KANSAS
Wildlife & Parks

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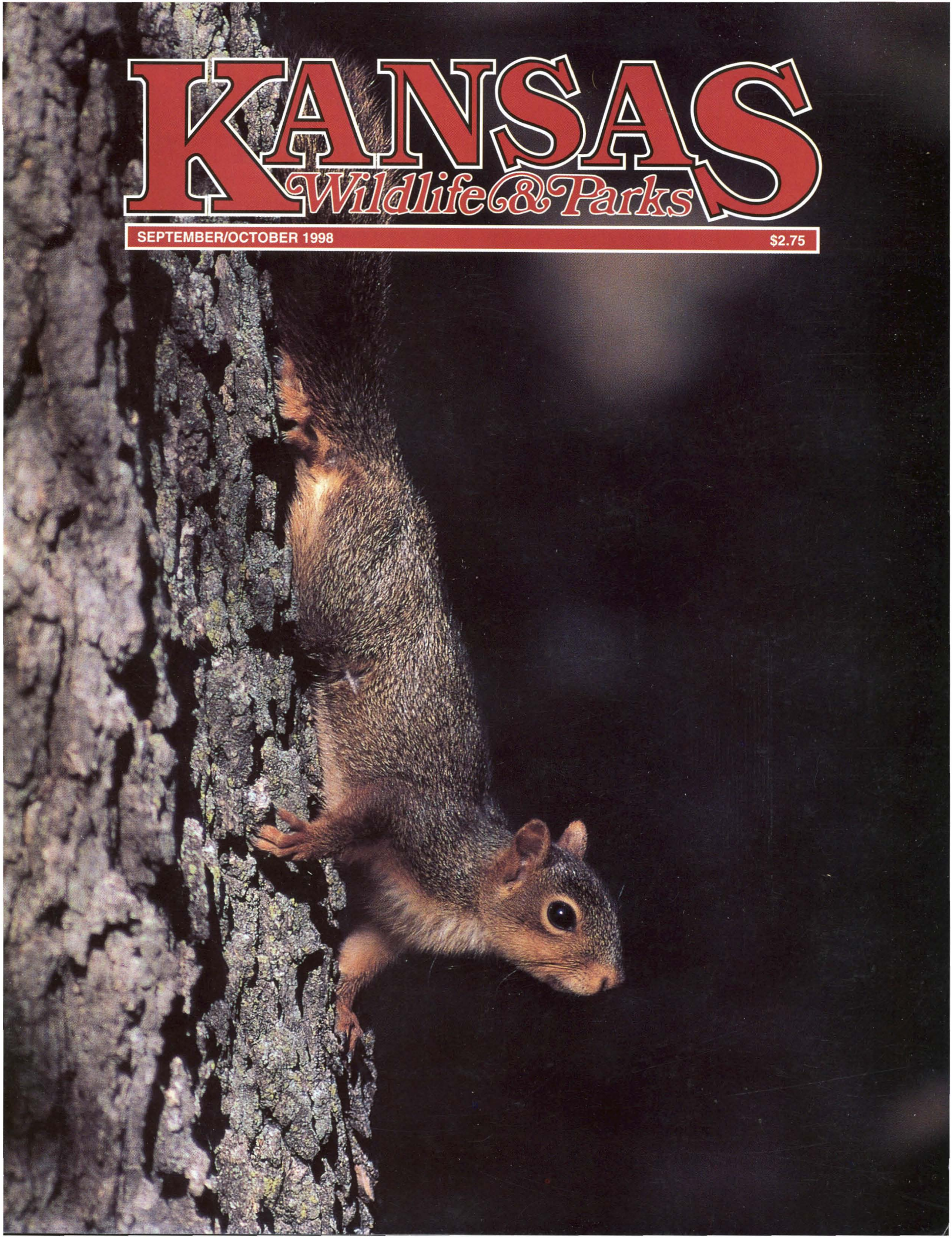

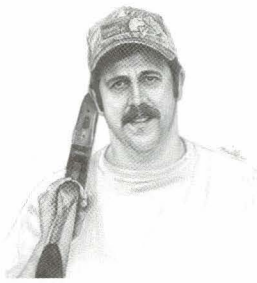

by Steve Williams

Hunter Education Turns 25

The Kansas Hunter Education Program celebrated its 25th birthday this past July. To recognize the anniversary, the department invited all active volunteer instructors to a special event at the Webster Conference Center in Salina. And while it was billed as the celebration of the 25th year of hunter education in Kansas, it was really a chance for the department to recognize the people responsible for our program's success: the volunteer instructors.

More than 200 instructors and their families attended, and amazingly, 75 of the 135 instructors who have been active in hunter education since its first year were present. Governor Bill Graves took time from his busy schedule to welcome the group and recognize the significance of their efforts as positive role models for youth. Three of the six men who have administered the hunter education program spoke, including Royal Elder, the first, and Wayne Doyle, the newest coordinator. And after 25 years, the message hasn't changed — the volunteers make this program work.

The 1972 legislature passed a bill that required all hunters born on or after July 1, 1957 complete a hunter education course before hunting in Kansas. While few could argue with the bill's purpose, getting the estimated 25,000 Kansas youth certified prior to the 1973 seasons seemed like an insurmountable hurdle. However, with the help of department conservation officers and volunteers from across the state, more than 50,000 Kansas youth were certified in the first two years. Today, 25 years later, more than 360,000 have taken the Kansas Hunter Education course.

The purpose of the bill was to make hunting safer for everyone, and the program has done that. During the five years prior to the program's implementation, an average of more than 50 hunting-related accidents and five fatalities were recorded in Kansas each year. In 1997, only 27 hunting-related accidents were reported with one fatality. Overall, hunting-related accidents have declined 40 percent since 1973. Most hunting-related accidents in Kansas occur during the first few weeks of upland bird seasons, and the number of hunters in the field during these seasons has remained fairly constant. However, many more Kansas hunters pursue deer and turkey today, dramatically increasing the number of hunter-days spent in the field, making the 40 percent reduction even more impressive. The program has worked.

Recognized as one of the finest programs in the nation, the Kansas Hunter Education Course teaches much more than safe firearm handling. The 10-hour course includes sections on wildlife identification, conservation, wildlife management, first aid, the dangers of drugs and alcohol, bowhunting safety and more. But perhaps the most emphasized concept of the class, apart from hunting safety, is hunting ethically. Ethics are and always have been a big part of the Kansas Hunter Education Program.

The course section on ethics teaches students to respect wildlife, other hunters, those who choose not to hunt, and landowners. Ethics are critical to the future of hunting and our outdoor heritage. The behavior of hunters in the field has a direct impact on how those who don't hunt view hunters and hunting. While the majority of nonhunters don't disapprove of hunting, they do, like all true sportsmen, disapprove of unethical or illegal behavior by hunters. Without the support of nonhunters, hunting could be legislated out of existence. Teaching ethics to our young hunters is an investment in the future of hunting.

Fortunately, thousands of Kansas hunters have made that investment. In 1997, 1,260 volunteer instructors contributed more than 17,000 hours of their time to conduct 300 classes and certify approximately 13,000 new Kansas hunters, continuing the tradition of generous volunteerism over the past 25 years. Reducing hunting-related accidents by 40 percent and instilling hunting ethics in our young hunters hasn't occurred by magic. It has happened because these dedicated volunteers gave up their week nights and weekends each summer and fall over the last quarter of a century. With nothing to show for their sacrifice but the thanks and smile of an excited young hunter, Kansas hunter education instructors take special pride in the program. It shows each time a course is taught, and it showed last July when a special few were honored for their extraordinary efforts. All conservationists, past, present, and future, owe these dedicated instructors a debt of gratitude for their commitment to preserve our hunting heritage.

Steve Williams

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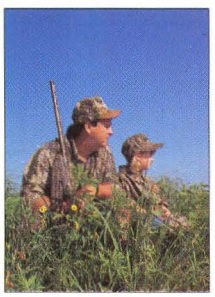
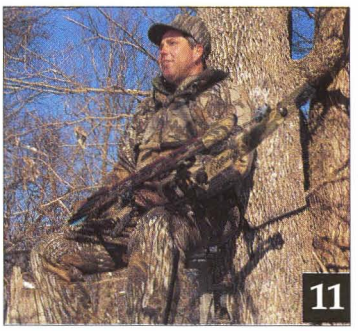
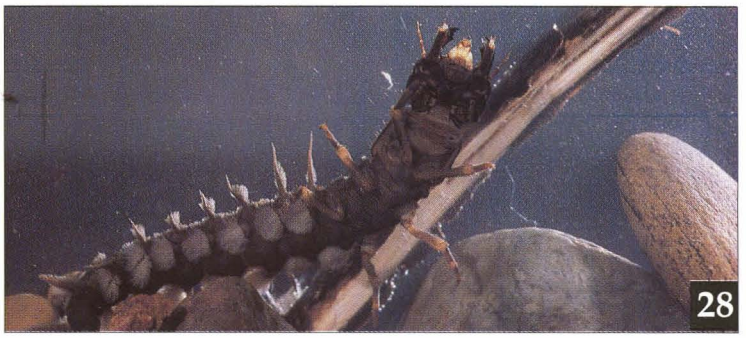
About the covers
Front: A fox squirrel checks for danger as it descends a tree. Mike Blair photographed the scene with a 400mm lens, @ f/5.6, 1/250 sec. **Back:** A September teal hunt is a great way to introduce a youngster to duck hunting. Bob Gress photographed Marc and Ashley Murrell with a 28mm lens, @ f/11, 1/250 sec.







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Handgun Squirrels

tougher than you think

text and photos by Mike Blair
staff photographer, Pratt

Traditionally hunted with rim-fire rifle or shotgun, squirrels are challenging quarry. Strap on a small-caliber handgun, and you've doubled the challenge and fun!

The woods were too noisy for a decent stalk. Dry leaves underfoot made it impossible to sneak, so I moved at a reasonable pace, hoping to surprise a winter squirrel busy with a walnut. But squirrels weren't feeding, and the sun-dappled trees held little promise for an easy hunt. Finally, I spotted a rusty tail dangling from a mulberry limb. The sunning fox squirrel watched as I turned to move closer, and then it disappeared into a huge cottonwood.

It took five minutes to relocate the animal hidden in the top of the tree. The squirrel was pressed flat against a horizontal branch some 90 feet above, showing only the top of its back and head. I unholstered a new pistol and braced it against an elm trunk, ready for my first handgun hunting experience. The bulky sights were hard to steady on the partial target, much different than the fine sights of my trusty rifle. I squeezed off a shot. Then another. Fourteen shells later, the squirrel tired of the noise and flying bark, and ran safely into a knothole. I looked at the pistol, thought again of the rifle, and knew I was onto a challenge.

There were no more chances that afternoon, and it's just as well that I missed. But several things were clear: First, I'd need to get closer; and next, I'd need some practice. Pistol-shooting, like bowhunting, would require more than a casual effort.

In fact, handgun hunting would require a whole new approach to the sport. Differences rested in the shorter weapon's characteristics. While it's not uncommon for a good rifleman to cleanly take squirrels at 120 feet or more, long shots are tougher with a handgun. A pistol has a short barrel — typically 5 or 6 inches long, compared with rifle barrels which may be 24 inches or longer. Long barrels result in greater accuracy, since the bullet is "guided" for a greater distance along the line of sight. Rifle barrels also provide a longer sighting plane, which increases shot precision. Further, a rifle allows a steadier shot, since it is braced against both shoulder and cheek. This places the eye close to the rear sight, providing a better sight picture than that presented when pistol sights are held at arms length. And finally, the sights themselves are different. The front sight of a rifle is thin and capped with a small bead, which fits into the narrow groove of a rear sight to allow fine shooting. Pistol sights are generally thick and coarse, and not as effective for precise aim.

Whether you choose a revolver or semi-automatic handgun for your squirrel hunting, you need to be familiar with the sights, which are different than those on a rifle.

Even so, rimfire pistols can be highly accurate. Good target models are capable of one-inch groups at 30 yards. It's the manner of shooting that causes greater error. Expert handgunners may handle long shots, but on average, the effective range of a .22 pistol is approximately half that of a rifle. The best handgun shots for small game are taken at less than 60 feet.

That's the reason pistols are a sporting challenge. Ultimately, the allure of using a short weapon rests in the need to get close to quarry. Stalking skills are tested to the maximum. Both species of Kansas squirrels — gray and fox — have sharp senses highly tuned to their environment. Getting within range requires patience and strategy. Squirrel hunters can definitely find a renewed challenge when hunting with a handgun.

Before starting, though, it's wise to spend time on a shooting range. After my failed first hunt, I shot several thousand rounds at various distances, learning to properly sight the pistol. I quickly noted major differences in aiming a handgun. The partridge-style sights found on most pistols are designed to form a "seat" on which the target sits. When aiming a rifle, a bullseye is often partially absorbed within the long gun's groove sights, so that a

Good handgun shooting requires practice. Start out with a steady rest and adjust the gun's sights. Then practice shooting positions you'll encounter while hunting.

While foliage may help hide squirrels during early-season hunts, it also helps hide the hunter. The swishing leaves also betray a moving squirrel to an alert hunter. Handgun hunting requires shorter-range shots than those required for rifle hunting.

fine bead can be taken. But with pistol sights, the bullseye rests directly above the front sight post, which is aligned to form a plane with the rear sights. Adjustable sights, which are found on most target pistols, are helpful when sighting-in for particular distances. Pistol scopes can also be used with some handguns to magnify a sight picture and improve accuracy.

Following several weeks of practice, I could shoot with confidence at 40 feet. The winter squirrel season was winding down as I hunted again on a February day. This time, recent rainfall had softened the litter, making it easy to slip through the timber. Squirrels were foraging on the warm afternoon, and I quickly spotted one eating a hedge apple on a low limb.

Being careful to stay quiet, I maneuvered into position behind an adjacent tree, and with a two-handed stance, braced my hands solidly against the trunk to steady the gun. Aligning the sights, I squeezed the trigger carefully as I had learned in practice. The shot was perfect, and there was a special sense of accomplishment as I picked up my first handgun squirrel.

Discovering what squirrels are eating, such as hedge apples, picture above, will improve your hunting success.

Safety is important with all guns, but particularly so with pistols. A long-barreled rifle naturally points away from the one holding it, but a pistol can easily be turned so that it points toward its handler. Obviously, the gun's safety should remain on at all times except when shooting. It's important to maintain an empty chamber during the hunt, especially if a handgun is holstered. There is usually ample time to ready the weapon during a stalk.

With this in mind, I unloaded the semi-automatic Ruger and replaced the full clip, then holstered the gun and started down the creek. It wasn't long until the distinctive sounds of a cutting squirrel led to a walnut tree. The animal was eating a nut, sitting in classic fashion on a dead limb. I readied the weapon and began a stalk which ended at a brace tree, 20 yards away. For a rifle, the shot was an easy one, but the opportunity demanded careful concentration with the handgun. At the sound of the shot, the squirrel tumbled. I was hooked on handgun hunting.

It was clear that getting close is a vital part of pistol hunting for squirrels. Fortunately, there are several ways to do this, depending on season. Kansas squirrels can be hunted June 1-Feb. 28.

Summer hunting can be tough, but there are certain advantages at this time of year. Squirrel numbers are at their annual peak, and young animals tend to be less wary. Though a woodland understory often feels like a sauna and flies and mosquitoes can be troublesome, the thick foliage helps to hide a hunter's movements. The dense cover also puts squirrels at ease, encouraging them to move freely through the treetops. During this season, game is found more easily by sound than by sight, since the leaves that help to hide a moving squirrel often "swish" to betray its location.

Mast is abundant in summer. Starting with the juicy fruits of mulberry and progressing through the development of cherries, hackberries, walnuts and acorns, good food trees can be found and hunted to provide close shots. The pistol hunter can sit beneath such places waiting for squirrels to arrive, or move quietly between mast trees in search of feeding animals. Tree height should be considered; squirrels feeding in tall trees may be out of pistol range even when the hunter is directly beneath them.

This is especially true in eastern Kansas woodlands, where tall forest trees must compete for light. In oak stands, mast is often concentrated 75 feet or higher, where sunlight reaches the tops of the crowns. Squirrels feeding at these heights provide a difficult target for the open, bulky sights of a pistol. For handguns, it's best to pick the shorter groves of food trees, such as Osage-orange. Or, for closer shots in any timber, a hunter can employ a squirrel call to bring the animals near.

During the summer and early fall, a squirrel distress call can help bring squirrels into handgun range. The call imitates a young squirrel that has been caught by a hawk or owl.

Several kinds of calls are effective in attracting squirrels throughout the year. None is better for summer hunting than the distress call. This mimics the sounds of a young squirrel being attacked by a hawk or owl, and is a shrill, high-pitched whistle. Adult squirrels may respond by barking and running to the call, or they may approach more cautiously. Often, more than one squirrel ends up within easy handgun range. The distress call seems to work best before young squirrels mature, when parental instincts are still strong.

The traditional squirrel call is good for all seasons. It mimics a barking fox squirrel. This call is ideal for improving a shot when a feeding squirrel is too high in a tree, or hiding behind a trunk. By quietly positioning for a shot and then barking on the call, a squirrel can often be drawn out to check the commotion.

Sometimes, bark and distress calls can be used together to increase their success. This was illustrated one August morning on a Barber County hunt, when repeated sets with a distress call were met with silence. There was no wind, so I was sure that squirrels could hear the high-pitched call for some distance. Even so, the sunlit walnut trees appeared lifeless. Slapping a leafy branch against the ground to mimic the sounds of raptor wings hitting against leaves, I squealed the distress call at half a dozen places. Finally, I tried following the standard distress sequence with excited barking from the additional call. That did the trick.

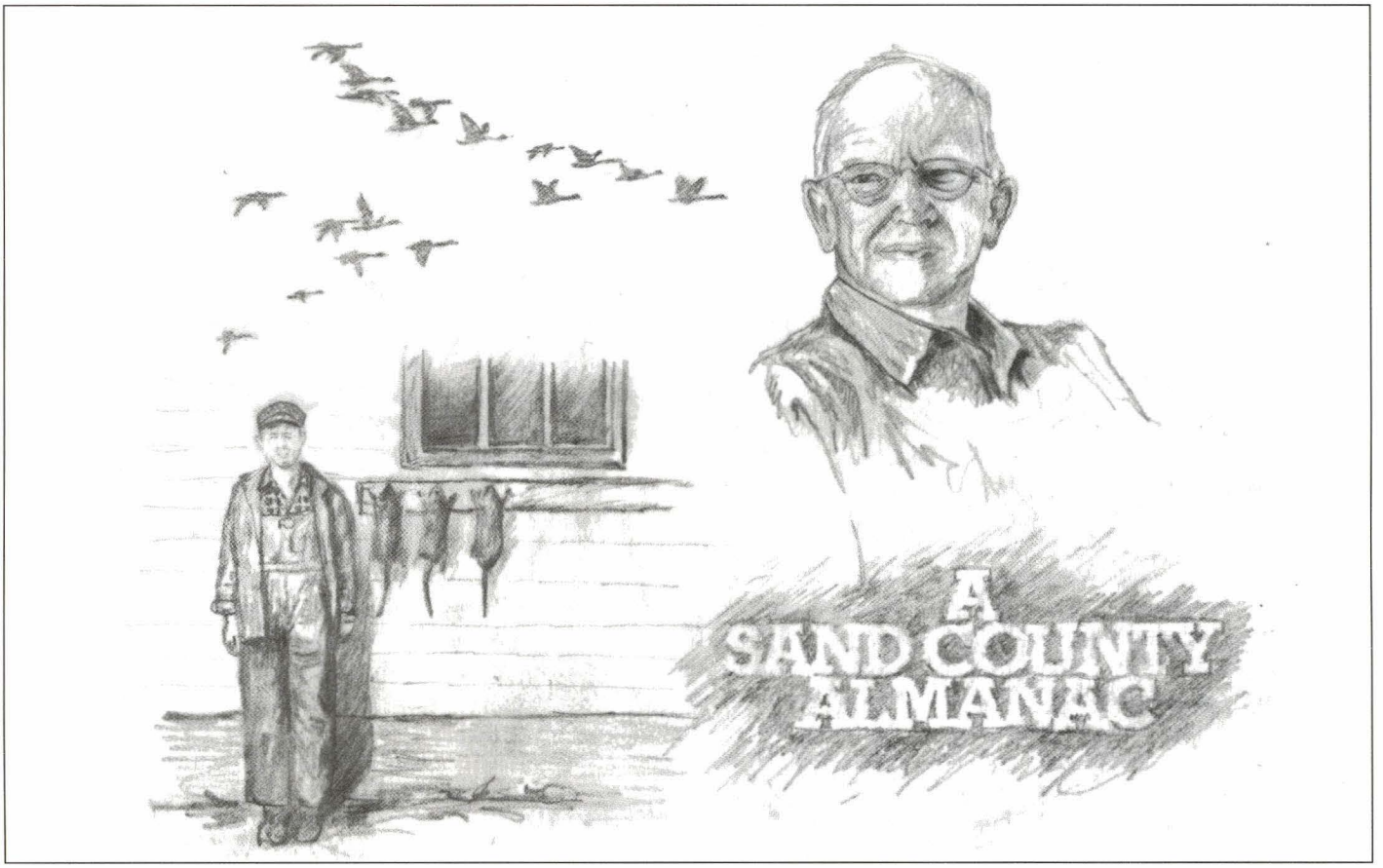
Squirrels began to answer and approach boldly, apparently to reinforce the supposed adult scolding at the scene of the disturbance. I wound up with three squirrels taken at ranges closer than 30 feet. Full camouflage helped to hide me from the sharp-eyed animals as they approached the call.

