter action is hunters themselves. Since instructors can reach young hunters, the program can be a spearhead for changing hunter attitudes, and instructors are elevating the importance of these subjects.

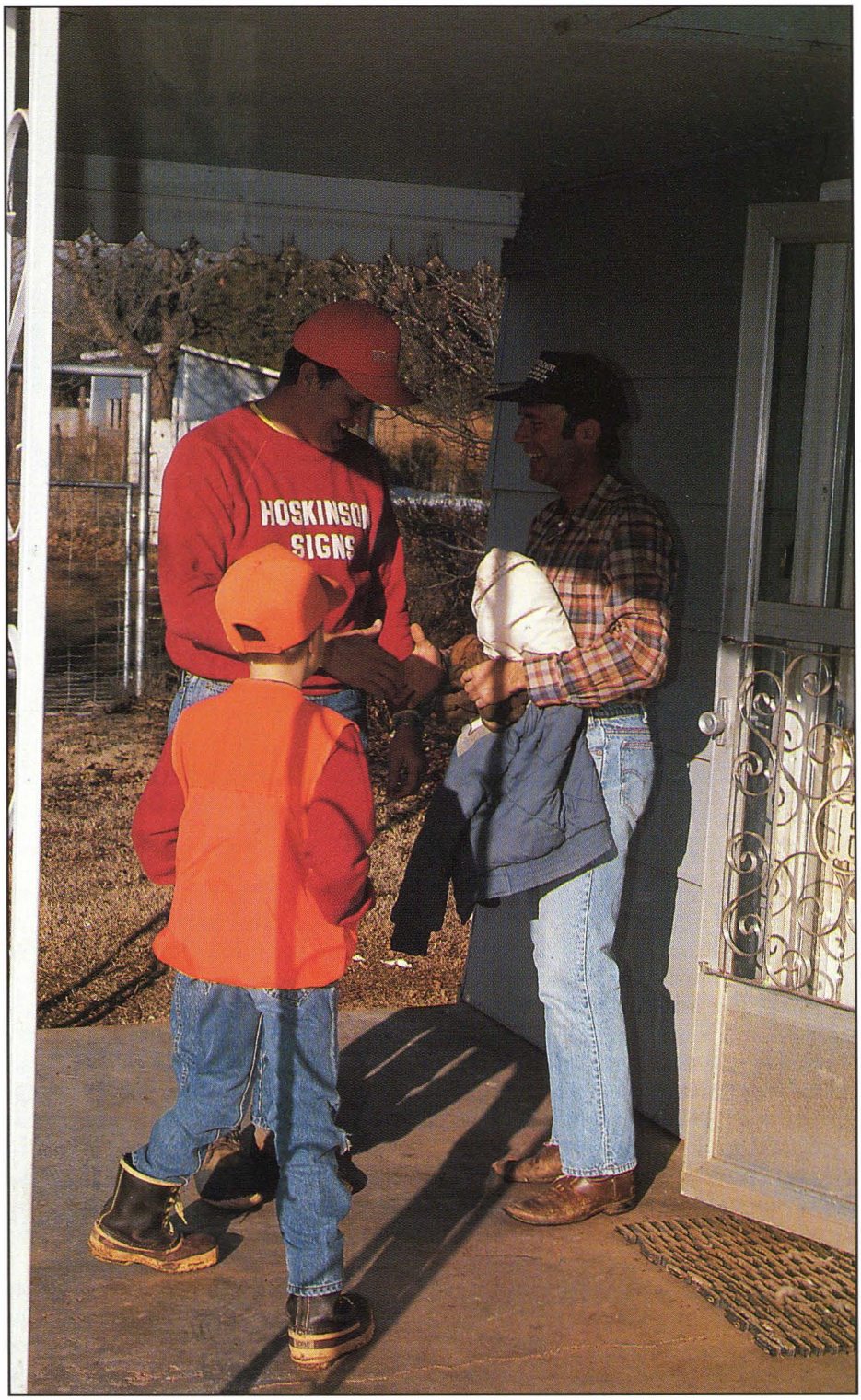
The thrust of the program's philosophy is that with the privilege to hunt comes many responsibilities. One of these is understanding of, and compliance with, hunting laws. Most classes include a portion taught by one of the department's conservation officers. This contribution adds much to the quality of the course. While explaining wildlife laws and answering questions, the officer also has a chance to meet tomorrow's hunters. Youngsters see the officers as allies in the effort to protect our wildlife resources. Conservation officers, most of whom are certified hunter education instructors, become positive role models for young hunters.

The ethics portion of the course promotes that most negative attitudes about hunting are directed toward hunter *behavior* not the ecological aspects of hunting. Society views some hunting-associated activities and behavior as inappropriate. Ethical hunters detest illegal, unethical or unthinking behavior of those who abuse their privilege to hunt. Hunter education instructors refer to those who shoot signs, trespass or poach as vandals, violators or poachers, *not* hunters. Ethical hunting guidelines taught include:

*Hunting on private land *always* requires permission from the landowner.

*Hunting from vehicles is illegal and unethical.

*It is not appropriate to display dead game in public.



A major emphasis of the program today is ethics and hunter behavior, which are both critical to the survival of hunting in America. Landowner relations, including getting permission before hunting any private land, is also stressed throughout the course.

Many classes include some type of live-firing exercise, allowing students to not only learn to safely handle a firearm, but also to actually shoot. Only those programs with access to appropriate facilities can offer live-firing.

*Hunter image is important to the future of hunting.

*Actions that do not reflect the spirit of fair chase or respect for the wildlife and environment have no place in modern hunting.

The future will bring many challenges for the hunter education program. As hunting continues to be criticized by anti-hunting organizations, the emphasis on hunter behavior will take on more importance. The department and the program's instructors hope that through contact with young hunters, certain attitudes about our wildlife resources can be passed on. A report by the International Association of Fish and Wildlife Agencies recommended that hunter responsibility be given equal time with the traditional safety subjects. Much of the current and future training for instructors will revolve around ways to increase the time and effectiveness of the responsibility and ethics portions of the classes. One example of this is an essay contest for graduates of the course. Entrants will write about the importance of hunter ethics to the future of hunting, and the resulting exposure might bring about more awareness in all hunters.

Another future concern of hunter education is sportsman/landowner relations. The future of wildlife and hunting in Kansas will ultimately rest with private landowners, and the program will continue to instill the respect necessary to retain hunting privileges on private lands. A new program, just in the planning stages, involving instructors, students and landowners, will elevate the importance of landowner respect among Kansas hunters.

All that the Kansas Hunter Education Program was, is and will be depends upon the volunteer instructors. The department funds and administers the program, trains and maintains a corps of instructors and supplies teaching aids such as manuals, films and videos, but it won't happen without volunteers. With their continued dedication, the program will train safe, responsible, ethical and conservation-minded hunters, ensuring that future generations will be able to enjoy the precious hunting tradition.

Edited by Mark Shoup

FOR THE KIDS

Editor:

I am student teaching and was shown the material that your office sent to a teacher friend. I want to thank you for providing it. The material is very informative and written so students can understand it.

My husband has bought hunting and fishing licenses for years, and I'm glad to learn part of the fees are used to provide such good educational materials.

Kathy Jackson
Eureka

MORE FOR KIDS

Editor:

I write this letter to ask how much attention our public schools have placed on getting our kids involved in nature study. I know that if I mention going fishing or hunting or sightseeing, every kid wants to go in the whole block. We have so many young people whose lives are being wasted on drugs, alcohol and sex that I think maybe if the schools turned more attention to something in nature, the kids could find a new love in life.

Perhaps we could teach mothers and fathers also.

We have endless miles of rivers, forests and fields, and probably any landowner would welcome the chance to let the kids on for clean and decent fun.

