

# KANSAS

*Wildlife & Parks*

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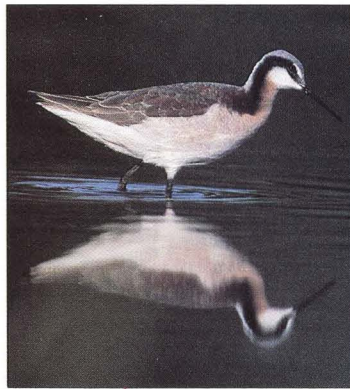
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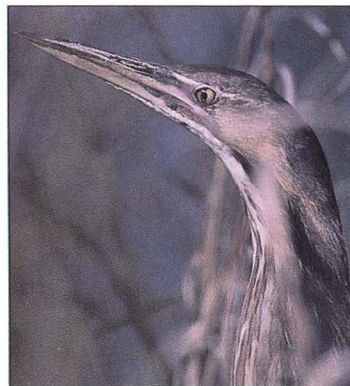
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**About the Covers**

A long-billed dowitcher rests and preens on a May afternoon in Pratt County. Mike Blair photographed this and other shorebirds during the spring migration. 600mm lens f/8 at 1/250. **Back cover:** Traveling open country in search of hens, four rio grande toms respond to photographer Mike Blair's calling. Blair filmed the turkeys with a 400mm lens, f/8 at 1/125.

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

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



## Taking Kansas for Granted

Sitting here at my desk as the outside temperature hovers near bone chilling, I'll occasionally slip into a reminiscing daydream about the past fall. It was fantastic. I caught and released a few Wilson Reservoir smallmouths, saw plenty of pheasants and quail, had a great bow season and generally immersed myself in the outdoors as much as possible. I appreciated all of those experiences, believe me, but it wasn't until now that I realized just how much. Now, when the seasons are closed and the weather is nearly forbidding, when I can no longer look forward to another day in the deer stand or another day following my Brittany around, now I miss those things.

I feel fortunate to live in Kansas and have these wildlife resources at my doorstep, but I expected those things to happen last fall. I expected to see a big buck, I expected to see more quail than in past years and I had no doubt that I could catch a few 15-inch-plus smallmouths. I guess that old saying "You don't know what you've got 'till it's gone," is always true. But I'd hate to think that, in my line of work where I can see nature's delicate balance on a daily basis, I would take certain things for granted. I've been hunting, fishing and enjoying Kansas natural resources for 17 years, and I've seen vast improvements in outdoor opportunities through that time. I've seen deer numbers grow, turkeys become common, and public fishing expand to offer new and exciting opportunities.

I can also remember my grandad's stories about Kansas in the 1930s when deer, turkeys and smallmouths were nonexistent, and other outdoor opportunities were very limited. As a youngster, I felt lucky to grow up when I did. I should still feel that way. But I can't expect things to keep improving or even stay the same. I'm afraid that if I and other Kansans begin to take these precious resources for granted, even demanding that they be available, we'll forget what an extraordinary effort it required to get where we are.

Outdoor opportunities in Kansas are better today than they have been in quite some time. More Kansans than ever hunt deer and turkeys, and our reservoirs and state fishing lakes offer not only native species but also new fish like walleye, smallmouth bass, striped bass and wipers. If my grandad were alive, he'd be amazed. But even though we're accustomed to these outdoor resources, we can't forget their delicate balance. Without constant effort and money, they might disappear.

Our environment is constantly threatened. Modern conveniences that we've also become accustomed to such as urban development, pesticides, unrestricted water use,



waste disposal, and pollution threaten our resources. That same modern technology has allowed us to shape and rebuild our environment, but we can't allow technology to cloud our vision of what's really important. And we can't allow ourselves to forget. We can't take our natural resources for granted and expect them year after year without giving a little of ourselves.

I think that's why the 20th celebration of Earth Day on April 22, 1990, may be so important. Twenty years ago when the first Earth Day was observed, it was a new awakening. It brought the environment and our sins against it to the forefront. Today it might be more of a reawakening, reminding us of the struggle. If events such as Earth Day and Kansas Wildlife Heritage Month do nothing more than remind us of our environmental fortune and the threats it faces, then they are a success.

Our environment is more than just game animals and fish. It's the quality of our life, the water we drink and the air we breathe. And that's why the seemingly insignificant acts of recycling an aluminum can or using less water are collectively so important. Take a moment this spring to consider what we have . . . before it's gone. Buy a federal and state duck stamp, contribute to the Chickadee Checkoff Program on your state income tax form, save aluminum cans and old newspapers for recycling, and use less water. And perhaps most significant, set an example for your children and teach them about wildlife and our environment. ♡

**Mike Miller**  
Editor





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# Long-billed, Black-necked, White-rumped Whachamacallits

by Gene Brehm  
*Videographer*

photos by Mike Blair

Each spring and fall, hundreds of thousands of shorebirds migrate through Kansas. The long flight requires that they stop to refuel and rest, and Kansas marshes are ideal rest stops. They're a joy to watch and study, but trying to identify the species can be a nightmare.

I discovered shorebirds when I was 10 years old. It was the first day of summer vacation, and I felt like a colt on its first day out of the barn. My early-morning romp took me to our farm pond, fishing pole in hand. As usual, I approached the pond cautiously in case any wildlife might be present. Pretending to be an Indian scouting for buffalo, I sneaked through the last screen of weeds at the pond's edge. To my delight, the pond was covered with brightly colored ducks. There were northern shovelers, blue-winged teal and a beautiful duck I would later learn was a wigeon. My best Indian belly crawl took me to the very edge of the pond where I watched the ducks for several minutes. I was fascinated by the beautiful wigeon drakes, which passed within feet of my position.