Whether calling or stillhunting, autumn is the best time to hunt squirrels with a handgun. During this season, the animals are active throughout the day, storing food for winter. Vegetation is rapidly thinning, making them easier to see. They spend a good deal of time on the ground, allowing close shots. They are also preoccupied, making them easy to stalk.

As winter settles, the animals spend more time in dens and nests to conserve energy. With foliage gone, they are easy to see, but also more wary and apt to spot a careless hunter. Still, a patient handgunner can be very successful stalking foraging squirrels during the cold months of winter.

Don't count on taking limits of squirrels with a handgun. Although it can certainly be done, average habitat conditions and squirrel populations make it difficult to collect five animals in an outing. So far, I figure success is about 1/4 of that expected with a rifle. But the hunting is exciting, and helps to sharpen stalking skills for bigger game. Shooting a pistol adds an enjoyable dimension.

Like bluegill fishing is to the angler, squirrel hunting is too often an introductory hunting sport that is seldom revisited. But with an abundance of game in the state, sharp senses that make squirrels difficult to bag, and a reputation for fine table fare, gray and fox squirrels offer a worthy and inexpensive pursuit for Kansas hunters. Add the difficulty of taking them with a handgun, and squirrel hunting becomes one of the Sunflower State's finest hunting challenges.



Dad's Gift

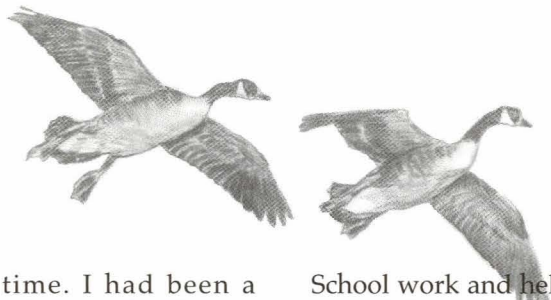
by Lee Queal
retired regional director for Ducks Unlimited, Pratt

One man's life was profoundly influenced by his father's example and a book titled "A Sand County Almanac." Fifty years after Aldo Leopold published his book, and a boy received a birthday gift, it's easy for the man to see his destiny shaped.

I can still recall the morning Dad's gift arrived in the mail — November 1949 — my 16th birthday. It was Saturday, a fresh, light snow dusted the ground. I had been dying new traps in preparation for my first season around the lakes and marshes of Hamburg Township in Livingston County, Michigan.

My grandfather had died the previous August, and Mom and I were trying to set up housekeeping on the family farm. Dad was almost 700 miles away in Pennsylvania where he worked as a forester at the Northeast Forest Experiment Station in Upper Darby. We had returned to Michigan that past summer after several years in Florida and Pennsylvania. Although I had been born near the farm, it would be the first time I really had been able to hunt and trap. These are not activities that should be self taught, but I had resigned myself to the fact that it would have to be that way.

Back in the house, I washed most of the dye and wax from my hands and started to open the package. It wasn't very large — about 6 inches by 9 inches and an inch thick. It felt like a book. I remember thinking, "A book. Now that's really what I need." Books didn't interest me



much at the time. I had been a pretty good student in Florida and Pennsylvania, but somehow the scholar in me left as I entered my junior year in high school. Perhaps it was Grandpa's passing, or not having Dad around to kick my butt. Perhaps it was the daily 18-mile bus ride. I never really came to grips with the reason, and I would struggle through my remaining two years of high school.

My guess was accurate — it was a book. However, my disappointment faded when I saw the Canada geese on the cream-colored dust cover. I wrongly assumed it was a hunting story. The title was simple enough, *A Sand County Almanac* by Aldo Leopold. Never heard of him.

The little book had a brief inscription on the flyleaf: "Leland, You will appreciate this book later when you more fully understand the meaning of ethics. Dad." It was typical of Dad. He would talk about the past or talk about the future; rarely did he talk about the present. If the book was about later, that was going to be soon enough for me, I reasoned, and I put the book on the shelf near my bed.

Hunting and trapping seasons came and went. With a .410 double-barrel borrowed from my older sister, I shot a few rabbits and squirrels, a wood duck, and one pheasant, as I recall. I managed to catch about 75 muskrats. Not too bad for a kid with no real experience. I sold the rats and bought my first deer rifle — looking ahead to next year! I wonder if I realized then that I was starting to think like Dad. I doubt it, but I chuckle about it now.

February, and the seasons were over. The farm was without any livestock that winter and would remain so until Dad retired from the U.S. Forest Service later that year. School work and helping with some remodeling of the farmhouse was all I had to occupy my time. The school work didn't have a high priority with me, and I found myself starting to read the little book that Dad had given me three months earlier.

As I proceeded through the sequential months of *Sand County*, I realized that this Leopold guy really knew what it was like in the woods and marsh. While I recognized some of the scenes he described, I knew there were many more to be discovered. I also began to realize the significance of the opening words of his forward:

There are some who can live without wild things, and some who cannot.

Aldo Leopold

I don't know when it finally slipped into my consciousness that I too was probably one who could not live without the wild bounty. Perhaps it was that winter. Perhaps it was not until several years later when I felt the conservation ethics side of *Sand County* starting to draw me up the path of conservation and wildlife management.

Dad was 43 when I was born, and due to our age differences, there were a lot of the typical dad-kid things we didn't do. We never played baseball or football. We didn't ride horseback or go swimming together. We did fish together quite a bit, but I only recall hunting with Dad on one occasion when we both carried guns. Yet despite the absence of many of these usual activities, we managed to be fairly close. One factor in this regard was the frequent opportunity I had to travel with him during the summer as he worked on various forestry and soil conservation projects.

Dad worked in the Forest Service as a contemporary of Leopold, although they never met, and Dad knew very little about him until after he published *Sand County*. Yet over the years, I have come to realize that Dad shared many of the philosophical beliefs expressed by Leopold. But Dad's beliefs evolved on their own, reflecting not resulting from the other man's words.

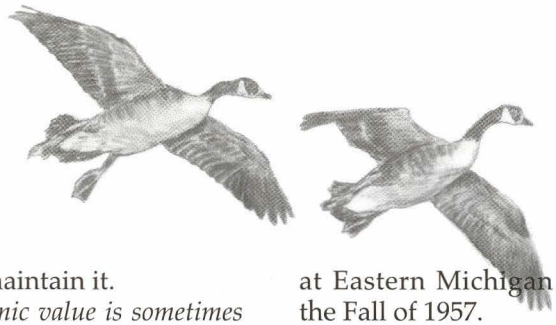
Land-use ethics are still governed wholly by economic self interests, just as social ethics were a century ago, . . . We asked the farmer to do what he could conveniently do to save his soil, and he has done just that and only that.

Aldo Leopold

In 1950, coming back to the farm where he was born and where his ancestors had homesteaded in 1835, Dad set about to stem the soil erosion that had gone on for more than 100 years. The gravelly soils evolving from the glacial outwash were never particularly fertile, but in a relatively short period of time, he converted the small, overused row-crop and grain fields to grassland with native grasses and legumes. The healing process was started.

Dad was willing to do more than just what was economically convenient. The land had to be treated better, some of it even retired. But in reaching that conclusion, he knew that it could not continue to be profitable for one family, let alone a second one I was likely to have in a few years. That realization, along with Dad's declining health and the likelihood of me being drafted, forced us to sell the farm. I felt that if I wanted to farm for a living, which I really did at the time, I would find another way to do so in the future.

As I left the land which I had come to love, I never forgot the greater affection Dad had for it, nor the eloquent words that Leopold used to describe our collective



obligations to maintain it.

Lack of economic value is sometimes a character not only of species or groups, but of entire biotic communities: marshes, bogs, dunes and 'deserts' are examples. Our formula in such cases is to regulate their conservation to government as refuges, monuments, or parks. The difficulty is that these communities are usually interspersed with more valuable private lands; the government cannot possibly own or control such scattered parcels. The net effect is that we have relegated some of them to ultimate extinction over large areas. If the private owner were ecologically minded, he would be proud to be the custodian of a reasonable proportion of such areas which add diversity and beauty to his farm and his community.

Aldo Leopold

I worked in a machine shop for a while, then spent four years in the U.S. Coast Guard with various assignments in the Great Lakes, the Pacific, and the Gulf of Mexico. Dad's gift, the green covered *Sand County Almanac* was frequently with me.

Some in the wildlife profession can reflect that they arrived at this point or that in their careers because it had always been their goal to do so. That was never the case for me. It was more like the moth being drawn to the flame. I left military service in 1957, in the midst of the worst post-World War II recession to date. I didn't have any job goals. It may not have mattered much because jobs were hard to come by.

A boyhood friend encouraged me to try college for one year, or at least a semester. I recall laughing at the thought of it, particularly reflecting back on my struggle to survive high school. Still, I wasn't working and had no immediate prospects for a long-term job. Despite my reservations, I enrolled at Eastern Michigan University in the Fall of 1957.

While enrolling in a biology class, I read a footnote explaining I could enter straight into zoology or botany if I "comped" out of biology. Nothing ventured, nothing gained, so I took the exam and passed. This, six years after graduating 264th in a class of 312 and eight years after taking high school biology as a sophomore. There must have been something that took root. The classes were fun. It was work, but not the insurmountable struggle high school had been. I met my future wife in freshman English. *Sand County* was always on the shelf along with the textbooks.

Apparently, the flame sparked by Leopold's exquisite wordsmithing grew brighter. I transferred to Michigan State University the following year and obtained a Bachelor of Science degree in Wildlife Management, followed by a Master of Wildlife Management from the University of Michigan, granted in 1963 — some 13 years after the arrival of Dad's gift. The time when I was supposed to appreciate this book —"later" — was at hand.

Job interviews with various resource agencies ultimately led to a question about my interests in hunting and fishing. I could recall the enjoyable days hunting upland game and waterfowl in southern Michigan and November trips north to hunt deer. Hunting pheasants, doves and wild hogs on the Big Island of Hawaii highlighted by brief tour of duty there. But I also recall watching with quiet glee as a red fox successfully eluded hounds and horses with red-clad riders one Sunday morning in Chester County, Pennsylvania. I certainly enjoyed these activities, but they obviously were not the sole reason for embarking on a wildlife career. Where did the hunt fit in? I hunted then. I still hunt. I'm not certain I'll ever know. Perhaps it's just for the hunt itself.

On reflection, Dad liked to hunt, but he mostly hunted alone, and he hunted strictly for the table. He owned just two guns, a single-barrel, break-action 16-gauge shotgun and a Model 73 Winchester rifle, which I never knew him to shoot.

While I only actually hunted with Dad once, he did take me on many hunts in the early 1940s. As many boys have done, I was privileged to follow behind as Dad hunted for ruffed grouse and snowshoe hares in the Huron National Forest in Oscoda County. Later, during the war, there were days in the swales, marshes, fields, and woods on and near the farm in search of pheasants, rabbits or squirrels. There were cold days, wet days, tired days, but they were great days, and I treasure them just as I do his later gift.

Other than safe gun handling, I don't recall Dad ever telling me anything about what to do or what not to do when hunting. I learned by watching him. He never shot a bird unless it was on the wing, and he never shot at a rabbit unless it was running. These were not things he spoke about. It was just the way things were done.

A particular virtue in wildlife ethics is that the hunter ordinarily has no gallery to applaud or disapprove of his conduct. Whatever his acts, they are dictated by his own conscience, rather than by a mob of onlookers. It is difficult to exaggerate the importance of this fact. Voluntary adherence to an ethical code elevates the self respect of the sportsman, but it should not be for-

gotten that voluntary disregard degenerates and depraves him.

Aldo Leopold

Arriving in Kansas in 1963 for my first full-time wildlife job with the Kansas Forestry, Fish and Game Commission, I was astounded to find legislation prohibiting shooting game birds on the ground. Based on comments from game protectors, I assumed this particular law had its base in some recent legislative session, perhaps as a result of the 1960 ice storm, which had virtually wiped out the bobwhite quail. But this was not the case. The "on the wing" law had first been enacted in 1909 as part of a series of restrictions proposed by the first Kansas Game Warden, Dr. L. L. Dyche. It may be the only such state law in the nation.

The obvious question; Why was legislation needed to prohibit something that the ethical hunter would not do anyway? This was my first exposure to the tendency of those charged with protecting and managing wildlife resources to try to regulate and legislate ethics — an interesting welcome to the real world of conservation.

It has been more than 40 years, actually closer to 50, since the little book showed up in the mail. The dust cover with Charlie Schwartz's rendition of geese is long gone, and the green cloth cover is worn and thread-bare in many places. Many people have read my copy of *Sand County*, but I doubt few realized the significance of Dad's gift.

Retired, I still appreciate the hunt, concentrating mostly on deer and waterfowl. Bringing game to bag is far less important now. I still love the chase but also find myself being more content reflecting on ancient memories as older folks are wont to do. The intermingling of current experiences with those of the past provides a kaleidoscope of change in the wildlife scene.

Closing out a recent duck season with a dear friend brought back a flood of memories. With the temperatures in the low 30s and a brisk north wind, the almost continual flights of mallards and Canada geese along the North Fork of the Ninnescah River contrasted sharply with the recent past. At one point there were 2,000-3,000 ducks, mostly mallards, swirling overhead — singles, pairs, groups of six, 10, 20, perhaps 50 in a bunch. Although not working the blocks or responding to calls, they provided a sight not common in central Kansas since the mid-1970s. It was a delight truly appreciated most by one who had seen leaner days.

The winged spectacular helped bring to focus the duckless years of the late 1980s and early 1990s, when drought on the northern prairies brought populations to lows not experienced since the dust bowl era of the Dirty Thirties. As a former fund-raiser for Ducks Unlimited, Inc., I couldn't begin to count the number of times I encouraged, cajoled, begged and pleaded for supporters to keep providing the wherewithal to continue preserving and restoring wetland habitats. They were discouraged, and it was often difficult to successfully reassure them that the ducks would be back when the wet seasons returned — provided there was still a habitat base.

Well, for the doubters, the ducks are back. Granted, the populations will continue to fluctuate, mostly in response to the vagaries in weather. But it continues to be our collective responsibility to provide the habitat base from which wildlife can rebound from the short-term lows.

And when the dawn-wind stirs through the ancient cottonwoods, and the grey light steals down from the hills over the old river sliding slowly past its wide brown sandbars — what if there be no more goose music?

Aldo Leopold

Those who learn to understand and appreciate the various faces of wildlife and their habitats, and their unique renewable potential, are rich for the experience. Again, after almost 50 years, "Thanks, Dad. Your's was the ultimate gift."

Aldo Leopold

Aldo Leopold was born in Burlington, Iowa in 1887. He was very interested in hunting and ornithology as a youth, growing up along the Mississippi River.

Leopold received a Master of Forestry degree from Yale in 1909. He worked for the U.S. Forest Service before he quit in 1928 to work as a private forestry and wildlife consultant.

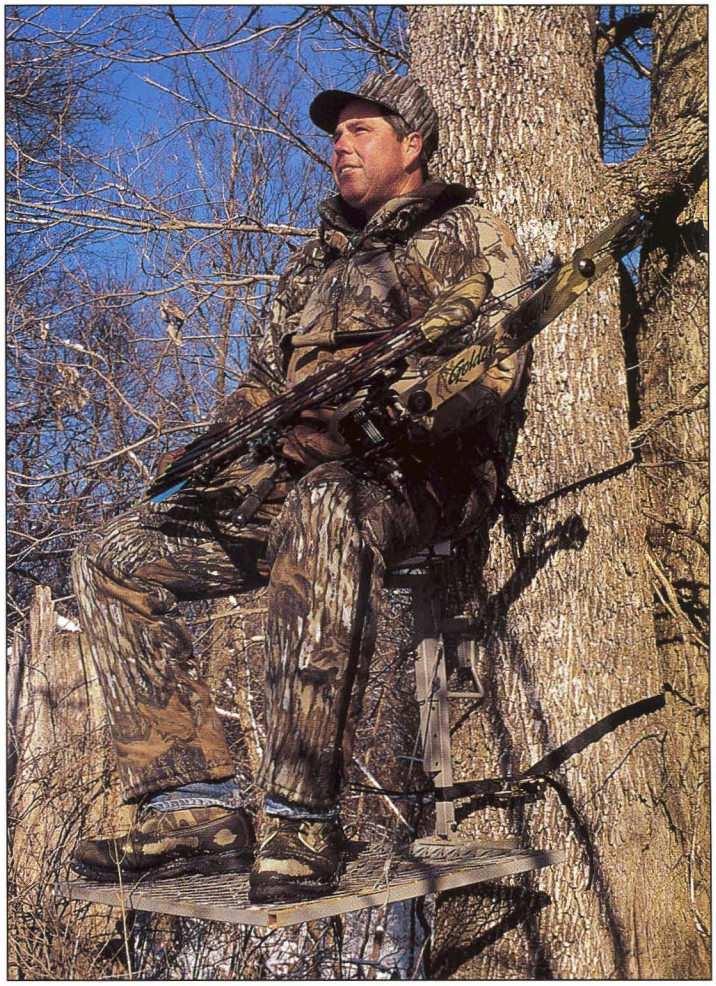
His book *Game Management* was considered a classic text on the subject. The book was so pioneering and so definitive that a group of University of Wisconsin alumni funded a special chair for him as America's first professor of game management.

The University of Wisconsin is just south of Wisconsin's "Sand Country." And it is here that Leopold purchased a badly abused farm with a shed that was to be known as the famous "shack."

Although Leopold was universally known by fellow biologists and natural scientists, he was not widely known outside this circle until *A Sand County Almanac* was published in 1949. Unfortunately, this was after his tragic death on April 21, 1948. Helping to put out a grass fire, Leopold died of a heart attack. *Marvin Schwilling, Kansas Wildlife and Parks, M/J 1988*

TREESTAND TRAGEDY

text and photos by Marc Murrell
public information officer,
Great Plains Nature Center, Wichita



All too often, we take for granted many of the things we love – bowhunting, walking in the fall woods, climbing to a treestand on opening morning – but they can all be taken away in one careless instant.

It can happen in less than the blink of an eye. It can happen to any hunter who hunts from a treestand, regardless of hunting experience, age, race or religion. In a careless instant, it can happen to you.

Each hunting season, we read the tragic headlines or hear about a treestand accident through friends in hunting circles. Some accident victims are lucky, suffering only broken bones, scrapes, cuts or bruises. Survivors can chalk one up to experience and modify their ways. But some aren't so lucky. Occasionally the results of a treestand fall are more harrowing, ending up in paralysis or even death. It happens every year. It can happen to you.

Until a few years ago, I'd never known anyone who had been seriously injured from a treestand fall. Then I read the tragic headlines that made me cringe: "Newton Man Injured in Treestand Accident." He was from my hometown, and the article went on to describe what happened to David Henney on opening day of the 1994 archery season. Henney and a friend were hunting near Newton when he fell from a tree. He was listed in critical condition at a Wichita hospital.

At the time, I didn't know Henney, but my heart-felt sympathy went to him. I was also hunting that morning. It was a beautiful morning, ruined forever in my memory by the tragic news. It didn't happen to me, but it could have. I wished it had never happened. I called Henney and listened to his story.

Henney, a 32-year-old plummer, was beginning his fourth bow season.

" I used to be a duck hunter," he said. "I said something to this guy I worked with about bowhunting, and we talked about it. He told me to come to work early one morning, and he ended up giving me a bow and everything."

Although Henney didn't take a deer his first season, he had success rattling bucks into range and enjoyed that aspect of his newfound hobby. He harvested a buck in his second season, and added another buck and doe his third year. The 1994 season, his fourth, was cut short by the accident.

"I never wore a safety belt ," said Henney. "I've never been scared of heights. I felt like I could always climb a tree with no problem, and I never was scared about being up in the air. I was never worried about falling.

"I wasn't actually hunting when it happened," he admitted. "I had sat in a different treestand that morning. I'd built some seats and was installing a seat in this other [homemade] treestand. I was getting ready to add a couple more

foot pegs to make it real simple to get into, and a tree limb I was leaning on broke."

Henney was 18 feet off the ground.

"I would have landed on my feet, but I hit another limb on the way down, The guy [hunting partner, Joe Laramore] that was standing there watching me thought I was going to grab ahold of this other limb, but it went across my ribs. I broke six ribs and cracked the rest, and that's the one that did all the damage."