Have the schools started any program toward any serious nature study? If not, then I will see what I can get started because our young people need it.

Kenneth McClintick
Wichita

Dear Mr. McClintick:

Thanks for your great ideas. I couldn't agree more that we need to help our young people connect with the natural environment, for their sakes as well as the environment's.

There are several ongoing efforts directed at young people. The Department of Wildlife and Parks distributes wildlife educational materials to schools throughout the state. Roland Stein, the department's education coordinator, also conducts in-service training for teachers who use these materials. Our Outdoor Wildlife Learning Sites (OWLS) program helps schools create small natural environments for wildlife on or near schoolgrounds. Currently, 20 of these sites have been developed.

Still, there is much to be done. Like many good things, a grassroots effort such as you suggest could be more effective than anything in the long run. I encourage you to work with landowners and young people in your community. If you need help with materials or other support, feel free to contact Mr. Stein (at the Pratt Office), your local biologist or conservation officer, or any department employee. —*Shoup*

BERRY WELL

Editor:

I was just wondering, is anyone trying to protect the wild grape, wild plum, gooseberry, elderberry, cottonwood and mockingbird in Kansas?

Clyo Heiserman
Marysville

Dear Mr. Heiserman,

I appreciate your concern for Kansas wildlife, both flora and fauna. The species you mention — wild grape, wild plumb, gooseberry, elderberry, cottonwood, and mockingbird — do well in Kansas. This is not to say that they don't bear watching. These plant species are important cover and food sources for many species of wildlife, and the mockingbird is one of many important songbirds that grace our state.

I guess the straight answer to your question is, "Yes." The department maintains numerous wildlife areas and conducts wildlife habitat improvement programs throughout the state. These projects have obvious direct impacts on both animal and plant life. In addition, every issue of KANSAS WILDLIFE AND PARKS contains articles designed to increase public awareness of the value of nature to mankind. In this sense, we directly or indirectly help protect the species you mention. —*Shoup*

FOOLING NO ONE

Editor:

I recently subscribed to KANSAS WILDLIFE AND PARKS magazine after enjoying it previously as a kid. My first issue, March/April 1993, had an article on paddlefish (Page 8). Being an avid outdoorsman, I have fished for paddlefish for years.

The problem — a magazine about the State of Kansas and what it has to offer. But in that article, three great pictures that were taken in Oklahoma. That's right, the city dam at Miami, Oklahoma.

I resubscribed because of the excellent photography, but now I wonder what pictures are really taken in Kansas. Are you juicing up the magazine with big fish and big bucks to get the nonresident dollars? Is Wildlife and Parks working for the residents or big money from the nonresidents?

Steve Natalin
Cherokee

Dear Mr. Natalin:

You caught us. But I'm not sure what we did wrong. There was no attempt to fool anyone with the photos. We wanted a story about paddlefish, and the pictures, wherever they were taken, illustrated the way Kansans fish for paddlefish. The day our photographer and writer went to Chetopa to shoot the story, the fish weren't there. But a fisheries biologist from Oklahoma showed up and told them fish were being caught at Miami, some 25 miles to the southeast. Rather than miss getting the story, they went on down and fished.

I'm puzzled about why you feel so misled. Fishing is the same at Miami as at Chetopa — same fish, same river, same techniques. The pictures were merely used to illustrate what paddlefishing is like. As I'm sure you know, on another given day, we could have taken very similar photos at Chetopa. It was simply a matter of being there at the right time.

I have no idea what nonresident dollars we could possibly attract with the paddlefish story.

Rest assured, 99 percent of our photos are taken in Kansas. Our only intention is to inform and entertain our readers with stories and photos about Kansas outdoors. On extremely rare occasions, this might mean running a photo of a timely activity that occurs in Kansas, but is not currently happening. —*Miller*

CAMPING REGS

Editor:

I'm writing in protest to the law that takes our right to camp on the lakes and streams in the state of Kansas, unless you are in a park.

I feel that this should be part of our constitutional right because it is part of our heritage. I don't care to stay in a park area that is overcrowded, sticker-infested, and overrated for what you pay for. The camper pads are too close together, and there is no privacy.

I realize that it costs a lot to have a conservation officer patrol the wilderness area, but running even more people into an already overcrowded area is not the answer. Maybe what we should be looking at is a wilderness permit for those who don't care to use the state and federal parks.

Overall, the Wildlife and Parks Department doesn't do a bad job although I think that they have overstepped their bounds on this, and really should reconsider what they very well may be doing. Please reconsider this law because some people don't care to be pushed into your parks.

Steve Muth
Salina

Dear Mr. Muth:

I appreciate your concern over remote-area camping on Department lands. Like you, I strongly prefer wilderness-like camping in seclusion, so I relate to your sentiments.

The department is developing plans and guidelines for better management of remote area camping, but most wildlife areas, state lakes, and undeveloped state parks still offer the camping opportunities you prefer.

Generally, unrestricted camping is not allowed on such areas, but is available in a variety of locations. In designating certain remote areas for camping, the department intends to provide the type of experience you and I seek, provide appropriate related services (such as restrooms), and prevent environmental damage. I'm sure you have witnessed the damage left behind by campers who use areas that are not suited for camping — such damages include barren soil, exposed tree roots, erosion, destroyed trees and undergrowth, and litter. By carefully selecting remote camping zones, we can reduce these negative impacts.

Remote camping areas on Department of Wildlife and Parks lands are generally marked with inconspicuous signs and are indicated on area map brochures. If you are unable to find the type of area you seek, please contact the local Wildlife and Parks property manager. —*Rob Manes*

FINICKY FISH

Editor:

First of all, I would like to say "Thank you" for producing this wonderful magazine that my dad and I look forward to every other month.

There was, however, one thing my dad and I were in disagreement with in your magazine. In the 16-page pullout entitled "Fishing Guide to Kansas," you gave brief descriptions of fish found in Kansas. In your description of the flathead catfish, you said that they were "strictly predatory" and that they are "caught with live bait only." I felt that you should change the wording in this statement just a bit.

In 1989, I caught a 28-pound flathead at Sebelius Reservoir, near Norton. Although odd, I did catch this fish while trolling with a bone-colored Hot-N-Tot.

Bryan Fulton
Central City, Nebraska

Dear Mr. Fulton:

I stand corrected. When I wrote that flatheads were predatory and taken with live bait, I was referring to catfishing techniques commonly used. Flathead are rarely caught on dead, cut or prepared baits. Since an artificial lure imitates a live bait fish, I didn't mention that alternative.

While it is unusual to catch a flathead trolling as you did, there is a small group of anglers who regularly cast lures for flatheads along riprapped dams and causeways. One particularly good lake for this is Milford Reservoir, near Junction City. The causeway near Wakefield attracts flatheads in July and August, and fishermen casting crankbaits often catch flatheads weighing up to 20 pounds.

Thanks for sharing your story. Hope you and your dad enjoy good fishing this summer. --*Miller*

RIVER RESCUE

On May 9, 1993, the Chase County Sheriff's Office received a phone call about 2 a.m. that a family in Saffordville wanted the sheriff's office and the fire department to get them out of flood waters. We arrived at the scene with two sheriff's officers and several rescue personnel, but it was too deep — about 5 feet. We felt they were safer to stay in the house.

We returned about 6 a.m. and decided that it would be too dangerous for a boat to attempt the rescue. The National Guard was then consulted, and they advised that they couldn't get close enough with a copter because of trees and other obstructions. We then consulted Wildlife and Parks conservation officer Randy Benteman, and he thought that their river rescue team could perform the rescue on wet-bikes.