Suddenly, I was discovered and the ducks flushed. Then, only after the colorful ducks were gone, did I notice the other, somewhat drab, birds also feeding on the pond. I had seen plovers (upland sandpipers) and killdeer before, but the other wading birds present were different. And they weren't nearly as cautious as ducks. I watched the birds wading, picking and probing the shallows for several hours. It was obvious that I was looking at more than one variety of "snipe," but identification was beyond me. Only when I heard a distant call to lunch did I slip from my hiding spot and leave those strange birds that had captured my complete attention.

Since that day I've learned a great deal about shore-birds. In 1982 I began photographing wildlife for a living, and shorebirds have often been my subjects. Out of necessity and interest, I began learning to distinguish the many shorebird species.

Collectively, shorebirds are the least understood and most difficult to identify of any group of birds in North America. "Peeps," "little brown birds," and "snipes" are some of the terms we use to save us when we don't have a clue. Most shorebirds belong to either the sandpiper or plover families. However, wood-



Often found in large mixed flocks, shorebirds may be the ultimate challenge in bird identification. The majority of these birds are white-rumped sandpipers. It requires a good field guide, binoculars and years of experience to distinguish shorebirds.



Most shorebirds belong to the sandpiper or plover families. However, this American avocet, woodcock, snipe, curlews, godwits, stilts and phalaropes are also included.

cock, snipe, curlews, godwits, avocets, stilts and phalaropes are also considered shorebirds.

The mention of shorebirds prompts visions of an ocean beach with birds scurrying to forage in the wash of a receding wave. While Kansas does not have an ocean, it does have Cheyenne Bottoms Wildlife Area and Quivira National Wildlife Refuge (NWR). These two sites rank right up there with the famous Delaware Bay as stopover sites for migrating shorebirds. Between 30 and 40 species of shorebirds may be observed during the spring and fall migrations at these two wetlands. Spring migration usually occurs between April 15 and June 15, and in the fall, shorebirds pass through Kansas from about July 15 through Oct. 1.

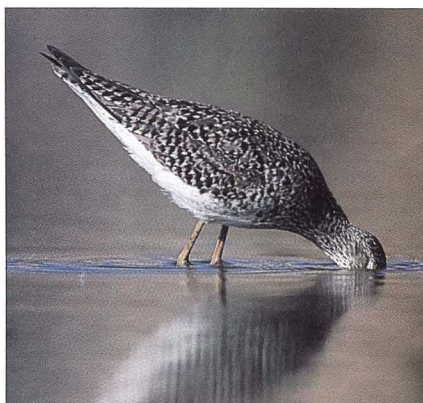
The majority of shorebirds that migrate through Kansas nest in the Arctic tundra. However, some species do nest in Kansas. Killdeer and upland sandpipers are the most common local nesters, but avocets, snowy plovers, Wilson's phalaropes and black-necked stilts all have nested at Cheyenne Bottoms and Quivira NWR.

A typical shorebird nest contains four pointed, brown or black spotted and blotched eggs. Nests usually consist of a shallow depression on bare or slightly vegetated mudflats. The Wilson's phalarope strays from this standard, nesting in spike rushes above water or on grassy areas near water. The upland sandpiper, as the name implies, nests in upland grasslands. The young of all shorebirds leave the nest soon after hatching and are cared for by both parents.

For those shorebirds that nest in the Arctic, migration is a true feat of endurance. Birds that spend the winter in South America, routinely fly non-stop for as long as 60 hours, traveling as far as 2,500 miles. These marathon flights require the bird to store great amounts of body fat for energy. When a shorebird stops in Kansas, it has one objective: a several day feeding frenzy that will supply weight gain equal to 50 percent of the bird's lean weight. A shore-



This killdeer nest represents a typical shorebird nest, usually found on bare gravel or mudflats.



Feeding methods vary. The semi-palmated plover, above, requires shallow water or mudflats. The lesser yellowlegs has a long, probing bill for deeper water.

bird's ability to quickly refuel during its stop in Kansas will result in its timely arrival at the northern nesting grounds and ultimately determine the nesting success of that species. As the loss of wetlands continues, management and preservation of existing stopover sites becomes critically important.

Migrating shorebirds require specific habitat. They feed on mollusks, crustaceans and insects. At Cheyenne Bottoms, shorebirds feed heavily on the larvae of aquatic insects that develop in the mud-bottom pools. For this food supply to be readily available to wading shorebirds, the water must be shallow. The smaller sandpipers must feed on mudflats or in water less than an inch deep. This would seemingly restrict them to the very edges of wetlands, however, our Kansas winds often expand their feeding range by moving shallow water and exposing mudflats. The water is gone, but the larvae lie waiting in the mud, creating a perfect shorebird smorgasbord. When this happens during the peak of migration, tens of thousands of shorebirds can be seen taking full advantage.

Feeding methods of shorebirds vary greatly among species. Dowitchers and white-rumped sandpipers are probers, pushing their long bills deep into the mud to feel for insects. Avocets walk through shallow water and skim with their bills in a steady back and forth movement. Baird's sandpipers merely pluck out food exposed on the mudflats or extreme shallows. The real crowd pleasers, though, are the phalaropes. The long-legged, lobe-toed Wilson's phalarope swims rapidly in tight circles, stirring insects from the bottom muck. Then it picks out larvae caught in the resulting current. A casual observer watching a large flock of phalaropes busily swimming in tight circles might think he's witnessing a group of brain damaged birds.

Upon initiation, a novice birder is quickly convinced that seasoned shorebird enthusiasts are the world's greatest liars. The veteran may re-

mark, "There are three least sandpipers, eight semipalmated sandpipers and one western sandpiper in that group." The novice, upon close scrutiny asks, "How the heck can you tell?"

Shorebird identification is truly a challenge. However, there are certain steps one can take that, when coupled with years of field experience, can actually produce results. Let's use six of the most similar looking short-legged sandpipers as an example.

These six sandpipers are commonly seen feeding together in shallow water or on mudflats in Kansas marshes. Because of their similarities, all but the experts have trouble identifying these birds. Listed by increasing size they are the least, semipalmated, western, Baird's, white-rumped and pectoral sandpipers.