The impact with the limb changed the direction of Henney's body as he fell, cartwheeling him through the air. It flipped him, and he crashed head-first into the ground, causing the most serious, life-threatening injury — a broken back.

"I was more conscious when I hit the ground than during the fall," Henney said. "When I hit the ground, he [Laramore] asked me if I was okay, and I told him no, and then he took off running for help. Then I thought I was okay for a minute because I hadn't felt any pain. I tried to get him to come back and help me roll over because my head and face were in the ground. When I figured out I couldn't roll over, and he didn't come back, I reached back and felt my legs. There was no feeling in my legs. I knew I was paralyzed right then. I knew the fall paralyzed me."

Laramore ran to a nearby house and called 911. Fortunately the ambulance was able to drive to the field near the sight of Henney's accident.

"I thought I would just go the hospital and be put in traction and all that for a broken back," Henney related. "I thought I would just be paralyzed.

It was much worse. Henney spent the first 16 days of his hospital stay in the surgical intensive care unit.

"I went Code Blue once because both of my lungs collapsed. I had punctured one lung in the fall. The doctor said I wouldn't have lived an hour on the ground because that lung already started filling up."

In October 1996, David Henney's life changed dramatically when as he placed a seat in one of his treestands, a branch broke, sending him to the ground 18 feet below.

After being upgraded from the surgical intensive care unit, Henney was in medical intensive care for another 10 days. After a hospital rehabilitation program, Henney was released on December 9, 1994, nearly two and one-half months after the accident.

The damage to Henney's back is permanent. He has no feeling from the chest down, but he does have use of his arms.

Despite the horrifying ordeal, Henney doesn't plan to let future deer seasons pass him by.

"I'm still going to bowhunt — just out of a chair," he says. "I'm going to have to ground-blind it."

Henney hopes that his misfortune will prevent the same thing from happening to someone else. He realizes now that a safety belt is a necessity when hunting from a treestand and admits that several of his friends who never believed in safety belts now have them.

I have a life-long hunting buddy that still refuses to wear a safety belt (and vehicle seat belt, too) no matter what I tell him. He doesn't believe anything could ever happen to him. Even after reading about Henney's tragic story, there will still be those, like my friend, who scoff at treestand safety. But it's serious business. No deer hunter is immune. It can happen to you.

Mike Blair photo

Check all of your bowhunting gear well before the season. Pay particular attention to treestands, steps, and safety belts.

Always use a safety belt, even when placing or working on a stand. It takes only a few seconds to put a belt on and snap it to the tree, and it could easily save your life.

Treestand Rules

* Have a plan. Many bowhunters hunt alone. Always have a plan to prevent from being stranded if you have an accident. Name or number you stands, and let your hunting buddies know where they are located, or draw a map of your hunting spots with approximate locations of your stands. Always tell your spouse or a friend where you're hunting each trip. Let them know when you expect to be back. If you have a cell phone, carry it. You can call and prevent worry if you're running late, and a cell phone in your fanny pack could save your life if you fall.

* Wear a safety belt at all times. The old excuse that "it's too much trouble to put on," doesn't hold true with today's belts. Many models can be snapped around your waist before you leave the vehicle. Then you simply snap the tag end to the belt around the tree. Always check belts for signs of wear and keep snap or buckle hardware in working order. It's a good idea to read the instructional material included with your safety belt, and "test drive" the belt a few feet off the ground in a tree in your yard. Not only will you know how to properly attach your belt, but it will be much easier to do that first morning in the pre-dawn darkness.

* Take extra precaution when using screw-in tree steps. Many falls occur when the hunter is climbing in or out of the stand. While handy, tree steps can also be dangerous if used carelessly. Make sure the step is securely threaded into healthy, solid wood. Keep your foot close to the tree rather than on the outer end of the step. Always use caution when steps might be wet or icy.

* Never leave screw-in steps and portable stands in the tree year-round. Weather, insects and animals can damage the equipment. And this is what makes permanent wood stands so dangerous. Wood will deteriorate and constant movement by the tree in wind can loosen screws and nails. Avoid using permanent stands, but if you must, always check them thoroughly well before the season, replacing rotted wood, nails and screws.

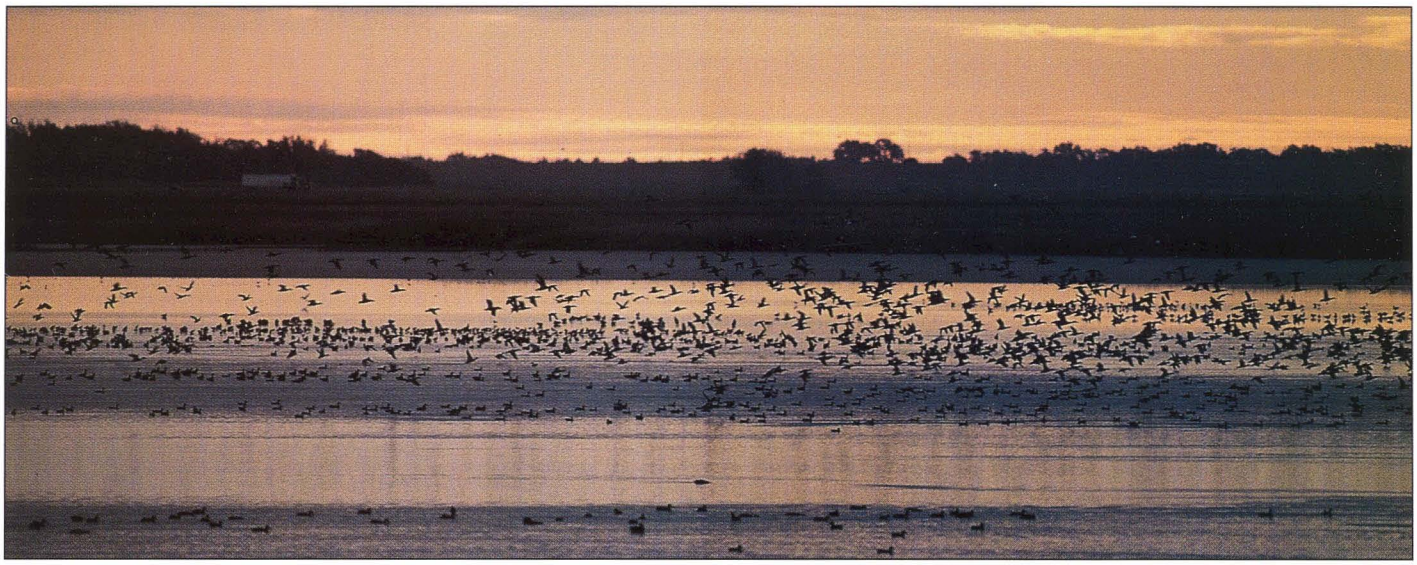
* Always use a haul line to haul rifle (unloaded of course) or bow safely to your stand — after you've secured your safety belt.

* Never step on or rest your weight on a dead limb. And never assume a limb is safe because it was last year. It's best to check any limb before you put any weight on it.

* Follow all instructions that come with a commercial portable stand and safety belt. Use common sense, and hunt only as high as you feel comfortable. Many hunters believe higher is better, but stands more than 15 feet high may present difficult shooting angles for archers. It's best to choose a stand site that has a foliage backdrop to hide the hunter and is situated down wind of the deer trail. In this case, 12-15 feet is high enough.

Once strapped in, raise your bow and other equipment with a haul line.

Make sure screw-in steps are threaded in solid wood. Avoid screwing them through heavy, loose bark.



Cheyenne Bottoms Renovation: Are We There Yet?

by Karl Grover
area manager, Cheyenne Bottoms Wildlife Area

photos by Mike Blair

It has been a long road, but the renovation to our most important wetland is nearing finish. Benefits of the project include better water control capabilities, deep water storage, cattail control, silt removal and more.

Are we there yet? I wish I had a dollar for every time I've heard that while on family road trips. That money would go a long way to offset some college costs looming on the horizon. The question usually stems from impatience and eagerness to get somewhere. Over the past several years, I've been hearing it at the Cheyenne Bottoms Wildlife Area office. To be truthful, I've even been silently asking the question myself. So with that in mind, here's an update on the progress of the Cheyenne Bottoms renovation project.

While we've provided many renovation updates in the past through the Cheyenne Bottoms Newsletter and this magazine, much has been completed since our last article. We are within a year of completing the entire project.

During the past two years, we've subdivided Pool 3 and Pool 4, and hunting/nesting islands have been constructed in both pools. Subdividing the pools has yielded many benefits, but the primary benefit has been that less water is now needed to flood a pool. For example, the original 2,620-acre Pool 4 was divided into two pools of 1,800 and 820 acres. This is a critical feature in years when water is in short supply. The manager now has the option to place the limited water in a pool with less surface area, which results in less loss of water to evaporation. It also means fewer wetland acres during dry times, but those acres will be wet for a longer period of time. In addition, smaller pools can be drained more quickly, allowing more efficient vegetation management. A pool must be dry before we can disc to control cattails. A quick draw-down

allows more time for drying and discing before the next rain. And smaller pools take less time to flood, allowing rapid irrigation to promote growth of desirable plants or drowning of undesirable vegetation.

There are also several unplanned benefits of the subdivided pools. The new dikes are attracting nesting snowy plovers, killdeer and avocets, which prefer to nest on areas free of vegetation. The smaller pools also allow us to provide undisturbed habitat for migrating whooping cranes while closing less of the wildlife area to hunting. When whoopers stop, we close the pool they are using. Now, instead of closing the entire 2,620 acres to hunting, as we did in the past when cranes were on Pool 4, we only have to close the subdivided pool the cranes are using. Crane security can still be provided with less impact on hunting opportunity.

The backhoe has been used to remove silt and cattails, creating deep-water areas which are easier to keep cattail free. The silt is then used to build nesting and hunting blind islands.

The 10 islands were designed with one main goal in mind: to provide sites for silt consolidation in heavy stands of cattail. Silt removal and the resulting deepening of the pool is the best long-term method to control cattails. This sets back the successional aging of the marsh, which is the primary cause of the cattail expansion. The total area impacted, including the barrow area and island, varies from five to 30 acres. The end result is open water areas where cattails once stood. And these areas will not refill with cattails quickly because the deeper water inhibits cattail expansion and germination. The islands where the silt was deposited have been seeded to grass and serve as hunting areas and potential nesting sites.

The final year of the project, late 1998 to 1999, calls for upgrading three of the diversion dams. This includes replacement of electrical switches and motors, which are so old now that parts can no longer be obtained. Increased protection from vandalism will be added to the motors as well.

The last year of the renovation will also see the inlet canal from the office to Pool 1 upgraded to accommodate the deeper water needed to gravity flow water into the storage pool. In a previous phase of renovation, Pool 1A, the primary water storage pool, was modified to increase its water storage capacity from 5 to 6 feet. This then requires the inlet canal to be able to handle an extra foot of water to eliminate the need to pump water from the canal into the storage pool.

Even though it is not yet complete, the renovation has already proven invaluable to the day-to-day management of the wildlife area. The three pump stations, mitigation marsh, subdivision of Pool 1 and the improvements to the inlet canal have all contributed to better management and water conservation. By late 1999, the renovation will be complete and the full benefit of the effort will begin paying off. To the casual observer, most benefits may be difficult to see, but the indirect results of the work should be noticeable as habitat conditions improve.

Two festering questions that come up on occasion are: "Why aren't you doing something for shorebirds?" and "Why is so much emphasis being placed on shorebirds? Hunters paid for the Bottoms." The most frustrating aspect of these questions is that both parties are interested in the same thing: improved wildlife habitat. The entire renovation effort and the day-to-day management of the area has and will remain directed at improving the habitat for all wildlife species that use the marsh. The "us against them" mentality between groups within the conservation arena will only limit efforts to protect habitat.

A 4-year-old's Perspective on Teal and Stuff

by Marc Murrell
public information officer, Great Plains Nature Center, Wichita

Take your children hunting. Not only is it a great way to get to know them better, but seeing the natural world through their eyes provides a new and sometimes humorous slant on things we take for granted.

Although I can't remember what it's like, it must be exciting for a child to experience natural wonders for the first time. Uncertain about many of life's great mysteries, children are fascinated and curious during their early years. Completely uninhibited and eager to learn, they often ask more questions than parents bargain for, like the time I had to explain to my 3-year-old daughter why she had to sit down to go potty while Daddy could stand up. They're not shy about stating their observations through young eyes, and they keep life fresh and interesting. Such was the case when Ashley, my 4-year-old-going-on-16 daughter, accompanied me on her first teal hunt last fall. The following are Ashley's perspectives:

Fashion

Ashley wanted to wear one of my camouflage shirts, which fit her like a full-length dress but would certainly conceal her. She looked down to see the bottom of her pant leg sticking out and said, "Daddy, I think these wide-leg jeans make the perfect hunting pants. They go good with my camo."

Wait a minute!" she said as she dashed upstairs.

As she came out of her room, she explained why a dull-brown pony-tail holder replaced the brightly-colored one, "This goes better with my camo, too, Daddy," she said. Being fashion challenged, I agreed.

Pre-hunt Preparation

After 10 minutes in the truck, Ashley said, "Daddy, I think I need to take a nap so I'll be rested when we get there."

I thought about using that line on my next hunting road trip but was fairly certain it wouldn't fly with my hunting buddies. People are funny about naps. You spend the first part of your life dreading to take one and the rest of your life trying to sneak one. As I turned into the wildlife area parking lot, Ashley awoke and peered over the dashboard.

"Are we here already?" she asked excitedly.

Bob Gress photos

Past Hunt Comparisons

She's only been hunting one other time and that was a ho-hum dove hunt when she was three. Although doves were few and far between, she would don her hearing protection each time one winged our way. After the first one hit the ground, I heard a resounding, "YYYEESSS!" as she pumped her clenched fist. After briefly inspecting the bagged dove, she was back making Daddy mud pies and baking dirt cookies laced with sand.

As we walked to where I hoped teal would land, she was obviously displeased at the lack of suitable baking material and wondered aloud why we couldn't hunt in a place like last time.

Habitat

As we nestled into a perfect, Mother Nature-made duck blind of rag weed, smartweed and millet, Ashley peered through the vegetation and said, "Whoever owns this place ought to cut the weeds. They're all over the place."

Duck I.D.

We hadn't been ready 30 seconds when Ashley hollered, "Daddy! There's a whole bunch coming behind you!" I wheeled around to see several dozen barn swallows darting overhead. After three more similar false alarms and skipped heart beats, I convinced her it was best if I identified the ducks myself.

Hunting Food

Just like her old man, Ashley is as content as her stomach is full. I had packed a couple deli sandwiches, and she devoured hers and said, "Man these sure taste good outside." I guess I hadn't tried them that way yet, but she was right.

Hunting Certain Species

I pointed to a Northern harrier and Ashley quizzed, "Can we shoot those?"

"No," I said. "It's illegal to shoot hawks, Honey."

"Well if you did, what would they taste like?" she asked curiously.

"Probably like a bald eagle," I joked, waiting for a response but getting nothing but a wry smile. I guess she hadn't heard that worn out joke yet.

Shooting Ability

"There's a tea,l Honey. Plug your ears!" I quickly whispered as the unfortunate little greenwing peeled back around for the final approach to his plastic comrades. I proceeded to miss an easy 25-yard shot before the duck swerved a hasty retreat. Fortunately for my ego, a third shot sent the bird tumbling.

I turned to Ashley half expecting her to say, "Good shot" or something to that effect when she brought me back to reality with, "Man, Dad, why did you have to shoot so many times?"

I said, "How many times did I shoot?" wondering if she could recall the sequence.

"I don't know — maybe four?" she guessed.

"Honey, you can only have three shells in your gun, so I only shot three times," I said, not admitting the situation only required one on an average day.

"Well, it seemed like at least four, Dad," she said honestly.

Littering

As we settled back onto our buckets, Ashley pointed to one of my empty hulls bobbing in the water nearby. "Dad, what happens if people shoot a whole bunch and this lake fills up to the top with shells?"

"It won't ever get that bad, Honey," I tried to convince her.

"But what if it fills up, Daddy?"

As I bent over to pick up my empty hulls, I wondered if a 4-year-old could actually know how to shame someone into doing something.

As the sun set and I picked up decoys, the usual happened, and several groups of teal buzzed our location only minutes after legal shooting time. Ashley understood why I couldn't shoot and seemed content to watch me flounder in the water. Childlike curiosity emerged.

"Is that fun, Daddy? Is the bottom squishy? What happens if you fall?" she asked in rapid-fire succession, never pausing for a response.

Ashley picked up the duck as I promised her she could carry it. I wondered what was going through her young mind as she carried the duck in outstretched arms like a bowl of hot soup. She asked me if we were going to eat the duck when we got home.

We loaded up in the truck and headed south as Ashley talked nonstop about our trip and who she would tell about her first duck hunt. She began to fade and snuggled into her reclined truck seat, and I knew she wasn't far from dream land. Just before she nodded off, she looked over at me with loving eyes and said, "Daddy, that sure was fun. We'll have to do that more often."

"We sure will, Honey," I smiled and touched her cheek. "We sure will."

ESS: These Guys Are Good

by Chris Mammoliti
chief, Environmental Services Section, Pratt

photos by Mike Blair

Over the last 2 years, the Environmental Services Section (ESS) staff of seven reviewed more than 4,000 projects submitted by more than 370 agencies, organizations or individuals. Less than 2 percent were required to obtain a permit to mitigate habitat.

The Department of Wildlife and Parks plays a vital role in protecting the natural resources of the state. State and federal environmental laws require the department to be actively involved in the protection of the state's wildlife resources. This role involves reviewing environmental laws and policies affecting wildlife in Kansas and assessing the ecological impacts of activities carried out by private individuals, industry, state and federal agencies, and local units of government. The bulk of this responsibility falls to the Environmental Services Section (ESS), a small branch within the Executive Services Division of the department.

ESS provides environmental reviews of various development projects with an emphasis placed on activities that impact fish and wildlife and their habitats. The section, made up of five full-time employees and two full-time, grant-supported biologists, also oversees habitat assessments, threatened and endangered species permitting, biological stream monitoring, and state environmental policy review.

ESS really began in 1972 with the creation of an agricultural liaison position that was assigned to work directly with major agricultural pro-

When ESS staff review a project, they determine what habitats and species will be impacted. When threatened or endangered species and rare habitats are involved, mitigation may be required.

grams and projects to incorporate wildlife considerations. Through 1980, the agricultural liaison's duties expanded to include technical participation in many nonagricultural projects. In 1980, the department's Game Division rewrote this position to establish the first Environmental Services coordinator. In 1982, the Fisheries Division created a similar position. Although the two coordinators worked closely on project reviews, it was not until the department reorganized in 1987 that a separate Environmental Services Section was established, made up of a supervisor and two full-time ecologists.

The legal mandate for environmental reviews actually began with the federal Fish and Wildlife Coordination Act in 1946. However, the real impetus requiring environmental review came with the National Environmental Policy Act (NEPA) of 1969, the Federal Water Pollution Control Act (FWPCA) of 1972, and the Endangered Species Act of 1973. The federal government eventually amended the FWPCA to become the Clean Water Act in 1977. Although environmental law at the state level has lagged behind comparable federal mandates, the Kansas Legislature has enacted several significant statutes that directly mandate the Kansas Department of Wildlife and Parks to be involved with development project reviews.

The Kansas Nongame and Endangered Species Act of 1975 broadened the agency's regulatory responsibility to all vertebrate and invertebrate wildlife species. Subsequent regulatory authority under that act provided for KDWP permitting for any project impacting critical habitat for state-listed threatened or endangered species. ESS has the charge to administer this permit program. In addition, Kansas enacted the Water Projects Environmental Coordination Act of 1987. This Act mandates that the environmental effect of any water development project be considered before being approved or permitted by the Kansas Department of Agriculture's Division of Water Resources. This statute identifies KDWP as one of seven state "environmental review agencies." ESS handles these review functions.