That afternoon, we arrived at Saffordville with conservation officers Benteman and Tom Swayne, and they decided they could make the rescue without any danger. I was real worried about the rescue being done safely, but with Chase County Rescue standing by, COs Benteman and Swayne, with help from another boating aide, performed the rescue with no danger to rescue personnel or to the rescued victims. It was done with real professional precision and knowledge that showed their training and skills in river rescue. Eleven people were rescued with no mishaps.

I, Gerald Ingalls, deputy sheriff, county emergency preparedness director, and a member of the Chase County Rescue Team, want to thank the officers and Wildlife and Parks for giving them the training to perform this rescue in such a safe manner. —*Gerald Ingalls*

NATIONAL HOTLINE

Your phone-dialing finger is now a vital weapon in the war against wildlife crime, thanks to a new national hotline that allows callers to report poachers from anywhere in the country. The number is 1-800-WARDEN.

The hotline, sponsored by the National Anti-Poaching Foundation (NAPF), operates seven days a week, 12 hours a day from 6 a.m. to 6 p.m. When NAPF operators establish that the call is to report a suspected wildlife violation, they will transfer the caller to appropriate state agency within 15 seconds. Calls for general information will not be taken.

Neither callers nor state agencies will be charged for the calls because the hotline is funded by donations to, and memberships in, NAPF. For more information or to make a donation, write NAPF, 2860 S. Circle Dr., Suite 2136, Colorado Springs, CO 80906. — *Outdoor Ethics*

CHEAP SALE

On Saturday night, Jan. 25, 1992, CO Bill Ramshaw, Sedan; Montgomery County reserve deputy Clark King; and I [CO Dennis Knuth] were working night patrol in Montgomery County. We had staked out an area north of Coffeyville, looking for spotlighters. I had received numerous complaints of spotlighting in this area.

About 10 p.m., Ramshaw saw a vehicle shining a spotlight as it travelled down the road. Ramshaw radioed King and me (we were riding together) and let us know that the vehicle was headed our direction. It soon approached our area, still shining the spotlight.

We stopped the vehicle, an old pickup. Two men and one woman were inside, along with two loaded rifles, the spotlight, three mixed drinks and an open bottle of whiskey. There were also large amounts of fresh blood and deer hair in the pickup bed. After questioning, the driver finally told us that they had shot a deer earlier in the evening, dressed it out and took it to a Coffeyville residence. He said that he could take us there.

After arresting the three suspects, we took two of them to the sheriff's department in Independence while Ramshaw took the driver to Coffeyville to get the deer. At the residence, an elderly woman answered the door. Ramshaw asked her if she had received a deer from the man with him. She said that she had and that she was cleaning and cutting it up at that moment. Ramshaw then explained to her that the deer was taken illegally and the meat would have to be seized.

"How am I going to get back the $40 I paid for that deer?" she replied, incredibly. Apparently she didn't understand that the deer had been taken illegally.

Ramshaw told the woman he would contact her again, and he took the driver to the sheriff's office, where all three were interviewed and booked.

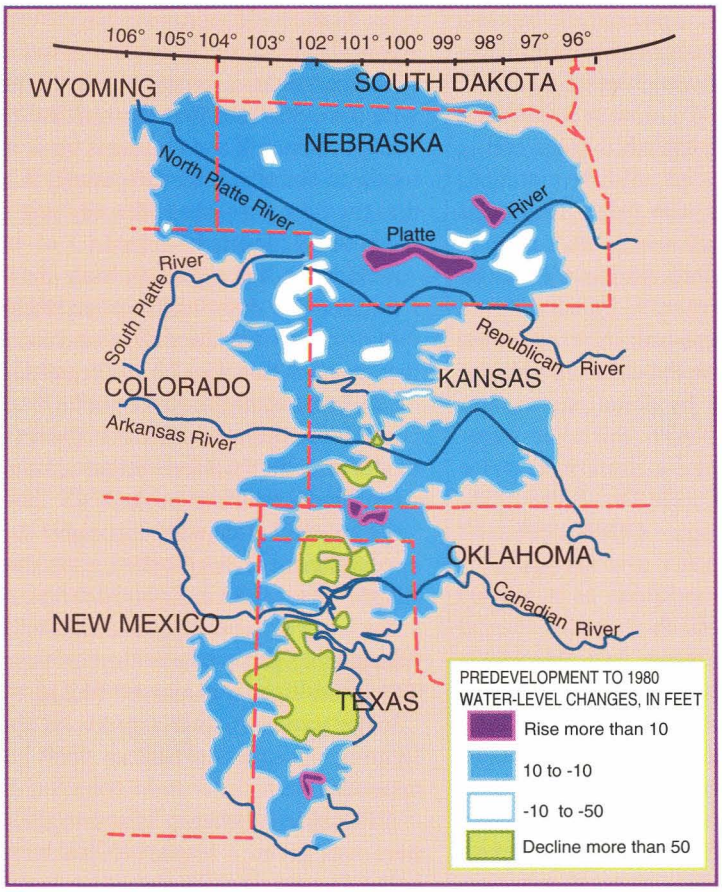
The two men were charged with spotlighting, illegal taking of deer, illegal sale of deer, hunting without a valid hunting license (one of them), and transporting an open container of liquor. They were fined a combined $1,214.

The woman was charged with spotlighting and transporting an open container of liquor.

The elderly woman who bought the deer was given a break because it was believed that she really didn't know the deer was illegally taken.

The two men who sold the deer were lucky that they hadn't been caught selling a couple more. If so, they would have been charged with felony commercialization of wildlife. Under this charge, in addition to all other penalties of a Class E felony, all equipment used in the commission of the crime could be confiscated; all licenses and permits issued to the convicted person could be revoked for 10 years; and restitution could be paid to the Kansas Department of Wildlife and Parks for the aggregate value of the wildlife taken.

Wildlife crime needs to be stopped. Poachers are ripping off the people of Kansas. Judges and county attorneys need to be contacted by everyone who cares about wildlife and the importance of wildlife crime emphasized. Just as important, wildlife crime should be reported. —*Dennis Knuth, conservation officer, Independence*



Water level changes in the Ogallala Aquifer

THE SEA BELOW

The Ogallala Aquifer that underlies parts of six Great Plains states distinguishes itself in several ways. First, it is the largest freshwater aquifer in the world. Second, it is also the most heavily developed aquifer in the world. Essentially non-rechargeable, especially in Kansas and other parts of the southern plains, the Ogallala is often referred to as "fossil water."

According to geologists, the Ogallala was formed some 70 to 90 million years ago when the Rocky Mountains began to rise. As the mountains rose, rivers carried sand, gravel and loose materials into the valleys and depression of the Great Plains to the east. Further geologic action eventually cut the aquifer off from its mountain sources and covered it with hundreds of feet of soil. The whole process took about ten million years. The geologic structure and the region's lack of rainfall (annual average of 16-20 inches in western Kansas) combine to make recharge negligible. Annual recharge in Kansas is estimated to be .5 to 1.0 inches.

The aquifer varies in saturated thickness throughout the plains. Nebraska contains 60 percent of the water available in the Ogallala, while Kansas contains about 20 percent. Within Kansas, saturated thickness varies even more. Westcentral and northwest Kansas never had as much Ogallala water as southwest Kansas. Today, saturated thickness ranges from zero in some parts of westcentral and northwest Kansas to more than 600 feet remaining in some parts of the southwest. Depletion ranges from 10 percent to 50 percent.

In 1990, approximately 3 million acres were irrigated in Kansas with nearly three-quarters of these in the western third of the state. Nearly 3.6 million acre-feet of water, most of it from the Ogallala, was used. To put it into perspective, an average family of four using a very modest 150 gallons per capita per day would use 211,200 gallons per year, which is less than one acre-foot per year. (One acre-foot equals 325,851 gallons of water.) The amount of water needed to irrigate 160 acres of corn (using a western Kansas regional average of 1.31 acre-feet per acre) would provide the annual supply for a community of 1,100 people. *—Kansas Rural Center*

STUDENTS AND STREAMS

Eleven high school science teachers and their classes are participating in a three-year, statewide stream sampling project designed to educate students, teachers and the public about the interrelationships between human activities and water quality. The program is coordinated by the Nonpoint Source Pollution Section of the Kansas Department of Health and Environment (KDHE). Funding for the project comes from the U.S. Environmental Protection Agency and Kansas water plan funds.

