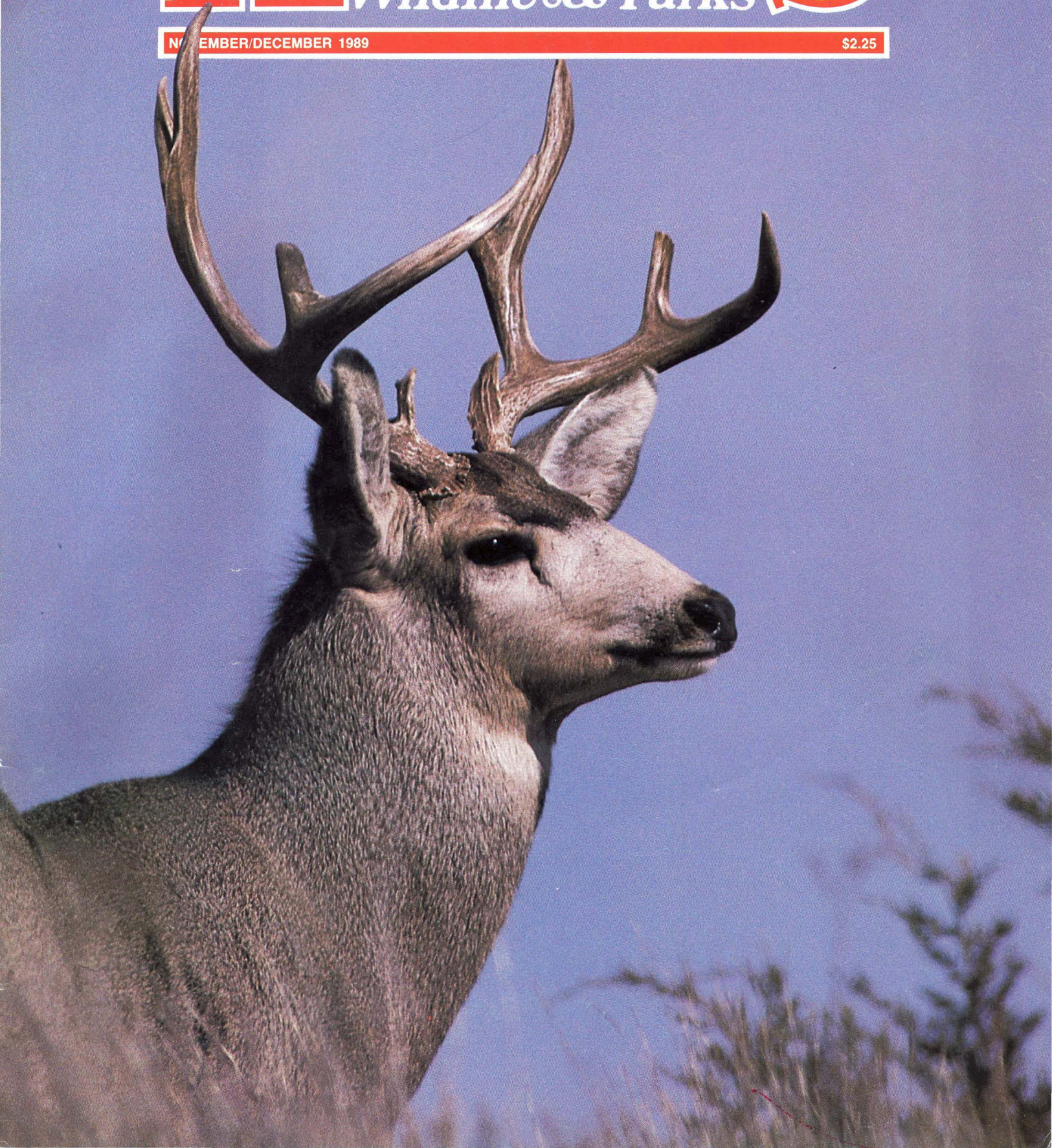


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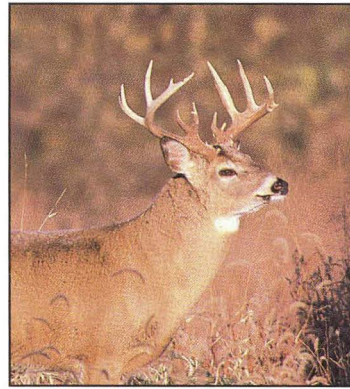
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Front: Tines broken from fighting, a mule buck pauses on a ridge-top before continuing the search for does. Mike Blair photographed the Barber County buck with a 600mm lens, f/5.6, 1/500. **Back cover:** A cedar waxwing visits a hackberry for a quick meal during spring migration. Mike Blair took the scene from a blind with a 600mm lens, f/8, @1/250.

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

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THE BUCK STOPS HERE



A HUNTER'S CODE

From the advantage of his tree stand, the hunter could see the glint of antlers. The hunter pulled a grunt call from his pocket and blew. The sound didn't seem loud enough to be heard by the distant buck, but it immediately lifted its head. Another grunt and the buck started toward the hunter. When it followed the sand draw to within 50 yards of the stand, the hunter could see it was a buck he would be thrilled to take. But the deer cautiously came out of the draw and stood in a clump of cedar trees. It wasn't a clean shot. He could only make out the deer's image, and there was too much heavy brush in the line of fire. The hunter decided it wasn't worth the risk of wounding the buck and held his shot. He hoped the buck might take a few more steps and present a better shot, but it didn't.

There are probably hunters who would have risked the shot, hoping the bullet would pass through the brush to its mark. But this time, the hunter felt he made the right choice. After the buck walked away, the hunter felt disappointment. An opportunity had slipped away. But he still was thrilled at seeing the buck and having called it to within shooting range. When the sun set, signalling the end of shooting hours, he ejected the cartridge and laid the rifle across his lap. He would sit for a while, so that he could slip out of the woods in the cover of darkness. But what if a buck should walk by now? There was plenty of light for shooting, and surely, in this isolated area, no one would hear him shoot just a few minutes after legal quitting time. Then the hunter crossed his arms and sat back against the tree. No, he would let a buck pass if it came by now. There would be no bending or breaking of hunting regulations. That was part of the hunt game—odds in the deer's favor. And he would stick by his self-imposed rules, taking only a clean shot he was sure of. The hunt would be rewarding that way, filled tag or unfilled tag.

Most hunters have a set of rules they hunt by. Some follow only those enforced by the Department of Wildlife and Parks, and others, many others, set additional rules or codes. To some it's a sense of pride. To others, it's merely a sense of responsibility—responsibility to the game, to other hunters and to the sport itself. A person who doesn't hunt, is exposed to hunting only through hunters he knows or hunts he's witnessed. If he is lucky enough to know a truly dedicated hunter, the nonhunter probably has a positive image of hunting. If he knows someone who poaches and disregards regulations, or if he has witnessed such violations, his image of hunting is



Dana Eastes illustration

probably negative.

A good example of this attitude forming can be seen during the firearms deer season. I've heard deer hunting described as a free-for-all with pickups racing this way and that, volleys of shots echoing through the river bottom, and hordes of orange-clad hunters converging upon likely looking deer hides. That's a far cry from any deer hunting I've done, but it's a negative image that deer hunters live with, because of the actions of a few. Those few who would chase down a buck with a pickup or shoot from the pickup are not only breaking the law, they're compromising themselves and ruining the image of all hunters.

Just how important is killing to your hunting? At some point in our hunting lives, we all will ask ourselves that question. There's no doubt that all hunters go through several stages in their attitudes. From a feeling of failure if we don't kill an animal to perhaps a feeling of gratitude for the privilege of just seeing a wild animal. Don't read this wrong. The actual taking of an animal is an important aspect of hunting, but it's just that, an aspect. There are other equally important aspects to hunting. If the killing is so important that you'll do just about anything to fill your tag, maybe hunting isn't for you.

Hunting should be more than just filling your tag and stocking the freezer. It's a stimulating experience, rekindling the hunting spark that glows in all of us. It's a chance to get away from pickups, noise and crowds. If you've never tried it that way, you're missing the point.

Mike Miller
Editor

Deer Hunting Fundamentals





Mike Blair photo

by Tom Giffin

*district fisheries biologist
Severy*

My first Kansas deer hunt lasted two days, not counting the hours of preseason scouting I put in. On the first day of the season, I arrived at my chosen location one hour before legal shooting time. Thirty minutes before shooting time, another hunter walked into the area, followed by two more hunters. Fifteen minutes later, a pickup pulled up within 100 yards of my deer stand. Finally, just as it was legal to shoot, another pickup drove to within 10 yards of me, and an orange-clad hunter climbed out and asked if I'd seen any deer yet. "Nope!" I replied as I started the mile walk back to my pickup.

Day two of my first hunting season began at dawn. I began still hunting my way two miles to a preselected afternoon stand. Four hours later, I arrived at my stand. I hadn't seen a deer, but did see and hear several pickups nearby. How he got there I'll never know, but, you guessed it, another hunter had beat me to my spot, and there was a pickup on top of the bluff. I turned and headed home. My disappointing deer season was over.

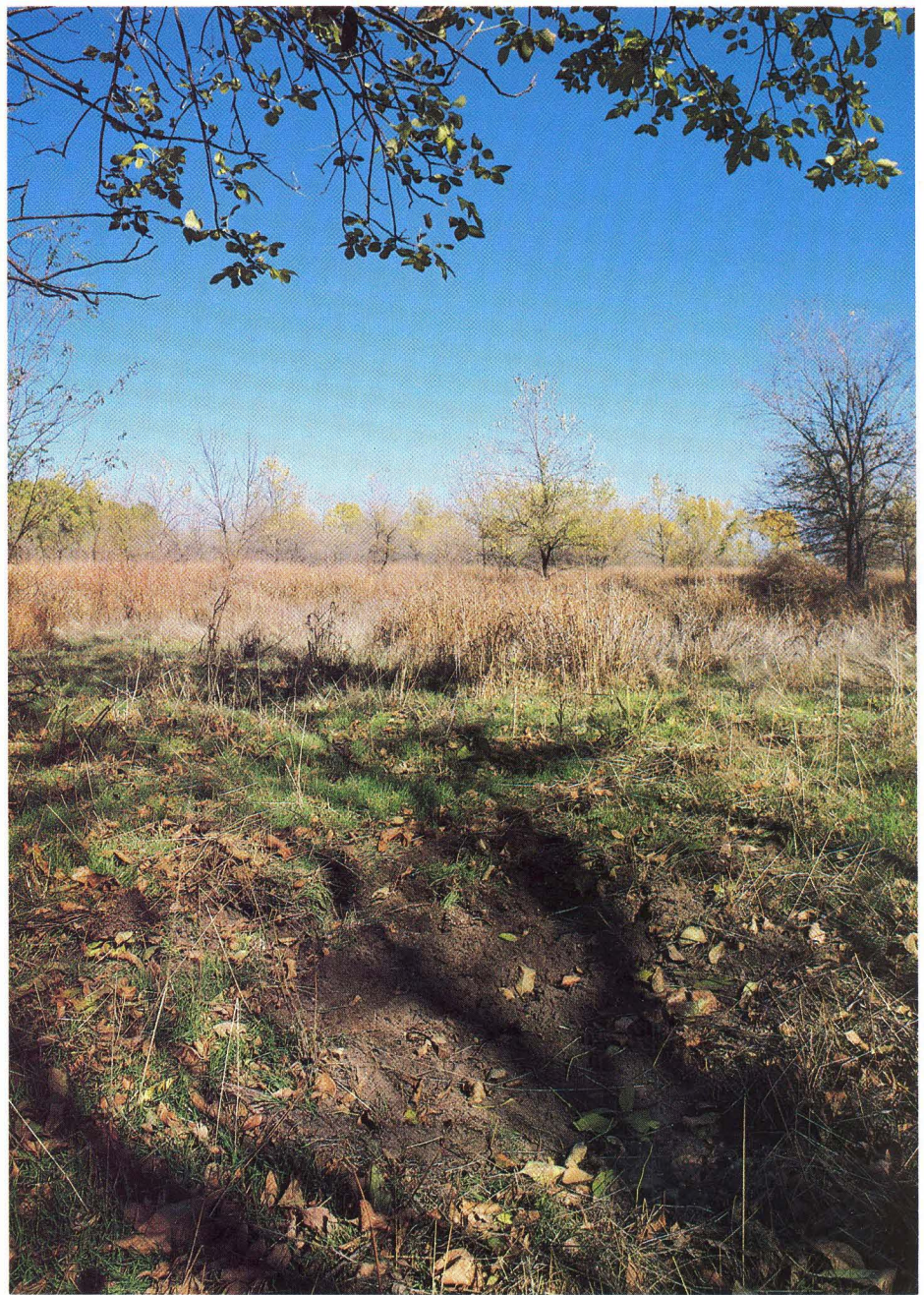
My problem that first year was failing to do my homework. First, I had failed to look for signs of other hunters scouting my selected areas. Second, I failed to make contingency plans for backup hunting places.

It was two years before I again applied for a deer permit. That year I had a good hunt and filled my tag. Over the next 13 years, I've had many satisfying and successful hunts that were all the result of plenty of preseason work and scouting.

My main goals in preseason scouting include having at least one area to hunt that I know will have limited hunting pressure. I also determine the expected hunting pressure on other areas I plan to hunt. I drop any areas that can be completely covered from a vehicle. Finally, I try to determine the general location and number of deer in the spots I plan to hunt. My first consideration for scouting private land is to get permission. It takes a lot of effort to get permission to hunt on private land, especially if you're new to an area.

Whether you're talking about public hunting land or private land, doing your homework is the same. Begin by scouting for suitable deer habitat and looking for deer. Always keep in mind that you need locations where you won't be crowded out by other hunters.

Be familiar with deer habits and deer sign. Remember, things aren't always what they seem. This was the case when I located an ideal looking section of land made up of woody vegetation, heavy cover and many small open areas. When I walked through the area for the first time, I found only one set of deer tracks and no rubs. I had been working along the outside edge of the brush. As I went into the thicker cover, I found that the brushy vegetation was dead and brittle. The overgrazed pasture had been sprayed with a brush-killing chemical and there was no preferred food left. This section provided deer with sufficient cover, but not food. Deer require a food source, adequate escape cover, protection from continued disturbances and openings in the cover to provide "edge." If a spot doesn't provide all of the above factors, it will not be used by deer as much as land that does.



Gene Brehm photo

Recognizing and interpreting deer sign is an important aspect of doing your homework. When the rut starts in early November, bucks will leave sexual sign posts called scrapes. Large scrapes such as this one may be visited by many different deer during the peak of the rut.

To find good deer habitat, you can scout from a vehicle, using binoculars extensively, cover an area on foot, and study aerial photographs. Look for the ingredients mentioned: cover, food and open areas. Edge is created when two different habitat types meet, and provides ideal habitat for all wildlife. Look for areas where the brushy cover is broken by open grassy areas or cultivated fields. When you find a likely looking area, find out who owns it. You can start

by simply stopping at the nearest farmhouse. County abstract maps and rural directories will also help.

When you find out who owns the land, talk to them in person. Don't phone! People like to see who they are dealing with. Present a good appearance and let the landowner know you are safety conscious and have respect for his property, land and livestock.

Now that you have permission, the serious scouting begins. Look for

hunting locations or stands that allow you to cover a large area, but that don't necessarily put you right in the middle of the deer activity. From these stands, you can observe deer movement without disturbing the animals and causing them to change their behavior. Binoculars are a must for spotting deer and judging size. And by observing deer from a distance, you can determine trails, high-use areas and routes used to get from cover to feeding areas. It's better to let a deer come to you than to spook it by allowing it to see or smell you.

While picking your stands, also pick your travel routes that allow you to get to your stands without spooking deer. Pick a route that keeps you in or along the edge of cover, never cross an open field or an exposed ridge.

Once your stands are chosen, it's time to make prehunt preparations. From each stand, pick landmarks and find out how far away they are. This will make judging distances quicker and more accurate when hunting. Hilly terrain can be deceptive, and changing light conditions can change your perception of distance. Now, go home and sight in your rifle. Know where it shoots at 100, 200 and 300 yards. I'll guarantee you that if you can't hit a bull's-eye at 300 yards using a rest and having plenty of time, you'll only miss at best or cripple at worst, if you take that shot in the field. Learn your limitations and stay within them.