These three sandpipers are similar. Subtle characteristics such as the color of the legs, length and heaviness of bill, body size and of course feather coloration are all used to distinguish the species. The time of year the bird migrates may also be a clue. The top bird is a least sandpiper, the smallest of sandpipers with pale green legs. At left is the semi-palmated sandpiper. It has black legs and is just slightly larger than the least. Below is the western sandpiper, which also has black legs, but it has a heavier bill that has a definite droop near the tip.



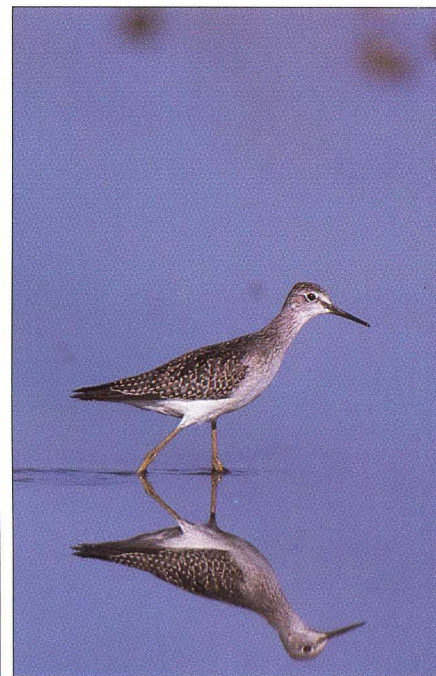
The least sandpiper and the pectoral sandpiper seem to make the task easy by being the only birds in the group that have pale green legs. The pectoral has a distinct margin between its streaked breast and its white belly and is nearly double the size of the least sandpiper. The other listed birds have short, black legs. The white-rumped is the only one of the bunch that has a completely white rump patch that is easily observed when the bird is in flight. The others have a black stripe running through the center of the rump patch. The Baird's sandpiper has a more slender body with wings that protrude a little beyond the tail when not in flight. The Baird's also holds its body in a more horizontal position than other sandpipers.

This leaves only the semipalmated and western sandpipers. They both have black legs and are just slightly larger than the least. However, the western has a heavier bill that has a definite droop near the tip.

Confused? It must be emphasized that shorebird identification skills can only be improved with field experience. Binoculars and a good field guide are necessities, but even then, confidence can be fleeting.

The time of year you observe a particular bird can also be a clue. Shorebird species do not migrate at the same time. Greater yellowlegs are among the earliest sandpipers to pass through Kansas in spring and fall. White-rumped sandpipers are among the last to arrive. Knowledge of migration habits can be helpful in identifying some species. Long-billed and short-billed dowitchers are difficult to tell apart. However, migration data from Cheyenne Bottoms indicates that if you see a dowitcher before late May, it's probably a long-billed. The shortbills don't reach the Bottoms until then, long after the longbill migration has peaked.

Until recently, little was known about shorebird habits. In an effort to learn more about the birds, independent enthusiasts, college researchers, and biologists from state wildlife agencies and the U.S. Fish and Wildlife Service have begun to



The greater (left) and lesser (right) yellowlegs illustrate just how similar shorebirds can look. Even the experts will have trouble with these, although the greater yellowlegs is usually the first species to show up on Kansas marshes in spring and fall.

compile past studies and conduct new research. Presently three researchers sponsored by the U.S. Fish and Wildlife Service are spending their summers in Kansas. Doug Helmers, a University of Missouri graduate student, is conducting research at Cheyenne Bottoms to determine the food base that makes the Bottoms so enticing to shorebirds.

Gonzolo Castro, an employee of the Fish and Wildlife Service, is studying the amount of fat gained by shorebirds stopping at the Bottoms. This data will ultimately be used to answer questions about how often a migrating shorebird must stop to feed throughout the long flight.

Susan Scoggins, also with the Fish and Wildlife Service, is spending her summers at Quivira NWR. Scoggins' research is directed at identifying a pattern of shorebird migration through the Central Flyway and identifying critical habitat areas within the United States.

Ed Martinez maintains an ongoing banding project that serves as the only source of documentation of shorebird movements to and from

Cheyenne Bottoms. Martinez, an entomologist with the State Department of Agriculture, has been independently collecting data for more than 20 years. His banding data and shorebird counts have focused much attention on the Bottoms, causing biologists from around the world to consider Cheyenne Bottoms the most important wetland in North America.

These research efforts are paramount to the future of shorebirds. Fifty percent of North America's wetlands have been destroyed since the turn of the century. As the destruction continues, migrating shorebirds must fly further between resting and feeding stops, emphasizing the need to protect the remaining wetlands. Imagine driving down a 6,000-mile stretch of freeway with no refueling stops. Shorebirds migrating through the Central Flyway could face such a plight if wetlands continue to disappear. Studies on shorebird habits and food requirements could prevent the unknowing destruction of critical wetland habitat.

The millions of birds that migrate through the Central Flyway are part

of our heritage, and the wetlands vital to their survival are living American treasures. It is easy to underestimate the value of a marsh, but wetlands provide habitat for countless other species of wildlife, even when shorebirds and waterfowl

aren't present. Spend the first days of May or the last days of August at Cheyenne Bottoms or Quivira NWR and witness the marshes teeming with wildlife. You will understand.