Cities with schools involved in the project include Wakeeney, Hays, Minneola, Winfield, Salina, Manhattan, Tonganoxie, Olathe, Fort Scott and Cherokee. Each of the participating schools was selected through an application process and received laboratory equipment, a computer and software, field sampling equipment, and funds for travel, lab supplies, and a teacher stipend.

The schools are responsible for selecting a watershed, establishing monitoring sites, collecting and analyzing water samples every two weeks, and reporting test results to KDHE through a computer network call KEMNET. In conjunction with the sampling, the schools will assess land use to determine the overall makeup of their watersheds. The data gathered from both the water testing and land-use evaluation will be dispersed to the public through annual

environmental education campaigns designed to enhance public awareness of nonpoint source pollution problems and solutions. The schools will also provide KDHE with quarterly and annual reports outlining their accomplishments.

Results of the schools' monitoring and land-use assessment efforts may also be published in journals of the Kansas Association of Biology Teachers, Kansas Junior Academy of Science and others.

The schools received their equipment in February and began sampling immediately. Water samples are analyzed for temperature, pH, dissolved oxygen, iron, manganese, sulfate, nitrogen, phosphorus, total hardness, conductivity and suspended solids. Stream velocity is also measured, and physical characteristics are recorded. In addition to studying water chemistry, the schools will also periodically conduct macroinvertebrate sampling to assess biological diversity of the streams. —*Phil Brink, environmental planning consultant, KDHE*

FISH ABUSE

A British man who left his tropical fish "home alone" was cleared in June of abandoning them but was swimming in legal bills after the case. David Sharod criticized the Royal Society for the Prevention of Cruelty to Animals for bringing charges against him, calling it "a total waste of time and money."

Legal experts put the cost of the two-day hearing at more than $12,000. Sharod said his legal fees topped $3,000.

The society argued that he abandoned the South American sucking loach and sucking plec for three days in October when he left his home in Maidenhead, about 25 miles west of London, to run a pub for a friend.

The 31-year-old electrician walked free after he produced a book written by one of the society's own experts that said it was safe to leave fish alone for as long as two weeks. Fish expert Lydia Gold said such fish "like to be alone. They enjoy peace and quiet."

Sharod said the fish ate algae in the tank and were fine. —*Associated Press*

FORESTERS FOR FORESTS

The world's largest group of professional foresters is urging a dramatic departure from the century-old practices of the U.S. timber industry, saying that more emphasis must be given to protecting wildlife and diversity in forests. In an uncharacteristically pointed report, the Society of American Foresters says the current aim to cut trees at the same rate of regrowth is simply not enough to protect forests over time.

Instead, a society task force is recommending an ecosystem approach that would also base logging on protection of wildlife, water quality and overall ecological health.

James Sweeney, director of wilderness ecology for the American Forest and Paper Association, was among three industry representatives on the 11-member task force.

"The different authors had quite divergent viewpoints at the front," Sweeney said. "Folks tend to say, 'Oh gosh, that's getting into some difficult areas,' and as a result back off of it. To move the concept onto the ground is where the challenge is going to be."

The panel recommends protecting ecological health and diversity across broad landscapes, as large as one million acres at a time. While past government policies have focused only on public land, the new concept would cross ownership boundaries in recognition of the impact that private development has on neighboring government property.

For example, U.S. Forest Service officials are concerned that they never will be able to restore fish habitat in national forests as long as logging operations on private lands send excessive sediment into rivers.

"Focusing on individual stands, with little attention to the landscape within which they exist, has led in some areas to degradation and fragmentation of critical wildlife habitat and failing forest health in some others," according to the report. —*Associated Press*

WOLF IN *SHEEPSKIN*

Animal species protect themselves with camouflage. Many people have seen a dappled Bambi blend into the forest or insects that resemble twigs more than bugs. But some anti-environmental organizations have learned from nature. They camouflage their goals by donning monikers that may confuse.

For instance, the Environmental Conservation Organization, created by the Land Improvement Contractors of America, says that it wants to "elevate public awareness of the delicate interrelationship between environmental and economic preservation." The record shows that most often the group sides with developers.

The National Wetlands Coalition says it supports protection for wetlands while promoting economic development. It does, but lobbies for reduced federal protection of wetlands.

Many such organizations ally themselves with the Wise Use Movement. The phrase "wise use" was coined by Gifford Pinchot, the first head of the U.S. Forest Service, as part of a conservation ethic. The co-opting of the term by anti-environmental zealots must have Pinchot spinning in his grave. The movement's bible, The Wise Use Agenda, lists among its goals logging ancient forest and encouraging mining and oil production on federal land.

To find out more about a group before you decide to lend it support, 1) ask for a list of its board of directors and a breakdown of its spending; 2) request press clippings to see what reporters say about the group; and 3) skim its annual report to learn about its goals and philosophy.

Or you can write National Charities Information Bureau, Dept. 160, 19 Union Square W., New York, NY 10003. —*Dennis Hayes, USA Weekend*

POND VEGGIES

All ponds contain some type of aquatic vegetation. Some are microscopic plants such as algae that are not noticeable to the eye. Other types are cattails or thick mats of weeds — often called "moss" or "seaweed" — found in shallow areas. Neither of these terms is correct, however, but all can be termed "aquatic vegetation."

How do these types of vegetation aid the fish? Consider what fish require to maintain good populations. First, fish need well-oxygenated water. Most people remember from school that plants undergo photosynthesis. All aquatic plants use carbon dioxide and release oxygen as a waste product. Warm water holds less oxygen than cold water. As water temperature increases, fish metabolic rates increase, so the fish need more oxygen. Because the water around the plants may have a higher oxygen concentration, the fish have a tendency to congregate around the vegetation.

When aquatic vegetation begins to grow, it attracts aquatic insects and microscopic animals called zooplankton. Small fish feed on these insects and animals. Thus, the vegetation attracts a variety of animals and fish to live around it. Most fish desire some form of "structure" to live around. This may take many forms: rocks, brush, logs, fishing piers. Aquatic vegetation also makes good structure for fish.

Fishing around the weeds can be productive or frustrating. Largemouth bass, walleye and other predaceous fish will hide in the vegetation and wait for an easy meal to swim by. These weedy areas can be really good fishing spots if the right types of weedless lures are used. Many buzz baits, plastic worms, top-water baits and a variety of lures with weed guards are available.

The smart angler fishing for catfish will use the mats of vegetation to his advantage. Small fish will seek the protection of the vegetation, and catfish will cruise the edges at night in search of food. The key to catching more catfish is to keep the bait in an area where the fish are more likely to be most of the time, and weedy vegetation is one of those places.

The next time you are at the lake, try to use the vegetation to your advantage. If you fight it, you'll go home with an empty stringer and hooks full of "moss." *—Tommie Berger, fisheries biologist, Dodge City*

CAST CONTROL

Nearly all of today's bait casting reels come equipped with a magnetic cast control. Here's a quick guideline for getting the maximum distance with a minimum of backlash.

First, set the tension, usually found on the side of the reel with the handle. Hold the rod in front of you at 2 o'clock. Depress the release button and allow your lure to hit the floor. Adjust the tension and repeat until no line overrides on the spool when it hits the floor.