Additional cooperative agreements with the U.S. Natural Resources Conservation Service, the Kansas Department of Transportation, the Kansas Department of Health and Environment, and various Watershed Joint Districts involve

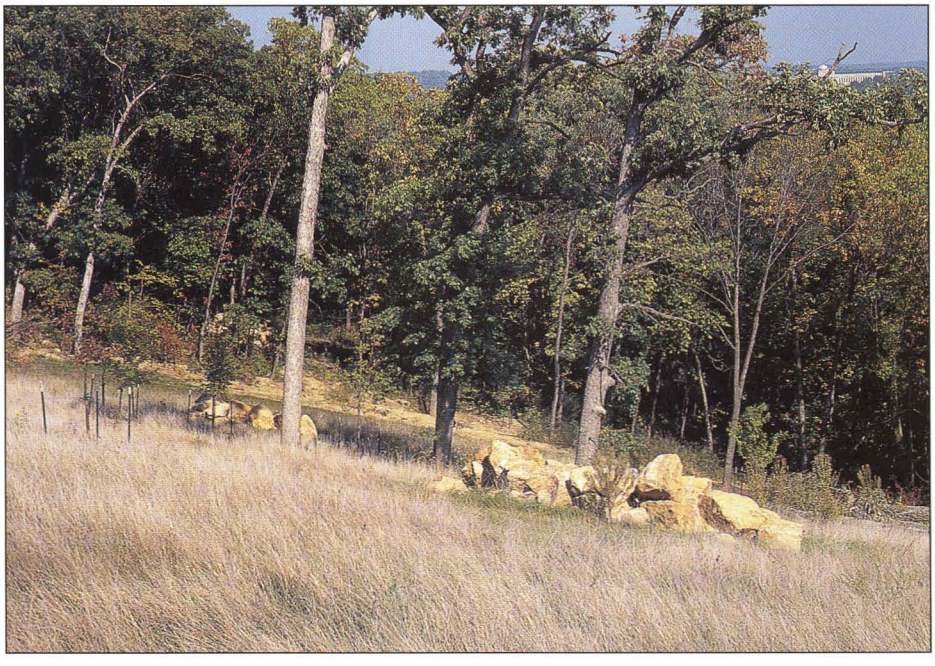
Less than two percent of the projects reviewed by ESS actually require permits or mitigation, but staff may provide input on how to lessen the impact of activity on wildlife.

ESS in nearly all programs and development projects requiring federal or state permits and funding in the state.

Over the past two and one-half years, ESS reviewed 4,225 projects from 378 identifiable agencies, organizations, or individuals. These projects had a direct impact on 82,964 acres of terrestrial habitat and 1,134,282 linear feet of stream channels. ESS staff evaluated each of these projects and, when applicable, recommended methods to lessen the impact of project activity on aquatic and terrestrial ecosystems. Only 63, or 1.5 percent, of these projects were required to obtain a permit from ESS conditioned to mitigate impacts to critical habitats of threatened or endangered species.

In many reviews, ESS staff coordinate the efforts of several different agencies and organizations, including state, federal, and local governments, as well as private companies.

The West Leavenworth Trafficway is an excellent example of a project reviewed by ESS. The project was determined to have an impact on critical habitats for two snake species. To complete the project required the cooperative efforts of all parties involved. Because the highway project would destroy critical habitats, identified by herpetologist Joe Collins, mitigation efforts were administered by district wildlife biologist Mike McFadden and Public Works director Michael McDonald. In-stream habitat considerations were addressed by district fisheries biologist Richard Sanders. Other parties involved included ESS staff, U.S. Army Corps of Engineers, Kansas Department of Transportation, the City of Leavenworth and the Kansas Department of Agriculture's Division of Water Resources. The result was a completed highway project with responsible consideration and proper compensation of critical habitats of threatened species associated with the area. While the process was not an easy one, it accomplished objectives expressed by all concerned interests and maintained a balance for sensitive natural resources.



An example of mitigation required, this area was restored to provide suitable habitat for the two snake species, after similar habitat was lost during the highway project.

Other ESS activities involve investigation of fish and wildlife kills, technical assistance to various department development projects, and stream biological surveys. The stream survey program, which started in 1994, has sampled more than 450 locations within the major river basins of the state. Funding from the State Water Plan has allowed three years of intensive sampling efforts with the Neosho and Kansas-Lower Republican River basins. ESS staff of ecologists rely on their collective expertise and that of department field biologists and land managers to ensure the state's wildlife resources receive due consideration when development programs and projects are proposed.

Pressed Posies

by Lorraine J. Kaufman
Moundridge
photos by Mike Blair

For those of us lucky enough to spend time outdoors, prairie wildflowers fill our lives with color and joy. To share this pleasure with friends and loved ones, the author devised a simple way to press flowers and incorporate them into cards.

A small pink cloud hovering over a ravine? I was surprised by the unusual sight as I walked near the old one-room schoolhouse I once attended. My thoughts went back many years to when this walk was a daily occurrence, but I had never seen anything like this. I stopped to look more closely, and realized that the "cloud" was a canopy of pink blossoms clinging to a steep embankment. It was a climbing prairie rose in full bloom. What a glorious sight it was!

I wondered how to adequately describe the scene to friends who are strangers to such out-of-the-way beauty. I often wish that those who haven't the opportunity to visit a meadow or a country roadside could see for themselves the lovely array of wildflowers found on a walk through the Kansas outdoors.

It is hard to describe the magical progression of color in many forms, hues and sizes that occurs from early spring until frost, or the inspiration that comes with searching. I wanted to show and tell. How could I do it best?

Then I thought of the pressed flower my mother kept in her Bible. One of my earliest childhood recollections, the faded rose was small yet perfect in form, and I hardly noticed its diminished hue. The pressed rose held special significance, as love and sorrow met in that remembrance. The little flower spoke volumes to me.

Why not press the schoolhouse roses in the same way? Then others could see their beauty in a tangible form. I envisioned them artistically displayed on cards or notes, along with a personal message or greeting. Flowers could only heighten warm wishes to a friend through their special beauty.

So I gathered the pink blossoms near my old school house with a sense of purpose and discovery, and that has opened a delightful hobby which helps to share the earth's gifts with others.

Flower pressing can be enjoyed by anyone. In addition to the benefits of fresh air and sunshine while collecting blossoms, another advantage of this hobby is that most necessary tools are already in the home. Additional supplies are not costly. End results are beautiful, personalized artworks limited only by one's imagination. After watching me make a card in my spare-room studio, my 6-year-old granddaughter insisted on pressing her own flowers when she returned home. Her first flower card was a gift to her best friend, who had recently moved away.

Getting started is easy. Wild and domestic flowers work equally well. The easiest ones are open-faced, with thin centers, like the climbing prairie rose. Flowers having thick, spongy centers (like sunflowers) are hard to press. After finding suitable specimens, pick only those which are in their prime. Some flowers open at dawn, some at mid-day, and some wait until evening to show their beauty. Take a moment to observe insect activity — bees and butterflies know which blossoms are freshest.

The wind can make it difficult to press individual flowers in the field, so I often collect them to press at home. Slitting the stems and placing flowers into small jars of water prevents them from wilting. A household caddy makes a convenient way to carry collection jars, clippers, and a note pad and pencil for keeping records. Be sure to collect leaves, stems

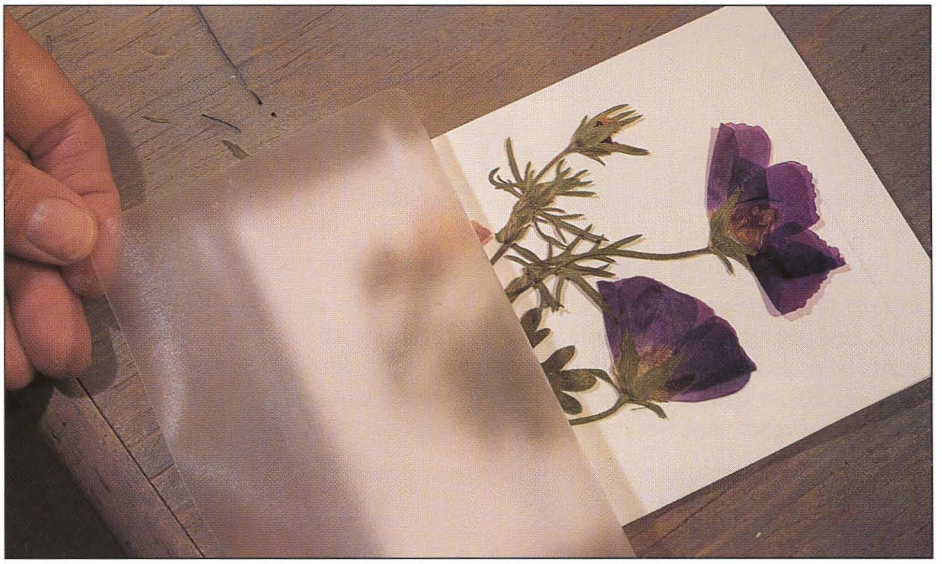
Flower pressing materials include the press, which can be made of plywood and long, threaded bolts with wingnuts, corrugated cardboard and soft absorbent paper. The flowers must be moved after several days to prevent them from sticking to the paper.

and other interesting plant parts to accompany the flowers.

Flowers can be pressed under books or other heavy objects, but a wooden press is more efficient. My husband fashioned a press from two pieces of 5/8-inch plywood, cut 8 inches by 11 inches. Three long bolts are inserted through holes drilled at either end of the boards, and fastened with washers and wingnuts. In this way, several dozen sets of flowers can be pressed together.

To press, place several thicknesses of folded newspaper or a single sheet of corrugated cardboard on one of the boards, followed by a sheet of absorbent paper. I often use Big Chief tablet paper to hold the flowers, but typing paper or smooth paper towels will work as well (facial tissue works best when flower petals are very thin.) Flowers can be placed face-down, face-up or sideways, but they should not touch each other. After arranging, gently cover the flowers with a second sheet of absorbent paper. Add another folded newspaper or sheet of cardboard to complete the layer. Continue stacking layers of flowers in this fashion until all are used. Top off with the second pressboard, matching bolts and holes. Tighten the wingnuts to exert substantial pressure on the flowers.

As pressed flowers dry, they begin to stick to the paper. After several days, it is important to open the press and "lift" the blossoms to keep them from permanently gluing themselves to the pressing material. Most flowers can be lifted after two days, but if petals are still soft and pliable, they should be allowed extra time to dry. Lifting is done with a knife point or seam ripper — any flat instrument that can be inserted under the flower. Carefully work the lifting tool under a petal until the entire flower pops free from the paper. Move the flower slightly, and it will remain free through the rest of the pressing process. Reset the layering materials and again tighten the press. Flowers should press for about a week

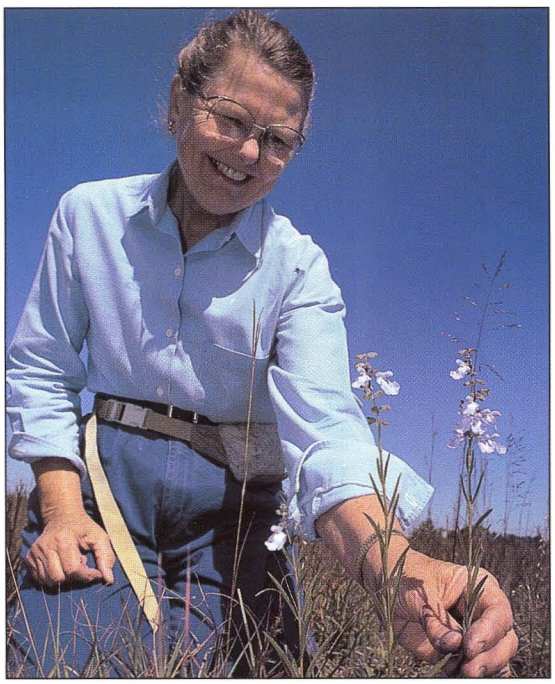


After the flowers have been pressed about a week, they can be removed for storage, or use. They can be mounted on card stock with contact paper in steps shown above.

Be sure to collect and press stems and leaves along with the flowers. Once pressed the flowers can be arranged in a variety of designs and combinations. Include a message and perhaps some complimenting artwork, and you have a truly unique greeting card.

before storing.

A few flower species have petals which are extremely thin and fragile. These quickly adhere to the pressing paper and become impossible to remove. Pressing them is tricky, but it can be done. Try lifting five or six hours after placing into the press, and then lift again five to six hours later. Experience is the best guide.



The author thoroughly enjoys wildflowers in the prairies around her home in central Kansas.

After flowers are dried, remove them from the press and sort according to color. Don't be surprised if the color is somewhat changed. Some flowers change hues dramatically, becoming lighter or darker in the press. Most yellow flowers retain their color very well, but blue flowers tend to fade. It is exciting to experiment and helpful to record your findings for next season.

Store the flowers between pressing tissues. I file them by color in a low cardboard box for easy searching.

To make a card or other art arrangement, select the flowers, stems and leaves you wish to use. Work on a smooth and well-lit surface, such as a table top. Use a knife blade or forceps to transfer flowers onto the card stock, and arrange them in a pleasing design. The eraser on a lead pencil makes an efficient tool to help slide flower parts into place, and also helps to pick up any stray particles. Be careful — even breathing on the arrangement can send petals flying.

Cut a piece of clear contact paper (available at discount stores) about an inch larger than the note card. Peel the backing from the contact paper, breathing on the sticky side as you do. Breathe over the entire surface again and then quickly smooth it over the flowers, starting in the middle. Breathing on the contact paper removes static electricity and keeps the flowers from "flying up" to meet it as it's laid in place. Smooth the contact paper over the face of the card, and trim the excess with scissors.

Possibilities for this creative hobby are endless. Add your own poetry or a few lines of your philosophy of life and make your note cards a very personal gift for a special friend.

Kansas Monarch Watch

by Kelly Barth
Lawrence

photos by Mike Blair

Each fall, Kansas is graced by the presence of countless migrating monarch butterflies. The mysteries of the amazing migration journey these delicate insects endure are now unfolding, thanks to research by the Monarch Watch.

What are the odds that a creature weighing just half a gram with paper-thin wings could fly across North America to Mexico? Sounds impossible, doesn't it? But every year, thousands of monarch butterflies defy the odds and complete the arduous journey south in the fall, then north again in spring. Amazingly, monarchs aren't particularly strong flyers. They must take advantage of seasonal winds that keep them aloft and provide tailwinds to push toward their destination. This year's monarchs will ride the crest of the 1997 migration, the strongest researchers have seen in 20 years.

"Monarchs are a magnificent phenomena — even though they're plentiful enough to seem commonplace, they capture our imaginations," said Orley "Chip" Taylor, founder of Monarch Watch, a research and educational outreach program headquartered at the University of Kansas in Lawrence. What began six years ago as a conversation between Taylor and Olathe high school teacher Brad Williamson about threats to monarch populations has blossomed into a dialogue between research scientists, elementary and secondary teachers, and amateur monarch enthusiasts.

"We kicked around the idea of involving school kids in monarch conservation efforts, and I put out news releases just to test the waters," Taylor said. A few weeks later, he had his answer. Even through Taylor limited his news release mailing to the state of Kansas and Texas, he and his colleagues were inundated with requests for monarch tracking tags and more information about other ways students and their teachers could help.

Kansas is a primary monarch migration corridor and an excellent place for study. But when a feature article about the program appeared in the Des Moines Register in 1993, Taylor received such an overwhelming response that he knew the Monarch Watch could become a

nationwide scientific effort.

Since those first busy years, Monarch Watch has grown exponentially. In 1996, a total of 117,000 tags were sent to the 1,400 Monarch Watch members. More than 49,000 monarchs were tagged during that fall migration. One teacher in Wamego, a favorite fall stopping place for Monarchs, helped his students tag more than 12,000 monarchs in the unprecedented fall migration of 1996.

"From the beginning, we thought of Monarch Watch as an outreach program," Taylor said. "We really had something better than research — a vehicle for educating a large number of students for whom research, as a natural consequence, becomes fun. Our hope is that the program prepares students to enter the world as realistic, thoughtful scientists in their own right."

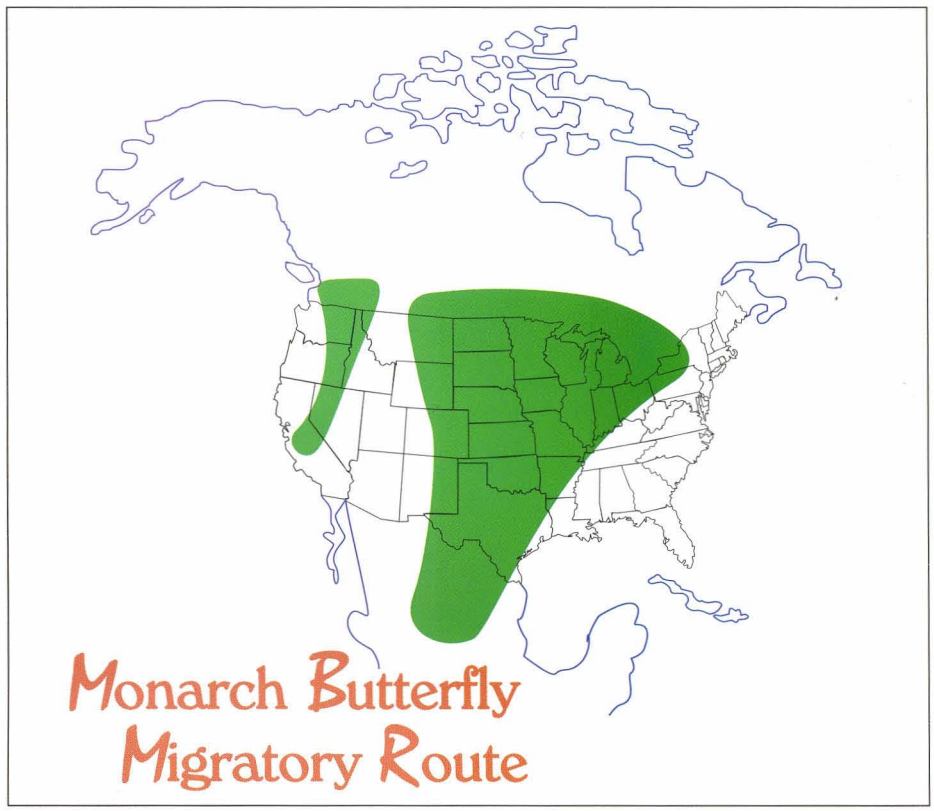
Volunteer scientists participate in five different ways to contribute important original data from which Taylor and his colleagues draw conclusions about the yearly migration:

* Tagging — volunteers place adhesive I.D. tags on monarchs and record basic information.

* Weights and measures — monarchs of a certain size may be more apt to die along the way. By recording body size, volunteers play a key role in determining which monarchs are better suited to the journey.

* Mapping — Students measure aspects of a butterfly's flight, such as vanishing bearings (compass reading when it flies out of sight) and body headings (direction butterfly tries to orient its body), as well as weather conditions at time of measurement to help researchers further understand how monarchs sense which direction to fly.

*Population census — Designated volunteers search milkweed patches for eggs and larvae and record findings. Since three to five generations of monarchs make up the entire year's cycle, the health of the whole depends on that of each generation.



To learn more about monarchs and their migration, the Monarch Watch Program has enlisted the help of school classes and groups from around the U.S. Tags placed on captured butterflies help researchers track individual butterflies on their journey.

* Hydrogen isotope studies — Volunteers across the U.S. raise butterfly larvae on milkweed plants exposed only to natural rainwater. Samples of both the milkweeds and six adult butterflies are then analyzed by scientists to determine the proportion of hydrogen isotypes. These experiments yield useful information about the geographic origins of the butterflies reaching roosting sites.

It isn't uncommon for monarchs to congregate in some areas of Kansas as they make their long journey south each fall.

When it comes to migration, researchers start with one primary question: if all monarchs have never been to Mexico, how do they know their way? In 1997, the scientific community turned to the University of Kansas, the birthplace of Monarch Watch, for part of the answer. A ground-breaking study conducted by Sandra Perez, a post-doctoral stu-

dent, and Taylor indicates they may use a "sun compass" as one way of navigation. Perez and Taylor collected monarchs during the migratory cycle, maintained them in the laboratory for 9-15 days, manipulating them with light/dark cycles six hours later than what they would have experienced under normal circumstances. Following the time-lag experiments, the monarchs were released on a campus rugby field and their body orientations monitored. The behavior of these "clock-shifted" monarchs was then compared to naturally migrating monarchs. As Perez predicted, the clock-shifted monarchs flew north/northwest because they thought it was 9 a.m. When it was actually 3 p.m.

"In a very real way, Monarch Watch participants can help us test the sun compass idea," Taylor said. "We can evaluate their recapture data through tagging."