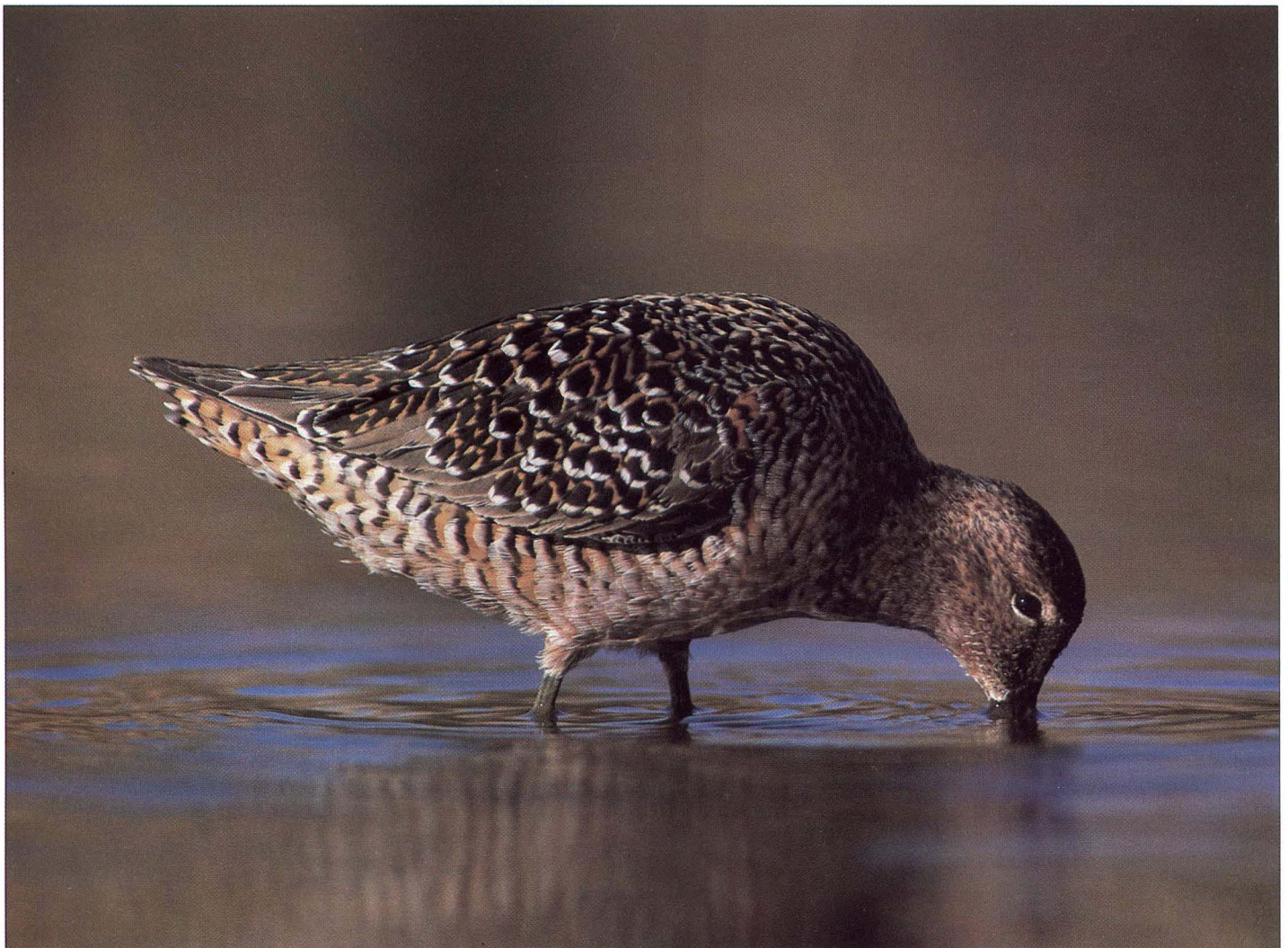
Shorebird watching can be immensely enjoyable. With more than

30 species to view, it's rarely boring, and the antics, varied feeding habits and behavior are entertaining. I've been a dedicated shorebird watcher since that day when I was 10 years old, and I hope my grandchildren will know the same joy. ♡





**Opposite:** Wilson's phalarope. **Right:** White-rumped sandpiper. **Below:** Long-billed dowitcher.







**Opposite upper left:**  
Solitary sandpiper  
**Opposite above:**  
Least sandpiper  
**Opposite below:**  
American avocet  
**Right:** Stilt sandpiper

# Matching Aid to Restore

by Bob Mathews

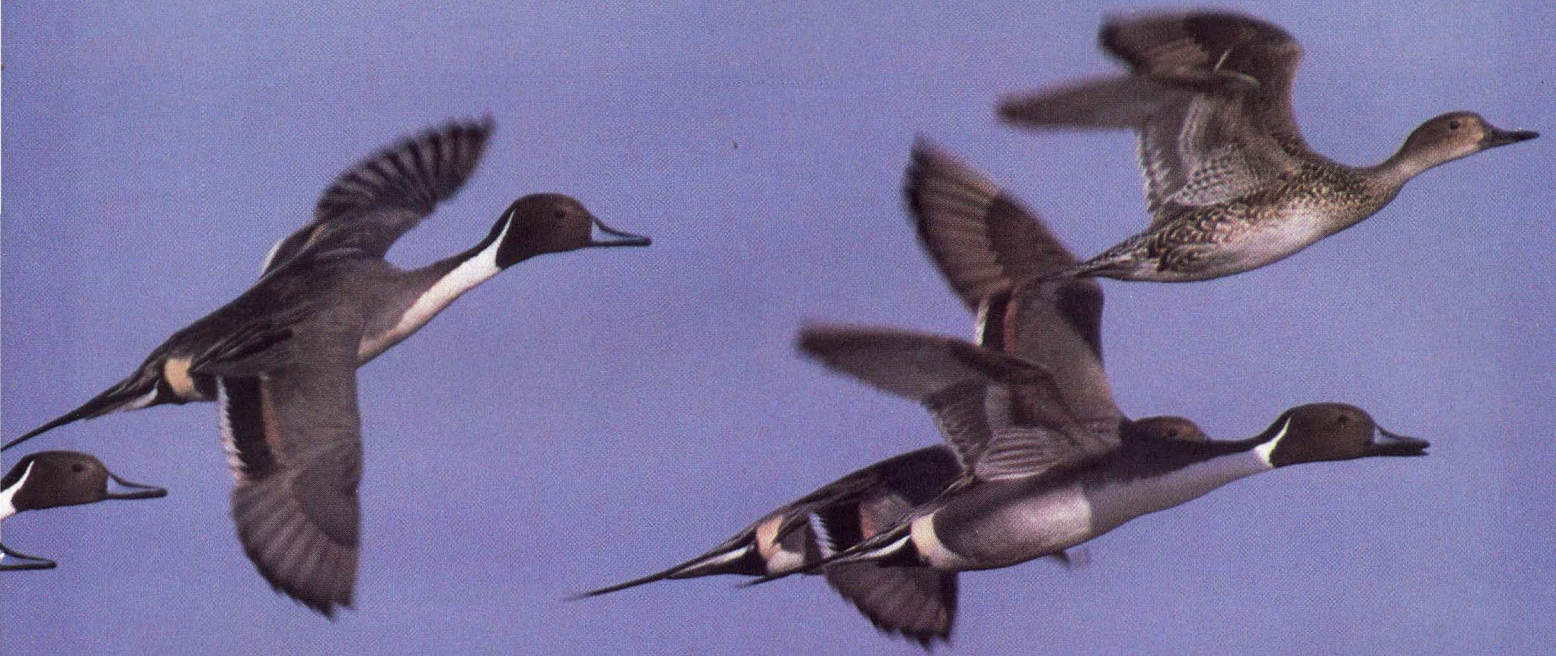
*assistant chief, Education and Public Affairs Division*