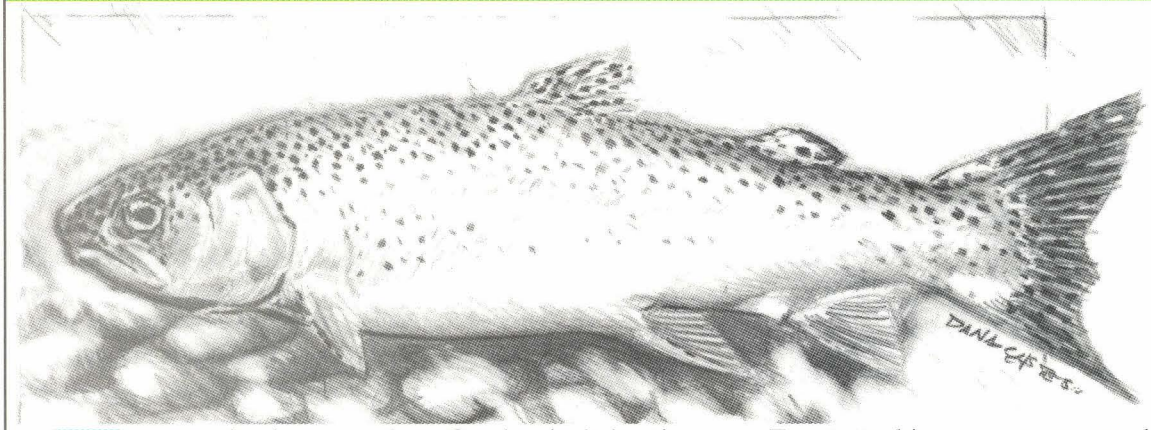
Next, make a cast with the magnetic control set in the middle position. Minimum control allows for a longer cast; maximum control cuts back on override. Continue to cast and adjust until you are satisfied with both distance and control. *—Larry Colombo, Humminbird release*

CRAWDAD MUNCHIES

If you like crab, lobster or shrimp, you should try a plate of boiled crawdads. Although generally ignored in Kansas, these tiny freshwater lobsters are delicacies in much of the south.

Slow water, a hardware cloth basket, and some chicken necks for bait are all you need. Just put the bait in the basket and suspend it in the water. *--Shoup*

TROUT TIME



For many hard-core anglers, October isn't hunting season; it's trout time. Because these cold-water fish can't survive the summer in most Kansas waters, the Department of Wildlife and Parks stocks trout at selected locations in October. Locations and dates are announced to all local newspapers in the state in late September.

Trout stocking efforts are accomplished through the use of surplus fish and wildlife from other programs. After all Kansas requests are filled, surplus fish are traded to states such as Colorado for trout. Other animals, such as turkeys, have also been traded.

Trout stockings are very popular. The Fisheries and Wildlife Division reports more calls about the dates for trout stocking than for any other species.

Hatchery trout are great for introducing kids to fishing. They are easily caught and most are harvested within a month of their release. *—Shoup*

ZENAIDA MACROURA

The mourning dove. Harbinger of fall. Although mourning doves are present in Kansas throughout the spring and summer, it is September when the they attract the attention of hunters. Dove season opens Sept. 1, and if late August has been cool in states to the north, the Sunflower State may have a particular abundance of these prolific, rapid-flying birds.

Kansas breeding bird indices for doves, commonly referred to as the "coo count," are usually tops in the nation. The coo count is conducted by biologists each year and estimates the number of doves per mile covered in a rural survey. (This year's count had not been completed as of this writing.)

Of course, cool weather can quickly change the dove hunting prospects in Kansas. A week or so of 50- to 60-degree weather can send them packing. In Kansas, however, this is not all bad news. Doves from Nebraska, North and South Dakota, and even Canada also migrate south when cool weather hits, and many of these birds stop over in Kansas. Often when dove hunting is over in these northern states, the Kansas season is going strong. However, if cool weather does hit Kansas early, there are a few points to keep in mind. Your favorite hunting spot may be abandoned by the time the season opens. Do plenty of scouting before opening day.

If there is little water in your area, any waterhole should be a good bet for finding birds. Look for doves feeding in fields and try to find places where they roost. Watch the evening sky for flying birds. Early morning and evening are the best times to catch doves moving from roost to feeding area to watering hole.

Of course, finding doves is not the most difficult problem in filling your bag. Hitting these wild-flying targets can be a real challenge. Trap, skeet and sporting clays can help give you the shooter's edge come Sept. 1.

Setting up can be the most important element in dove shooting. Birds coming in to feed, water or roost are generally the easiest shots because they are slowing down and performing fewer aerial acrobatics. Weeds near a feed field, or a shelterbelt where the birds roost are both good spots. Perhaps the best spot is a pasture pond near feed fields or roosts. Not only are the doves easier to hit as they come into water, pasture makes finding birds much easier, especially if you don't have a dog.

It is especially important to go over all the safety tips you have learned before dove season. Most dove hunters have not been afield for several months come the opener, so special attention to safety is paramount. Set a good example for young hunters and wear hunter orange. Most importantly, know the location of every hunter in your party at all times and keep a watchful eye for others. —*Shoup*

"DISABILITY" PERMITS

Hunting is a lifelong pursuit for many people and often the most important source of connection with the natural world. Unfortunately, this connection is often severed by old age, disease or injury. Although interest is still intense, the lifelong hunter simply cannot overcome physical disability, and this can be intensely frustrating and depressing.

In the past, Kansas regulations made allowances only for those hunters "unable to walk or able to walk only with the aid of orthopedic devices." However, the Kansas Wildlife and Parks Commission is considering a new regulation that broadens the qualifications, allowing for people with debilitating ailments, such as heart disease, to receive a disability permit. The intent is to include hunters who have difficulty walking for any reason, not just because they need the aid of an orthopedic device.

The new regulation could return fall excitement to the lives of many disabled outdoorsmen and women. —*Shoup*

STAMP OF APPROVAL

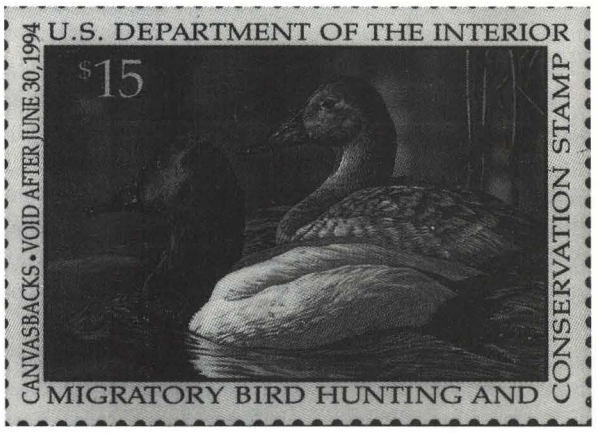
The work of wildlife artist Bruce Miller of Mound, Minn., will grace the 1993-94 Federal Duck Stamp. In a field of 629 other artists, Miller won the 42nd annual competition for the stamp with a pair of canvasback ducks on water. Money from the sale of the stamp will be used to purchase and protect vital wetlands for waterfowl and numerous other

wildlife species.

Since it began in 1934, the Federal Duck Stamp Program has generated $414 million to acquire more than 4 million wetland acres, primarily for the National Wildlife Refuge System. All waterfowl hunters 16 years of age and older are required to purchase the stamp annually. The current price is $15.

Of every dollar raised through the sale of Duck Stamps, 98 cents goes directly to purchase vital migratory waterfowl habitat.

The Duck Stamp has been issued annually by the Federal Government since J.N. "Ding" Darling provided the first commissioned design. The stamp was commissioned yearly until 1949, when the contest began. The federal government offers no monetary reward for first prize, but the fortunes of the contest winner usually take a dramatic turn for the better. Reputations are enhanced, and future sale of limited edition prints is almost guaranteed because of the contest's prestige.