When I'm in the field, I like to carry all sorts of "needed" equipment in a fanny pack. My plunder includes my deer tag, pen, gutting knife, bone saw for cutting through pelvic girdle, marking tape for tracking, paper towels to wipe off blood, hand cleaner, Thermos of coffee, snacks, rain gear, etc.

I recommend plenty of clothing. Dress warmly—you can always stop activity or remove unneeded clothes, but you can't add what you didn't bring. If you are going to be moving in brushy cover, you'll want to wear "quiet" clothing. Wool is a material that is quiet in brush and warm in any condition. Blue jeans and Cortex cloth are very noisy, and if you must wear this type of material, you better stick to stand hunting or stay away



Gene Brehm photo

Rubs are another good sign to look for. Again, these will start showing up in late October and early November. Bucks will often have a series of rubs, or rub line, along a commonly taken route. Sitting downwind of a fresh rub line is a good way to see bucks.

from brush.

Wind, terrain, cover and sunlight are some of the most important factors you must consider when hunting. The terrain and cover will dictate how the deer will move and where the travel lanes and feeding areas will be located. The wind will determine where you will stand hunt and the direction you will travel. Hunt into the wind or into a cross wind. A heavy wind can act in your favor since it will mask any noise you

make.

The best hunting method I know is a combination of stand hunting and still hunting with all moves planned out ahead of time. I like to still hunt to a stand, then stay put for 30 minutes to two hours. Then I will slowly work my way to the next stand area, stopping every 10 to 50 yards to watch and check for deer. When still hunting, use binoculars to look 100 to 1,000 yards ahead. Slow is the watch word. Deer are very difficult



Preseason scouting is just as important for mule deer hunting as it is for white-tails. It's important to find an area that isn't easily accessible to vehicles. That way you'll lessen the chances of someone driving in and interfering with your hunt.

to spot unless you see them move. The trick is to see them move before they spot you. Whether still hunting or stand hunting, take a tip from the quarry and make use of natural cover to stay hidden. Movement of any kind is the quickest way of being spotted. So, stay still as much as possible and when you do move, move slowly. Every step opens new lines of sight and potentially exposes game to your line of vision and vice versa.

The sun is an important factor. If the sun is at your back, it is putting you in the shade, while deer will catch light and be spotted easily. Looking into the sun will make spotting game more difficult and sighting through a scope nearly impossible.

Try to get to your stand at least 30 minutes to an hour before shooting time. This will let any game you may have disturbed get over their alarm and allow you to get situated before other hunters come into the woods. Take your time getting to

your stand.

Other hunters can work to your advantage by driving deer to you. Deer may move as much as one-half mile ahead of walking hunters. The deer don't necessarily spook, but simply move slowly out of sight. Vehicles driving in an area will move deer into heavy cover and sometimes completely out of the area. If you have done your homework, you'll know the lay of the land and the deer travel lanes, which will help you second guess deer behavior.

Once you've spotted a deer, be patient. Deer can do a lot of moving around without covering much ground. I've waited as long as two or three hours for a deer to finally move into gun range.

When it is time for the shot, several things should be considered. First of all, if you've spent time on the target range, you know your limitations. Don't shoot beyond your capability. Excitement can sometimes

cloud judgment. A good hunter takes pride in controlling his excitement and making the right decisions. You must also consider safety when shooting a high-powered rifle. Know what's beyond your target and never take a skyline shot.

In the midst of all the excitement, you must also make some other crucial decisions. After the shot, you need to make a mental note of where the deer was standing. Pick an easily located landmark. Next, mark the spot you shot from. Now sit down and unwind for about 30 minutes. Have a cup of coffee, a snack or just sit. This time will clear your head before you start tracking and also ensure that your deer is down for good.

When you begin tracking your deer, approach as if you're stalking a live deer. Watch ahead for a deer that may be escaping. Always start your search at the place the deer was standing when you shot, not where you think you saw the deer last.

Check the area for hair and blood and mark it. If blood is not found immediately, don't give up. Sometimes a deer won't start to bleed for 50 yards. By marking each spot of blood or track, you can look back and get a general direction the deer was travelling if the blood trail is lost. While trailing the deer, remember that the blood trail will often diminish shortly before the deer goes down. And I've also noticed that fatally hit deer will often run hard in a straight line then suddenly make a radical change in direction just before death.

Once you find your deer, tag it as the law requires. Now it's up to you to promptly field dress the deer and get the meat to a cool place or commercial locker plant. Prompt care in the field will ensure quality eating.

Over the years, I've developed my own hunting methods and my own set of hunting ethics based on safety, wildlife laws, common sense and personal beliefs. I believe that wearing orange clothing is not only safe, but also a courtesy to other hunters. If

you can see another hunter from a long distance, you not only can stay safely out of his way, but you can also plan your hunting strategies accordingly. People who hunt without orange clothing are jeopardizing their own safety, while putting other hunters in a position to unknowingly participate in a tragedy.

I also refuse to take the long shot or "hope shot," which is shooting at a deer ridiculously far away, hoping that you will hit it. This not only risks a wounded deer, but these shots will also spook deer from your hunting area. And it's common for the guy taking the long shot to see the deer run away and assume he missed. Every time you shoot, assume you hit the deer and search the area for blood sign.

Probably one of the most controversial hunting practices is hunting deer from a vehicle. In my biased opinion, there are three types of vehicle hunters: 1) those who, because of health problems, can't stand the exertion of hunting on foot; 2) those

who, because of health problems can't stand the cold; and 3) those hunters who are too lazy to walk and too impatient to stay on a stand. Two problems with vehicle hunting are the facts that animals will usually be farther away and moving or running when the shot is taken. Both factors contribute to crippling game, and the excitement of attempting a shot at running game with little chance to know what is beyond the deer make vehicle hunting unsafe. Other problems associated with vehicle hunting include trespass problems and disregard for other hunters (those on foot) using the area.

I believe in playing fair and doing it right. There will always be a small percentage of people who will cheat at almost anything they do. I don't need these people. The law will have to take care of them. I'm addressing the remainder of hunters; those who would never think of cheating at golf, cards or keep a billfold they found. Look at hunting the same way and always play by the rules. ♡



Mike Blair photo

The reward of a patient stand hunter or still hunter: a big buck that is unaware of the hunter. In this situation, the hunter can take his time and make a good shot. Judge the distance accurately, pick a spot and be aware of what's beyond your target.



Bowhunting Kansas Muleys

by Phil Kirkland
*conservation officer
Hill City*

photos by Mike Blair



The author stands by his new state record mule deer. Taken in 1988 with the techniques listed in the article, the big buck scored $182\frac{2}{8}$ Pope and Young points. To Kirkland's left is a $199\frac{3}{8}$ nontypical whitetail taken in 1981.

Editor's Note: Much of what is written about deer hunting concerns stand hunting or still hunting through timbered areas. In western Kansas, where trees are few and far between, another method of hunting is needed, particularly when the hunter is carrying a bow and the quarry is mule deer. Generally considered less wary and easier to bag than whitetails, big muley bucks don't fit that stereotype. Veteran mule deer hunters will tell you that a trophy-sized mule deer is as wily as any whitetail.

Phil Kirkland, a conservation officer from Hill City, has spent thousands of hours scouting and bowhunting mule deer in northwestern Kansas. He's developed some ideas and stalking techniques that work, at least for him. Kirkland killed the new typical state record mule deer buck in 1988, scoring $182\frac{2}{8}$. Here, Kirkland lists some of his ideas about locating and stalking mule deer on the Kansas prairies.

One of the most important tools for stalking is camouflage. I wear camouflage clothing, gloves and headnet. I also paint anything shiny on my bow. I even cover all but the tip of my sight pins with a flat black paint and cover my arrow fletchings with a camouflage sleeve.

Blending in or staying out of sight is the name of the game when stalking. Never silhouette yourself along a ridge or skyline. Move slowly. If you don't spook a bedded buck, it won't go anywhere, so don't rush the stalk.

Knee pads and leather gloves are handy if you have to crawl through rough cover. I wear a fanny pack so I can carry calls, gloves, knife, range finder and other necessities.

Preseason scouting is also extremely important. Scouting allows you to learn the land and the deer. Without scouting, you might shoot what you think is the biggest buck, only to find out a larger one was living in the same area. A person who spends a lot of time watching big bucks probably won't have as much trouble with buck fever.

Watching deer allows me to determine where main trails and fence crossings are. Each deer has its own individual characteristics, but I believe they fall into two basic categories: One that runs when it becomes nervous and one that beds down. I like to hunt deer that bed down. If I've learned that a particular deer beds down to hide, I'll let it see me from a distance of about 200 yards. I'll casually move around a small area and avoid looking at the buck so it thinks it hasn't been seen.

After it beds down, I can make a good stalk.

Mule deer rely heavily on their sense of smell. Keep the wind direction and your scent stream in mind at all times when stalking or calling. In my experience, 90 percent of the bucks responding to a call circle downwind to approach. I try to keep my hunting clothes clean and as free of human scent as possible, and I also use a masking scent to help cover odors.

If calling doesn't work and there's no way to get within shooting range of a buck, you can prey on the deer's curiosity. As a last resort, wave a white flag. Sometimes curiosity will get the best of a deer.

If you spot a buck feeding, try to move ahead of it and let it come to you. When a buck is feeding in a milo or corn field, it will usually stay in the same row as it walks along. Position yourself within range of that row.

Like whitetails, mule deer will follow the same trails and cross fences at the same place, sometimes at the same time each day. You can find these areas through preseason scouting.

I prefer to hunt mule deer before the rut. The bucks are easier to pattern, and the larger bucks are usually by themselves. It's much easier to stalk a solitary buck than several deer all watching for danger. When the rut starts and bucks' hormones become active, so do the deer. Bucks roam widely looking for does. When they find one, the pair will move to a predictable area. Staying within that small area, the deer are

extremely active.

If you locate a buck with a receptive doe and other deer are around, move close and wait. Small bucks will challenge the larger buck, distracting him enough to allow a stalk. If the doe moves away, follow her. Set up close to her trail and wait for the buck to follow. He will.

Be versatile. Don't limit your hunting effort to open prairie. I spend a lot of time in cane fields and heavy Russian thistle patches. Don't worry about noise you make, deer are just as noisy and accept the sounds as natural. I use a grunt call when stalking in heavy cover. If I see a deer that appears nervous, an occasional grunt will sometimes calm it down.

A grunt call is also effective at getting bucks to move. If I can't get within shooting range of a bedded buck, a grunt may bring it to its feet. Several big bucks have come to my grunt call, all bristled up and looking for a fight. Remember, if you call a buck in, don't spook it. Two years ago, I called in a four-by-four muley buck six times in a three-week period. If I would have ever scared the deer, the grunt call probably wouldn't have been effective again.

If you make a good stalk but still can't get a good shot, don't push a bad situation. Back off and try again, or come back another day. I usually wait several days before hunting a particular buck again. I believe too much human scent is left if you continually hunt the same area. And if you put too much pressure on a big buck, it will move. I've



Hours of preseason scouting in late summer and early fall may provide sights like this. The author spends considerable time watching deer through the summer to learn about their habits and movements.

known good bucks to move as much as 9 miles in a single night.

Remember, big muley bucks are afraid of vehicles. They don't get big by being stupid. The older they are, the stronger the fear. Several years ago, I was stalking a big buck in a canyon nearly a mile from the closest road. Neither the deer nor I could be seen from the road, nor could we see vehicles on the road. Even so, the buck would lie down and hide each time it heard a vehicle pass.

When you enter an area, whether you've seen deer or not, never slam a vehicle door. Be as quiet as possible and don't be afraid to walk a few miles to keep from alerting deer. Remember, unless you're driving a tractor, the sound of your vehicle will spook big muley bucks.

If you watch a buck bed down and have good cover to stalk by, take your time. The buck probably won't move for several hours. A buck that beds down in the open is approach-

able, but it takes a different technique. Wait an hour and then leisurely walk toward the deer. Choose your route to pass within range of the deer, but never act like you've seen it. Sometimes a deer will let you pass incredibly close if it thinks it's hidden.


A few years ago, my dad and I were bowhunting when we spotted a buck standing in an open field. It was the day after Christmas and the deer were used to seeing pheasant hunters walking the fields. Feigning disinterest in the buck, we were able to walk close enough for a good shot, and Dad killed the buck with one arrow.

Cold, calm mornings are best for calling deer. On cold, windy days, deer will head for cover. Look for them in steep draws or in heavy trees and plum thickets. Windy days are best for stalking, since there's less worry about noise or the deer picking up your scent.

Mule deer seem to have a pref-

erence for old, abandoned farmsteads. Some bucks will bed at the same farmstead every day.

It's important to judge distances accurately when stalking. I carry a range finder. A hunter in a tree usually knows what distances he'll be shooting. When stalking deer on the open prairie, judging distance can be difficult. The shots may be longer, too. I practice at longer distances than most whitetail hunters consider. Each hunter must know his own capabilities. If you aren't confident about a shot, don't shoot.

Big muleys are an exciting challenge. Underestimating their wariness leads to few bowhunting opportunities. But for the hunter who pays attention to detail and gives them just credit, close shots at trophy-sized animals are possible. And a successful stalk in open country is one of Kansas' greatest hunting thrills. 

A successful stalk brought Kirkland to within 15 yards of this bedded muley. The author then grunted and the buck stood up. But, deciding it wasn't the buck he was after, Kirkland passed the shot.





DAND EASTES

Marsh Manners

by **Ken Brunson**
nongame biologist
Pratt

photos by **Mike Blair**



Many duck hunters spend time in the marsh for more than just shooting ducks. They crave the experience, solitude, cupped wings and brilliant speculums. It's all part of duck hunting, but easily ruined by those who have never learned marsh manners.

Incredible! Yes, some of the inconsiderate actions we have experienced from other hunters border on the absurd. Sometimes, I believe we are our own worst enemies when I see some of the atrocities we perpetrate on each other. And nowhere can you experience so many of these than on a public hunting area. Oh sure, private landowners have their beef too, but you can hardly beat a public waterfowl area for gathering a suitcase full of exemplary anecdotes. Consider the following:

As a dedicated waterfowl hunter, you've already invested your wife's furniture dollars in several dozen decoys and all the other junk a waterfowler needs. The decoy anchor lines, properly tied with whatever cheap, homemade anchors you could come up with, add to the conjured up mess you call a decoy bag. And there's a big, dumb black dog to which you've dedicated countless wasted hours of training and food. But he's part of it, and once in a while he does a good job, so you keep him part of it.

You got up at 3 a.m. so you could be set up to hunt ducks at least 15 minutes before legal shooting time. You set out with the dog, the decoy bag stuffed with three-and-one-half dozen fake mallards and pintails, your calls (two don't work but you keep them anyway), the old Remington 870 that doesn't seem as quick as it used to be, and a Thermos. You are part of one hulking, crunching mass, set on creating the finest of inviting duck parlors at the other end of an exhausting trek through the pitch-black marsh.

You are sweating in the near freezing air by the time you reach "duck motel." By getting there so early, you have first choice for setting up your own idea of duck attraction. Just as satisfying is the fact that you are the first human greeter to hundreds of duck chuckles and quacks. You hear the sounds of whistling pintail wings and whistling wigeon. *Whaack, whaack, whaack, whaack*, a startled mallard hen scolds your intrusion into duck city as she wings through the darkness. Straight overhead you hear the speeded *whish, whish, whish, flap, flap, flap* of wings in near perfect synchronization. Tearing yourself from this auditory spectacle, you pour into the 15-minute chore of untangling anchor lines, flinging decoys and then waddling around setting right the three or four that stubbornly rest on their sides. (I have often wanted to leave these few "sleepers" just to see if they'd attract real lazy ducks.) And there's always two or three dekes without weights. You set these in the mud near the blind, and, if you're with others, you act like you meant for them to be that way.

The time! Hurry! Even though it's 20 minutes before shooting time, you cherish those last few moments when some of the flushed ducks circle back. There cannot be a greater meditation than that shared with ducks during the predawn day. The eastern sky has lightened to reveal the bobbing outlines of fake waterfowl through the pile of fireweed you call a blind. The setting is perfect.

What you think is perfect can be very easily screwed up though. You worry when you see headlights coming to a stop. You hear a car door shutting—but not too loudly. You sense your human competitors today are knowledgeable of the hoarse whistle of wigeon, leaky waders and unspoken marsh ethics. They went to the other good duck motel north of yours. You knew that if this was all the crowd, you could have an even better hunt than if you were there

alone. Sometimes people who know duck hunting can help each other out, even though they theoretically may be competing for the same ducks at some point.