photos by Mike Blair

Wetlands are getting much needed help from a Ducks Unlimited program that helps states acquire and maintain this valuable wildlife habitat.



# States Habitat



**I**t takes time. People get hold of an idea and won't let go. Take marshes, for example. It's only been in the past few decades that a centuries-old, myth-ridden disdain for wetlands has been replaced by nearly unanimous esteem for their positive values. After swimming against the tide of misguided sentiment for so many years, wetlands devotees are entering the 1990s with that proverbial tide at their backs instead of in their faces. And, while there still are monumental challenges ahead, some constructive forces are working to reclaim some of the resources we Americans frittered away with our myopic early view of wetlands. One of those enlightened strategies is known best by its acronym: MARSH. Appropriately, Matching Aid to Restore States Habitat is an invention of the most efficient marsh saver around: Ducks Unlimited (DU).

From the time it was formed in the grim and gritty 1930s, DU has

focused much of its effort in Canada, where most of the continent's waterfowl are produced. The organization has completed more than 3,000 individual projects north of the border, encompassing some 3.7 million wetland acres. Its Canadian commitment remains, but DU has broadened its mission. In 1984, it undertook a program to develop and preserve wetlands in Alaska, Minnesota, Montana, North Dakota and South Dakota—the primary U.S. contributors to the continent's waterfowl flights. In 1985, DU took its U.S. efforts a step further by inaugurating the MARSH program, which provides funds for wetland development in all states.

As with its other ventures, the enterprising fund-raising strategies of DU's members bring in the dollars that fuel the MARSH program. Seven-and-one-half percent of the funds raised by local DU chapters is apportioned back to that state's wildlife agency for waterfowl habitat de-

velopment, improvement and acquisition. Through 1989, DU's MARSH administrators allocated more than \$19.1 million to the states. Some \$340,000 of that total came to Kansas.

As the MARSH program was getting started, another revenue-producing tool was introduced in Kansas in 1987: a state duck stamp. Duck stamp sales—primarily to waterfowl hunters—produce about \$100,000 annually in the Sunflower State. Proceeds fund a variety of wetland projects and, combined with MARSH revenues, broaden the financial base that underwrites waterfowl habitat improvements.

Kansas' duck stamp makes possible yet another source of income for wetland development. Kansas DU coordinates the publishing and sale of art prints derived from duck stamp original artwork. Twenty percent of that income is dedicated to improvements at Cheyenne Bottoms Wildlife Area. Those funds made possible the



The idea that marshes are worthless real estate can be changed by spending some time on a wetland observing its inhabitants. Commonly thought of as havens for ducks and geese, marshes serve as valuable habitat for countless species of wildlife including this American bittern and the raccoon.



purchase of a specially-equipped amphibious backhoe used to excavate improvements at the Bottoms. The other 80 percent of print sales revenue pays for Kansas-sponsored wetland projects in Canada. Last year, Kansas officials dedicated their 1,074-acre Englishman Lake Project in Saskatchewan.

Already, this blend of finances, begun in the 1980s, has underwritten a substantial variety of MARSH projects in Kansas. These range from the outright purchase of land . . . to minor improvements on existing public marshes. Following is a sampling of wildlife area acquisitions made possible by MARSH.

**\*Slate Creek Salt Marsh**—This 667-acre parcel contains a complex of wetlands and salt flats located along the lower Slate Creek floodplain above its juncture with the Arkansas River in Sumner County. These lands originally were owned by the state but were sold in the late 1880s to help finance the founding of what

is today Emporia State University. Although the property contains excellent deer and upland bird habitat, its primary value is its status as part of the only natural marsh complex within a 75-mile radius. Existing marsh covers about 70 acres. Area managers plan to develop an additional 150 acres as wetland. The balance of the property is native grassland with numerous potholes and oxbows. Extensive waterfowl and shorebird use has been documented over the years by Dr. Max Thompson of Southwestern College in Winfield.

**\*Neosho Addition**—This 270-acre property lies 3 miles south of the state-owned Neosho Wildlife Area near St. Paul. Since it has been managed in the past primarily as a private waterfowl hunting lease, it was a natural addition to the state's public lands system. The Neosho River flows through the property and water rights for pumping from the river come with the land.