Among judges for this year's contest was Mona M. Willis, widow of Wichita wildlife artist M. Wayne Willis and past president of the Kansas Arts Commission. —*Shoup*

UNDER CURRENTS

SANCTURIES

by Rob Manes

I have been blessed with many private refuges – places in the landscape that have allowed me true escape from life's burdens. I worry, though, that others (maybe most other people) have no such wild sanctuaries, and we all suffer the results.

When I was a small boy, my personal sanctuary was a place in the White Mountains where a spring-fed creek danced through a half-dozen shallow, clear-water ponds in a little evergreen-lined valley. Where a huge lightning-struck pine tree had fallen, roots formed a protective cover over the hollow in the ground where they once were anchored. There, I was concealed from third-grade pressures and nine-year-old worries.

I also had boyhood refuges around my granddad's Ellsworth County farm. One such place was under a Kentucky coffee tree at the base of a high bluff that shadowed a little creek that was probably only significant to me. The bluff offered protection in the nooks and crannies of its rich brown and red Dakota sandstone outcrops. Strikeouts, poor math grades, and bad haircuts couldn't touch me there. The tree provided fine shade, and its beans were perfect slingshot ammunition.

Later, it was a place on the Ninnescah River. At one bend, the dark cutbanks formed a V-shaped fortress with a soft, white sandbar floor. A fallen tree lay in the water there, creating a niche from which I tried to lure silvery channel catfish. The river smelled sweet and the toads sang cheerful songs. Even lost love, peer esteem, spending money, and the other matters that haunt a teenage boy couldn't penetrate the banks of that cool river. I was at ease there. It was near town and probably frequented by others; but I didn't see them, so it remained my private escape.

My grown-up escapes aren't much different than those of my youth. Some are still on my granddad's farm. Another one I've claimed in recent years is in the sandhills of northeast Pratt county, where one of the taller rises is covered with thick, concealing switch grass and Indian grass. There I can retreat from such enemies as appointment books and telephones.

As an adult, I often escape with (and to) my family. Together we've claimed our own refuges. Not far downstream from my adolescent Ninnescah River hideout, is another of the globe's sweet spots. The river is wide and slow and gentle there – just right for little daughters who do more floating than fishing. Mostly knee-deep, with a few darker holes, the Ninnescah provides a perfect place for little girls to learn the fine arts of body floating, snake squealing, frog grappling, and fish story weaving. Cool summer nights there have become jeweled memories for my wife and I and for our children. Some of what strengthens our husband-wife and parent-child relationships is gleaned from this spot on the river.

So where do other people go? Where do they escape in this beautiful State of the South Wind? Many, I suspect, have no such refuge – and I fear we all pay a heavy price – loss of good will, creativity, important insights, empathy, and more. Our society is the poorer. People with no earthly refuges surely must struggle to find time to nurture the mind and soul – to know husbands, wives, children, and themselves – to understand what it is they believe and what they believe in. Perhaps these escapes in the wild are among the desperately-missed ingredients of a healing potion for a suffering nation. Unable to retreat from modern life's assaults, it seems we become less understanding and less compassionate. Maybe some find substitutes for these sanctuaries in the landscape – libraries, shopping centers, golf courses, and the like.

Maybe not.

SING A SONG

Bird songs have inspired composers, poets and nature lovers for centuries, but they also provide inspiration to ornithologists who study them. All have asked one eternal question: Why do birds sing?

Nearly all birds make songs or calls to communicate with individuals of their species. Birds' songs are not made of words and sentences, but they are messages other birds can understand. Ornithologists recognize two general classes of bird vocalizations — calls and songs. Calls are often simpler and include varied messages for different circumstances. Songs are more complex, sung only by males, are usually used only to defend territories and attract mates.

Nearly all birds give calls, but only one large group — the songbirds — sings true songs. Songbirds include thrushes, warblers, sparrows, and other familiar birds.

The messages birds sing and call vary and depend on social circumstances. Chicks begin to call for food soon after they hatch, and many birds begin making noises just before they hatch. Most birds give alarm calls when they are frightened or threatened by a predator. Many alarm calls are hard to locate, so individual birds can alert each other that they have seen a hawk without giving away their location to the hawk. Sometimes, birds attack predators and give harsh "mobbing" calls to try to drive them away. Calls of some species, like pigeons and doves, are used to attract mates and defend feeding territories.

Songbirds give begging, alarm, mobbing and other calls, but male songbirds sing true songs, as well. True songs advertise that a male has established a territory or is looking for a mate. Songbirds learn their songs from other males as they grow up. Most species sing a distinctive song that ornithologists and bird watchers can identify. Since birds learn their songs like people learn languages, many species have regional "accents" or song dialects. Songbirds also vary the size of their song repertoires. Males may sing only one song or hundreds of different songs, depending on species. Mockingbirds, for example, have a huge repertoire of songs that imitate other birds almost perfectly. *—Dr. Richard Prum, from Panorama, KU Museum of Natural History*

TRUNK HOPPER

Two species of nuthatches can be found in Kansas: the white-breasted nuthatch is the year-round resident while the red-breasted nuthatch is an occasional winter visitor from northern forests. Both belong to the family Sittidae.

As its name implies, nuts, especially acorns, are favorite foods of the white-breasted nuthatch. The red-breasted nuthatch prefers seeds from conifer trees and will not migrate south to winter in Kansas when the pine cones are abundant in its northern range.

Insects and insect eggs provide the bulk of the nuthatch's diet during the warmer months, but they will be eaten year round. Nuthatches glean insects and their eggs from the bark of trees, often spiraling down a trunk head first.

Nuthatches are efficient insect locators and important in keeping forest insect pests in check. The crop of one nuthatch was recorded to have contained 1,629 fall crankworm eggs.

At the bird feeder, nuthatches will take sunflower seeds and fly off to wedge them into the bark of nearby trees, where they are either pried open or left for storage. Like woodpeckers, they are also fond of suet.

As daylight wanes, nuthatches seek out tree cavities in which to roost. They apparently don't mind company. One researcher saw 29 white-breasted nuthatches fly into a crack of a hollow tree.

To ward off predators, the white-breasted nuthatch captures metallic-colored beetles and anoints the edges of the nest hole with the pungent fluid squeezed from the insects. Its northern cousin smears sticky pitch from evergreen trees around the nest hole. *–Ed Miller, nongame wildlife biologist, Independence*

FLOOD DAMAGE

Summer flood damage at Kansas state parks and wildlife areas has been estimated to be nearly $7.5 million, broken down as follows: crop losses, $750,000; facility damage, $4.7 million; cleanup, $1 million; and revenue losses, $1 million.

Principle areas affected include Tuttle Creek, Milford, Perry, Kanopolis, Glen Elder, Wilson, and Lovewell state parks and wildlife areas.

The Department of Wildlife and Parks hopes to receive federal aide to repair facilities and recoup losses from 1993 floods. --*Shoup*

HUNT AND FISH SCHOOL

The 1993 Kansas Wildlife Federation Hunting, Fishing and Furharvesting School will be held at Rock Springs Ranch, south of Junction City, on Oct. 23-24. The school will offer participants a variety of courses, including fishing and furharvesting techniques, bowhunting, upland/waterfowl hunting, and big game hunting. The program is conducted by the federation's Conservation Education Committee with cooperation and assistance from the Kansas Department of Wildlife and Parks and the Kansas State University Extension/4-H.

Safety, ethics and responsibility, and conservation are stressed at every opportunity in all courses. These elements are also the focus of a program on outdoor ethics and responsibility.

For more information on times, cost, and enrollment, contact the Kansas Wildlife Federation, P.O. Box 5715, Topeka, KS 66605, (913) 266-6185. —*Shoup*

WILDLIFE CONFERENCE

The Texas Parks and Wildlife Department has announced the that it will host the Second Annual Watchable Wildlife Conference, Nov. 10-13, 1993, in Corpus Christi.