You hear the distant crisp splash of rubbery-plastic on cold water. As the splashes subside, the marsh returns to pleasing quiet. You share communion with a couple of snipe as you sip the last of a once steaming cup of coffee and talk softly to your dumb Labrador about life's simple pleasures. In 10 minutes, you'll be able to show your dog just how dumb and slow you are. You wish for one of those brilliant pintail drakes to come back. Then after you "play" with the ducks for a while, you wish for a double on greenheads. This is what you wish.

Then five minutes before shooting time, here they come: the BOZOs! They have been assigned by "Mur-



Everything's perfect. These hunters have walked in well before legal shooting time and set up their blind and decoys. It looks like the ideal situation, until someone without duck hunting knowledge or consideration moves in too close.

phy” to mess up your duck hunt, your day and perhaps much more. These guys rolled out of the sack an hour ago at the most. They may have a dozen decoys and they may not. Sometimes they take it easy on themselves and just come decoyleless. You see, if they can shoot ducks by taking advantage of your decoys and all your hard work, why should they go to the extra trouble? Anyway, here they come. As they tramp along the skyline, they are as obvious as hair on a duck’s bill. You know from special marsh ESP that your other hunting partners to the north are having similar thoughts about this disruption.

Finally, it’s clear that the BOZOs are headed in your direction. Your feathered friends have already flushed from this ill-timed intrusion. As predictable as a fall weather front, these guys are bent on spoiling your day. So, naturally, wearing not a stitch of camouflage clothing, they set up, so to speak, just downwind of your decoy spread, giving accurate meaning to “incredible.” Their position is exactly below the point where any ducks that work over your spread will start to cup their wings for a gentle glide toward your blind. You strain to erase the first thought from your mind. A thought that has a set of cross hairs aligned squarely between the beady eyes of one of your uninvited guests.

Now that these BOZOs are within damaging distance of steel shot and beneath where “your” ducks will work, you see that they are as glaring in their red, yellow and blaze orange attire as a white cat on a black rug. These must be the rainbow BOZOs, decked out in the colorful tradition of BOZO The Clown. “Welcome to duck motel,” you begrudgingly say to yourself. “Your cousins were here last year—the Skybusting Stooges. Boy could those guys shoot high. So high, that some of their steel shot steamed and fizzed when it finally hit the water.”

Now, you have a situation to deal with, and there are several ways to handle it. The most expedient keeps popping into your mind, but it isn’t legal. The second is to invite these BOZOs into your blind and give them a friendly seminar on duck hunting methods and etiquette. Today, though, you feel neither benevolent nor professional, so you decide



Don’t get discouraged and leave if your early-morning hunt is disturbed by inconsiderate hunters. Wait them out and hunt the late-morning and early-afternoon flights, which can be great.

to sit this one out.

Being slightly anti-social anyway, this seems to be more natural. After all, you’ve already had some delightful experiences this morning, experiences that these clowns will never know or appreciate. Thankfully, the BOZOs leave in less than an hour, content with their bag of one hen mallard and two green-winged teal. You also hear some babbling as they stroll back over the crest of the hill and cause another flock of greenheads to flare away from your hunting partners to the north. The BOZOs are as oblivious to those flocks as they were to the fundamentals of setting up safely and appropriately for good duck decoying. They never had a clue to why the guy with the large decoy spread just across from them didn’t shoot at the few teal that slipped through their steel shot flak curtain.

All was not lost on your day in the marsh, however. You had some fun before and after the BOZOs left. You and the group to the north successfully decoyed some greenheads and pinnies and waited on each other to work different flocks into your decoys. What satisfaction it is to be in complete coordination with another group of duck hunters without knowing or speaking to them. If only the

BOZOs could grasp some of this concept.

As inept as they may seem, there is one thing you should know about most BOZOs: They normally don’t intend to mess up a responsible hunter’s hunt. Oh, there are those few who get drunk and do their best to be our worst enemies, but in my experience hunting both private and public lands, I think the biggest problem in hunting ethics is brought on by sheer ignorance. Those of you who do know the delights of properly fooling ducks, while considering other hunters in the marsh, owe it to our hunting future to educate those who don’t yet appreciate such things. Especially now—when there is so much bad news regarding declining duck populations. Even if you don’t hunt ducks, your hunting experience will benefit by following simple etiquette rules for waterfowlers.

If you plan on hunting ducks this fall, particularly on a public wildlife area, consider this list of Golden Rules Of Duck Hunting:

1.) **Do not consider your hunt a failure if you do not kill anything. This is particularly important now that duck bag limits are so restrictive. Learn about the many other things to enjoy in a marsh. You**

might specialize your hunting efforts to pursue one specific species of ducks, or try to work birds into your spread "just the right way."

2.) Learn the basics of duck hunting from someone who knows how to do it right.

3.) Know the specific and general regulations for that area and practice smart gun safety.

4.) Learn to be proficient with your duck call or simply do not call. Nothing is more aesthetically displeasing than listening to some "yo-cal" harping on a duck call continuously. There are plenty of instructional tapes and videos available.

5.) Wear camouflage, be as quiet as possible and keep movement to a minimum. Do not mix duck hunting with upland bird hunting in the same area. By getting up and roaming around periodically to hunt pheasants and quail, you are flaring someone else's ducks.

6.) Do not set up immediately downwind from another hunter and his spread. This is inconsiderate since you'll be short-stopping any

ducks working his spread.

7.) Scout an area at least the evening before to determine where you want to set up. Get there at least an hour before legal shooting time the next morning. If your spot has been taken, look for another one or simply wait until your spot is available. It's first-come, first-served on a public area and hunters in your spot deserve it because they got up before you did. If competition is high, consider coming in midmorning. Hunting can be excellent later in the morning through midafternoon.

8.) DO NOT drink alcoholic beverages before or during your hunt.

9.) Don't skybust (shooting at ducks that pass over too high for an ethical shot, and ensuring that those ducks will not decoy into anyone's spread). This only reveals an inner weakness to produce a kill without regard to the good factors that should make up a well-rounded hunt and hunter. Learn to enjoy fooling ducks into *landing* in the middle of your decoy spread. Once you experience the thrill of bringing ducks in close, you'll never feel the need to

skybust again.

10.) Practice basic courtesy. For instance, don't hunt in large, noisy groups or with uncontrollable dogs. Remember, your objective is to blend into the marsh as quietly as possible.

The grand tradition of duck hunting is in danger of being lost. It's a tradition that knows the true meaning of whistling pinions and orange feet descending out of a gloomy sky. A tradition that thrills at the sound of several hundred early-season migrants "tornadoing" down nearly on top of the hunter; of glistening speculums and heralding highballs; the satisfaction of watching a Lab make a blind retrieve through icy water. It is a tradition that demands those who do it the right way to teach those who are just learning. Passing that knowledge on can lead to less conflicts and more fulfillment on public marshes. And more importantly, it can lead to a better appreciation, a critically needed appreciation, for a dwindling and magnificent wildlife spectacle. ♡





center section

Edited by Mark Shoup



LETTERS

QUIET HEROICS

Editor:

I would like to relate our story of an average family on an average camping trip encountering the inevitable emergency, and the response of one park ranger.

My husband, two children, ages three and one, and I were camping at Pomona State Park over the Fourth of July weekend. We arrived Saturday morning to stay through the fourth. My husband returned to Kansas City Sunday night to work on Monday, and would return on Monday night.

Monday afternoon after the children had napped on the pontoon boat, my three-year-old son awoke with a swollen left eye. It looked serious enough that I packed up and headed into the marina. By the time we arrived, his eye was nearly swollen shut and was very red and full of yellow mucous. His right eye was beginning to swell as well. The employees at the marina called the park office for assistance.

Ranger Jerry Schecher arrived to a state of turmoil and a grotesque looking three-year-old boy. Jerry's response was swift and appropriate. He loaded us and all of our belongings into a van and drove us directly to the nearest emergency clinic. At the clinic, he entertained my son and read him stories in the waiting room, distracting him from the immediate problem.

After my son was treated, Jerry delivered us to our campsite safely and returned to check on my son the following day, July 4. My son had suffered an allergic reaction but recovered quickly with treatment.

Ours is the kind of story that makes recreational camping and campers comfortable in our public camping areas — comfortable knowing that we can enjoy Kansas State parks in relative safety and

that rangers like Mr. Schecher are available in case of emergency.

Terri Elster
Overland Park

POACHING CONCERNS

Editor:

I recently have become informed about bear poaching across the country. I would like to know about Kansas laws concerning the sale of animal parts and live specimens.

With each state having their own laws, it makes control of poaching nearly impossible. We need to set national standards on hunting and set stricter enforcement and penalties for violators.

It upsets me to find wild animals for sale in pet stores. What are our state laws? What can we do to make sure the wild animals are protected from poachers?

Also, I am a science teacher, and I want to thank you for all the wildlife materials you make available to teachers.

Janeen Walters
Topeka

Dear Ms. Walters:

Except for those species defined as game or furbearing animals, it is illegal in Kansas to possess or sell wild animals or their parts. Under a new state law, each species has a legal value. Anyone possessing over \$500 of wildlife is guilty of a felony. A bald eagle, for instance, is valued at \$500. Violators face up to five years in prison and a \$5,000 fine. Our July/August issue (Page 19) details these new poaching laws.

In addition to these laws, the federal government has laws concerning many species. For instance, taking illegally killed wildlife across state lines violates the Lacey Act and can lead to a

maximum five-year prison sentence and \$250,000 fine on each count.

Every Kansan should be aware of the Department's Operation Game Thief. If you observe the illegal taking of wildlife, call 1-800-228-4263. As a teacher, you are also in an excellent position to introduce young people to the natural world, and to educate them concerning the ethical hunter's role in conserving wildlife. —Shoup

LESS MOWING

Editor:

I note with joy and thanksgiving the report by Rob Manes in the September/October issue (Page 26) that mowing will be reduced by half on state park lands, and that efforts will be made to reestablish native grasslands that by their very nature require less effort to maintain.

As you point out, resources can now be redirected towards more meaningful activities. Additionally, it is worth noting the reduction in air pollutants that will occur. The latter effect may seem minuscule, but the reality of acid rain and the impending effects of greenhouse gases on global warming are potential catastrophes that are approaching at exponential rates. Anything we can do now will buy time for more effective solutions. Even more difficult to quantify is the increase in public good will that must assuredly accrue from your decision.

Now, if you can just get this positive balance sheet through to the folks over in the Kansas Department of Transportation, the quality of life around here will be substantially improved — not just for us, but for the rest of the biota with whom we live.

John L. Zimmerman
Manhattan

EAGLE QUESTIONS

Editor:

Our family recently subscribed to

KANSAS WILDLIFE AND PARKS, and we have enjoyed the many interesting articles. We also proudly display the magazine in our home, so our guests can enjoy the fine articles and exquisite photography. We are always excited when a new issue arrives.

Last June, I read an article in the newspaper about the first recorded nesting of a pair of bald eagles in Kansas. I found this article interesting and would like to hear more information about this unique event. Did the nesting result in the survival of any eaglets? Did your magazine feature an article on these eagles?

Carolyn Gordon
Wichita

Dear Ms. Gordon:

Like yourself, many Kansans were fascinated with the historic nesting of bald eagles at Clinton Reservoir. The eagles did, indeed, hatch two eaglets this summer. Shortly after the eaglets hatched, the male adult disappeared. Fortunately, the female was able to care for the young birds until they fledged in August.

The word in early September was that all three eagles had migrated. Hopefully, they will return next year. —
Shoup

INDIAN BREAD

Editor:

I want to tell you how much I enjoy your great magazine, KANSAS WILDLIFE & PARKS. Mike Blair's photos of wildlife and Kansas landscapes can't be beat. Keep up the good work.

I read with interest your article, "The Right Tool" (Page 21), in the September/October issue. You mention digging for Indian bread. What is Indian bread? I assume it is some kind of plant. How is it used?

B. Olson
Lenora

Dear B. Olson:

What I call Indian bread is more commonly known as purple poppy

mallow. It is an indigenous prairie perennial which grows trailing, vine-like stems low to the ground in pastures, fields, roadsides and undisturbed areas. It displays a beautiful purple flower much like a poppy and about the size of a half dollar.

The root of this plant is about the size and texture of a parsnip, although somewhat tougher, and can be baked or fried in butter. The Osage Indians dug these roots and stored them for winter food. They were also boiled for intestinal pains, and their smoke was inhaled as a cure for colds.

I have read that the leaves are also good for thickening soup. —*Shoup*

NIGHTHAWKS

Editor:

I was especially pleased to read the nighthawk article by Marc Murrell, with pictures by Mike Blair.

When I was a little girl growing up on a farm in Clark County, I used to watch these birds. My father, who loved wildlife, told me they were bull-bats and showed me how they sometimes nested on the tops of fence posts.

I used to lie on my back in the grass and watch them as they did their evening acrobatics, flying way up into the sky, then making that long dive with the "whoosh" sound at the end of the dive. It was fantastic.

I had always thought there was surely another name for this lovely bird, and nighthawk is so much nicer than bull-bat. I hope they are around for a long time because I consider them one of our state treasures.

Dorothy Burch
Horton

"KILLERS" KNOCKED

Editor:

I read with some concern the editorial of Rob Manes, "Killers" (May/June, Page 20) and Mr. Manes' reply to Mr. Bob Hooper's letter published in the Septem-

ber/October issue. To quote, in part, Mr. Manes' reply to Mr. Hooper's letter, "Pride in a successful hunt is, perhaps, acceptable."

The implication I have interpreted from this quote is that also, perhaps, taking pride in a successful hunt is not acceptable. Further, perhaps, hunting, in any form, is not acceptable.

I am curious if the editorial policy of KANSAS WILDLIFE AND PARKS magazine is assuming the posture that hunting or pride in hunting, may not be acceptable. If, indeed, this is the situation, I would very much want to know the commissioners' views on this matter.

William E. Stewart, Jr.
Olathe

Dear Mr. Stewart:

I cannot speak for the Kansas Wildlife and Parks Commission, but it is in no way the policy of this magazine that hunting or pride in hunting is unacceptable. Considering the number of articles we publish each year on various types of hunting, it is difficult to see how such a conclusion could be drawn.

It is also difficult to see how the views of Rob Manes, and avid hunter and former hunter education coordinator for the Department, could be construed as being anti-hunting. In Rob's article, he was probing a very complicated philosophical question: "Why do we hunt?"

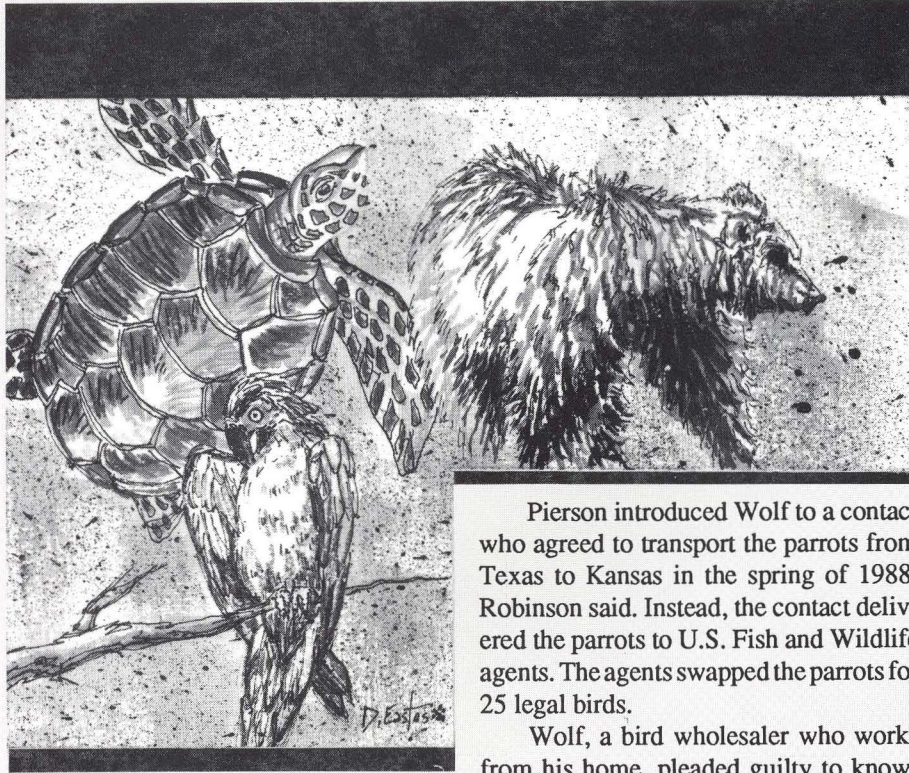
His conclusion was that we hunt because it is an activity embedded in the very fabric of our beings as the most powerful predators at the top of the food chain. His article was, in fact, a defense of hunting, not a condemnation.