**\*Isabel Wetlands**—This 200-acre parcel in southeastern Pratt County was purchased in 1989. It lies in a natural depression and contains 26 acres of wetlands. Potentially, another 10 to 15 acres of the property can be developed as marsh habitat. The balance is in native grass. The purchase included an irrigation well with rights to 190 acre-feet of water per year. General management practices aim to maintain native grasses, improve wetland vegetation and manipulate available water to provide maximum seasonal benefit to migratory birds.

**\*Schrag Land Addition**—This 160-acre acquisition lies in the Big Basin in McPherson County. Historically, the Big Basin was a pothole-rich region extending some 20 miles from McPherson south into Reno and Harvey counties. Most of these potholes were eliminated around the turn of the century when the Blaze Fork Drainage Ditch was built to rid the area of surface water. Before



The matching money provided through Ducks Unlimited's MARSH program pays for acquisition of new wetlands and projects on existing wetlands. The construction of this dike will create more valuable acres of wetland habitat.

that, the Basin was second only to Cheyenne Bottoms as a waterfowl area. Management on the new area comprises maintaining native grass stands, increasing wetland vegetation and plugging drainages from the property to retain water. MARSH program managers hope to add other tracts in the Big Basin in future years.

**\*Texas Lake-Henry Addition—**In 1988, the Department of Wildlife and Parks purchased this 160-acre parcel adjacent to the existing 560-acre Texas Lake Wildlife Area in western Pratt County. This property has been incorporated into the system of interconnecting potholes which characterize the Texas Lake area. About 25 acres of the quarter-section will contain water during wet periods, with the balance in native grass.

**\*Jamestown-Florell Addition—**This 140-acre property has been added to the existing Jamestown Wildlife Area northwest of Concordia. Although Jamestown is the smallest of four state-owned water-

fowl areas, the 3,000-acre area contains about 1,300 acres of water managed primarily for migratory birds. The Florell property is adjacent to the northern end of the Jamestown area and will be developed for waterfowl habitat.

Besides underwriting the purchase of property with potential or existing wetland value, the MARSH program has made possible an accelerated effort to enhance wetland habitats on existing wildlife areas. In many areas, these projects may seem like small potatoes. But, when you consider that small wetlands contribute substantially to the continent's total wetlands picture, each small improvement is significant. MARSH projects in Kansas are based on that philosophy.

Consider these:

In 1986, construction of a 600-foot earthen dike and water control structure established a six-acre marsh on Copan Wildlife Area near Caney, in Montgomery County. At Jamestown Wildlife Area, construction of two dikes and a water control structure

formed a 10-acre marsh. A similar project created a 10-acre marsh at John Redmond Wildlife Area in Coffey County. At Marais des Cygnes Wildlife Area in Linn County, three separate projects established an eight-acre marsh, added 30 acres to an existing 115-acre marsh, and improved dikes and water control capability on an existing 40-acre marsh. A three-acre wetland was developed on a Mined Land Wildlife Area tract northwest of Columbus in Cherokee County. Water transfer system improvements at Neosho Wildlife Area allowed managers to increase water area in one pool from 80 acres to 178 acres.

For a program that is just getting started, DU's MARSH initiative has gotten off to a precocious start in Kansas. It figures prominently in plans to restore some of the natural legacy we, out of ignorance, discarded in the past 150 years. It will take time. But it will happen . . . because it's an idea that won't let go. ♡



Programs like MARSH are changing the attitude that wetlands must be drained to be of any use. The preservation and maintenance of Kansas wetlands will ensure that geese and other wildfowl continue to have a place to land as they pass through on future migrations.



# center section

Edited by Mark Shoup



## LETTERS

### TEACHER'S AID

Editor:

I work in an elementary school, grades one through three. When I am finished with my KANSAS WILDLIFE AND PARKS magazine, it goes on the library shelf for awhile for students to look through. They love the bird and animal pictures, in particular.

It is then taken apart and filed according to subject in the teachers' reference file for use in various units.

Karla Merryman  
Wamego

has been resolved, there are many more within our state that need to be covered to protect our valuable wildlife resource. Since Kansas isn't one of the states mentioned by the U. S. Fish and Wildlife Service as having this problem, it is very important that any open pits that are trapping wildlife be found. If any of your readers know of such pits, they should contact the Service, or their nearest Wildlife and Parks employee.

Charles Swank  
district wildlife biologist, Ellinwood

the one Blair so artfully monitored — could be analyzed for pesticides.

We here in "Kansas del Norte" (not written wholly in jest — many of your readers probably know that all Nebraska south of the Platte River was considered as a possible addition to Kansas, but there were too many proslavery people up here) think that it's a running battle as to which state game/parks/wildlife magazine is better. So far, I think you're neck in neck.

Robert F. B. Diller  
Steele City, Nebraska

### PITS ARE THE PITS

Editor:

It is encouraging to hear that the U.S. Fish and Wildlife Service is going to prosecute companies and individuals for having open oil and chemical pits that trap and kill wildlife. Although this problem may be greatest in Oklahoma, Texas, and New Mexico, Kansas also has its share of open pits.

During my 15 years with the Department of Wildlife and Parks, I have investigated many cases of wildlife trapped and dying in open pits. These pits are common in most oil-producing areas of the state. The latest case I was involved in was last summer when the Department received a complaint from a citizen in Hoisington concerning dead waterfowl in an open pit covered with oil and diesel fuel. Upon investigation, we found over fifty dead ducks and other birds. Some were almost completely decomposed; others were fresh. This pit had apparently been trapping waterfowl for over a year and possibly for many years.

Although the problem with this pit

### SOCK IN HEAT

Editor:

I just read the January/February issue of KANSAS WILDLIFE AND PARKS — great!

As for the article on frostbite, a little advice. I had a pair of rubber-bottomed boots with tops made of the latest breathable, waterproof material. One boot developed a leak in the seam at the back of the boot. Water got in, and I got frostbite on the ball of my right foot.