This year's conference promises to enhance the wildlife appreciation efforts of the annual event. For more information, write Watchable Wildlife, TPWD, Urban and Nongame Wildlife Program, 4200 Smith School Road, Austin, TX 78744. —*Shoup*

PRAIRIE DUNES AUDUBON-CERTIFIED

Last March, Prairie Dunes Country Club near Hutchinson became the third golf course in the United States to be certified by the Audubon Cooperative Sanctuary Program (ACSP). The ACSP is a joint effort by the New York Audubon Society and the United States Golf Association (USGA) to recognize golf courses that "enhance and protect wildlife habitat and water resources."

To become certified, courses must first register with the Audubon Society of New York State. Once registered, the course must develop a plan of action and a resource committee for technical assistance. The course must then fulfill the several environmental management goals.

Golf course managers interested in involvement in the Audubon Cooperative Sanctuary Program should contact the Audubon Society of New York State, Hollyhock Hollow Sanctuary, Route 2, Box 131, Selkirk, NY 12158, (518) 767-9051, or contact the USGA, Golf House, P.O. Box 708, Far Hills, NJ 07931-0708. —*Shoup*

DUCK STAMP DEADLINE

The deadline for the 1994 Kansas Waterfowl Habitat Stamp Contest is February 1, 1994. The new stamp will feature blue-winged teal, and the contest will be restricted to Kansas artists.

1994 will be the first time a blue-winged teal has been featured on the stamp. This is a common species found throughout the state, both as a nester and migrant.

Rules for the contest are simple: any artistic medium may be used; image size must be 13 inches high by 18 inches wide; each artist may make only one entry; and the artist must reside in Kansas. Judging will be Feb. 12, 1994, in Hutchinson at the annual Kansas Ducks Unlimited Convention. Artists should contact Michael or Ruth Ellen Simpson, The Finishing Touch, 622 N. Broadway, Pittsburg, KS 66762 for detailed information and contest entry forms.

All proceeds from the sale of stamps are used by the Department for acquisition and development of wetland habitat. Stamp revenues exceeded $538,000 during the program's first six years. Royalties from the sale of prints of the stamp art, which have totalled $540,000, are also used by DU for wetland habitat development in Kansas and in northern areas of the Central Flyway. —*Lee Queal, Ducks Unlimited*

WILDLIFE VIEWING GUIDE

Nature lovers, the book of the year has finally hit the bookstores. The long-awaited Watching Kansas Wildlife, by Bob Gress and George Potts, promises to enhance outdoor experience and opportunity for anyone who carries this handy guide. Gress is director of Wichita Wild, and Potts is a professor of biology at Friend's University.

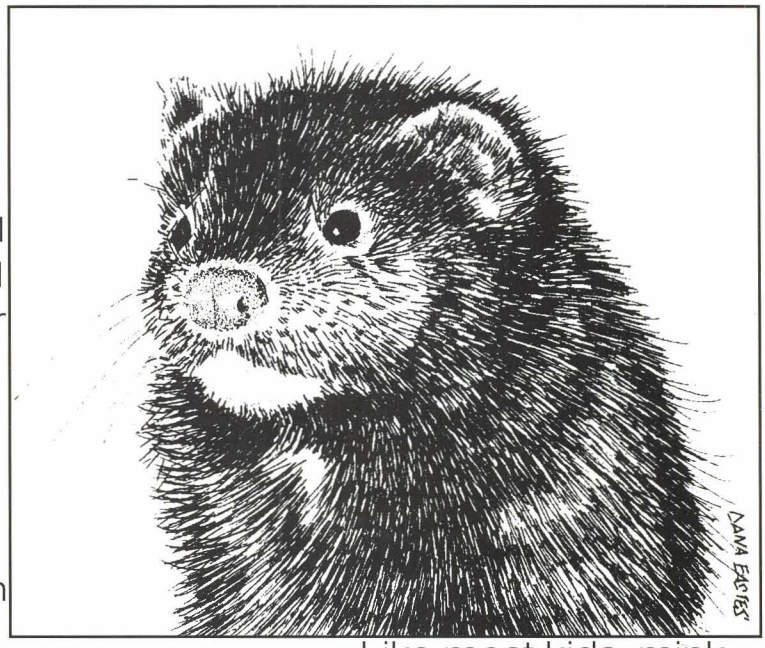
Published for Wildlife and Parks by the University Press of Kansas, this guide includes 101 prime wildlife viewing sites in habitats ranging from the Ozark landscape of the southeast to the high plains shortgrass prairie in the west. Mammals, birds, reptiles, amphibians, and insects are all considered in vivid descriptions of viewing opportunities. Maps of each region and color photographs help make the guide a practical tool.

The sites in the guide include some of the most beautiful natural environments in the midwest. Copies are available for $9.95 at bookstores, select Wildlife and Parks offices, or through the University Press of Kansas, 2501 West 15th St., Lawrence, KS 66049. —*Shoup*

by Dana Eastes

In a wink, there goes a mink!

Mustela vison



Mink are truly a luxury that all Kansans can enjoy.

You might catch a brown glimpse of these finely-furred critters if you happen to be fishing or exploring a river bank. Don't blink though; they are quick, agile and shy. As soon as they appear, they're gone again.

The mink has shimmering, dark brown fur with a white spot under the chin. Mink are found throughout Kansas, but less common in the western part of the state. Mink like the habitat along stream and river banks, pond and lake shores, wetlands and swampy areas, and places with lots of trees and brushy cover. At any rate, you'll rarely find a mink far from water.

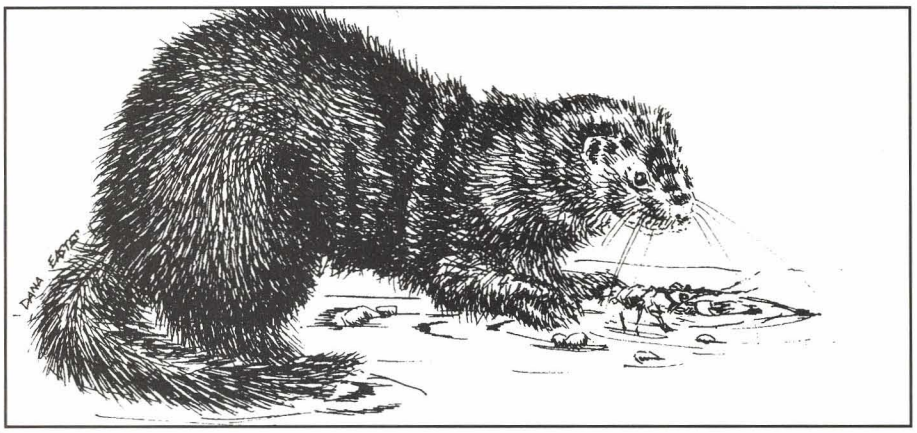
Mink are more active at night than during the day.

Males and females make separate dens, usually located under river banks, in hollow trees, under tree roots and abandoned beaver and muskrat dens.

MINK TRACKS

right front foot right hind foot

Like most kids, mink don't care for vegetables, but they do like meat and will eat almost anything that moves, including muskrats (a mink favorite food), squirrels, rabbits, deer mice, voles, fish, crayfish, mollusks, grasshoppers, worms, birds, frogs and snakes. Mink are excellent predators when it comes to small- or medium-sized mammals. The mink's predators include man, great horned owls, bob-



cats, bears, red foxes and coyotes. Female mink will give birth to three to six young, called kits, in late April or early May. The kits are born blind and furless. By August, the young kits are big enough to leave their parents. The female generally raises the kits alone.

It is thought that mink will become less common due to the lowering water tables in Kansas, which in turn will alter their habitat. Just one more little fine furry reason to conserve water.