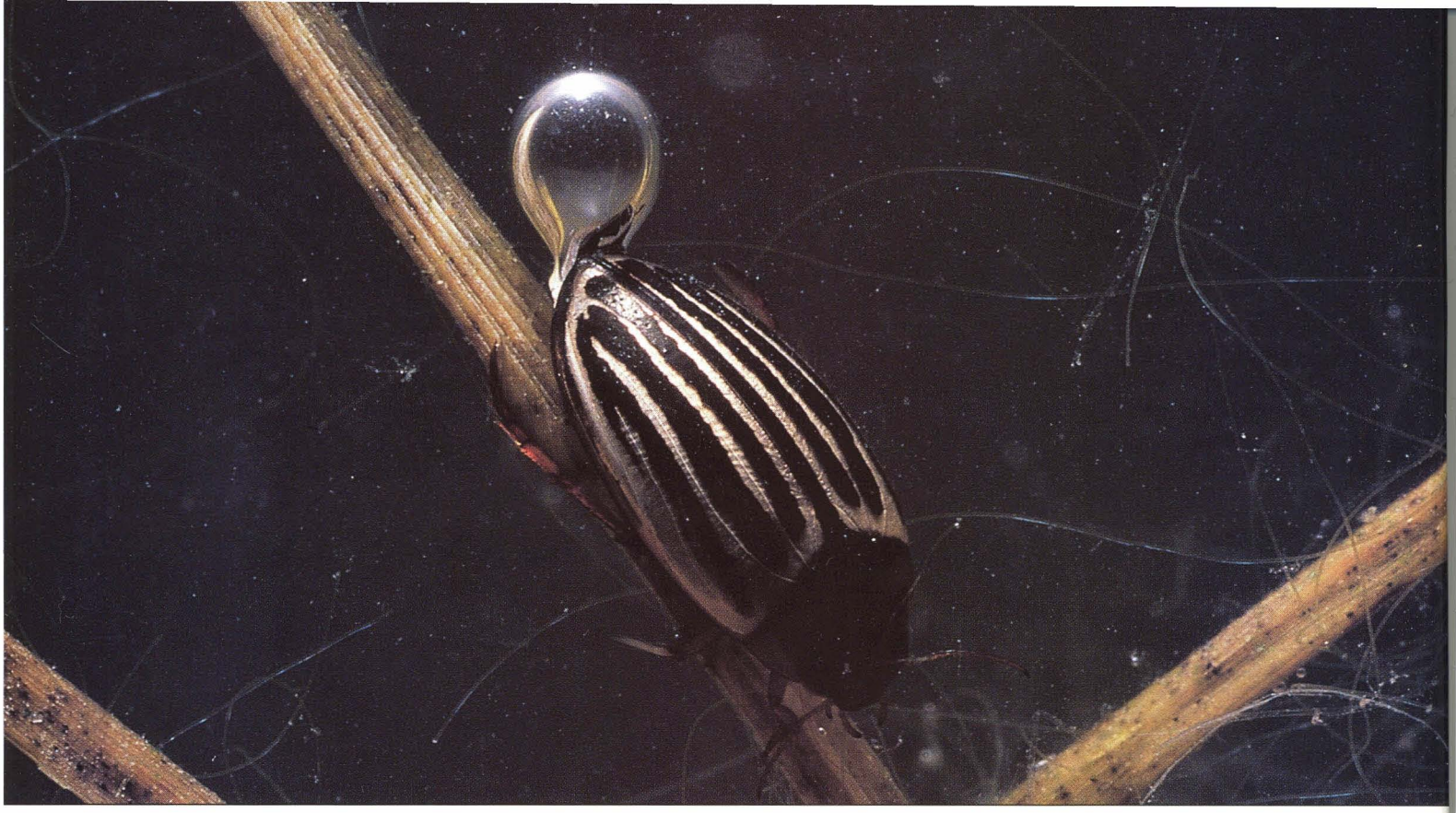
The Monarch Watchers Website provides another opportunity for students and interested participants to contribute drawings, ideas, projects and observations — all building blocks of research. The site draws an average of 200 viewers daily.

Each year, the obstacles in the monarchs' path become more numerous. Deforestation of Mexican over-wintering sites, herbicide destruction of milkweed — the monarch caterpillars' only food source, and encroaching development threaten the monarch's survival.

"It matters little to the survival of the monarch if we have strong migrations but continue to witness, for example, the deforestation of the monarch's Mexican roosting sites," Taylor said. Monarch Watch is working now to establish a contract with the principal ejidos, or landholders, who manage the most visited roost sites." In addition, Monarch Watch is collecting materials for the schools in the communities within the monarch reserves in Mexico.

"The monarch's struggle is symbolic of larger environmental conflict," Taylor said. "We must find ways to educate ourselves, balance the needs of humans and other living things. Monarch Watch hopes to do just that."

For more information, write Monarch Watch c/o O.R. Taylor, Department of Entomology, Haworth Hall, University of Kansas, Lawrence, KS 66045. The toll-free phone number is 888-TAGGING, and the fax number is (785) 864-5321. Online, Monarch Watch can be accessed at www.monarchwatch.org. Their e-mail address is monarch@ukans.edu. To participate in the electronic discussion group, send the message "infor Dplex-L" to Listproc@listproc.cc.ukans.edu.



SCUBA Diving Bugs

by Mark Kumberg
fisheries biologist technician, Pratt Fish Hatchery
photos by Mike Blair

The biggest obstacle to life underwater is respiration — breathing. Many aquatic and semi-aquatic insects have evolved fascinating methods to survive in a watery world.

Ponds, streams, and wetlands are diverse environments and home to an immense variety of life. Perhaps the most varied and abundant are the insects. Some, like the diving beetles and backswimmers spend most of their lives submerged. Others, such as mosquitoes and dragonflies, begin life underwater and then become airborne. Each species is fascinating in its own way but perhaps most amazing are some of the adaptations that allow them to survive in the aquatic environment. The biggest problem in adapting to an aquatic environment would seem to be obtaining air for respiration, or breathing.

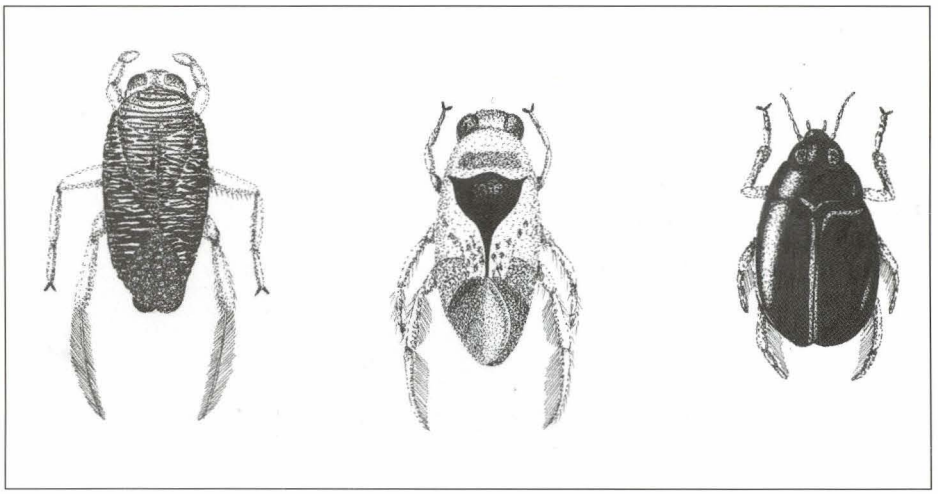
To understand how insects breathe underwater, a familiarity with insect anatomy is necessary. As insects evolved, a water-proofed exoskeleton was selected, and the surface area needed for oxygen intake has resulted from an extensive network of internal air tubes known as tracheae, through which air is conducted to every cell of the insect. Oxygen is carried directly to tissues by these tubes, and insect "blood" plays no role in the transfer of this gas to organs or cells. Trachea are used not only in carrying air to the body, but also in receiving and removing much of the carbon dioxide and other gaseous wastes produced by the cells. The radiating tracheole network resembles the capillary network in humans. Many insects have air sacs in the tracheae that expand or contract with muscular exertion allowing them to "breathe." Among both flying and aquatic insects, these air-filled sacs decrease the organisms' specific gravity, improving flight characteristics and buoyancy.

Some insects have openings, or spiracles, into the tracheae. This system is referred to as open. Spiracles vary from simple holes to highly modified structures with fil-

ters and valves. Each spiracle sends a tracheal branch to the muscles, the alimentary canal, gonads, and to the muscles and nerve cord. Normally, when a terrestrial insect is at rest, the spiracles are closed as much as possible to prevent loss of moisture. An insect will often use one or two pairs of spiracles while it is inactive. The others will open when the insect begins to move and needs to take in more oxygen and discharge more carbon dioxide.

Some insects have no spiracles and most of the oxygen absorption occurs through the body surface from the water itself. They are "thin-skinned," and there is a rich tracheal network just under the skin's surface. The most highly adapted insects are those which remain submerged, obtaining all their oxygen from the water. The majority have a closed tracheal system, into which oxygen simply diffuses through areas of thin cuticle. Sometimes these areas have specially developed plate-like or tufted gills such as those seen along the sides of the body of nymphs and some caddis fly larvae.

Insects are ectothermic, and the respiratory rate is dependent on the temperature of their environment. Species in the tropics have little difficulty in maintaining an active metabolism. However, for those surviving in cold regions of the world, nearly total inactivity occurs for significant periods of their life. This inactivity is advantageous, particularly during the winter for herbivorous species because their food source is not available and energy would be wasted by fruitless searching and activity.



Dustin Teasley illustration

Aquatic insects commonly seen at ponds and streams include the water boatman, left, the backswimmer, center, and the whirligig beetle, right.

The atmosphere is a reliable source of oxygen for aquatic insects because it is always available, except when the water surface is frozen. However, a total reliance on the atmosphere for oxygen limits the amount of time that many species can remain submerged. Each time an individual comes to the surface to breathe, the more likely it will be exposed to natural enemies. It isn't surprising then, that aquatic insects have evolved a variety of means to reduce the dangers of breathing at the surface.

As might be expected, insects living on the water-surface have no special respiratory adaptations. They breathe atmospheric air just as terrestrial species do. The simplest respiratory adaptations to aquatic life occur in species that live submerged but come to the surface periodically for a supply of air. Insects such as water scorpions have long breathing tubes protruding from their abdomens. They hang on vegetation below the surface waiting for prey. When air is needed, they back up the plant stem just far enough to reach the surface with their "snorkel" and renew their air supplies. Other insects such as predacious diving beetle larvae have terminal spiracles on funnel-like processes that project through the surface film and conduct air into the tracheal system.

Water-boatmen, backswimmers, and adult diving beetles visit the surface to renew a bubble of air confined beneath the wings or among hairs on the body. This bubble serves as more than just an extra supply of oxygen because it forms a physical gill. Oxygen diffuses into it and carbon dioxide out. Carbon dioxide never accumulates in this store because of its high solubility in water. The air bubble does get smaller the longer the insect

This giant fishing spider sparkles because of the thousands of tiny air bubbles trapped on its hairs. The air is absorbed through the skin while the spider is submerged.

The water scorpion uses a long air tube to take in air from above the water's surface.

remains submerged, chiefly because of the diffusion of nitrogen gas outward, and it is necessary for the insect to surface periodically to renew the bubble. The renewal interval is highly variable. Sometimes it is only a second or two, sometimes as long as several hours or days, depending on the temperature and the amount of oxygen in the water.

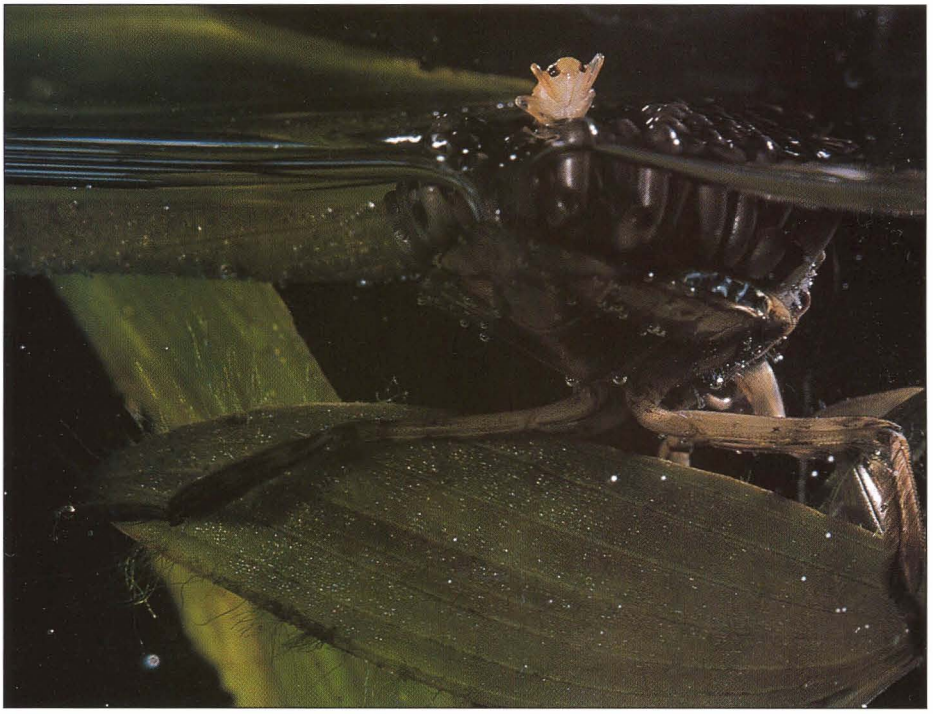
Water scavenger beetles utilize a different, though similar in function, type of air store known as a plastron. Plastrons are bubbles of air held in direct contact with large portions of the body surface by millions of fine hydrophobic hairs. Plastrons are utilized by aquatic bugs and beetles that creep about on submerged vegetation and rarely surface. There may be more than two million hairs per square millimeter of body surface. They curve at the tip and resist the tendency of water to compress and invade the airspace, up to a water pressure of four or five atmospheres. The volume of the air film therefore remains constant, and these insects are capable of remaining submerged indefinitely. The spiracles open into the plastron and there may be pathways through the hairs that allow the flow of air from the plastron to the tracheal openings. In essence, these insects have developed their own Self Contained Underwater Breathing Apparatus, or SCUBA, as an adaptation for aquatic life.

A few aquatic insets obtain oxygen by penetrating the tissue of aquatic plants and extracting the air trapped between the cells. When oxygen is in short supply, they pierce the plant tissue with a toothed siphon that has a spiracle near its tip.

One of the most common aquatic insects is the whirligig beetle. It is seen often because it spends most of its life on the water surface. This beetle has divided eyes that allow it to see in and out of the water at the same time. The paddle-shaped legs make it well adapted for rapid swimming. Whirligig beetles frequently fly, but cannot take off from the water and must climb up on some emergent object. These beetles are good divers and carry an air supply under the wings when submerged.

Giant water bugs are one of the most predacious insects found in water. They have a flat, oval body that is usually brown. The end of abdomen bears two short, straplike appendanges for breathing. It hangs upside down with its breathing tubes penetrating the surface film to renew its air supply. Giant water bugs feed on all kinds of aquatic organisms, including tadpoles, small frogs, and fish. These bugs grasp their victims with their front legs, and then inject a poison through their needle-like beak. They are known as "electric light bugs" because of their attraction to lights at night. Occasionally a giant water bug is seen that has what appears to be hundreds of tiny cigars sticking up from its back. The female

The water scavenger beetle uses a type of air store known as a plastron. The plastron is a bubble of air held in place by tiny curved hairs. Air is taken in through spiracles.



This male giant water bug has risen to the surface to allow young to hatch from eggs. The eggs are carried on the male's back until they are ready to hatch.

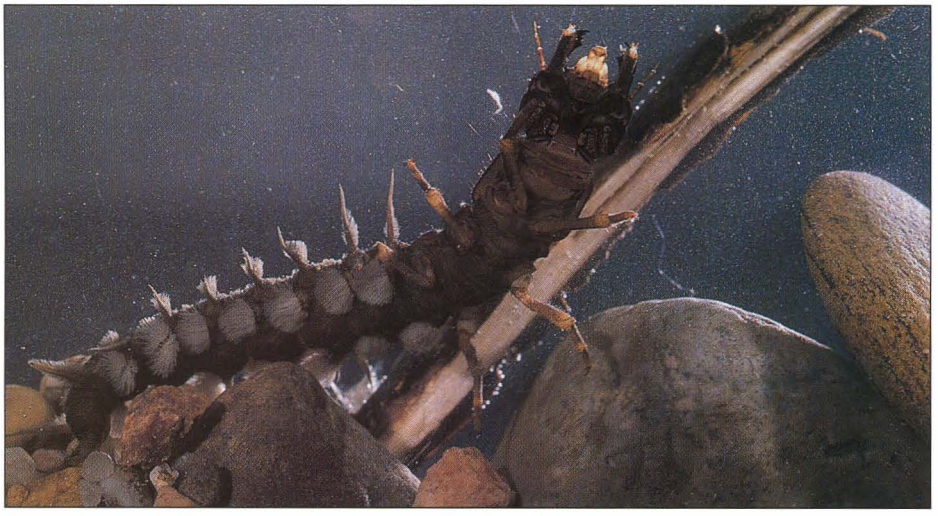
cements her eggs to the male, and he carries them until they hatch.

Equally savage but smaller is the water back swimmer. It spends most of its time in water but can fly from pond to pond on well-developed wings. As the name implies, the back swimmer swims upside down, on its back. Because of this, its coloring is reversed from that of most aquatic animals — its back is light colored and the underside is dark. This adaptation makes it less visible to predators from above and below. In the water, the back swimmer appears to be surrounded by a silvery-looking substance, like it has been dipped in mercury. Actually this is an air bubble that the insect has captured and holds in place by little hairs covering the body. As the bubble is used up, the backswimmer rises to the surface and with a quick, somersaulting motion, captures a new bubble. Its painful bite has earned it the nickname "water bee."

The water-boatman is the most common aquatic insect, both in species and individuals. It is similar to the backswimmer in size and shape and both hunt underwater. Its oar-like legs make it an excellent swimmer. Its body is almost completely enveloped in a film of air and because it hunts underwater, it must fight natural buoyancy by clinging to submerged objects when it is not swimming. Most water-boatman species are strong flyers and take off easily from the surface of the water. Occasionally these insects may fly from the water surface in such numbers that it appears to be snowing in summer.

You've seen dragonflies buzzing along pond margins like World War I flying aces, but have you ever wondered where the young dragonfly lives? The dragonfly nymph, called a naiad, dwells on the pond bottom sprawled out in a spider-like fashion. It's modified mouth parts are unique. The hinged lower lip can shoot out and grab a passing insect, small fish, or other prey. Oxygen is obtained through water held in the barrel shaped rectal chamber. This cavity contains many minute tracheal gills. If the rectal muscles, used normally in exchanging water, contract strongly, water will be forced out rapidly, and form of "jet propulsion" occurs that moves the animal forward at 30-50 centimeters per second. This mechanism helps the naiad avoid predators.

Given the opportunity, who hasn't gazed into the watery world of a pond or stream and wondered what fascinating forms of life await the eye? Watch any pond for a few minutes, and you're sure to see a whirligig beetle, backswimmer, or water-boatman busily swimming or diving in the water as they search for food. These small animals serve as an important food source for fish and sometimes the fish are food for them. Their adaptations over thousands of years have allowed them to become an important and fascinating part of the underwater kingdom around us.



This menacing looking insect is the nymph stage of the dobson fly. The nymph spends three years in aquatic life before emerging as a large winged adult insect.

Deducts
. . . a plague on our deer herd

by Mike Ehlebracht
conservation officer, Great Bend

Last deer season was going along just fine. It was late November, and I hadn't killed a deer yet, but that wasn't unusual for me. I was having a great time just being out in the woods, communing with nature.

On the way home from hunting one morning, I stopped to compare notes with a couple of hunting buddies. We were trading stories when one of them asked if we'd heard that Joe had got a nice deer.

"But I heard it had a lot of deducts on it," he said in a serious tone.

I didn't say anything, but they lost me as they discussed deducts, explaining that some deducts can really knock a deer down. That got my attention!

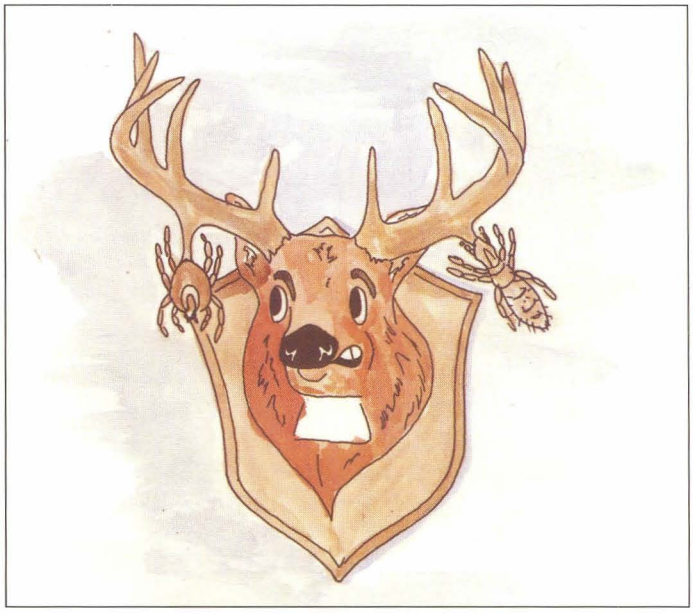
On the outside, I was nodding in agreement. After all, I didn't want to look like an idiot. But on the inside I was thinking, "Holy cow! What kind of monstrous parasite can take a full-grown buck deer to the ground?" I thought about all the deer I had taken. Granted there haven't been all that many, but I couldn't recall one with a deduct. Sure I've shot deer that had tics, and one even had a warty growth on its brisket, but I'd never seen a deduct.