The doctor said to wear polypropylene socks, which take moisture away from the foot. From now on, I only hunt in polypropylene socks.

Bill Connelly  
Wichita

### STOCK ANSWER

Editor:

I am a subscriber to KANSAS WILDLIFE AND PARKS. So are many of my friends, and we would like our voices to be heard. We would like you to stock a few pheasants, quail and prairie chicken in and around the Victoria area. How about it?

Also, we'd like for you folks to stock our lakes with walleyes instead of stripers. They are ruining our lakes.

Raymond Lang  
Victoria

Dear Mr. Lang:

I asked Kevin Church, small game coordinator, and Jim Beam, fisheries management specialist, to answer questions relevant to their areas of expertise.

Kevin states that "Gamebird populations fluctuate annually relative to weather, habitat and land use practices. When populations are low, even the most well-intentioned individuals suggest stocking as a way to increase abundance. However, the futility of

### NEBRASKA FAN

Editor:

I would like to express my appreciation for the superb article by Mike Blair on barn owls. These elusive birds near the top of the food chain deserve more study because they may well tell us of environmental threats and/or improvement. Perhaps the detritus of a nursery — such as

stocking to enhance existing populations has been acknowledged by wildlife biologists since the 1950s. High cost, low survival, the risk of disease and deleterious genetic effects, as well as ethical considerations are just a few of the reasons most state wildlife agencies no longer stock pen-reared gamebirds.

"Game bird populations will always fluctuate, and as a result, there will be years with fewer birds than we would like. Nonetheless, the key to wildlife abundance in Kansas is through research-supported habitat management, environmentally conscientious land use practices and careful season regulation."

Concerning walleye and striper stocking, Jim Beam says, "To date, the Department has no evidence of striped bass having a detrimental effect upon the state's walleye populations. Most Kansas reservoirs contain an abundance of prey (such as gizzard shad) capable of supporting healthy populations of both species.

"In 1989, striped bass were only stocked in Cheney and Wilson reservoirs and in Crawford State Fishing Lake.

"Declines in walleye numbers most often can be traced to years when poor habitat conditions have limited natural reproduction. In some instances, over harvest of walleye may also affect populations. Although walleye stockings have been beneficial in bolstering some fish populations, they hold no comparison to the number of walleye that Mother Nature can produce when habitat conditions are optimum." -*Shoup*

## NONRESIDENT DEBATE

Editor:

As a native and resident of Kansas for over 20 years, I'm very much aware of all the hunting opportunities this great state has to offer. Now, because of my work in Wyoming, I only make it back home once or twice a year. Each visit, especially in late fall, brings mixed emotions. One, of fond memories of past hunts with family and friends, and another of aggravation because I can no longer hunt deer here.

The usual arguments of no public

land and limited deer populations just don't hold up under close observation. I know I could still receive permission to hunt on plenty of land. As for limited deer populations, what wildlife resource isn't, and what of the extra deer permits I am often told of?

Kansas, I'm sure, is seeking a larger, more diverse economic base. I have seen first hand what nonresident dollars can mean to a community, and if made to feel welcome as hunters, many return with their families to vacation.

Perhaps it is just a matter of being fair. Many Kansas hunters come to Wyoming to enjoy a hunting experience their home state cannot offer. It's true there is abundant public land available to hunters. However, the game animals found on these lands belong to the people of the state and they have always been willing to share their wildlife.

Wyoming sportsmen are becoming more aware of what is going on with game management in other states, and some hard feelings are growing. Many are feeling cheated in the one-sided deal of "what's mine is mine and what's yours is mine."

Joe Hicks  
Meeteetse, Wyoming

Editor:

This fall, I was able to take a beautiful six-point whitetail with a dressed weight of 148 pounds.

As a landowner whose family has owned a Kansas farm since 1930, it was a real treat to be able to hunt deer for the first time on my land. I grew up on this place in days when there were no deer, turkey, pheasants or even quail in Sedgwick County.

Not being able to hunt until this year, I confess, has been a source of irritation to me. Hopefully, now the program will be continued, and I shall look forward to spending a week hunting deer in Kansas next year. I hope to develop some pheasant and "chicken" contacts by then.

J. C. Henderson  
Midland, Texas

Editor:

I am writing to you in reference to a letter in your September/October issue

regarding nonresident deer hunting. Is this being considered? If so, why? I do not think any Kansas deer hunter would support this. More tags should be sold to Kansas residents and should be easier to obtain before going to nonresidents. I must strongly suggest that you poll the sportsmen of Kansas before considering this move.

Thomas D. Frost  
Topeka

Dear Messrs. Hicks, Henderson and Frost:

As you can see from the other letters, this is a complicated issue. It is not simply a matter of Kansans being stingy with their resource.

Pheasant, quail, turkey and prairie chicken, as well as other species, are all open to nonresident hunters. Nonresidents who own 80 acres or more in Kansas may also hunt deer on their own land now. In fact, deer is the only species with a significant population that general nonresidents may not hunt.

Landowners and hunters have expressed strong opposition to allowing nonresident deer hunters at this time. Because our deer management program focuses on maintaining a quality deer herd, a large number of antlerless-only permits must be issued. Therefore, many Kansas hunters still do not receive permits to hunt either sex. Some do not receive licenses at all. Until our herd grows to the point where we may give all our resident hunters the opportunity to take a deer of either sex, many Kansans will probably view non-resident deer hunters as unfair competition for deer permits.

With all this said, I should also mention that Kansas is the only state with a deer season that does not allow nonresidents to hunt. It is quite possible that a small percentage, say five percent, of Kansas permits will be offered to nonresidents in the future. This would certainly improve our image with other states and would have some economic benefit to Kansas.