In his response to Mr. Hooper's letter, Rob was saying that wanton pleasure in killing for the sake of killing is perverse, and that we should have empathy for the creatures we hunt. This is in keeping with all hunting codes of ethics, from those of the plains Indians to those of Aldo Leopold and other great modern wildlife managers.

That he took the time to delve into his own motivations on a difficult subject is laudable. —*Shoup*



THE LAW



BIRD SMUGGLERS

In recent years, illegal importation of exotic birds — species which could do considerable damage to the environment and indigenous species — has become an increasing problem. A two-year investigation by the U. S. Fish and Wildlife Service and the U. S. Customs Office ending in late 1988 led to charges filed against 36 people in several states. Agents seized smuggled parrots valued at \$468,000, an aircraft and other vehicles valued at \$93,000. Officials described the operation as their first major undercover effort to crack down on illegal parrot dealers.

In connection with bird smuggling into Kansas, two men pleaded guilty in federal court to smuggling parrots into the United States from Mexico. On August 28, Mark Wolf of Johnson County, Kansas, and James Pierson of La Feria, Texas, entered their pleas to illegal importation charges. Pierson had arranged for 25 juvenile yellow-naped parrots from Mexico to be delivered to Wolf for sale in Kansas, said U.S. Attorney Julie Robinson.

Pierson introduced Wolf to a contact who agreed to transport the parrots from Texas to Kansas in the spring of 1988, Robinson said. Instead, the contact delivered the parrots to U.S. Fish and Wildlife agents. The agents swapped the parrots for 25 legal birds.

Wolf, a bird wholesaler who works from his home, pleaded guilty to knowingly violating regulations requiring wildlife to be imported only through designated ports of entry. Pierson pleaded guilty to transporting wildlife that he should have known was illegally imported. —*Associated Press*

TURTLE EGG THIEF

In a ruling hailed by wildlife conservationists, a Riviera Beach, Fla., man charged with turtle-egg poaching received the stiffest sentence ever handed out for a violation of the federal Endangered Species Act.

James E. Bivens, 37, was sentenced in August 1989 to two years in prison and three years probation. He had pleaded guilty in June to stealing 818 eggs from the nests of endangered or threatened turtles on Jupiter Island in August 1988. U.S. Judge James C. Paine handed out the tough sentence after hearing testimony that Bivens pleaded guilty and received a \$108,800 fine and a 60-day jail term on state charges of poaching 1,088 turtle eggs

on Singer Island in July 1988. Bivens also was convicted on state charges of possession of turtle eggs in 1973 and has a lengthy criminal record, including convictions for armed robbery and grand theft.

Pickled sea turtle eggs sell for \$250 each as aphrodisiacs in Vietnamese markets from New York to Kansas City to San Francisco, said Terry Grosz, special agent for the U.S. Fish and Wildlife Service.

Sea turtle shells carved into trinkets bring up to \$600 a pound, casting doubt on the future of some of the planet's most ancient and threatened creatures.

U.S. Attorney Dexter Lehtinen said Paine's ruling was believed to be the "most lengthy prison sentence imposed under the Endangered Species Act" and said his office will continue to "take very seriously the poaching of turtle eggs." — *Wichita Eagle*

SHADY GUIDES

Three Great Bend men were charged on August 10 with unlicensed guiding, taking of untagged bear, and falsifying hunting records in Alaska. A Great Bend man, his son, and another man face charges filed in Alaska state court by the Alaska Division of Fish and Wildlife Protection.

The warrants, and the subsequent search of the Great Bend man's home, were the culmination of a joint investigation by the U.S. Fish and Wildlife Service, the Kansas Department of Wildlife and Parks, the Minnesota Department of Natural Resources, and the Alaska Division of Fish and Wildlife Protection. The undercover investigation lasted several months, and all four agencies participated in the search. Other charges are under investigation, including taking of illegal species and interstate transportation of illegal and/or illegally taken species across state lines. The interstate transportation charges are federal felonies under the Lacey Act. Federal weapons violations are also being investigated.

Still other individuals are also under investigation in connection with this case.

The elder man owns and operates a big game guiding service based in Great Bend. He is suspected of having conducted illegal guiding and/or outfitting trips for over 12 years. — *Shoup*



HUNTING



FALCONRY PERMITS

For thousands of years, man has employed the unequalled hunting skills of raptors, and many modern hunters still practice the art of falconry. The Kansas Department of Wildlife and Parks is now offering falconry permits for sportsmen interested in pursuing this age-old form of hunting.

The requirements are demanding, but anyone 14 or older can apply for a falconer's permit. There are three classes of permits available. "Apprentice" permits are issued to beginning falconers. Apprentice permits require the sponsorship of a general or master falconer for two years, and only red-tailed hawks or kestrels can be used. "General" permits are issued to falconers who are over 18 and have had two years experience. Once a falconer has at least five years experience at the general level, he can apply for a "master" permit. Annual permit fees are \$100.50 for apprentice, \$200.50 for general and \$300.50 for master.

For detailed information and applica-

tion forms, write the Kansas Department of Wildlife and Parks, RR 2, Box 54A, Pratt, KS 67124. —*Shoup*

MISSOURI DEER

As in the past, nonresidents may purchase Missouri firearms deer hunting permits. The permits allow hunters to take one antlered deer statewide. This permit requires no special application. After purchasing the nonresident permit for \$75, nonresidents can make special application for a "quota" any-deer permit. If an applicant's preferred unit has leftover permits after all resident applications have been processed, his quota any-deer application will be entered into a drawing. Purchase of the nonresident firearms permit does not guarantee a nonresident entry into an any-deer permit drawing.

For more information, write: Missouri Department of Conservation, Fiscal Section, P.O. Box 180, Jefferson City, MO 65102-0180. —*Shoup*

PUBLIC PHEASANTS

Although the pheasant season starts Nov. 11, it's not too late to look for new places to hunt. Private land is usually the choice, but serious consideration should be given to some of the state-managed wildlife areas. Although these areas receive heavy hunting pressure during the first few weeks of the season, late season pheasants can offer some fast action.

Northwest and northcentral Kansas typically offer some fine hunting. Norton, Glen Elder, Milford, Perry and Byron Walker wildlife areas are several of the more popular public hunting areas. These areas alone offer nearly 50,000 acres of the finest pheasant habitat in Kansas. In fact, there are over 200,000 acres of public hunting land in Kansas.

Early season pheasants may be found in light cover. Grown up fence rows, hedge rows and agricultural food plots are all good places. Later in the season, when weather is more severe, the birds will take to heavier cover. Thick grassy draws, weed-choked fields and cattails are likely spots for tight-holding, late-season pheasants. As the season progresses, your chances of flushing several birds at once increases. With the onset of cold weather and snow, pheasants flock together in large groups. Fifteen to 20 birds can flush at once.

The season runs through Jan. 31, 1990. The daily bag limit is four roosters and the possession limit is 16 on or after the fourth day. Pheasants being transported must have a leg or other part intact so that the sex of the bird can be determined.

Our public hunting areas may be somewhat crowded and hectic the opening week or two of the season, but once the crowds have gone, you may be witness to some of the best pheasant hunting in Kansas. *Murrell*

STILL-HUNTING

Most Kansas deer hunters, especially bowhunters, hunt from a tree stand, but a few prefer the challenge of still-hunting.

In theory, still-hunting is simple: move through the woods slowly and quietly, keeping your eyes open for deer. In practice, however, it may be the most dif-

ficult method of hunting this wary creature. There are many things to take into account, but if you are successful using this technique, you will have accomplished a major achievement of woodsmanship.

Still-hunting, like other methods, begins long before the season opens. A still-hunter must scout his territory thoroughly. Use binoculars or a spotting scope and watch deer to determine their movements and habits. Try to find out where they feed and water, and where they bed down during the day.

The best times to hunt are generally morning and evening, whenever the deer are up and moving. When the season opens, move into your area against the wind. Chances are the deer will be moving in the same direction, using their keen sense of smell to avoid walking into danger. Parallel their trails. Move very slowly. Move a short distance, then wait. Take care to be quiet, and step over or around branches and logs. Keep body movements smooth and relaxed. The novice still-hunter should put particular emphasis on slow movement. It should take several hours to move a few hundred yards in good deer habitat.

Your eyes are the key to this type of hunt, so watch the scenery with eagle eyes. Look for grayish-tan body parts through the brush. The flash of a white tail may also be a tip-off. Any movement or part of the scenery which just doesn't seem quite right should be scrutinized.

Look for fresh scrapes. Look for fresh tracks and droppings and follow them. Snow can be particularly helpful in finding fresh tracks and in muffling your footsteps, but be careful of twigs and branches hidden just under the snow.

Keep in mind that a deer will bed down where it can see in all directions, so it is difficult to spot a bedded deer before it sees you. Deer are also very suspicious of their backtrack. If you suspect that a deer is in a certain area, back away from the area and approach it from the opposite direction the deer used. This can give you an extra chance to surprise the deer, and the deer is left in the position of feeling that it has no clear getaway.

Still-hunting requires skill and tenacity. If you are looking for an extra challenge in this year's hunt, it would be well worth your while. —*Shoup*

FOR WHAT IT'S WORTH



MAN AND NATURE NATURE & MEN

by Dana Eastes

After working my new job for a few months, I get the feeling I've come full circle. My interest in art has come through trying to reproduce observations of man and nature. Since I have been working at Kansas Wildlife & Parks, mostly surrounded by males in my department, I'm finding that my childhood observations of boy and nature are closely related to my observations of men and nature today.

Much to the displeasure of my mom, I was a tom boy as a kid. For some reason it was much more interesting to tag along with the boys than to stay home and play with dolls. Growing up in Andale gave me lots of opportunities to explore and play outside. We lived on the southwest edge of town with wheat fields across the street and shelterbelts and farm ponds not far away.

In the summer, I watched my older brothers and other neighborhood boys build the annual tree-house down the street. It was built at the beginning of the summer and torn down at the end. It was a challenge to see what new twist they could add to the architecture each summer. Their drive was inexhaustible. It was as if they were on a mission of tradition. I could clearly see it was something they felt they had to do.

I can't think of a time when the boys were happy to have me along, which made me more curious about the mystery and magic of their outdoor excursions. They couldn't scare me with a mere bug or toad although they did keep me close to home for awhile. They told me the wheat field that led to the shelterbelt hideouts was stalked by a giant jack rabbit that would run me down and stomp me. I knew this to be true because I had seen postcards of cowboys riding jack rabbits. My persistence paid off though. I was even allowed to go on a few duck hunts and trapline runs.

I had always been fascinated by wildlife and the outdoors, but I could tell it was a little different for the boys. Besides being

outdoors, it was having trusted equipment in hand (fishing pole, gun, bow); the excitement of the hunt; and the competition with nature. It seems to me now that hunting and fishing was instinctive to the boys. It was also something they felt they had to do.

These observations of instinct and tradition keep bumping into me today. Office talk usually centers around hunting and fishing stories, where the fish are biting, hunting and fishing gear, hunting and fishing techniques, the ones that got away and a few that didn't. I am reminded of my childhood curiosity about boy and nature. The instinct and tradition is still there. It's even magnified by their years of experience. I can see it in their eyes when they talk. It's still something they feel they have to do.

My husband is also in the midst of all this. He can spend an hour on the phone discussing a new color of jig or an upcoming hunt. More recently, he made the mistake of asking me to go fishing with his regular fishing buddies. At first, I felt that childhood twinge of stepping on a sacred male ritual, but I gladly accepted.

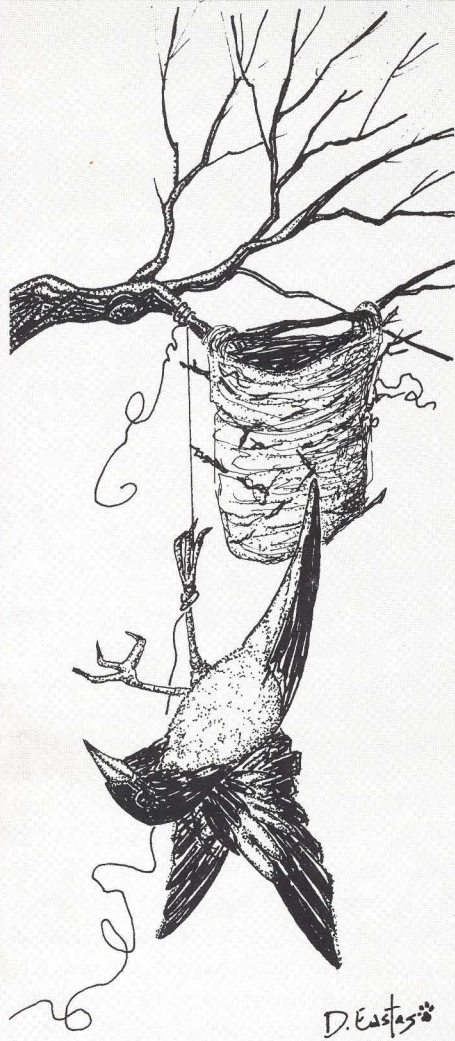
We were on the road by 5 a.m., heading for Glen Elder. Along the way, I was thoroughly coached on the proper fishing etiquette and told that once the boat was on the lake, they would not come in for hours. I quickly realized this was one of those ploys to get me to stay home. Because I was pregnant, they knew the bathroom was one concern at the top of my list. Just to test their patience, I had them return to the dock after 30 minutes. We fished long and hard, but had little luck. Our best catch of the day was by accident; we ran amuck on a shallow part of the lake and cut a big carp cleanly in two with the propellar.

I haven't been fishing with the boys since. Come to think of it, they haven't asked. They have diligently gone back time and again. It's something they feel they have to do.

I will always be an outdoors addict, but I think I will stick to observing and recording through art. If I have a boy, this cycle may start all over again in a few years. I'm prepared though. I just hope the fish aren't biting or it's not opening day of some hunting season when the baby comes.



FISHING



OUTTA SIGHT

Out of sight is out of mind. This old cliché holds true for most of us, and fishermen are no exception. Most fishermen are conscientious in their use of lakes and streams, and would never think of throwing a beer can or plastic six-pack yoke on the ground or in the water. Other types of litter are less obvious, and they are rapidly becoming a big problem for wildlife.

Monofilament fishing line is the first thing that comes to mind. Naturally, it's difficult to see. How many times have you changed the line on your reel or cut away kinked or damaged line and left it lie?

Small things are just easy to ignore, but they mount up. Take plastic worms, for instance. Have you ever replaced a ragged

plastic worm and casually dropped it in the water or on the bank?

These may seem like a harmless acts, but biologists report increasing numbers of dying or dead otters, fish and birds which have ingested fishing line and plastic worms, having mistaken them for prey. Their stomachs are blocked by the materials and they die of starvation or poisoning. Birds mistake fishing line for natural material and use it in their nests. They often become entangled in this line and die. Other animals suffer similar fates when mistaking man's litter for something else. It's a problem from the Great Lakes to the Gulf of Mexico.

Fishermen, of course, are not the only culprits in the plastic pollution problem, but we can do our part in reducing pollution. Plastics can last for hundreds of years in lakes, rivers and marine waters.—*Shoup*

RECORD FISH

As of Sept. 1, three state fishing records had been broken in 1989. On April 22, Kendall Fox of Wasilla, Arkansas, caught a 50-pound white amur in a farm pond west of Cedar Vale. He caught the giant fish, also know as a grass carp, on rod and reel using a split-tail spinnerbait. The previous record of 41 pounds, 8 ounces was held by Charles Neeley of Leavenworth.

Danny Freeman of Desoto was fishing the Kansas River on the afternoon of May 16. He was using nightcrawlers when a 4-pound, 8-ounce shovelnose sturgeon hit his line. He reeled in the record fish, breaking the old record by 8-ounces. J. W. Keeton of Topeka held that record.