"I've never shot a deer with any deducts." I said not wanting to be left out of the conversation. There was a long pause. Then they both assured me that I had.

This news was just about more than I could take. When they told me that every buck has deducts, I was really concerned. My mind took off in high gear. I wondered if the Game Department knew about this, and if they did, what they were doing about it. These nasty things could wipe out the deer herd. And if all this wasn't enough, my buddies told me they knew of a buck that had a single deduct that measured more than 8 inches!

When I left my buddies, I must have looked like some kind of zombie. I couldn't shake the picture of these hideous varmints attaching to deer, then multiplying to such a number that they could actually subdue the animal. The very thought of it was enough to send me running through the timber, screaming and waving my hands wildly over my head.

After I calmed down, I decided to take action. I wasn't about to let one of these deducts get on me. Ticks and chiggers are bad enough. I went to see Chuck, a friend who owns a sporting goods store and knows everything about hunting. He'd know what to do. Before I walked into the store, I gathered myself. I didn't want to appear totally ignorant. I strode in the door with an air of confidence and leaned on the counter where Chuck was waiting.



Dustin Teasley cartoon

"Give me a can of your best deduct repellent," I said firmly.

There was a long pause. I think I started to sweat. Chuck leaned forward with both hands on the counter, raised one eyebrow and said, "What?"

I tried not to show it, but I was shook. Trying to save face, I propped myself up and without missing a beat said, "You know, deduct repellent. I don't want any of those filthy suckers getting on me."

Once I picked Chuck up of the floor, and he quit laughing, he spent the next 30 minutes explaining deducts. I was relieved to learn that deducts weren't parasites after all. Chuck explained that deduct is a term used in scoring a deer's rack. Boy, did I ever feel silly. Chuck said that deducts are points that don't match from one side to the other. So, you have to subtract these so-called trash points and other imperfections from the final score. Then you'll know how good your deer is.

I decided that I was right all along. I never have shot a deer with any deducts on it. And what's more, I doubt I ever will.

Edited by Mark Shoup

WHAT ABOUT RABBITS?

Editor:

I just finished reading an article in another outdoor magazine that talked about the fun that an outdoorsman can have chasing hares/rabbits and how they can be used to keep one's marksmanship skills sharpened in the off seasons.

I know that rabbits are plentiful and not often hunted here in Kansas despite the fact that the season is open year round. I'm curious to know several things now that I had previously been ignorant of:

1. Are there some areas here in the state where rabbits are more plentiful than others?

2. What can you tell me about the diseases that they supposedly carry and how to spot tell-tale signs in the game I hope to harvest?

3. Like fishing, what are the most productive times to be afield in hopes of harvesting some cottontails?

4. In your opinion, will most landowners allow a person to hunt on their land, (after properly seeking and getting permission), or will I be laughed at for even asking in the off season?

5. Is there anywhere I can get some decent recipes for preparing and serving this type of game once I get it home?

Larry D.Hamm
Wichita

Dear Mr. Hamm:

1. Generally speaking, there are more rabbits the farther east you go.

2. The disease is tularemia. If you see any animal that appears sick, leave it alone. When cleaning rabbits before the first hard freeze, wear rubber gloves. The disease can be transmitted through scratches in the skin. White spots on the liver indicate that the rabbit has tularemia. Thorough cooking will kill the disease if you want go ahead and eat it.

3. This is difficult to say. They have more cover in summer, and after snowfall is a great time to hunt rabbits. In summer and early fall, look for them in early morning and late evening.

4. Many landowners won't care if you hunt rabbits as long as they don't have livestock nearby.

5. Rabbit is delicious cooked just like chicken, but you'll find many great recipes in a wild game cookbook, available at most bookstores.

-Shoup

WHY FEWER ANTLERLESS PERMITS?

Editor:

The news release dated June 18 contains two initiatives that are intended to help stabilize deer populations. I find this peculiar because the number of antlerless-only firearm permits have declined substantially in units 10 and 11. In unit 10, the number of antlerless-only permits have decreased from 2,400 in 1997 to 500 in 1998, and Unit 11 from 3,900 in 1997 to 1,000 in 1998.

There seems to be some conflicting messages here.

Sam LeVar
Shawnee Mission

Dear Mr. LeVar

Good point. I'm always impressed when people carefully evaluate these numbers and come back with a question like this.

We reduced the number of antlerless-only permits in a few units where we authorized game tags, which allow a hunter to take an antlerless whitetail. The game tags are unlimited, cost only $10.50, and any hunter with a deer permit may purchase as many as two game tags. Because they are unlimited, they are not counted in the firearms permit authorization. We do, however, have estimates of the number of people who will purchase a game tag, and we used that to adjust the permit numbers.

I estimate there will be more than 15,000 game tags used in units 10 and 11. When you add them to the other permits that are authorized, you see a substantial increase in the potential harvest of antlerless deer, and that is exactly the message we tried to convey in the news release.

A question you might ask is, Why did you keep any antlerless only permits in a unit where game tags where authorized? The answer is that there may be some people who are unsuccessful in obtaining an any-deer permit. Without a permit, they would be unable to obtain a game tag. The antlerless-only permit allows these hunters to stay involved. The restrictions on the any-deer permits will maintain deer quality standards that Kansans have become accustomed to. We have done this in other units. For example, when we started using game tags in Unit 12a, we stopped authorizing antlerless-only permits.

It may take some getting use to, but I believe you will appreciate the changes we made this year.

-Lloyd Fox,
big game coordinator, Emporia

WHERE IS WIHA?

Editor:

This letter is to ask if you could either print or issue a special edition of your magazine that would include all maps of Walk-In Hunting Areas. While back in Kansas last fall and again in January, I had a hard time finding these at several outlets that supposedly carried them. Because these areas may change from year to year, it would be a great thing to publish a special edition in the fall that would include all 105 counties of Kansas, or at least the counties that have WIHA.

My annual or semi-annual returns to Kansas are usually during upland game season, and these would be of great help to me.

Daryl Rollings
Mineral Wells, Texas

Dear Mr. Wells:

Thanks for your interest in WIHA. Because our magazine is printed on more expensive paper than the annual WIHA atlas, printing it as a special magazine edition would be cost prohibitive.

Also, many people who don't need it would receive it.

However, the atlas is available to anyone just by phoning the Pratt Operations Office, (316) 672-5911. If we don't have it printed yet, we put them on the mailing list to receive a copy when they are ready.

-Shoup

PUT A SOCK ON IT

Editor:

Have you ever put camo tape on your shotgun? Does it work good? Does it hurt it? Does it come off ok?

I found a camo sock at the Bass Pro Shop. I was going to try to make do with that, but I know that it would be better (I think) to tape it.

Carolyn Hudnall
Seattle, Wash.

Dear Ms. Hudnall:

While socks are handy in some ways, they are also a pain. They can catch on brush, and you can't really cover your action well if you're using a pump, or your receiver if you're using an autoloader. Tape works much better.

Of course, I wouldn't put tape on a fancy gun. Most people have a less expensive gun with a three-inch chamber they use for turkey hunting. They tape this gun up just for turkey and goose hunting. Getting tape off can be tough, and the solvent you use to remove the glue could damage your stock.

Shotguns of varying prices also come with a matte finish, which I like a lot because it's not shiny. The main thing when turkey hunting is to be well hidden and still. Turkeys will pick up on movement in a heartbeat, even if it's camouflaged.

-Shoup

CALIFORNIA TEACHER

A few months ago, an online buddy from Kansas paid for a subscription to your magazine for me. I have enjoyed it immensely. When the Jan./Feb. issue came with all the wonderful pictures, I knew my kindergarten children would enjoy looking at it.

When I told them the name of the magazine, they naturally said, "Oh, where Dorothy lived!" They pored over the magazine and talked about the pictures. I decide to make a graph of their favorite pictures. I gave each child a sticky note and had the kids place them on the one's they liked the best.

This was fun, and it has been fun for me to see such beauty in the many scenes of Kansas. I had no idea it was such a picturesque area. Thank you for the wonderful magazine.

Pollyanna Sorenson
Santa Barbara, California

WHERE ARE CHICKENS ?

Editor:

I am writing to express concern about low populations of prairie chickens in Anderson County. I believe a lot of factors have contributed to this condition, among them weather and predators; however, it seems to me a noticeable decline started with the introduction of the early chicken season. In our area, we do not have the expanses of grass as in the Flint Hills, and the birds are easier to locate. I am a bird hunter, and if the numbers were there, I would enjoy taking advantage of this opportunity. But I feel it has had a negative impact on the population.

I suggest that KDWP survey this area of the state to determine the cause of the problem. Also, I would like to see the season closed or greatly reduced in this area until conditions warrant them being liberalized.

L. J. Sayers
Paola

Dear Mr. Sayers:

I agree with you that prairie chicken populations are not what they used to be. I suspect several habitat/weather-related factors are the cause. We started having poor nesting/brood rearing conditions (weather) in 1992, and this probably accounted for at least some of the short-term decline you have noticed.

The last couple of years, however, weather has been reasonably good. It is likely, especially under somewhat broken-up habitat conditions, that one or more of the following are playing a more long-term role: (1) has burning frequency and/or intensity increased in the prairie chicken range you are concerned with? We now have evidence that annual burning can reduce the success of ground-nesting birds by 95 percent in the year of the burn.

Burning is good if done every few years, leaving a mosaic of burned and unburned pastures in any given year, but it can be a problem if done every year on a widespread basis as is happening more often. Where many ranchers were previously unconcerned about odd areas that did not get burned, now they often go back and "clean up" unburned areas with smaller burns, sharply reducing nesting opportunity for prairie chickens; (2) has there been a change in the type of livestock management going on in your area? If early-intensive grazing is starting to catch on, this may be much of the problem. Under that system, pastures are heavily stocked in May and June (early July?), and then cattle are completely removed. This seems to be a good way to put pounds on cattle, and the pastures usually recover nicely in the late summer, but this system appears to leave little for ground-nesting birds during the critical reproductive period;

3) has there been a long-term encroachment of woody vegetation (e.g. scattered hedge trees) in the pastures you're watching? We really are not certain, but this may adversely affect chickens by increasing raptor predation.

I am not particularly familiar with that area, but I would be willing to bet that land use has changed in some important way, and it is that change that is driving chicken numbers lower.

What I am relatively confident about is that hunting, including the early season, is not the cause of lower chicken numbers in your area, unless the pressure occurring on that area is extremely heavy. Do you see really heavy hunting pressure in that area during the early season?

Currently, a graduate student at Kansas State is looking at our long-term prairie chicken data and is looking to see if there is a correlation between these declines and changes in land-use. It will be another year before we have any results from that study.

-Randy Rodgers,
wildlife research biologist, Hays

AVOID MARINE THEFT

In the summer of 1996, I checked a personal watercraft (PWC) for a boat identification plate and found that it had been removed. Further investigation of the operators of the vessel revealed that the PWC had been stolen by a man who had access to gate codes of a storage facility, where he had cut the lock on the compartment where the vessel had been stored.

In this case, the boat owners were lucky, the thieves unlucky, but it doesn't always turn out this way. Marine theft is quite common, especially with a personal watercraft, which is light enough to steal quickly and expensive enough to make it worthwhile for the criminal. Here are a few precautions you can take to protect your boat:

1. *Always record the serial numbers of your boat, motor, trailer, and other equipment, and any other identifying features, and keep them in a safe place.*
2. *Place your own identifying marks, such as social security number, in several hidden places on the property.*
3. *Padlock your trailer to the bumper hitch while transporting, and lock the hitch while at the lake.*
4. *Store your vessel in a locked, lighted location.*
5. *With smaller vessels, padlock the vessel to the trailer.*
6. *If any belongings are stolen, report it immediately to a law enforcement agency.*

- Dan Heskett,
boating enforcement officer, Haven

ELK COUNTY MULIES

Elk County isn't considered a common place to find mule deer, nor should it be the place to find an Oklahoma hunters trying to harvest Kansas deer. But this is the story of a lost mule deer meeting Oklahoma hunters in Kansas.

On the opening weekend of Oklahoma's deer season, I received a call from a Howard bowhunter who had heard a high powered rifle shot and watched a pickup leaving the area.

Two weeks earlier, this same bowhunter, in the same place, had found the carcass of a large buck that had been shot with a rifle and its head removed by the poachers. Suspecting the same thing might have happened, he went to the area and saw a wounded six-point mule deer get up and go over the hill.

I felt there was a good chance the poachers intended to return later. The bowhunter and I trailed the mule deer for nearly a half-mile before finding it. I loaded the deer in my truck and returned to where it was shot to wait for the poachers, but they were already in the field looking for the deer. When they saw me, both men lay down in the heavy grass.

Seeing that there was no vehicle nearby, I realized that the men had been dropped off. I radioed the Elk County dispatcher for assistance then entered the field and arrested the closet man. The second was arrested by CO Bob Funke, Fredonia, more than an hour later. The person who dropped them off returned, and he was also arrested for his role in the incident.

All three men were booked into the Elk County Jail where they posted a total bond of $3,000 before being released late that night. In court, the three pled guilty to eight charges and paid $1,294 in fines and court costs.

-- Dan Melson,
conservation officer, Eureka

FRIDAY THE 13TH

On Friday, Feb. 13, a Wichita woman learned that Friday the 13th really is a bad luck day. While checking fishing licenses at an area lake, I asked a couple for their licenses. The man told me his was up in the vehicle, so I told him to go get it. The woman said her's was in her purse in her car, which was at home. I issued her a ticket for "failure to produce a valid fishing license" and told her she would have to show the license to the Sedgwick County District Court to get the ticket dismissed.

They both brought their lines in to leave, so I asked how far it was to get her license, and they said about 5 miles. I told them I would hold her poles, and if she brought her license back, I would make her ticket a warning. I explained that this would save her from driving downtown to the courthouse to show them the license. They agreed and left to get the license.

When they returned 45 minutes later, I asked if she had found her license, and she said that she just grabbed the purse when they got home and hadn't looked for it yet. She took a little time shuffling paper around until she found it.

However, several things made me suspicious. The first was the time it took them to return. Also, the license was not wrinkled, and it was bought the day before, during the exact time of day they had been gone, at a nearby bait store. I used my cell phone to call the bait shop and asked if a woman had just bought a fishing license. The clerk said "yes" and gave me the name, which was the name of the woman I was checking. I also asked what the woman had said to convince him to change the date on the license. She had told him that she was highly "religious" and didn't want Friday the 13th on her license.

When I returned to her vehicle, I said, "I hear you are an extremely religious woman and are scared of Friday the 13th."

She just looked down and said "yes." I wrote her another ticket for "misrepresentation to purchase a fishing license" and kept her fishing poles. She told me this really was a very unlucky Friday the 13th.

The woman pled guilty on both counts and was fined $10 and $45 court costs on the first charge. On the second, she was fined $500 and $45 court costs. The clerk was not charged, but the store owners are now aware that they could lose their privilege to sell licenses if this happens again.

-Alan Hulbert,
conservation officer, Valley Center

NASA Honors KU Program

A year ago, the Kansas Applied Remote Sensing (KARS) Program of the University of Kansas concluded a memorandum of understanding with National Aeronautics and Space Administration (NASA) officials that designates KARS as a NASA Regional Applications Center (RAC)

NASA's overall goal in establishing RACs is "to foster the self-supporting use of environmental and Earth resources data (from satellites and other sources) by regional institutions, including state and local government agencies, universities, consortia, and commercial companies."

As a Regional Application Center, KARS will cooperate with scientists at NASA's Goddard Space Flight Center, Greenbelt, Maryland, in calibrating and validating data from NASA satellite sensors, including those in the next-generation Earth Observing System Program. In addition, KARS researchers will help develop and disseminate valuable environmental products to consumers.

Under the RAC concept, NASA will provide software that collects and analyzes satellite data and generates products from this data. The University of Kansas Office of Research and Public Service has provided funding to purchase a high-capacity graphics workstation that will run the RAC software.

Designation as a Regional Applications Center means that the University of Kansas joins a select group of universities cooperating with NASA on this effort. It also marks the continuation of a 25-year partnership between NASA and the KARS Program. Through its work as a Regional Applications Center, KARS will continue to be at the forefront of remote sensing research and product development and will have access to the latest technology and data from NASA's satellite sensors.

--Biota

Mutant Frogs No NINJAS

The United States Geological Survey (USGS) is asking for help in the scientific investigation of deformed frogs, toads, and salamanders.

"We need rigorous scientific investigations as well as observations from the general public to understand the observed decline in North American amphibian populations and the increase in reports of deformed amphibians," said Denny Fenn, chief of the Biological Resources Division of the USGS. "Many amphibian species, including northern leopard frogs, Pacific treefrogs, and several species of salamanders, have been found with deformities. Although it has not been unusual to occasionally find a deformity, only since 1995 have these reports become more common."

Amphibian sightings can be reported online to the North American Reporting Center for Amphibian Malformations, http://www.npsc.nbs.gov/narcam. This website, which is jointly funded by the USGS and the U.S. Environmental Protection Agency (EPA), provides background information on the problem, maps of known incidences, and other information, as well as data entry forms.

Reports may also be phoned in to 1-800-238-9801.

In addition, the EPA is installing $1.5 million worth of equipment to track what is causing the increasing numbers of deformed frogs. The equipment will track the ultraviolet radiation in 12 national parks in a wide range of climates, including the Great Smoky Mountains in North Carolina and the Florida Everglades.

--Farmers and Wildlife

KDWP AIDS WATER QUALITY

The Kansas Department of Wildlife and Parks resumed biological monitoring in the Kansas-Lower Republican River basin in late May 1998. Through the summer, a stream survey crew sampled fish, aquatic insects, and freshwater mussels at 45 sites in the basin. In addition to biological sampling, the stream survey crew also collected water quality and physical habitat data.

The Kansas-Lower Republican basin crosses the Smoky Hills, Flint Hills, and Glaciated Region physiographic provinces of northcentral and northeast Kansas. The basin has been targeted by Governor Graves' Water Quality Initiative for increased water quality monitoring and reduction of sediment, pesticide, and fecal coliform pollutants.

The KDWP stream monitoring project is one component of the Clean Water Initiative and is funded with Kansas Water Office and federal Sportfish Restoration Act monies. Twelve of the 45 sampling locations are adjacent to Kansas Department of Health and Environment water quality stream monitoring stations. The two agencies' combined data sets will allow analysis of relationships between levels of chemical, bacterial, and sediment pollutants and the health of wildlife communities dependent on aquatic resources.

This year's stream survey in the Kansas-Lower Republican (KLR) is the last of the three-year KDWP study. Ninety samples have been collected in the basin over the two previous years. Ten of the sites in 1997 were located in the Horseshoe Creek watershed, near the Nebraska state line in Marshall and Washington counties. Biological and habitat data from this sampling will be incorporated into a pilot comprehensive watershed plan being developed by the Horseshoe Creek Watershed District, another component of the Governor's Water Quality Initiative.

An Index of Biotic Integrity, or IBI, has been developed for the KLR basin to help analyze the health of fish populations. An IBI is an analysis tool that organizes and summarizes fish species and abundance data, condensing numerous pages of data down to a

number. Some researchers have compared the IBI to the well-known Consumer Price Index, an indicator of the health of the national economy. Biological monitoring and the IBI were born out of the inadequacy of traditional physical and chemical monitoring methods to address impacts of human-induced changes that degrade both water quality and wildlife habitat. IBI scores may comprise a valuable framework for investigations of habitat loss on a basin-wide scale.

The majority of the KDWP biological stream survey sites this year have been sampled in one or both of the two previous years, providing researchers with an understanding of fish population and habitat variation from year to year.

This is tough, muddy work, but the KLR crew members are tough, too, and they know they're working for a good cause. The bulk of their work at each site is collecting a sample of fish through seining with large nets, as well as shocking. Stream and stream bank habitat must also be evaluated at regular intervals.

Ultimately, all the data will be summarized into a report describing the strengths and weaknesses of the streams within the watershed. In addition, members of the public, researchers, state and federal agencies, and water resources developers will have access to summaries of the data through the KDWP homepage.

--Karen Yates, stream fisheries biologist, Pratt

DAM RENOVATED

KDWP has recently completed repairs to Ottawa State Fishing Lake. The project cost $660,000 and consisted of raising the dam four feet, flattening the downstream slope, sealing cracks and joints on the upstream slope, installing a drainage system to control the flow of groundwater through the dam, resurfacing the spillway, and reshaping and riprapping the stilling basin.

Fences were constructed at both ends of the dam. Biodegradable erosion control fabric mats were placed on the slopes -- a first for a department-owned dam. This mat will cover the ground while the grass is growing. The dam now meets current safety criteria, has a downstream slope that can be maintained with proper equipment, and has a seepage control system. Due to the construction of a house downstream of the lake, the dam crest was raised four feet. The dam was seeded with annual rye as a temporary cover and buffalo grass as a permanent cover. It may be two years before the buffalo grass is established.