How many mink?

Can you find and count all the mink in this picture? (Keep in mind, you'd never find this many mink together in the real Kansas wilds.) Look for the answer on the bottom of the page.

There are twelve mink in this picture. The critter in the lower left corner is a muskrat, notice the rat-like tail. Mink like to eat muskrats.

HIGH GROUND

by Mike Miller

Santa Drives A Brown UPS Truck

I believe in Santa Claus. Those who've read my words before, especially my ramblings about hunting and fishing, probably aren't surprised. Some might even say my belief in Santa is just one more fact proving that I've never grown up. But I have.

Santa Claus, I mean the real one, is for children. And I'd fight anyone to defend their right to believe in the round, merry old gentleman with a white beard and a sleigh pulled by reindeer. But since I've "matured," I've allowed that Santa Claus should devote all his energies to the little people. I, as a grown man, believe in a different Santa Claus, and I look forward to his visits now just as eagerly as I awaited the red-suited one just a few years back.

My Santa drives a brown UPS truck, and he's better than the other Claus because he visits more than once a year. And he brings the stuff a man of my years really needs. Neat things like trigger rods, camouflage sweatshirts, spinner baits, broadheads, Gortex-lined boots and more. I still labor over my wish lists, but I no longer address them to the North Pole. I merely call a 1-800 number and place my order. (Maybe the other Santa could use a 1-800 number?)

I have a number of great catalogs to browse through, and I "shop" frequently, jotting down needed items and crossing out some previously listed (checking it twice, I guess you could say). Finally, I'm ready to make the call. I dial nervously. A pleasant voice answers and with only a few numbers and letters from the mailing label on my catalog, she knows my name, where I live, my work and home numbers and a few other personal details (kind of spooky, isn't it?). I think the operators sound happy when they hear my voice because they recognize me and anticipate a big order.

With my "toy" list in one hand and a plastic card in the other, I read item numbers to the keyboard-punching operator. Almost before the number leaves my mouth, the operator knows just what item I've ordered: "Item number SA 4503 (02); that is the large Swimmin' Sam's Bass Buster Buzz, chartreuse and fire red. How many?" she says without a chuckle.

"One," I say.

"Next item," she says expectantly.

The conversation goes on like this for several minutes. An item is out of stock and she politely asks if I'd like to backorder as they expect a shipment any day. When I'm finally finished, she asks if I'd be interested in their phone-order special of the day and, of course, I am.

Dana Eastes illustration

"We have the camper's special. A 26-piece set of outdoor cooking utensils with handy carrying case and a free nature cookbook; regularly $49.99, now only $39.99." I decline and she calculates my total.

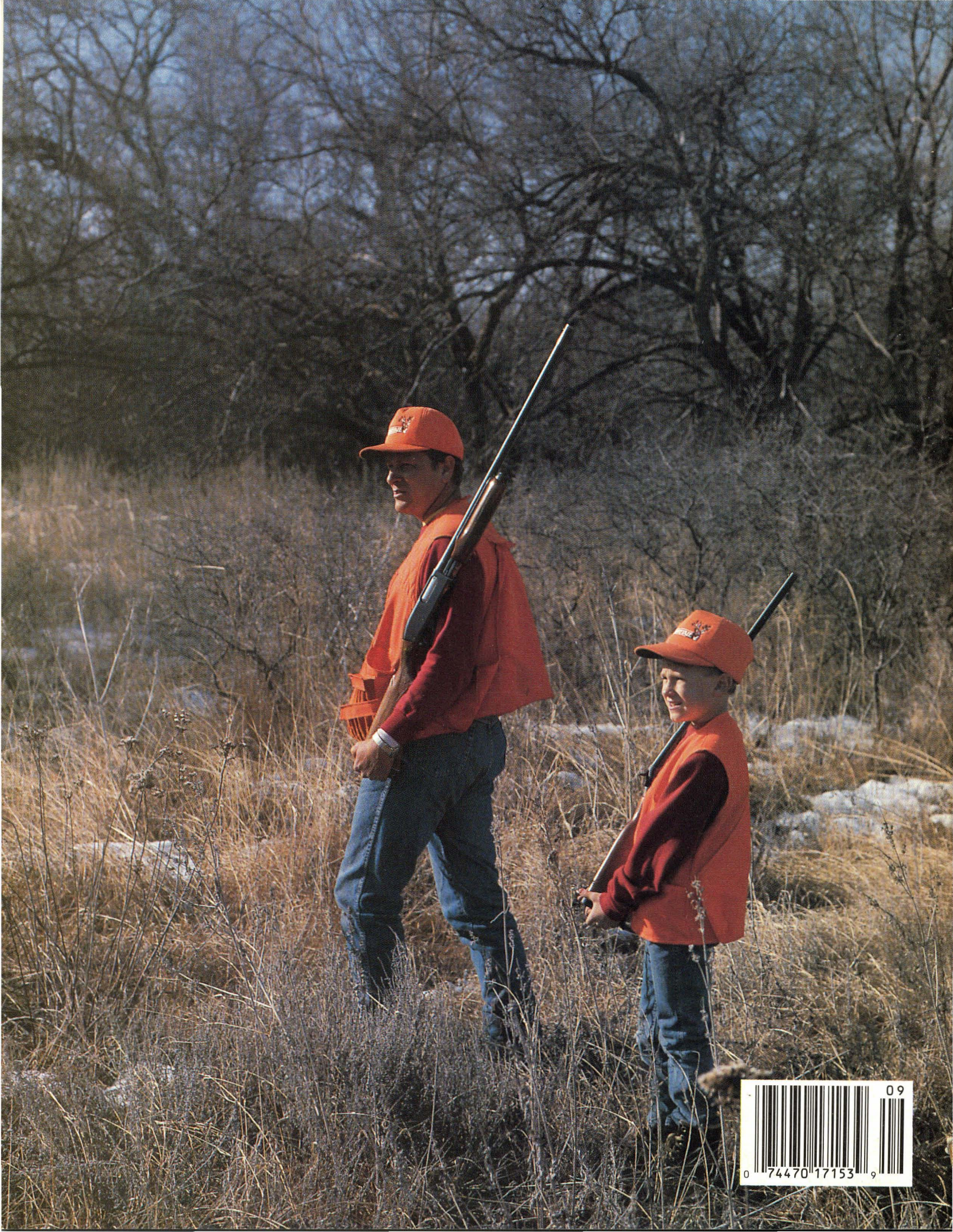
"Your order comes to $64.26, plus $3.37 shipping for a grand total of $67.63. You should receive your merchandise in five to seven working days. Thank you for calling."

"Thank *you* ," I say, already giddy with anticipation.

Now all I have to do is sit back and wait for that special moment, five to seven working days away. If I'm lucky, I might be home when "Santa" arrives. I can hear the drone of the delivery truck's engine as it accelerates up the street. I close my eyes and will the engine to slow, hoping it will stop in front of my house. It chugs to a halt. I hear the truck's sliding freight door rattle open. The door bell rings. I rush out the door as Santa's truck lugs away up the street. Like presents under the tree on Christmas morning, my prizes are neatly stacked in several different-sized boxes just outside the front door. Hoping none of the neighbors see, I do a little dance of delight, then grab my booty and rush up stairs to open it.

My wife watches with disbelief, but humors me as I pull each item out of the box and hold it up for her to see. "This baby's sure to catch the biggest northern on our Canada trip, and none of the other guys will have one," I gloat. She nods agreement with a smirk. When I'm finished, the kitchen bar is covered with boxes, scattered packing paper and ripped invoices. I can't wait to put my new "stuff" to use.

Yes, my friend, Santa Claus lives. He just changes suites and vehicles as you get older. (And he accepts Visa or Mastercard.)



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