The Waterworks Lake at Olathe was lucky for Michael Pembleton on May 30. At 1 p.m., a big fish took the nightcrawler on his line. When the fight was over, he had landed a 40-pound, 8-ounce carp. This fish beat the old record, held by Zane Mohler of Manhattan, by 6-pounds, 8-ounces.—*Shoup*

SPACE AGE BOBBER

Good fishing often waits where structure breaks the current of streams or rivers. Brush piles, boulders and downed trees afford hideouts where fish can wait for food to drift by.

Unfortunately, most conventional bobbers cast to these locations are quickly swept out of position. The laws of physics dictate that a free-floating object tied to a line in the presence of current will align with the point of origin — usually a river-bank.

This makes fishing a chore, since constant recasting is necessary and retrieval through shallows often fouls the hook with debris.

Rex Kerschner of Hutchinson realized the answer to this problem was a keeled bobber designed to plane the water and hold it in the current. Experimenting with a block of wood, a metal fin and a series of metal eye screws, the "River Rat" was born.

Today, the bobber is a red and white molded plastic rectangle. Along each side are three snap positions for the fishing line that change the degree of planing and variably control the position of the bobber in current.

One position acts as a full sideplane, so that as more line is released, the bobber carries the bait toward the far side of the stream. This allows bank-to-bank fishing from one side on average rivers, and exact positioning of a bait near structure without fear of foul-ups. When retrieved, the line comes directly back to the rod without arcing toward the bank.

The second position decreases the angle of planing and is useful in cases where a bait must be drifted past structure downstream, but close to the river edge.

The third position cancels the planing influence for use from bridges where straightaway fishing is desired.

Shortly after developing the bobber, Kerschner's idea gained interest in central Kansas. As demand grew, the product was modified, patented and protected with a registered trademark. Kerschner and his brother, Lonnie, now have a full-time business and a hit product at last year's American Fishing and Tackle Manufacturer's Association show.—*Blair*



ISSUES



D. Eades

WORK-STUDY

Under a new work-study program at Friends University, Kansas Department of Wildlife and Parks (KDWP) employees can pursue a master's degree in environmental studies and natural resource management while helping the Department's overburdened Environmental Services Section (ESS). One question currently facing the ESS: Are current stream pollution regulations stringent enough to protect aquatic communities?

Through the program, one Department employee hopes to bring us closer to answering this question. KDWP fish culturist Chris Mammoliti has embarked on a study of Natrona Creek under the guidance of ESS and Friends University faculty. The study will analyze the long-term effects of feedlot pollution on the creek. By comparing Natrona's fish populations to those in more pristine streams of the area, he hopes to determine how fish populations react to organic loading, how long a stream takes to recover from such incidents, and how severe the effects are. The species of fishes occurring after kills, and whether or not some species are entirely eliminated from such polluted streams, will also be analyzed.

With the results of Mammoliti's study

in hand, ESS can more effectively recommend restitution charges for fishkills. Biologists believe that fishkill damage from a pollution incident may be minor when compared with the long-term damage. Hard data collected from this study should help the state to more effectively evaluate its regulations on potential pollution sources. *Bill Layher, ESS*

CONSERVATIVE BULB

Have you ever thought you could save money and energy around the house while reducing air pollution and conserving natural resources? Although it might seem like a tall order, many new products do exactly that.

One is a screw-in fluorescent light bulb. This bulb may be initially more expensive than conventional bulbs, but it is designed to last much longer. Switching one on can also save the equivalent of 300 pounds of coal over the life of the bulb. —*Shoup*

HABITAT TRAINING

During the week of Aug. 28-Sept. 1, 39 Department of Wildlife and Parks district biologists and nongame biologists gathered at Rock Springs 4-H ranch in Geary County. The gathering heralded a renewed effort on the part of the Department to protect the state's fish and wildlife habitat.

The Department's Environmental Services Section (ESS) provided training in environmental law, permit issuing and habitat modeling. ESS personnel were assisted by a three-man team from the U.S. Fish and Wildlife Service and Wildlife Services National Ecology Center in Ft. Collins, Colo.

The great number of projects reviewed annually under a variety of federal and state statutes has made assistance on projects to lessen fish and wildlife habitat destruction necessary. Because the Department has a work force already in place across the state, it seemed logical to request assistance from field personnel.

Now, instead of five ESS employees investigating permit reviews and illegal

channel changes, it's five plus 39, and a welcome boost for habitat preservation. —*Bill Layher, ESS*

GAS HOGS

According to the National Wildlife Federation, fears about air pollution from automobile exhaust have not swayed Americans from their love affair with cars. This is despite the fact that most experts believe engine exhaust is one of the primary contributors to the Greenhouse Effect. While other sectors of the economy have slashed petroleum use over the past 15 years, energy use for transportation has increased steadily.

Why? Several trends appear to be involved: the growing popularity of less fuel-efficient light trucks, an increase in drivers, and less emphasis on fuel economy by both the government and the auto companies. Fuel economy standards for light trucks and vans are 5 or 6 miles per gallon below those for cars. All vehicles, however, are becoming less efficient in actual highway use because of increasing traffic congestion, higher speed limits, and lower government fuel economy standards. —*Shoup*

CLEANER AIR

The Izaak Walton League of America (IWLA), claims that the Bush Administration's proposed Clean Air Act amendments, released July 21, would weaken existing laws and fall short of the president's commitment to clean air by the year 2000.

Conservationists applauded the President's June 12 pledge for cleaner air, but many see the recent bill as an attempt to push back clean air protection efforts by 20 years. According to the IWLA, the bill presents several drawbacks: repeal of mandatory protection for national parks and other "unpolluted" areas, relaxation of rules governing auto and bus emissions, narrowing requirements for cleanup technology, lowering states' protection from pollution outside state lines, and delays of up to 20 years in clean air health standards reviews.

In addition, the Environmental Protection Agency (EPA) would no longer be

required to step in when states refuse to act against air pollution; court orders instructing EPA to take action to correct certain problems would be voided; and courts would defer to EPA's judgement when the agency is challenged by a state. —*Izaak Walton League*

NAVY WETLANDS

The U.S. Navy Department has initiated a new policy to protect wetlands on its installations. Naval bases contain thousands of acres of valuable wetlands important to waterfowl and other wildlife.

The policy, issued recently by the Chief of Naval Operations, commits the Navy to be "a good steward of the public land entrusted to its care." It states that enforcement of wetland provisions under the Clean Water Act will be a priority, and that all facilities and operational actions will avoid wetland destruction or degradation. Any wetland loss that cannot be avoided, the policy states, will be minimized and mitigated through planning, programming and budgeting.

Conservationists are hopeful that the other military services will follow Navy's lead and implement similar wetland policies. The Department of Defense controls more than 20 million acres of federal land. —*Wildlife Management Institute*

ENDANGERED MEANS. . . .

What is the endangered species list? Listing a species as "endangered" means that it is in danger of extinction throughout all or most of its range. A species listed as "threatened" is likely to become endangered within the foreseeable future.

The single greatest reason certain wildlife populations and their ranges have decreased is habitat destruction. Unwise agricultural practices, poorly planned industrial and residential development and pollution have degraded prairies, forests, wetlands and other terrestrial and aquatic habitats.

The Endangered Species Act was passed in 1973 as a measure to help prevent wildlife extinction. This federal law deals with seriously dwindling wildlife populations first by classifying a species as

endangered or threatened, thereby drawing attention to the problem.

Next, wildlife managers and biologists extensively research that species to determine its specific habitat needs. Population dynamics is also a key factor in a wildlife management plan — researchers must know a listed species' reproductive and mortality rates. By understanding an endangered or threatened species' needs, wildlife managers can begin recovery planning. Management programs to maintain and improve habitat are important factors in wildlife conservation.

Restrictions on illegal trade of a federally listed species, as well as penalties for poaching, collecting, killing, injuring or harassing are punishable by a \$20,000 fine and/or a year in jail.

Listing often stimulates research and recovery interest by state universities, conservation associations and other organizations. Many more species are under review for federal and state listing. Efforts to conserve wildlife have restored many species, including the wood duck, the wild turkey and the American alligator. —*Oklahoma Department of Conservation*

FIRE ISLAND HUNT

The New York Department of Environmental Conservation reported in April that a special deer hunt had been successfully conducted on Fire Island, which runs just off the coast of New York City. The National Park Service manages Fire Island National Seashore there, and a major adjustment of policy allowed the hunt.

The Park Service usually maintains a strict policy prohibiting hunting in national parks. However, the park was in danger of being overrun by deer. It was heavily overbrowsed. The deer herd was destroying landscape plantings and natural vegetation, and the deer were in poor physical condition from lack of nutrition. The Service also suspected that the high incidence of Lyme disease among the Fire Island human population was caused by excessive deer ticks, which transmit the disease to people.

Animal rights activists failed twice in court challenges to stop the hunt. The hunt was then conducted, and officials expect a rejuvenated ecosystem and a healthier deer

population to result. This action by the Park Service proved that sport hunting is an efficient and effective method of controlling destructive growth in large animal populations. Such populations not only damage the environment, but the resulting starvation can destroy entire herds. Perhaps the Fire Island experience will set a precedent for management of other public lands. —*Shoup*

RAIN FOREST LOAN

After a year of prolonged debate, Brazil, responding to pressure from the World Bank, has withdrawn its application for a \$500 million Power Sector II loan. The loan would have helped construct a series of hydroelectric dams in the fragile Amazon rain forest. The World Bank had, in turn, yielded to protests over the inefficiency of Brazil's power industry, the high cost of dams, the economic feasibility of Brazilian nuclear development, indigenous people's land rights and the value of lost tropical rain forest.

The cancellation of the Power Sector II loan is being called a major victory by conservationists, including Barbara Bramble, director of the National Wildlife Federation International Program. "The environmental lobby in Brazil and around the world has seen its first impact on a big loan. But what's just as important is the environmental impact analyses now being required by the World Bank," she said. As a result of these environmental impact analyses, several of the worst projects have been scrapped.

The cancelled loan would have been a substantial contribution toward Brazil's countrywide 2010 plan, which proposes to build 143 dams over the next 25 years, many of them in the Amazon rain forest. One dam, the Belo Monte, was the site of a historic demonstration by indigenous populations who condemned the drowning of their homelands.

Brazil's government has now proposed a unique environmental protection loan. Critics like Dr. Jose Goldemberg, rector of Brazil's most prestigious university, argue that Brazil could have new, cheaper energy sources by investing in energy efficiency and conservation measures. —*National Wildlife Federation*



NATURE

CONDOR UPDATE

On May 24, an Andean condor egg hatched at the San Diego Wild Animal Park. This chick is being cared for by two California condors, AC4 and UN1, who are the parents of three of the captive-conceived chicks. This is the first Andean condor chick to be cared for by California condors. It is being done as an experiment to test the parental skills of the captive California condors. This Andean condor will be released in South America within the next year.

The Andean condors that were shipped to Colombia from captive breeding facilities in the United States earlier this year arrived at their new home safe and sound. As of early June, the birds were in their hack box outside of Bogota, adjusting to their new surroundings. Two Service biologists are observing and assisting the Colombian biologists. —*Endangered Species Technical Bulletin*

TUTTLE RELEASE

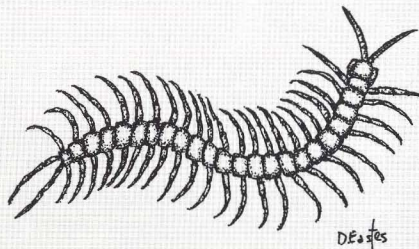
Folks in the Manhattan area may have been scratching their heads after last August's release of three feet of water from Tuttle Creek Reservoir. The reason for the release? Two species of migratory birds, one threatened and one endangered, use an area along the Nebraska/South Dakota border for their nesting sites.

On the surface, there seems to be no logical connection, but there is. The threatened piping plover and the endangered least tern both use the area below the dam at Gavin's Point Reservoir on the Missouri River for their nesting sites. These rare birds nest in only a few places on the continent, and Gavin's Point is one. They make their nests on the sand bars below the dam. If the Gavin's Point facility were to release any significant amount of water from the dam, nesting sites for two of the western hemisphere's rarest birds would be destroyed.

Herein lies the rub. The U.S. Corps of Engineers created six federal reservoirs

along the Missouri River to control flow levels for navigation. Holding back water in late summer hinders navigation downstream, but these threatened and endangered species must take priority. The solution turned out to be less complicated than one might think. Tuttle Creek Reservoir empties, via a short stretch of the Big Blue River, into the Kansas River. The Kansas, in turn, feeds the Missouri, thus aiding navigation on the lower reaches of the larger river.

Currently, there are over 400 endangered and over 120 threatened species in the United States alone. It is encouraging that the Corps is working creatively to help protect some of these species. —*Shoup*



GREAT LEGS!

Although all true insects (members of the taxonomic phylum Arthropoda and the class Insecta) have six legs, many of their close relatives do not. Myriapods (which are also arthropods and much like the primitive ancestors of modern insects) can have as many as 752 legs.

Myriapods include centipedes and millipedes, feared and loathed creatures with dreadful reputations. Their reputations are mostly undeserved, however, and many of these insects benefit people. They are quiet and secretive and, with a few exceptions, pose no economic or health threats.

Centipedes ("hundred-legged") are all predators, feeding on a variety of small animals. Their meals include earthworms, snails, slugs, other insects and just about anything else they can catch. Some huge centipedes of the tropics can kill and devour birds, lizards, mice and snakes.

The house centipede is common in basements, bathrooms and other moist areas. It differs from other centipedes in that it has long, delicate legs. Though fearsome in appearance, the house centipede is not venomous, and it benefits people by eating cockroaches, silverfishes, flies and other household pests.

The centipede's body is separated into distinct segments, each with a pair of legs. Varying from species to species, centipedes can have from 30 to 354 legs. The legs move with incredible coordination and accuracy, carrying these creatures at blazing speeds in excess of 80 feet per minute. If a centipede loses a leg or two, it won't even limp.

Centipedes breathe through air tubes, called spiracles, that open at the sides of the abdomen. They can survive for hours under water, but die in just a few hours without moisture in their environment. This need for moist soil and close quarters explains why centipedes are seldom seen. They spend most of their lives under rocks and other debris or buried in the soil.

Contrary to its name, the millipede does not have a thousand legs. In fact, that name is at best about 75 percent correct—the most legs found on any millipede species is 752, and about 100 legs is most common. Despite having all this running gear, millipedes are slow. Their legs are used primarily for burrowing in the soil. Immature millipedes have one pair of legs for each body segment, but the segments fuse at adulthood, placing two pairs of legs on each section. This makes its long body more rigid and less apt to buckle under the great force it exerts when burrowing rapidly.

Millipedes, unlike centipedes, are not predators. They feed mainly on decaying vegetation and, in doing so, contribute to soil formation. Occasionally, they can be garden pests when feeding on small plant roots. Millipedes don't bite and are generally harmless. If threatened, they usually curl into a tight ball, but some secrete foul chemicals, including highly toxic hydrogen cyanide, from body pores.

Most encounters with millipedes and centipedes should be pleasant ones — opportunities for learning more about the strange invertebrate creatures which so outnumber people. —*Manes*



NOTES

HATS, BUCKLES, ETC.

The Department has a number of wildlife-related items for sale through the Pratt office. Limited-edition 1989 belt buckles are still available for \$12, and a few 1986 buckles are left for \$8 each.

T-shirts sporting a wild turkey on the front are available in youth and adult sizes. Youth shirts are \$7 and adult are \$8.

Adult Deer Classic T-shirts are \$8 plus \$1 shipping. Caps are also available for \$6.50. Each cap features a howling coyote.

Posters are also on sale. Two animal identification posters — Kansas Birds and Kansas Amphibians — can be had for only \$5 each. A third poster, Feathered Friends, is available for \$3.

All prices include shipping and handling. —*Shoup*

ACT ANNIVERSARY

It was 25 years ago that President Johnson signed the Wilderness Act, which preserved 91 million acres and pushed the United States into the forefront of wildlife conservation.

According to George T. Frampton, president of the Wilderness Society, the act has done much good, but more needs to be done. In the United States, he said, the next 25 years will, in all likelihood, “be our last opportunity to make good on the promise of the act.”

He said at least another 90 million acres need to be protected. Of the 91 million acres protected so far, 55.5 million acres are in Alaska. Protected wilderness covers only 3.9 percent of the United States and only 1.8 percent of the lower 48.