Construction started in November 1997 and finished in June of this year.

Ottawa State Fishing Lake was originally built in 1927, making it one of the oldest state fishing lakes. The lake impounds 111 surface acres of water and is located in Ottawa County on Sand Creek, 24 miles north of Salina. It contains good populations of black bass, channel catfish, and sunfish.

--Russell LaForce, engineer, Topeka

BOWHUNTERS PLANT HABITAT

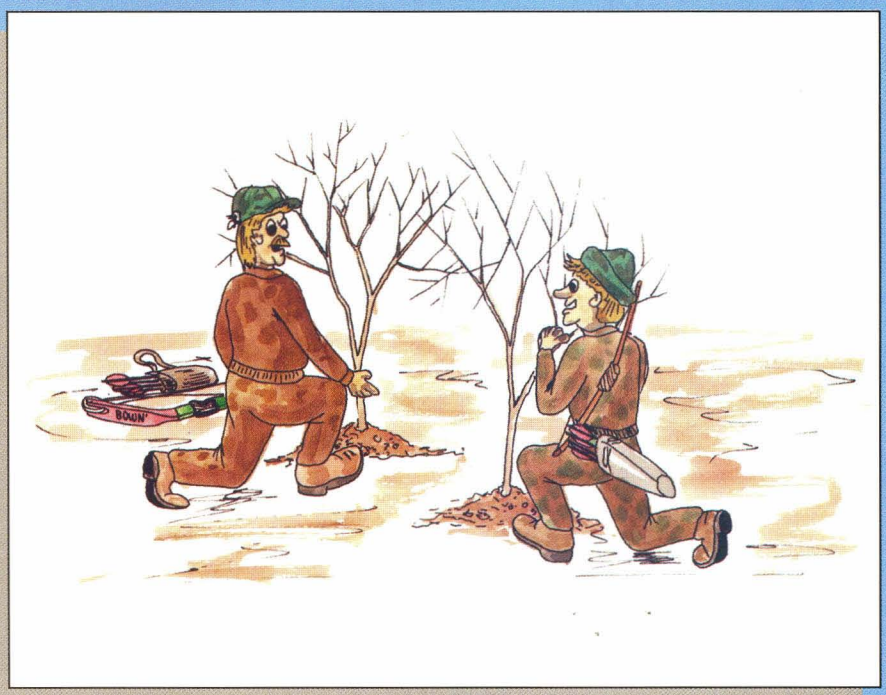
Can you imagine planting 50,000 trees? This is what the Kansas Bowhunters Association (KBA) has accomplished on five wildlife areas across Kansas over the past six years. If these trees were spaced 15 feet apart, they would create a tree row 150 miles long covering 500 acres.

On April 25, the KBA continued this tradition of natural resource stewardship and cooperation on the Elk City and Duck Creek wildlife areas, near Independence. KBA members provided bare root trees, stratified seed, and labor while working with Kansas Department of Wildlife and Parks staff to complete three plantings of almost 4,000 trees.

In 1993, the KBA started planting bare-root trees and stratified nuts on public lands across the state, focusing primarily on habitat that had been destroyed by flooding. These reforested areas will provide habitat for a variety of wildlife species, from songbirds to deer and turkey.

In recognition of this work, the KBA received the 1997 Kansas State Foresters Award for outstanding service. And their work continues. Each spring, KBA members travel across the state to complete conservation projects on selected Wildlife and Parks lands. The KBA receives most of its financial support from the Lafarge Corporation, one of the largest producers of cement in the world. With their financial support, the KBA plans to continue the tree planting program for years to come.

--Darin Porter, public land manager, Independence



REPORT BANDED BIRDS

Everyone who hunts migratory birds loves to bag a bird with a U.S. Fish and Wildlife Service (USFWS) band. If reported to the Service, these bands can provide interesting information on the origins of the bird. Unfortunately in the past, some bands ended up as nothing more than decoration for duck call lanyards because hunters failed to report them.

Past reporting procedures may have been to blame, or hunters may have misunderstood the procedure and felt they had to return the band to get the information. All they really had to do was write the Service and report the band number and harvest information. Hunters have always been able to keep the bands.

In any case, the procedure for reporting bands got much easier in 1995 with the establishment of band recovery toll-free hotline - 1-800-327-BAND. With this change, Fish and Wildlife Service staff believe reporting rates have improved dramatically over the previously estimated 33 percent report rate. Last year in Kansas, 77 percent of all reports were made using the toll-free number, the highest use rate in the Central Flyway.

"Banding is one of the oldest and most important migratory bird monitoring programs in North America," says B.H. Powell of the U.S. Bird Banding Laboratory (BBL) in Laurel, Maryland. "In order to effectively analyze banding and recovery data, it is necessary to know the rate that encountered bands are reported to the BBL. Low reporting rates increase the cost to state agencies by increasing the sample size needed for meaningful data analysis. But our toll free number has been an extremely effective method that allows hunters and other persons encountering banded birds to report the bands."

If you harvest a banded bird this fall, you can easily find out where the bird came from, how old it was, and other information on the bird. It's free, and it's as simple as phoning 1-800-327-BAND.

In addition, Wildfowl.net (a non-profit webpage) -- www.wildfowl.net -- has recently teamed up with the U.S. Fish and Wildlife Service to create an on-line waterfowl band submission page. Now, when waterfowl hunters across the country harvest a USFWS banded bird, they can report the bands on-line and the Bird Banding Laboratory will receive the information instantly. To report bands online, go to the waterfowl band submission page: www.wildfowl.net/band.html.

By reporting the recovered band, you will not only assist the USFWS in collecting important data that helps the natural resource you love, you get to learn some interesting facts, too.

And, yes, you get to keep the band.

--Shoup

MORE MCPHERSON

Ducks Unlimited recently submitted the third North American Wetlands Grant for the McPherson Valley Wetlands. This grant was written with more emphasis on the development of the project. The grant proposal included 11 new moist-soil management units that comprise 11 miles of levees, 30 water control structures, two water relift pumps, and one new pump site. This development cost is estimated at $792,190. The grant also includes $308,000 for land acquisition.

On July 8, the North American Wetland Conservation Council met in Canada to discuss several wetland grants. The council then recommended the third phase of the McPherson Valley Wetlands for final approval by the Migratory Bird Conservation Commission in September.

This grant request is for $297,760 with eight partners that have agreed to provide $849,500 in matching funds. The partners of this project include Ducks Unlimited, the Kansas Department of Wildlife and Parks, the U.S. Fish and Wildlife Service, the Natural Resources Conservation Service, Western Resources, the R. Michael Rhodes Foundation, The Nature Conservancy, and Eleanor Clark.

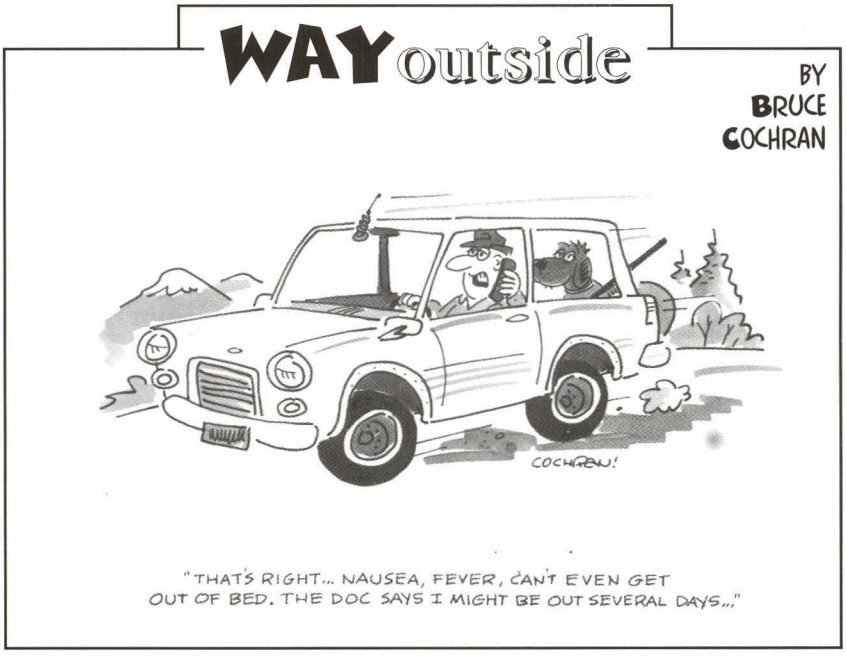
--Todd Pesch, public lands manager, McPherson

WHAT'S IT WEIGH?

Experts say the field-dressed weight is about 78 or 79 percent of the live weight, so a deer that weighs 120 pounds at the locker plant probably weighed about 152 pounds live weight. That same deer should yield about 58 percent -- 70 pounds -- of its field-dressed weight in boneless meat.

If the deer was weighed after dressing, skinning, and removing the head and forelegs, it will yield about 72 percent of that weight in boneless meat.

--South Dakota Game, Fish & Parks News



OF MILLENNIA AND MEN

by Mark Shoup

As we approach the millennium, I become aware of subtle distortions in time and space. My first hint of this phenomenon came when I noticed that it takes longer for me to run 20 minutes than it used to.

My 11-year-old golden retriever has noticed it, too. The other day, I called her from across the room, and she just sat there gazing out the window, like a cat. I called again. Still no response. On the third call, she jumped as if just frightened from sleep and came running over, confused and excited. The only explanation is that time must have slowed for an instant, or space lengthened, delaying her reception of my auditory command.

Come to think of it, my wife seems to be experiencing this same effect. Of course, she doesn't fetch herself with tail wagging, intent on my every word. More likely, she'll try to hide the experience with an offhand comment like, "I'm sorry, Honey. Were you talking to me?"

There is more evidence to support my theory. While bowhunting last fall, I released an arrow that flew so slowly you could have reached out and grabbed it. The buck hopped easily out of the way and continued grazing nonchalantly. Was the deer aware of this phenomenon or just the limitations of my accurate range?

The timing of these events seems random: getting up in the morning, wrestling with my kids, crossing a fence. My body just locks up, and time is suspended for several seconds. Nothing will move, and I get the distinct feeling that I am in a movie scene that has been slowed down for special effect. Psychologically, this is unnerving, like the dreams we have as children where we find ourselves at the movie theater in our underwear. Or worse.

I'm not sure what all this means, but combined with predictions from computer geeks about the dire effects of the Year 2000 on everything from Lotto picks to power grids, it's enough to make you want to grow a beard, put on a white robe, and carry a sign into Times Square.

Geeks call it the Y2K problem. For those of you as computer illiterate as I am, "Y" means year; "2" means, well, two; and "K" is reference to a unit of computer information called a kilobyte. "Kilo" means 1,000, and "byte" means something really bad has happened, as in "In the year 2,000, I turn 50, and that really bytes."

Some think this power grid thing is especially scary. A highly computer-literate city friend of mine says that our computers, by the design of their operating systems, are "scheduled to crap out the moment the clock strikes 12 in the year 2000?" He babbles on about something called "bine-hairy code," the thought of which makes me itch. I can't imagine what this has to do with computers.

"Well," says my friend, "the evidence is rolling in. Power companies are now saying that it's not a question of 'if' but rather 'how many' grids will go offline at the fateful hour. It'll be like the Northeast Blackout in '65. Years from now, we'll be telling our grandkids, 'I remember where I was when the screens went blank' ."

But the power grid thing doesn't bother me nearly as much as this time-space warp I've experienced. While the cities are writhing in chaos, I'll be safely ensconced on the lonely Kansas prairie, where folks help each other and are resourceful enough to deal with this kind of nonsense. We hunt; we fish; we live off the land and have long before all these consarn computers began mucking up the world. We come from hearty pioneer stock. We're resilient, adaptable, imaginative. We'll be the first to raid the local supermarket's toilet paper aisle.

No, it's this distortion thing that's got me wondering if the doomsday millennialists aren't on the right track. What if it's like approaching the speed of light, where time slows way down, only in this case everyone experiences it. What if these events become more and more frequent until one New Year's Day I find myself straddling a fence and then I'm just stuck there for all time? Of course, at this point in time there is no time, so what does that mean?

Perhaps the phenomenon will continue its evolution and begin reversing itself. This might not be so bad. I'll start getting younger. Not that age has anything to do with it, but perhaps my wingshot will return. The buck will never know the arrow is coming. I'll bounce out of bed in the morning, wrestle my kids to the floor, command my wife's rapt attention and a kiss goodbye, and run to work with the dog trotting eagerly at my side.

On second thought, this time-space distortion phenomenon might not be too bad after all, as long as it has its limits. Maybe time is just trying to reset itself to, say, 1990. Let's hope so. I can't imagine waking up some morning as a teenager.

F.I.S.H. Kansas

The Fishing Impoundment and Stream Habitats (FISH) program is a pilot project started in the spring of 1998. Based on the highly-successful Walk-In Hunter Area program, FISH is designed to give more Kansas anglers the opportunity to enjoy the state's diverse fisheries. Common sense and ethical behavior will ensure that the program may be expanded for all to enjoy in the future.

On occasion, sites enrolled in the program are removed at the landowner's request. Make sure the land you are entering is posted with the FISH area signs.

Funding for Fishing Impoundments and Stream Habitats Areas has been provided in part by fishing license fees. The following is a list of areas enrolled as of late July:

--Steve Sorenson, Region 4 F &W supervisor, Wichita

County	Water Type	Acres	Location
Dickinson	Pond	14 acres	4 N, 3/4 W of Herrington
Graham	Pond	43 acres	4 N of Hill City
Harper	Pond	112 acres	4 E, 6 S, 3/4 W of Anthony
Jackson	Pond	26 acres	2 E, 1/2 S of Soldier
Jackson	Soldier Crk	0.6 mile	1.25 N, 4 E of Delia
Lincoln	Pond	12 acres	8 E, 2 S of Hunter
Mitchell	Pond	33 acres	11.5 S, 2.5 W of Beloit
Mitchell	Pond	23 acres	11.5 S, 2 W, .5 S of Beloit
Mitchell	Pond	23 acres	10.5 S of Beloit
Mitchell	Pond	55 acres	6 E, 5N, 1 E, 1.25 N of Hunter
Morris	Neosho R.	1.0 mile	Below Council Grove Reservoir
Nemaha	Pond	26 acres	2.5 W, 3/4 N of Centralia
Ottawa	Pond	25 acres	1 W, 4 S, 1 W, 1/2 S of Delphos
Rice	Arkansas R.	1 acre	2.25 S of Sterling on Hwy. 96
Rice	Arkansas R.	1 acre	3 W, 1/2 S of Sterling
Rice	Arkansas R.	1 acre	2 S of Alden
Rice	Arkansas R.	1 acre	1/2 S, 2 W of Alden
Rice	Arkansas R.	1 acre	1/2 S of Raymond
Rice	Arkansas R.	1 acre	1/2 N, 2.5 W of Raymond
Rooks	S. Solomon R.	1.75 miles	3.5 N of Demar
Shawnee	4 ponds	6.5 acres	5.75 W of Auburn
Smith	N. Solomon R.	0.5 mile	2 S of Harlan
Smith	N. Solomon R.	1.0 mile	3/4 W of Harlan
Sumner	Chikaskia R.	0.5 mile	1 S of Argonia

The following guidelines will assist sportsmen in using FISH waters:

1. Obey the lease boundaries. Stay within 50 feet of the shoreline.
2. If the FISH property is a river or creek, fish only on the side that is on the FISH tract. Do not walk or FISH on adjacent property.
3. Do not damage any standing crops.
4. Obey all Kansas fishing rules and regulations and respect the rights of landowners and others using the area. Treat the land as if it were your own and act responsibly. Angler's behavior will decide the future of this program and these areas.
5. Take all your trash with you when you leave. If someone using the area before you left trash, please remove it also.
6. Do not open gates or enter properties with vehicles. Park along the road or in areas designated as parking areas. Do not block access to fields or block access along county roads. Leave room on county roads for large farm implements to pass. Landowners may need to work fields with big equipment, so please allow them to pass. Use fence crossing ladders located at access sites.
7. Fishing Impoundments and Stream Habitats areas are for fishing only. Hours are sunrise to 1/2 hour after sunset. Other activities such as hunting, shooting, camping, horseback riding, fires, or dog training are prohibited.
8. Do not attempt to contact the cooperating landowners for the purpose of fishing on other portions of their land. Enrollment of land in the FISH program may have been done to reduce the landowner's contact with fishermen.
9. All statewide length and creel limits are imposed on all F.I.S.H. areas.
10. The following regulations are enforced on Fishing Impoundments and Stream Habitats (F.I.S.H.) areas: no hunting, no fires, no dog training, no discharging firearms, no seining, no swimming, no camping, no pets except on a leash or confined, no horseback riding, no stocking or releasing of fish or wildlife, no fireworks, no littering, no cereal malt beverage or alcoholic liquor, no destructive acts, including digging, destruction or removal of signs or vegetation.

BASS UNLIMITED

The Black Bass Foundation, North America's only 501-c-3 nonprofit bass conservation organization, is seeking new members, sponsors, and bass clubs to support the foundation's mission: "The protection of bass habitat and the promotion of research, education, restoration, and conservation of black bass fisheries in North America."

According to recent information and data gathered by the foundation, the number of bass anglers in the U.S. continues to decline along with the quality of bass angling. Because of this decline, the foundation also believes that the need for a national, nonprofit, nonpartisan organization such as the Black Bass Foundation is essential to the protection and preservation of declining black bass fisheries, management programs, and the sport of bass angling in North America.

The foundation notes that while other organizations like Ducks Unlimited, Trout Unlimited, the National Wild Turkey Federation, and many others are raising millions for the protection and preservation of habitat, no bass organization or institution is doing the same for the future of bass angling.

For more information about how you can help and become a member, sponsor, or affiliated bass club of the Black Bass Foundation, write BBF, P.O. Box 670, Edgefield, SC 29824 or phone 1-800-610-0036.

-Black Bass Foundation release

HENSLOW'S SPARROW

The weak song and secretive habits of the Henslow's sparrow make it a challenge to spot as you scan the sea of grasses in a Kansas pasture. But you may increase the odds of finding this diminutive, elusive bird by learning its insect-like notes and habitat needs.

Characteristically observed perched on a grass or wildflower stem, the Henslow's sparrow is distinguished from other sparrows by its short tail, large olive-colored head, finely-streaked breast, and reddish wings. It is sometimes confused with the grasshopper sparrow.

The Henslow's sparrow arrives in Kansas in late April and early May and remains until early fall. Males establish territories shortly after arriving. Males sing actively during the early phases of the breeding cycle.

Found during the breeding season in Northeast, Midwest, and Plains states, and during the winter in the South, the Henslow's sparrow has a large range, but its numbers are falling. As pastures, prairies, and meadows are converted to rowcrops, lost to forest succession, or urbanized, this sparrow has become increasingly difficult to find.

Habitat needs include large tracts of grasslands with tall, dense cover. In Kansas, Henslow's sparrow is restricted to the tallgrass prairie region in the eastern part of the state and is found primarily in tallgrass prairie. Despite the extensive areas of tallgrass prairie remaining in the Flint Hills and elsewhere, Henslow's sparrow populations are small and scattered. The largest populations are found on ungrazed or lightly grazed grasslands that have not been burned for one or two years. Good populations occur on Konza Prairie, Fort Riley, and Melvern Wildlife Area.

One bright note is the increasing amount of habitat available because of the Conservation Reserve Program. So search out the thickest stand of prairie grass you can find, listen for a *si lick* call, and you may find this fascinating member of the prairie community. [A good bird-call tape recording will help in your search.]

--Kansas Biological Survey

WATERFOWL HABITAT

Ducks

With the exception of the coldest months of the year, ducks will satisfy most of their nutritional needs from a pond. A one- to two-foot drawdown during the spring and early summer, to allow annual plants to become established, followed by an autumn rise in water levels, is a standard approach to providing foods for ducks. The drawdown allows the annual plants to become established and produce seed, and the autumn rise floods the vegetation, making these seeds available to the ducks.

WARNING: *Mowing crops down for waterfowl creates a "baited" area that cannot be hunted. In fact, hunting may be prohibited in a significant area around your field, depending on how close to your neighbors you are located and whether law enforcement officials consider ducks over their property to be within the "zone of influence" of your "baited" area.*

In the event that annual plants fail to establish on their own, you can aerial seed japanese millet on the mud flats any time prior to mid-July to ensure a food supply for the ducks. Once established, the millet can grow and thrive in standing water (as long as the water doesn't rise above the millet).

If you are really serious about attracting ducks, you could eliminate all fish from the pond. Fish are a serious competitors for the invertebrates in the water and pond soil. These invertebrates are highly sought by female ducks, which need this high protein diet to prepare for the return spring migration and egg-production period. Also, any ducklings produced on the pond need the invertebrates to grow and survive. Unfortunately, not many individuals want to give up the recreation provided by the fish in their ponds

Geese

Geese will use the same foods as the ducks, but they also graze and feed extensively on upland areas. While grazing, geese prefer the tender, new growth, not the older, tougher vegetation. This means that keeping an area of grass mowed short is important in holding geese in an area. It also makes them more comfortable if they can easily see predators coming from a long distance. If you can fertilize and water that grass, they will like it even better.