“The fact that we have been able to create this wilderness system serves as sort of proof that we’re willing to respect the integrity of nature,” Frampton said. He added that although the modern environmental movement is only 20 years old, it has convinced people to see that “stopping the destruction of natural planetary functions is a priority. Environmental protection is as big as preventing nuclear war.” —*Associated Press*

EMPTY PLAINS?

Writing in *Planning* magazine, Frank and Deborah Popper of Rutgers University describe the Great Plains as “an austere monument to American self-delusion.” The delusion, embodied in the Homestead Act, was that farmers should plow up the semi-arid, windswept region — land better suited to ranching than farming. The Poppers — he is the chairman of the urban studies department; she is a geographer — predict that over the next generation, the region will inevitably become almost totally depopulated. The wisest thing the federal government could do, they argue, is start buying back great chunks of the Plains, replant the grass, reintroduce the bison — and turn out the lights.

There is a precedent for something like that. After the Dust Bowl, the government did buy back a New Jersey-sized empire of ravaged Plains land, establishing a network of national grasslands that includes the Pawnee National Grassland in northeastern Colorado. But the Poppers are thinking on a grander scale. They call their idea Buffalo Commons.

“The Buffalo Commons will be the world’s largest historic preservation project, the ultimate national park,” they say. “Most of the Great Plains will become what all of the United States once was.” Empty. —*The Wall Street Journal*

#1 ISSUE

An April poll conducted by CBS News and the New York Times indicates that public support for protecting the environment has grown steadily since 1981. Seventy-four percent of those polled agreed that “protecting the environment is so important that requirements and standards cannot be too high, and that continuing environmental improvements must be made regardless of cost.”

In January, 1981, only 45 percent agreed with the statement. In another question, 51 percent of those polled opposed drilling for oil in the Arctic National

Wildlife Refuge. [Probably much higher since the Exxon Valdez oil spill.] “This poll bears out what those of us on the voting scene know counts with the working voter,” said Sen. John Chafee (R-R.I.). —*Land Letter*

"GREENHOUSE" LIT.

Reprints of two articles on global warming that appeared recently in *International Wildlife* magazine are now available from the National Wildlife Federation.

The publication, titled “The Greenhouse Debate: New Problems, New Solutions,” contains articles from the March-April and May-June issues that explain global warming and what people can do about the problems it causes.

Single copies are available free from the National Wildlife Federation, Dept. GWR, 1400 16th St. NW, Washington, DC 20036. —*National Wildlife*

DEER ROAD KILLS

Think we have a problem with deer on Kansas highways? A look at the Pennsylvania statistics might change your mind.

The Pennsylvania Game Commission reports that 39,143 deer were killed on Pennsylvania highways in 1988. This compares with 3,922 in Kansas. In fact, the Pennsylvania deer road kill figure was only 1,211 shy of the total Kansas hunting season harvest in 1988.

Pennsylvania bears also suffered in 1988. Two hundred and thirty-three were killed in highway accidents. All this in a state approximately two thirds the area of Kansas. —*Shoup*

LITTER LIVES

The Arkansas Game and Fish Commission has listed a number of common litter items and their rates of decomposition. According to the Commission, even a banana peel can last up to six months. Other items include: cotton rags and paper, 4 months; wooden stakes, 4 years; wax paper cups, 5 years; styrofoam cups, 10 to 20 years; plastic containers, 50 to 70 years; cigarette filters, 15 years; tin or steel cans, 100 years; aluminum cans, 100 to 500 years; glass containers, never; and rubber, never. —*Shoup*

NATURE'S NOTEBOOK

by Joyce Harmon Depenbusch, Wildlife Education Coordinator

OUTDOOR RESPONSIBILITY

Everyone should enjoy the pleasure of being outside to explore nature by bird watching, camping, hunting, fishing, taking photographs, hiking, drawing or other activities. There are many unique and beautiful areas to investigate. All areas should be treated with respect.

To use privately owned land, follow a few common sense suggestions. To gain and retain the use of someone's land, permission must be received. Don't assume that permission is good from one year to the next. Ask each year. Don't abuse the landowner's generosity by bringing additional people without asking. Many landowners may not live on the land. Ask people who live nearby who the landowner is so that you can gain permission. Remember that trespassing on another's land is against the law and against outdoor ethics.

Here are some general guidelines to develop a good relationship with landowners:

- 1) Act like a guest on the owner's land. Follow the restrictions he or she places on you. Be polite and courteous. Accept the landowner's decisions without argument.
- 2) Get permission as far ahead of time as possible. For example, don't wait until the opening day of a hunting season to ask permission.
- 3) Know the boundaries of the land, and do not stray onto another landowner's property without permission.
- 4) Do not allow your pets to bother the landowner's animals, land, equipment or family.
- 5) Leave things in better condition than you found them. Do not litter or damage any equipment. Repair or replace any damage you are responsible for. Be helpful to the landowner if the opportunity arises.
- 6) Walk or drive on roads not in cultivated fields, fields with crops or pasture, unless you have permission.
- 7) Close gates if you open them. Do not cut or break fences.

COLOR PAGE

THE PICTURE BELOW SHOWS AN OUTDOORS PERSON RESPECTING A LANDOWNER BY ASKING PERMISSION TO HUNT.





A Gift That Lasts

The Kansas Department of Wildlife and Parks can help with your Christmas shopping this year, especially if you're shopping for the outdoor lover who seems to have everything. Order that person on your list a subscription to **KANSAS WILDLIFE AND PARKS** magazine. Not only will the magazine be the perfect gift, but it will last, because every two months a new one will arrive. And **KANSAS WILDLIFE AND PARKS** magazine is affordable at \$8 for one year (six issues), \$15 for two years (12 issues) and \$21 for three years (18 issues). A year's subscription includes six issues, packed with articles about wildlife, hunting, fishing, management, conservation, environmental issues, state parks and other Kansas natural resources. And best of all, the magazine is illustrated with color photographs taken by one of the best wildlife photographers in the business, Mike Blair. **Subscribe today!**

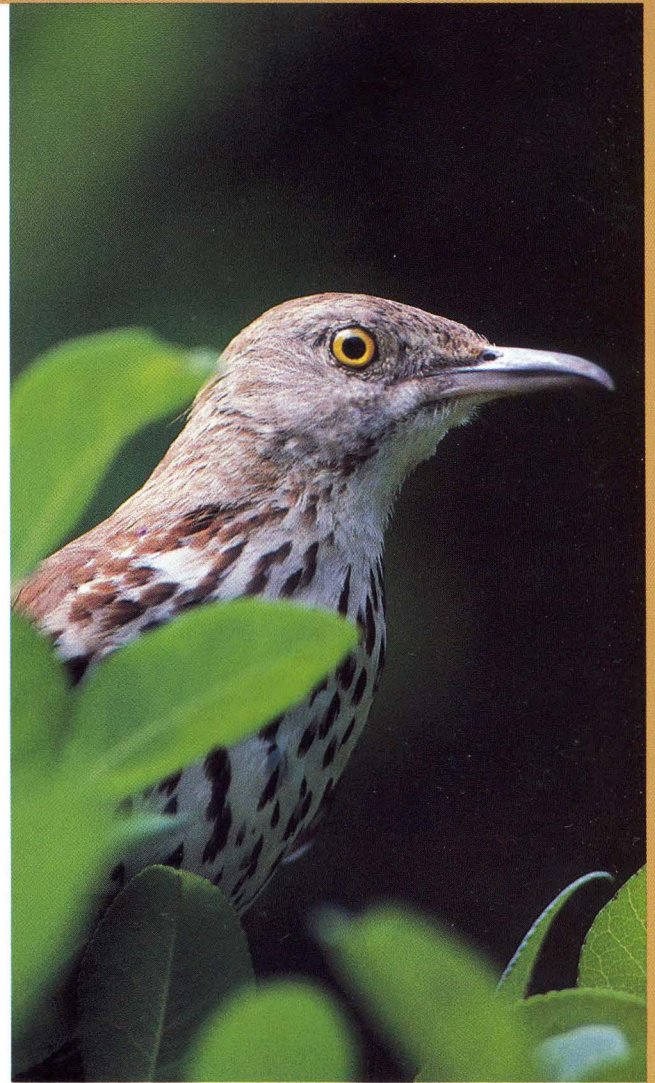
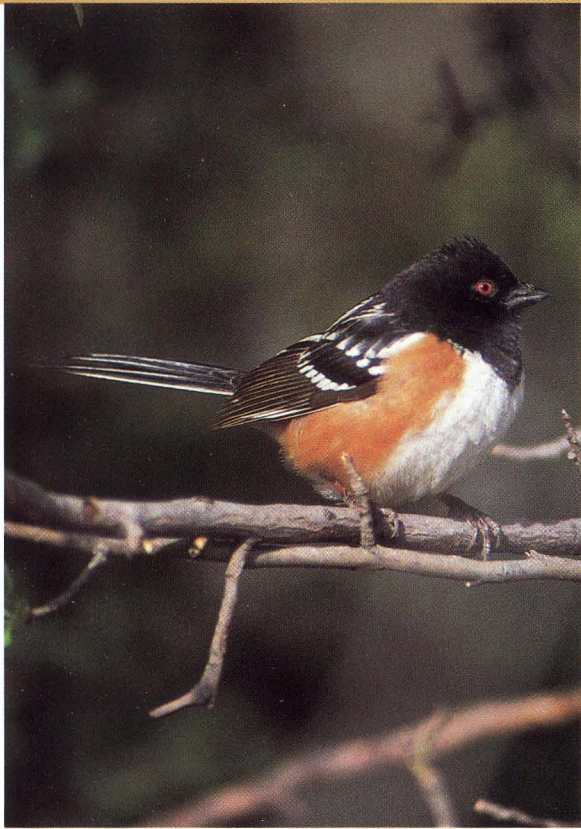


gallery

by Mike Blair

Birds capture our imaginations like no other animals on earth. As a group, they're colorful, dressed in vibrant hues that beg attention; they freely sing, inspiring us with nature's gift of music; they swim the open air, causing us to dream.

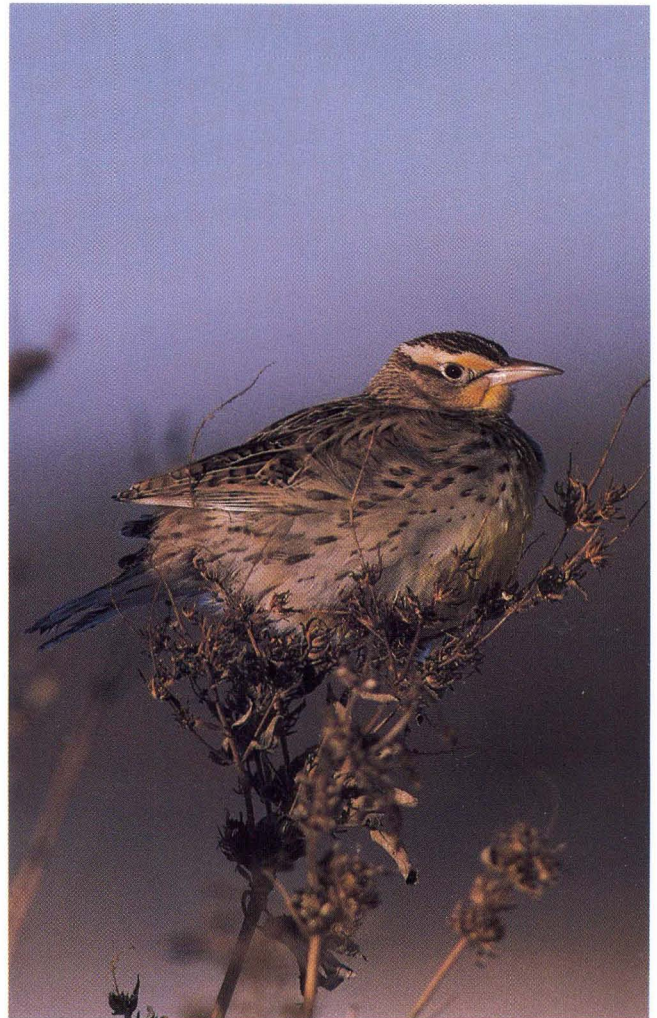
Common and friendly, birds accept our landscapes as home. No other animals offer such close and frequent contact with the natural world. Without them, days would be silent and empty. Birds are truly gifts of God.



opposite page: Pine siskin in December, 400mm lens with extension tube, f/9, @ 1/125. **Above left:** Rufous-sided towhee (western race) taken in April, 400mm lens, f/11, @1/125. **Above right:** Brown thrasher taken in June, 400mm lens with extension tube, f/6.7; @ 1/125. **Left:** Mourning dove taken in December, 600mm lens, f/5.6, @ 1/125.



Left: Horned lark taken in June, 600mm lens, f/8, @ 1/250. **Below:** Western meadowlark taken in January, 600mm lens, f/8, @ 1/250.





Left: Eastern bluebird taken in June, 400mm lens, f/8, @ 1/125. **Below:** Lazuli bunting taken in June, 600mm lens, f/8, @ 1/250.





Doe A Deer

photos and text by Mike Blair

staff photographer

A doe deer deserves more respect than she often receives. Surprisingly, when so much attention is given to wily, old bucks, it's usually the does that determine feeding and bedding grounds and the does that discover danger first.

Baldies. Antlerless deer. Propeller heads.

The nicknames are functional, yet unflattering to one of nature's most beautiful animals. This is the lingo of a hunting crowd that equates deer with antlers, and the aliases portray does as unworthy prey.

Ask a deer hunter about his hunting success, and the answer may be apologetic: "Just a doe," he'll say. Outdoor writers invariably harvest a "fat doe," as if that's somehow better than just any old doe. In both cases there is the implication of settling for

second-best.

Nonsense. Let's just call them does.

Deer are more than a hunting challenge, and does are worth more than their headgear. In truth, deer exist in a matriarchal society, where the doe is paramount. She is mother and single parent, content to separate herself from others during birth and early nurture of her offspring. She is protector of her young, courageously confronting coyote or bobcat if the fawn's natural defenses should fail. She is leader and teacher, passing the ways of deer to her young through

example. She is the sole lookout, responsible for the safety of herself and her charges.

That's ample duty for any animal. It's the reason too, that old does are among the sharpest animals in the woods. True, years of selective hunting pressure on bucks might make them more nocturnal than does. But wit for wit, the doe may be equal or superior at discovering danger. Big bucks know this and use the does as advance scouts, often following them by several hundred yards in the course of daily travels.

Does are normally mild creatures,

given to patience. They're forever surrounded by other deer, though these associations vary throughout the year. Aside from the rut, when mature does briefly travel with bucks, their offspring stay with them. Several generations of fawns may be present.

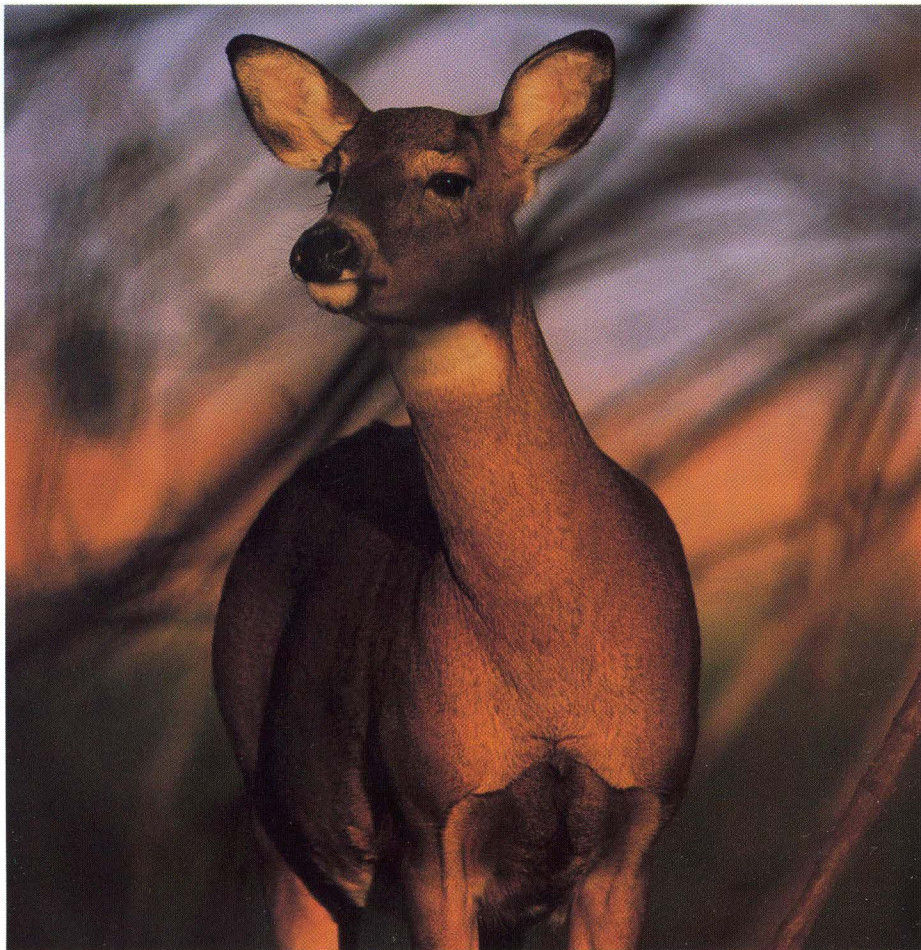
The cycle of life begins in spring, from mid-May to mid-June in Kansas. Yearling fawns are driven away, and the doe seeks solitude as fawning approaches.

Mule deer choose brushy pastures or open shelterbelts for birthing their fawns. Whitetails fawn with little apparent forethought, sometimes jeopardizing their young by selecting exposed sites.

Healthy does sometimes live 15 years in the wild and are capable of bearing fawns throughout life. Yearlings produce a single fawn, but older does normally have twins or triplets.

Though born together, twins are rarely hidden in one place. Instead, the doe may lead them hundreds of feet apart to separate hiding places, and visit each periodically.

The doe feeds and rests some distance from her fawns during daylight, but never out of their hearing. Every two or three hours, she nurses them. Deer milk is very rich, with twice the solids and three times the fat and protein of Jersey cow milk. This al-



Fully alert, a doe smells, listens and looks for danger. Often maligned by hunters as second best, does are usually the ones that notice any danger and alert the rest of the herd.

Nursing twin fawns, this doe tries to get in a bite for herself. Twins are usually hidden in separate locations when the doe is absent. The doe will find each hidden fawn periodically for short feeding sessions. Never pick up an apparently abandoned fawn. The doe is usually watching nearby.



lows for short feeding sessions so the doe can avoid drawing attention to her fawn's whereabouts.

People who discover fawns often assume them orphaned, due to the mother's absence. Each year, many young deer are needlessly taken from their hiding places. In most cases, the hidden doe watches anxiously nearby as the fawn is kidnapped. Because of this, always leave a fawn where you find it. Don't worry if you've handled the young deer, the

doe will readily reclaim it regardless of human scent.

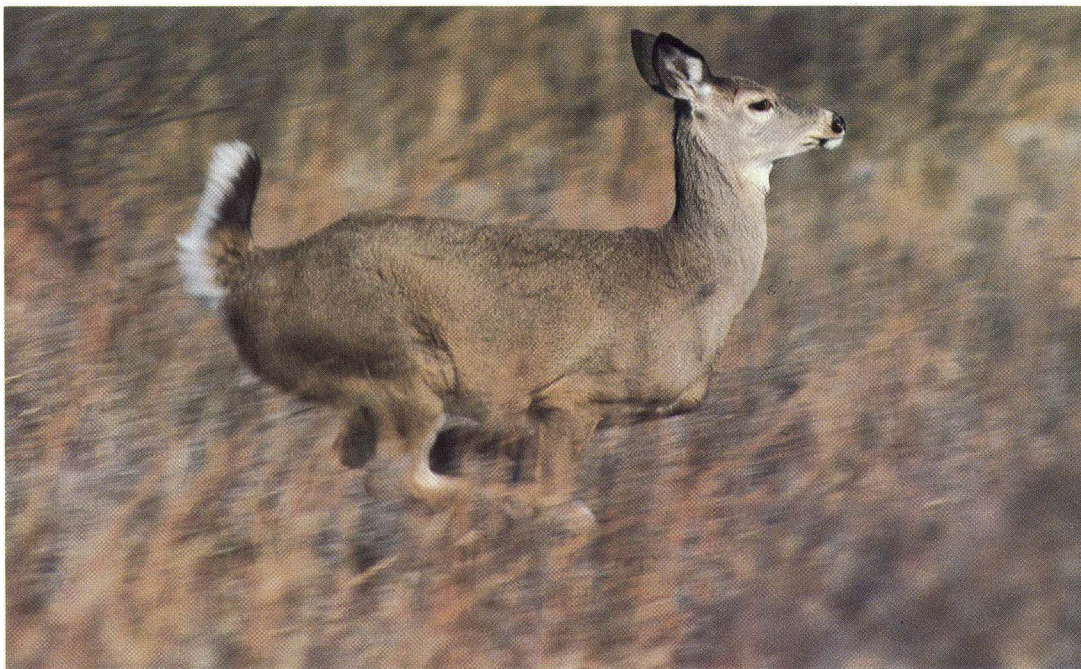
Fawns grow at astonishing rates, and within a month, the doe may allow banished yearlings to rejoin her and the new fawns. By early fall, mature daughters or sisters with their own fawns may join the group, creating large family associations. Occasionally, yearling bucks may even be loosely associated with their maternal family groups.

As fawns are weaned, the doe re-

sumes her normal patterns. Typically, this involves five activity periods each 24 hours, with the most active periods at noon and sundown. But feeding forays into open fields are still limited.

Like all deer, does require about 8 pounds of green forage each day for each 100 pounds of body weight. Feeding trips, especially with fawns to look after, must be brief.

A deer's special stomach helps accommodate this. The doe grazes and



Above left: A doe must eat 8 pounds of green forage daily for each 100 pounds of body weight. This doe takes a bite of stinging nettles. **Above right:** Deer have relatively poor eyesight and depend almost entirely on their sense of smell to survive. Here, a doe tests the wind to identify the sound of a shutter clicking. **Left:** Never doubting what her nose tells her, a doe turns and flees when odors associated with danger are distinguished. The namesake tail is raised like a warning flag to signal the danger.

swallows a good deal of food (cud) which is stored in a stomach compartment called the rumen. Then she can lead her fawns to safe quarters, regurgitate the cud, and thoroughly chew it for digestion — a process that takes up to eight hours per day.

Does do not ordinarily grow antlers due to female hormones that inhibit such growth. Individuals vary though, and some produce small, velvet-covered antlers. More rare are does with well-formed, polished antlers. These odd traits normally don't

interfere with reproduction.

Gentle as they are, does can be aggressive, especially with other deer. Competition for choice food increases during winter months, and a doe will often attack her own fawns that challenge her for food.

Does fight by kicking their sharp hooves, or rearing on hind legs and "boxing" with both front hooves. This defense can be very dangerous, especially to predators.

As fawns get older, the doe's bond to them grows weaker. When

alarmed to flight, she makes little effort to stay with them. As rut approaches, she abandons her young, or watches indifferently as a buck drives them away. But the animals always regroup, both for company and for the increased safety afforded by many eyes and ears.

Does and their family groups comprise the most visible part of deer society. Where bucks are interesting and observable primarily during the fall months, does are watchable year-round. ♀



Next time someone apologizes for harvesting a doe or says that all they saw were does, correct them and give the doe the respect it deserves. In the matriarchal arrangement in deer herds, the doe is leader, nurturer, sentry and teacher, and probably one of the wariest animals in the woods.

Rascal Research



by **Lloyd Fox**
furbearer biologist
Emporia

photos by **Mike Blair**

To learn more about the effect of running seasons on raccoons, biologists attached tiny radio transmitters to raccoons and followed their movements for three years. Not only were questions about the effects of running answered, but many other interesting things were learned about raccoons.

In April 1985 I began the type of project that wildlife biologists crave. To give you an example of how unique this opportunity was, I'll make an analogy using fishermen. Most of our jobs are like sitting alone on the bank of a shallow, muddy pond with a cane pole, fishing for stunted bullheads. This project was like riding in a well equipped bass boat with a bunch of good friends on a clear, lunker-filled lake.

Like much wildlife research, we started the project to answer a management controversy. Raccoon houndmen in Kansas have the shortest running season in the Midwest, and they would like it lengthened. Running seasons are different from regular hunting seasons. Houndmen may not carry firearms or intentionally harm a raccoon. Studies in other states suggest year-round running is detrimental. Those opposed to the running seasons are concerned that hounds kill many raccoons and disturb females during critical mating and young-rearing periods.

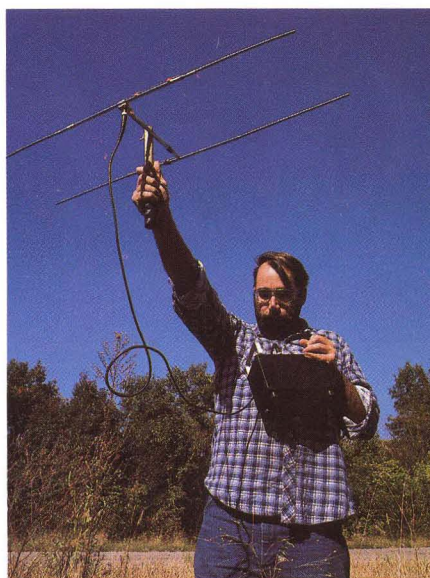
The study design was simple. We selected two 1½-square-mile study areas of similar habitat. Raccoons on one area were protected while on the other they were intentionally pursued with hounds. We captured raccoons on both areas and fitted them with radio collars. Each \$175-transmitter had a unique frequency to allow identification of an animal. Directional antennas and sensitive receivers allowed us to locate the animals and follow their movements. We were able to do this from a distance and thus control disturbance of the animals.

The Flint Hills National Wildlife Refuge (NWR) in Coffey County was the protected study area. The other site was private land along the Neosho River in Lyon County. We were fortunate to find some wonderful landowners who put up with our strange hours. Without their cooperation, the project could not have been done.

Most projects have aspects that border on drudgery. Mark/recapture is a workhorse technique. The idea is to capture and mark a sufficient sample of animals, then return later and resample the population. Measuring the number of previously

marked animals (animals caught a second time) allows estimates of the total population. Computer programs regurgitate the resulting statistics. It looks good on paper. However, collecting enough suitable data in the field requires planning, effort and a little luck.

We spent 5,333 trap nights of effort to make 413 captures of 229 raccoons. Carrying box traps into the woods was the easy part. All field projects seem to have a hidden weakness. In this study it was black, clay soil and frequent rains. In dry times, we could drive field roads. During a rain and for days afterwards, the only means of travel was on foot. Imagine having a 10-pound mass of tar on each foot. Then try to carry an angry



Fox, posed like a torch bearer, raises antenna to find the signal of a radio collared raccoon.

15-pound raccoon in a box trap. And to add to our enjoyment, the raccoons would reach through the wire cage and pull in an extra 50 pounds of mud.

We had a satisfactory sample of marked animals on both study areas by September 1985 when Stan Gehrt, a graduate student at Emporia State University, joined the project. However, we were unprepared for what happened that October. We had about 80 box traps in the field when a flood hit. Then something mysterious began happening to the study animals. Within a few weeks, 10 of the 20 radio-collared raccoons

on the private land site were dead. We lost signals from two other animals. The fate of a third raccoon was unknown, but the transmitter was under 15 feet of water in the Neosho River. We speculated that all three animals died before or during the flood and their bodies washed away. A virus was devastating the population. Two more radio-collared raccoons would die during the summer of 1986.

The results from the telemetry study and the mark/recapture study told us the same story. We had dropped from a population of more than 100 raccoons per square mile to a population of about 40 per square mile in just a few months. Disease had been a major factor. The impact of hunting, trapping and running had been almost imperceptible. The survival rate of raccoons on the private land study site that first year (1985-1986) was a bleak 26 percent compared to 63 percent during 1986-1987, 42 percent during 1987-1988 and 86 percent during 1988-1989.

The densities that we found were in the middle of the realm reported by other researchers. Dr. Eric Fritzell detected only 1.3-2.6 raccoons per square mile in the North Dakota prairies. Cliff Hoffmann and Jack Gottschang estimated a density close to 178 animals per square mile in an Ohio suburb.

It was during the dark days of winter 1985 that we made some new friends and a whole new aspect to the study developed. Dr. Victor Nettles of the Southeastern Cooperative Wildlife Disease Study at the University of Georgia diagnosed the raccoon-killing virus as canine distemper. Working with Dr. Johnna Veatch and the staff at the Veterinary Diagnostic Laboratory at Kansas State, we changed our procedures to include the taking of blood samples each time we handled a raccoon. This gave us the opportunity to learn about the impact of canine distemper on a raccoon population.

When we sampled the raccoons in the spring of 1986, more than 70 percent of them had high positive titers for the canine distemper virus. As the seasons passed, we recorded a steady decline in the number of positive animals and a decline in the

titer values of raccoons that survived the epizootic. By the fall of 1988, none of the raccoons had a positive titer. However, that one event in the fall of 1985 would shape the population for the rest of the study.

Graduate students are cheap and dedicated labor for much of wildlife research. Gehrt fought the floods, mud and cold nights to amass 2,932 relocation points on 42 radio-collared raccoons. These data showed that raccoons on our study areas had well-established home ranges. On the private land study area, he found that adult females occupied about 265 acres, while adult males covered about 403 acres. Yearling males were the big travellers, covering nearly 800 acres. Adult females on the Flint Hills NWR had significantly larger movement patterns than those on the private land site. They used an average of 566 acres. This was surprising because the population density at Flint Hills was higher than at the private land site.

One of the findings of Gehrt's study was the association between adult males. When you have more than 10 adult males per square mile and each of them have a home range of 400 acres, you expect to find spa-

tial overlap. We were surprised to learn that two or more males would not only occupy the same area but travel together and share the same dens. On a couple of occasions, when one of the pair would die, the other would shift its movement pattern to associate with another male. Raccoons living at densities as high as we observed had a different social system from those in less populated areas. We were fortunate to collar enough males to allow us to see this.

One aspect of the study that we had not anticipated was the frequent flooding. During the fall months of both 1985 and 1986, there was extensive flooding at the Flint Hills NWR study site. During the 1985 flood, we had our hands full on the private land site due to the disease outbreak. Limited observations of three radio-collared raccoons on the Flint Hills site during the flood showed that they remained in the flooded region even though nearby areas were above water. In the fall of 1986, we had nine radio-collared raccoons at the Flint Hills with known home ranges when much of the study area again went under 10-15 feet of water. This provided a natural experiment.

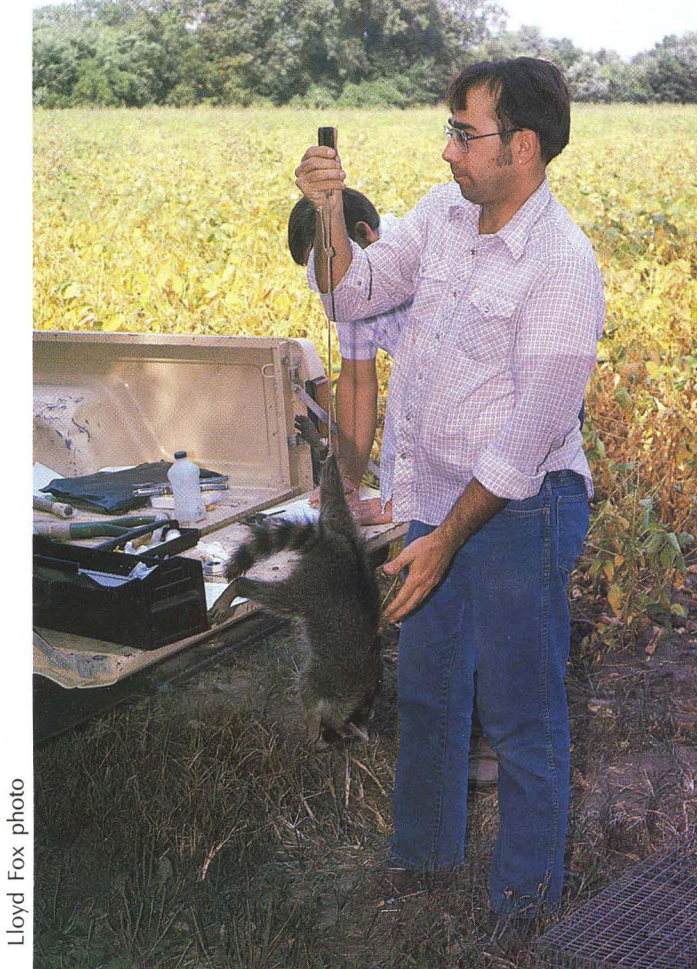
When a flood hits, raccoons climb trees in their home range. It was the degree of fidelity that these animals had for their home range that surprised us. Flood water covered the entire home ranges of six raccoons. Five of them remained in these home ranges from Sept. 30 through Oct. 29. Only one animal expanded its home range to include exposed land. Of three raccoons with home ranges on the edge of the flooded area, two shifted their use to the exposed land. Raccoons in flooded timber continued to move about their home ranges, but the flood was so severe, few den cavities were available. When Gehrt canoed through the area, he found the raccoons exposed on the side of trees or lying in branches. Hardly the type of secure den you might consider necessary to ride out a month of flooding.