One of the best examples of good summer habitat for resident geese is provided by golf courses. Of course, geese are not welcome guests on these areas.

Another possibility is to plant some crops that geese will graze on. All agricultural crops - including clover, soybeans, winter wheat, and corn - will be eaten by geese when they are young and tender. Winter wheat is a good choice because it will be available throughout the fall, winter, and spring months; is well suited to growing conditions in Kansas; and is relatively inexpensive to establish. Unless severely grazed, you will usually get a good crop the following summer.

During the extreme cold of mid-winter, high carbohydrate foods are needed by both the geese and mallard ducks that winter in our state. Milo or corn are the most likely food sources. If you chose to plant these, you will need to make them available during the cold weather by mowing or brush hogging them down just prior to when you want the birds to consume them.

- Marvin Kraft,
waterfowl coordinator, Emporia

BACKYARD BIRD VIDEO

Copies of *The Birds in Your Backyard*, a 19-minute bird ID video, is now available from the Kansas Department of Wildlife and Parks. This excellent tape will help you identify most of the birds that come to your feeder, including chickadees, juncos, nuthatches, tufted titmouse, pine siskin, goldfinch, house finch, tree sparrow, Harris sparrow, white crowned sparrow, song sparrow, downy woodpecker, red-bellied woodpecker, flickers, red-winged blackbird, grac-kle, and cardinal.

Detailed descriptions and close-up footage of both male and female of each species is presented, and tips on care and use of feeders and backyard habitat are also included. It's the next best thing to having an expert birder at your side.

The Birds in Your Backyard sells for $21.20 and is available by phoning (316) 672-5911.

--Shoup

CONFUSING CRITTER

It was a slow day until the call came in. A man needed assistance identifying and capturing an unknown, uninvited critter.

He had gotten off work from his regular job the previous evening and had gone to his antique shop to do some bookwork. Upon entering the building, he heard a strange noise but thought nothing of it. But as he left, he remembered something and re-entered the building. When he turned the light back on, he heard something "cock-a-doodle doing" - similar to a rooster crowing but not quite the same - in the back of the building.

The following morning, he called animal control, but they weren't interested. It was outside the city limits. So when all else fails, who do you call? Wildlife and Parks of course. They deal with wild, unknown animals, don't they?

The man explained that there was this critter in the back room that crowed similar to a rooster. Every time he turned on the light, it crowed three times. He then proceeded to imitate the creature's crowing. The man was even kind enough to hold the phone up and turn the lights on and off twice so that we could hear this uninvited guest. Needless to say, we couldn't.

When asked what it looked like, he responded in a nervous tone, "I don't know 'cause I didn't go look." He was pretty sure one of the employees had left the back door open during the day, and the critter had found its way in. He wanted a professional to come out and take a look-see, so we told him we would be out in a little while.

Even before we had a chance to gather up our curious-critter catching tools, we got another call. Seems the wife had shown up and was willing to check out this critter, so the two of them entered the room. Low and behold, what did they find but a light-sensitive lamp that crowed three times like a rooster every time you turned on a light. Unbeknownst to them, it had been added to the inventory the same day.

Another cock-a-doodle-do case solved. Another ordinary day for the Kansas Department of Wildlife and Parks.

--The Region 1 Staff, Hays

WILDFLOWER BOOK

Kansans are lucky to have another wildflower book, especially one that tells how to propagate these native flowers. Co-authored by Dr. Dwight Platt and Lorna Harder, *Growing Native Wildflowers* is a handbook sponsored by the Kansas Wildflower Society. The handbook is published in notebook form and contains a general how-to guide and four sets of 15 species accounts. Handbook components can be purchased in any combination, with or without a three ring binder.

Additional sets of species accounts will be published in the future.

With the increased interest in prairie wildflowers in Kansas, *Growing Native Wildflowers* is written to provide more information to individuals who wish to use native wildflowers in yards, gardens, and prairie restorations. The book is in large part the result of experimentation and experiences in growing wildflowers from seed for the tallgrass prairie reconstruction at the Kauffman Museum. Each account contains a description of the cultural and growth characteristics, human and animal uses, seed collection and germination techniques, and range for individual wildflower species. A complete bibliography is included with each set of 15 species accounts.

Individuals interested in more information or in ordering the handbook can do so by writing Platt or Harder at the Kauffman Museum, Bethel College, North Newton, KS 67117 or by phoning (136) 283-1612.

--Shoup

STAR PARTY

On Sept. 17-20, the Kansas Astrophotographers and Observers Society (KAOS) will host the 8th Annual Great Plains Star Party at Scopeville, 75 miles southwest of Kansas City. This is the largest astronomical event in Kansas and Missouri and will include family activities for one, two, or all three nights of camping under the stars.

This event has gained notoriety as a weekend for astronomers of all ages. Although the group caters to the serious amateur astronomer, the recreational astronomer will enjoy the opportunity to educate himself on all aspects of this hobby. Events include interesting talks, activities, homestyle meals, and most importantly, the dark skies of Scopeville on a high, flat grassy plain in the heart of the Osage Cuestas.

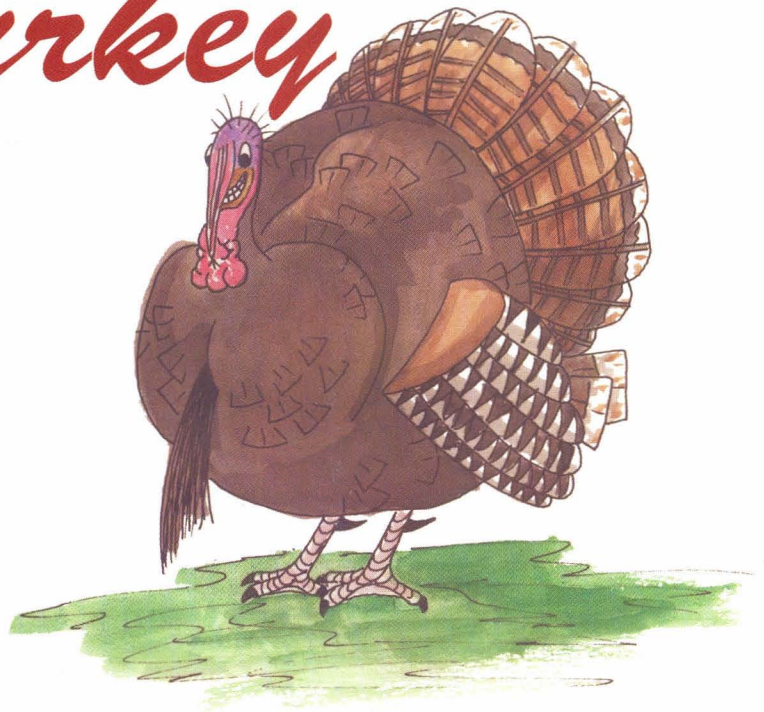
Speakers include Dr. Keith Ashman, PhD in theoretical cosmology from the University of London; Richard Wilds, Heartland Astronomical Research Team; and experts from the KAOS.

For general information and registration, visit the society's website at www.icstars.com/HTML/GreatPlains, or phone (913) 897-0235.

--Shoup

by Ed Miller, nongame biologist, Independence

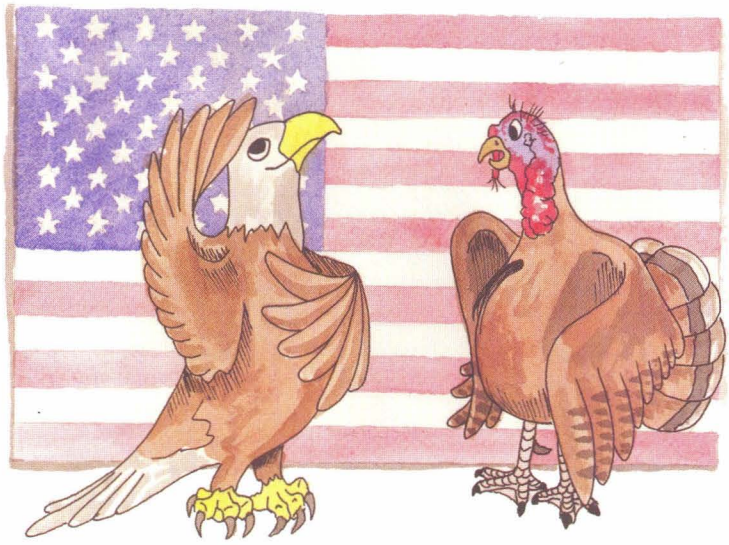
BEN'S Turkey



Old Ben Franklin didn't want to adopt the bald eagle as our national symbol. He knew about it's behavior and didn't think it would be a good choice. Instead, he wanted the wild turkey.

Both bald eagle and turkey were good choices because they were native to North America. But Franklin didn't want the bald eagle because of its habit of stealing fish from the osprey, which was better at catching fish than the eagle. He also knew that the eagle would just as soon eat something dead as go through the trouble of capturing live prey.

This is why Ben said the eagle was "too lazy to fish" and had "bad moral character."

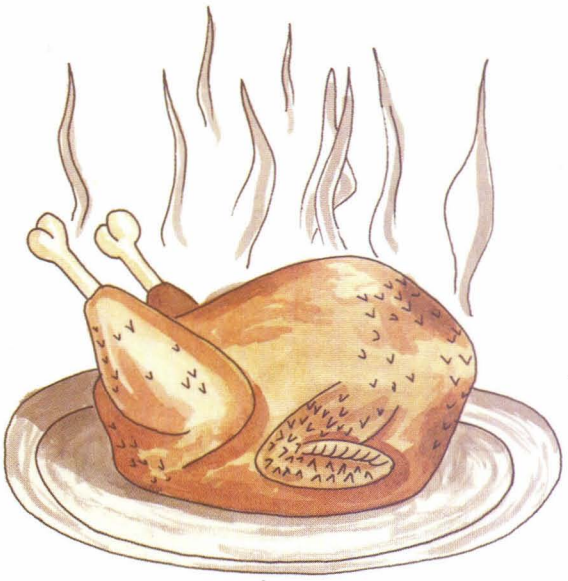


It also seems that Ben liked to eat turkey. He wasn't alone. The Aztecs were the first to tame the wild turkey. Then the Spanish took the birds home, and by 1530, the tamed variety spread across Europe. American colonists then brought this variety back to North America. Still, most thought the wild turkey was much better. Wild birds were saved for special occasions like Thanksgiving.

The number of market hunters increased with the demand for tasty wild turkey meat. In the early 1800s, a wild turkey could be bought for six cents. A St. Louis exporting business filled an order from the London market for 700 dozen wild turkeys in 1881.

Both wild turkey and bald eagle went through bad times. Habitat changes and an open season for market hunters caused the wild turkey to become rare by the 1930s. The bald eagle population fell severely because of the effects of insecticides like DDT, which made their egg shells too thin. But restricted hunting and restoration efforts for turkeys and the banning of DDT have brought both species back to very healthy populations.

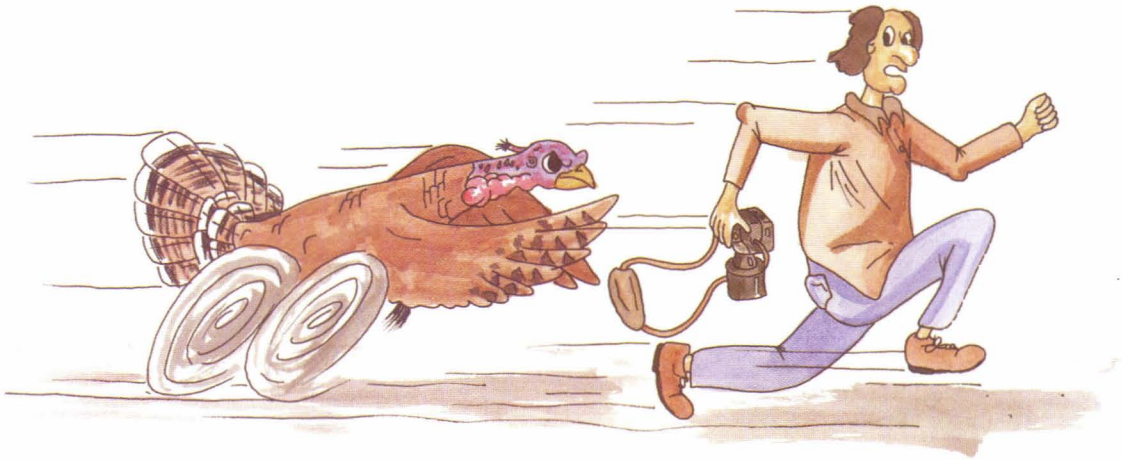
Even though Ben wanted it, the wild turkey just didn't seem right for most people as our

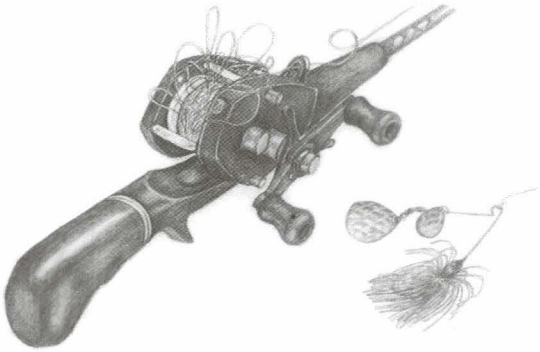


national symbol. It was alert and quick of foot and wing, but it just didn't look noble enough for a national symbol. Or maybe some thought it wouldn't stand up to a fight.

Don't tell me this, though. I graduated from Virginia Tech, whose mascot is the Fighting Gobbler. And don't tell my friend who was flogged by a strutting gobbler while he was clicking pictures of the bird.

In the end, old Ben gave up the fight -- maybe because of this kind of foolish behavior -- and the bald eagle became our national symbol. More importantly, both birds are doing well today.





Backlash

by Mike Miller

Tell Me Something Good

Early fall is a busy time here at Wildlife and Parks. The hunting seasons are just beginning, and along with assembling and distributing all the necessary printed information, we take lots and lots of phone calls. It goes with the territory, and it's enjoyable for the most part. I hunt, and I enjoy talking about hunting with other hunters, but I have to be careful.

I'm optimistic by nature. When a hunter from North Carolina is considering a trip to Kansas to hunt quail this fall, he wants the straight scoop about potential bird numbers. I can't let what I've heard or seen in my area unduly influence what I tell him. There often are major differences in bird numbers from one region of the state to another. Heck, there can be a big difference in bird numbers from one county to another. People want to hear something good, and it's hard not to tell them something good.

So many factors influence bird numbers, it's difficult to give hunters an accurate forecast. Our biologists have it down to a science about as much as it can be. Comparing brood count surveys and Rural Mail Carrier surveys with more than 30 years of past survey data, they can provide us with an idea of what to expect this fall. It's easier to compare this fall's potential to last fall's reality. So if a hunter hunted in Norton County last fall, we can give him an idea of what to expect there this fall. If a hunter has never been to Kansas before, it's more difficult.

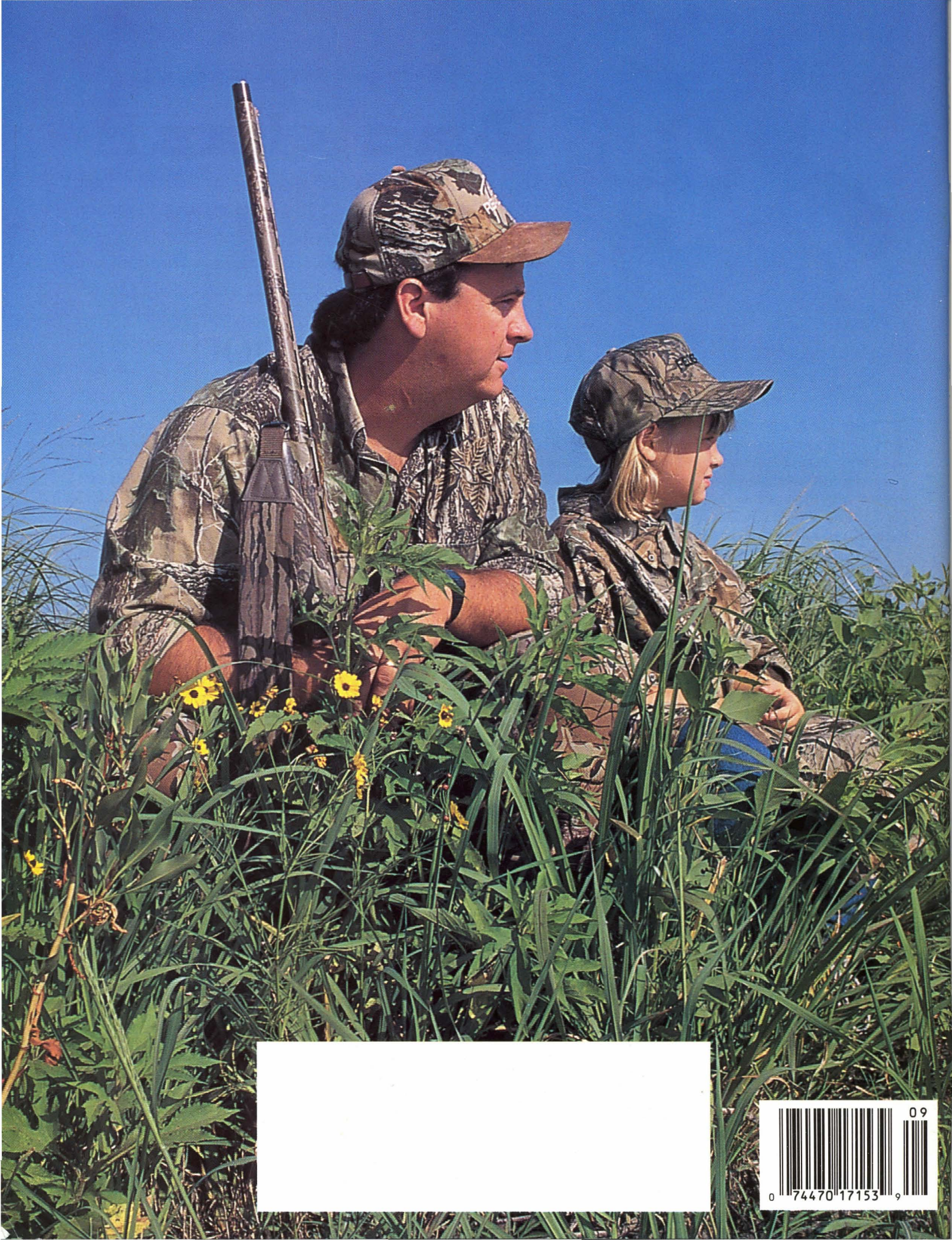
Some hunters want very specific answers, which can be dangerous to give. For example, let's say I've just told a hunter that quail numbers in the southeast are much improved over last year, and last year was pretty good. He'll ask, "So, how many coveys can I expect to see in a good day?" Now I'm back to being careful. If I let my optimism get away from me, I might tell him that on a good day in southeast Kansas he could flush 10-15 coveys. And that could happen. But even when bird numbers are high, other conditions must be considered on any given day — temperature, scent conditions, wind, quality of the dogs, quality of the bird habitat, the amount of walking the hunter is willing to do, etc.

Just to keep us humble, a few hunters will call and let us know how they did. I appreciate these calls most of the time because they not only tell me how accurate our forecasts are, but they also let me provide better information to future callers. However, there are those who call to let us know that we steered them wrong. We try to be honest — honest. It would serve no purpose for us to tell hunters that bird numbers were up if our data didn't support it. We rely on return license buyers, and if we lied, they'd likely never return.

I've had a hunter call to tell me that he and his party saw hundreds of pheasants in such-in-such county. Within an hour, another called to tell me bird numbers were way down because they saw only a handful of birds in the same area. I have to be careful again, not wanting to offend the latter caller, insinuating that his group had lousy dogs or were poor hunters.

Human nature, I think, allows us to remember the good years much longer that the bad years. And, like a Nike T-shirt slogan "The older I get, the better I was," the good years get better with age. Hunters love to reminisce about the "good ole days" when they saw cock pheasants along the roads at every fence post -- or years when thousands of pheasants erupted from every field. It's tough to compete with those memories.

All in all, visiting with hunters about the coming fall is one my favorite parts of the job. A few hunters call several times each year, and even though I've never met them, I feel I know them well enough to call them friends. Hunting provides a common bond with all of the callers I talk to, and I, like the rest of the Information and Education staff, try to provide the most accurate information I can. As the long awaited fall begins to cool and transform the Kansas landscape, my mind, too, turns to cackling pheasants, the whir of bobwhite wings, and the sight of a Brittany locked up. So, since bird hunting is already on my mind, you might as well call. We'll talk about it.



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