In June 1988, Jay Brunner, a recent graduate of Kansas State University's wildlife program, joined the study. On his first day in the field, we searched the private land study area and discovered raccoon No. 541 using a huge silver maple tree. It had a den large enough for a man to crawl inside. I climbed the tree and carefully removed the cubs, whose eyes



The radio telemetry study was initiated to answer a management controversy, but the biologists learned much more about raccoons. When a virus attacked a study population, some of the collared raccoons died. Here Fox homes in a signal only to find the collar attached to a skeleton.

When the virus hit, Fox began taking blood samples from captured raccoons, along with measurements and weights. The virus was identified as canine distemper and reduced the population on one study area from 100 raccoons per square mile to 40 in just a few months.



Lloyd Fox photo

were barely open, and placed ear tags on them. During the next month, we repeated this process at the dens of five other female raccoons. With juveniles marked at their natal den, it was possible to return in September when the raccoons were larger and attach transmitters to members of family units.

Cubs move from tree dens to ground beds when they are seven to nine weeks old. They try to follow the female but generally return to a bedding area after travelling a few yards. The female returns periodically. By monitoring her movements carefully, we could locate these bedding sites. It would have otherwise been difficult to find the young during this period. Because of the dense vegetation of these places, the cubs were nearly invisible. Often they would hide in the grass rather than

climb a tree when we approached. Twice I stepped on one of the cubs before I heard or saw them.

One of the myths I would like to dispel is that raccoons abandon their young if a human disturbs them. Each spring we get many calls from well-intentioned people requesting permission to keep a raccoon cub because they believe the female has abandoned them due to human interference. It is a good idea to minimize disturbance to any wildlife species, but fortunately, raccoons are tolerant. I handled the offspring of one raccoon six different times. During our mark/recapture study we trapped the adult female eight times during the period she was nursing her young. We also chased her with hounds a couple of nights. She successfully raised all three of her cubs. All raccoons moved their cubs after

we handled them. Two months later, we were able to return and trap members of each litter. Please leave young raccoons where you find them.

If that request isn't enough, then consider your family's safety. Nancy Barnes, a graduate student at Kansas State found that 63 percent of the raccoons she examined had a parasite called *Baylissascaris procyonis*. This parasite caused the death of two youngsters in other states and blindness in other people. Your chances of being infected by that parasite are minuscule unless you persist in having a raccoon as a live-in member of your family. Leave the raising of young raccoons to raccoons or a trained wildlife rehabilitator.

We captured all of No. 541's offspring last September along with several juveniles from nearby litters and attached tiny radio transmitters to their ears. Mark Eisenbarth, a volunteer from Emporia State, documented the movements and denning behavior of these young raccoons. Raccoon families in Kansas maintain communication throughout the winter. From Sept. 15 through March 23, we recorded the den trees used by these four animals on 62 different days. They used 25 different trees and one ground den during that time. Not only did they change trees frequently, but they also changed companions within the family. It reminded me of tag-team musical chairs. On only five occasions did we find all four family members in the same den. Each time it was at a different tree. However, there was a strong family bond. The two male cubs denned with at least one other family member more than 75 percent of the time. The adult female and the juvenile female shared a den with a family member more than 60 percent of the time.

Following the history of den use gave us another view of the importance of the family bond. Many of the 26 dens used by No. 541's family were used by other raccoons; adult males, adult females, juveniles and mixed groups. However, on only four occasions were members of No. 541's family found in a den with another radio-collared raccoon.

The objective of the study was to test the impact of hounds running raccoons. To accomplish that job, I

enlisted the help of 10 houndsmen and 25 hounds. These people were enthusiastic volunteers. One travelled more than 100 miles to participate. Two of them donated the use of their hounds for a couple of months to be sure that hounds were available even if an owner was not.

Houndsmen need leatherlike hide to chase raccoons with hounds during summer nights. Every few steps puts another spider web in your face. Ticks, chiggers and mosquitos abound, and the vegetation is solid poison-ivy except where greenbrier or stinging nettles take over. When the temperature and humidity are in the 80s and 90s, you don't mind those times when hounds tree on the opposite side of the river. An evening swim is refreshing. Some people call this sport.

Raccoons are well equipped to evade hounds. They are noted for their alertness and intelligence. Researchers have found that they are midway between domestic cats and primates in their ability to learn. They have excellent retention and are able to recall solutions to problems for more than a year. They are able to hear frequencies as high as 85 kHz. Their night vision is enhanced by a well-developed tapetum lucidum behind the retina (this is a light-reflecting membrane that causes the characteristic eyeshine). Raccoons have a slow ambling gait except when pressed, when they can run rapidly for considerable distances. They are excellent climbers and swimmers. Their scientific name is *Procyon lotor*. Lotor refers to their habit of washing their food. Procyon means before dogs, referring to their place in the evolution. (It sheds little light on the abilities of the two species.)

We always found raccoons to chase. We did not help the hounds in any way even though most nights we could easily locate a half-dozen raccoons with radio collars. Within a few minutes of turning the hounds loose, they would strike a track. Many nights the chase led to a tree with bright yellow or green eyeshine from raccoon eyes, and sometimes we'd receive an electronic signal from a raccoon wearing a radio collar.

We always had at least one trained hound on the hunt. Sometimes we

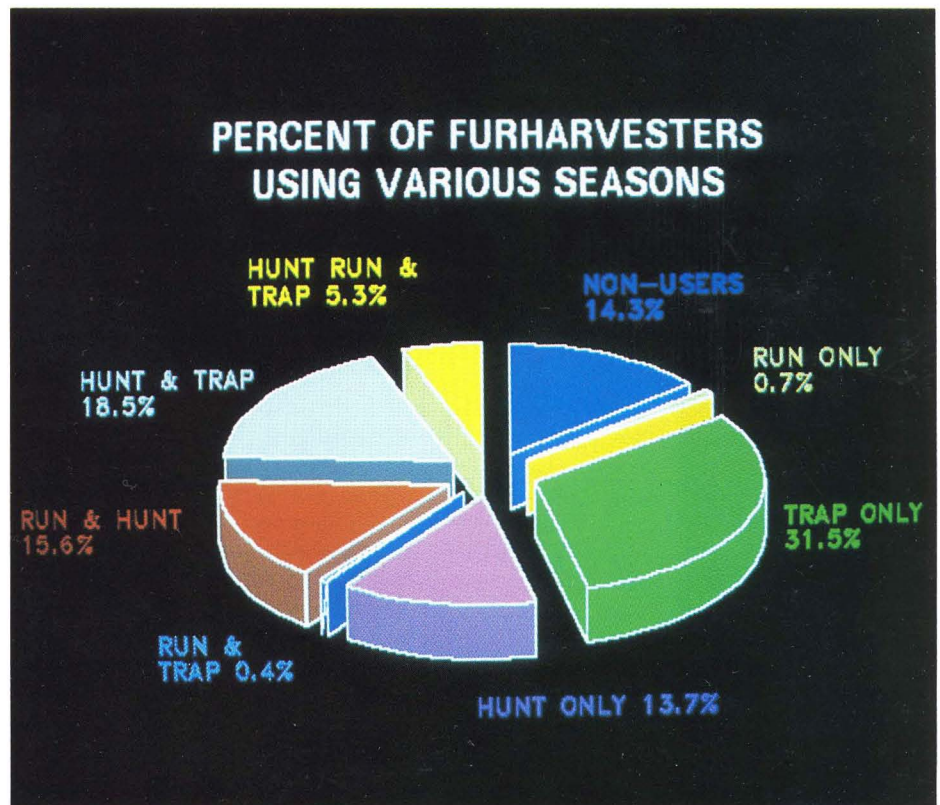
had champion-class hounds, veterans of many "Nite Hunt" competition events. For the volunteer hunters, this was an opportunity to watch the hounds in action while knowing where at least some of the raccoons were hiding. On no occasion did we chase a raccoon from its home range. Many people believed the hounds would catch the cubs on the ground and kill them. This did not occur during any of the nights I accompanied houndsmen. In fact, when all of the current regulations were followed, we could not detect any detrimental impact on raccoons. Shortly after we left with the hounds, the raccoons resumed their normal activities.

Raccoon populations are highly resilient. High densities are possible in good habitat in Kansas. The species also has a strong reproductive potential. However, the human factor in the equation must be considered. Poachers took at least three of our study animals. Twice we recovered radio collars that had been cut from

study animals and thrown in the river. In some regions these flagrant violations result in local scarcities of raccoons. Tom Edwards of the Kentucky Department of Fish and Wildlife Resources tallied 5,692 field checks of raccoon hunters and found that one in six were trying to take raccoons illegally.

Man can use and enjoy the raccoon resource in many ways. With sound stewardship, raccoons will be here in numbers to enjoy for generations to come. Houndsmen have a part to play in that stewardship.

Studying raccoons has been rewarding. Along the way, I met some good people and had the opportunity to learn more about another fascinating species of wildlife. That's what makes some of us tick. Now it's time to pick up the old cane pole and head back to work. Hopefully, more students and researchers in Kansas will have an opportunity to follow the masked rascal. 🦉



In this computer-generated chart, Fox shows the various groups that derive recreation from wild Kansas raccoons. The telemetry study found that running seasons (seasons where houndsmen run raccoons with hounds but are not allowed to kill raccoons) had little effect on local raccoon populations. Fox never witnessed hounds catching and killing cubs and never chased a raccoon out of its home range.




Rural Route #1, by Jerry Thomas

Kansas Wildlife Habitat Award

The Kansas Wildlife Habitat Award is a cooperative project between Kansas Quail Unlimited and the Kansas Department of Wildlife and Parks. Prints of the wildlife painting "Rural Route #1" by artist Jerry Thomas will be awarded to Kansas landowners who have improved wildlife habitat on their land by providing food and cover through the planting of trees, shrubs, food plots and native grass.

Kansas Quail Unlimited chapters are providing funds through the Wildlife and Parks WILDTRUST program for the purchase and planting of wildlife habitat and also for the acquisition of equipment and machinery to carry out these efforts.

Jerry Thomas is a native Kansan from Manhattan, who has provided artwork for other natural resource projects and whose reputation as a wildlife artist is growing nationwide. Thomas won the 1988 Kansas Wildlife Art Series and was selected by the Kansas Association of Conservation Districts to create their first limited edition print. Thomas painted "Rural Route #1" specifically for the Kansas Wildlife Habitat Award. Prints produced from this painting will be used solely for this award.

Contact your local Quail Unlimited Chapter or local Wildlife and Parks office for more details. 



by Mark Shoup

Will the Ducks Return?

Remember U.S. Congressman Dan Anthony of Kansas? Well, perhaps not, but it was Anthony, along with Sen. Harry S. New, Ind., who introduced the first bill to establish a federal duck stamp. That was in 1921. In 1929, the bill was finally passed as the less effective Migratory Bird Conservation Act, but provisions for a duck stamp had been forced out of the bill by an unlikely coalition of anti-hunters and waterfowl “hunters” who didn’t feel they should have to contribute.

However, the landmark efforts of Anthony and New were not in vain. Other conservationists, such as Jay N. “Ding” Darling from Iowa, would continue the effort. In 1934, President Franklin Roosevelt appointed Darling chief of the Bureau of Biological Survey, which later became the U.S. Fish and Wildlife Service. In this position, Darling, an avid waterfowl hunter, implemented the Duck Stamp Act.

The new duck stamp sold well. Between 1934 and 1974 it added \$150 million to the National Wildlife Refuge System. The 1986 stamp, despite declining sales, provided more than \$13,450,000 for waterfowl management.

Thus, a dream initiated by a Jayhawk and a Hoosier was realized by a Hawkeye, and the midwest had established a proud wildlife legacy. In 1957 alone, Kansans purchased more than 73,000 federal duck stamps.

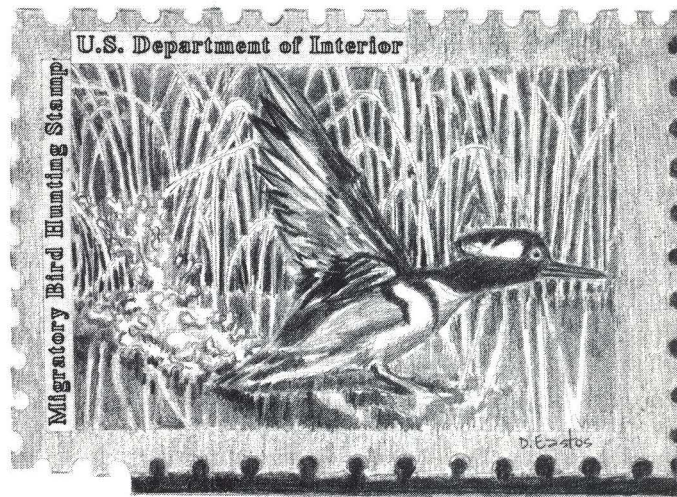
Now, the thread of this legacy is about to unravel. In 1988, Kansans bought 17,844 federal duck stamps.

This figure represents a nationwide trend, but in 1987-1988, federal duck stamp sales in Kansas dropped nearly 10 percent more than the national average. At a time when polls show that Americans are more concerned with the environment than any other issue, their willingness to take action to protect this environment seems to be waning.

And what of hunters, traditional conservationists, who yearly spend more on wildlife conservation than any other group? There are fewer waterfowl hunters, and the reasons for this are easy to discern. Reduced duck populations due to drought and habitat destruction, shorter seasons and elimination of the early teal season, steel shot requirements, and complicated regulations have made duck hunting more difficult.

These may be good reasons for not hunting. They are not good reasons for failing to buy duck stamps. Hunters have a special relationship to the earth’s natural resources. The hours we spend afield inextricably tie us to wildlife. Although some hunters may no longer hunt waterfowl, waterfowl desperately need our help.

Some examples: The 1988 mallard breeding population was 25 percent below the 1955-88 average. American wigeon were 18 percent below the same long-term average. Blue-winged teal were 34 percent below the average, and



Dana Eastes illustration

pintails were down 55 percent. In 1988, federal duck stamp sales were down 19 percent nationwide from the previous year. Add it up. We compound the problem with our apathy.

By we, I mean everyone who cares about wildlife.

And ducks are not the only species at risk. Prairie wetlands are also important habitat for avocets, bitterns, cranes, black-billed cuckoos, curlews, golden eagles, prairie falcons, finches, goshawks, grebes, gulls, harriers, herons, ibis, loons, owls, sandpipers, waxwings, badgers, beavers, bobcats, rabbits, lynx, mink, river otters, shrews and woodchucks.

Five wetland species—whooping cranes, bald eagles, peregrine falcons, piping plovers and least terns—are on the endangered species list. All five are dependent upon federal duck stamp money. All five migrate through Kansas.

Much to our credit, Kansans started a state duck stamp program in 1987 to support conservation within the state. However, this stamp is meant only to help critical waterfowl migration habitat in Kansas. Federal Duck Stamp money is an essential source of revenue for saving wetland breeding grounds in the North.

As a native Kansan, I truly believe that our people are generous by nature and concerned with the environment, and we should be proud of this legacy. But something has weakened our concern in recent years. Perhaps as we separate ourselves from wildness, we lose sight of the most beautiful natural law in the wild: giving up is not an option.

A Federal Duck Stamp costs \$12.50 this year. A movie for two, one tape or record, one vacation trinket, one green fee, one bottle of wine, one carton of cigarettes, one twelve-pack of beer or two Silly Meals at the local fast food joint: Is it possible that Kansans would deny waterfowls such a small yearly donation? 