Of course, the biological needs of the deer herd will dictate the number of permits issued, not economic or recreational interests. -*Shoup*



# THE LAW

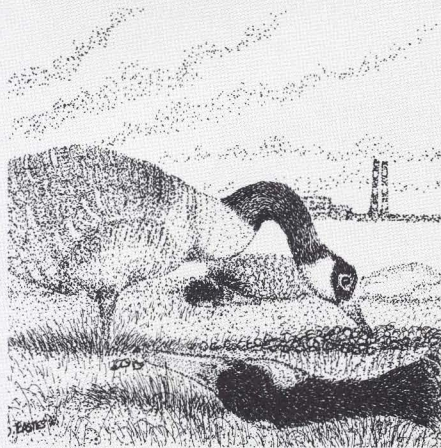
## TRESPASS

During the 1989 dove season, two Chautauqua County dove hunters found out the hard way that permission is required to hunt on private property.

The Chautauqua County Sheriff's Office received a complaint from two landowners about two men hunting doves without permission. When asked to leave, the men had ignored the landowners.

The sheriff's office then called conservation officer Bill Ramshaw, who responded to the complaint. Ramshaw contacted the two men and issued each a citation for unlawful hunting.

The two paid fines and court costs totaling \$284. -*Bill Ramshaw, conservation officer, Sedan*



## GEESE POISONED

In a first-of-its-kind case for Kansas, a Kansas City man was fined \$1,000 last year by the State Board of Agriculture for misuse of pesticides. The pesticide application killed ten Canada geese.

Using their authority to assess civil penalties for the misuse/misapplication of pesticides, the Board acted on information presented them by the Department last year. On July 17, 1989, Kansas City Power and Light (KCPL) plant chemist for the La Cygne power plant reported a dead Canada goose and one sick goose near the hot water discharge area at the plant. Mark Johnson and district fisheries biologist Don George investigated the incident. Johnson called Karl Karrow,

field supervisor for the Marais de Cygne Wildlife Area, for help, and Karrow, Johnson, and George searched the area for more dead geese.

They found seven dead or dying geese that day, and the next day they found three more dead geese in the hot water channel.

Karrow shipped three of the dead geese to the U. S. Fish and Wildlife Service's National Wildlife Health Research Center in Madison, Wis., to determine the cause of death. On August 15, the Center returned their report. The cause of death was strychnine poisoning from treated corn. The use of strychnine above ground was made illegal by federal court order on Nov. 3, 1988.

On August 25, Johnson contacted John B. Kreidemacher of Rid-a-Bug exterminators in Overland Park. Kreidemacher had contracted with KCPL to rid the power plant at La Cygne of pigeons. Kreidemacher admitted to placing the treated corn along the pools and tanks in the area. He claimed that he thought he could use the strychnine-treated grain because he had bought it before it was banned.

Four months prior to the geese killings, Johnson and wildlife biologist Tom Swan found approximately 75 dead blackbirds in the area. Unfortunately, the carcasses of the birds were too badly decayed for analysis. -*Shoup*

## POACHING PAYS?

We've been reporting on wildlife violations in this section for many years, and will continue to do so. However, there are times when our reporting of "get tough" cases seems a little futile, though we try to make the best of it. The following cases—certainly nowhere near the most lenient—exemplify this frustration.

On Oct. 6, 1989, the Ford County Sheriff's Office received a call about a deer poacher. Deputy Scott Mitchell investigated, and a man was subsequently charged and convicted of taking a deer without a permit. He was fined \$500 and

\$32 court costs. No jail time.

In January, 1989, conservation officer Ray Beisel arrested a Jefferson County man for poaching deer. The man was convicted of killing three white-tailed deer out of season. He received \$1,500 in fines, \$29 court costs, and suspension of hunting privileges for one year. No jail time.

In August, 1989, conservation officers Glen Cannizzaro and Clyde Umscheid arrested two men who were using a large generator to shock fish from a boat on the Missouri River. Each were charged a \$25 probation fee, \$32 court costs and one-year license suspensions. Approximately \$3,000 worth of equipment was seized in this arrest, most of which did not belong to the men. They were ordered to make restitution for the seized equipment. No jail time.

In October of 1989, three Oklahoma men were convicted of poaching paddlefish from Table Rock Lake in Missouri. The paddlefish were taken purely for their eggs, which carry a high black-market value as caviar. The fish had been netted and cut open randomly to see if they contained eggs, then the carcasses dumped overboard. This means that three males were probably killed for each female caught. On the night they were arrested, the men had most likely killed forty fish for the 125 pounds of eggs in their possession. They admitted that they had been poaching paddlefish in Missouri for four years. An illegal caviar netter can make more than \$20,000 per week. One man was ordered to pay \$1,000 restitution and the other men had to pay \$5,000 each for restitution. No jail time.

The frustration, of course, is obvious. Both courts and lawmakers often view wildlife violations the same way they view minor traffic violations. True, if the average citizen kills a deer illegally, a moderate fine might be enough to deter him a second time. But for the professional wildlife thief, \$500, \$1,000, or even \$10,000 is just operating expenses. License suspension is a joke.

The good thing in many of these cases is that arrests were made because sportsmen and other citizens cared enough to notify authorities through Operation Game Thief, 1-800-228-4263. -*Shoup*



# ISSUES

## BOTTLE LAW Q&A

**Are deposit laws an effective tool in reducing litter?** The deposit/refund law is successful in dramatically reducing litter because there is a monetary incentive NOT to throw the containers away. Based on figures in deposit law states, a national deposit law would result in an annual savings to local governments of \$650 million.

**Do deposit laws reduce the solid waste flow?** According to the U. S. Government Accounting Office (GAO), beer and soda containers make up six to eight percent of municipal waste. They comprise one-fourth of "recyclable" waste, as defined by the Environmental Protection Agency (EPA). In other words, we could reach one-fourth of the national goal of 25 percent recycling with enactment of a national beverage container deposit law.

**Would beer and soda prices increase with a deposit law?** Immediately after a bottle law's implementation, many deposit law states have experienced no change in soft drink prices although most have seen increases in beer prices. Over half of the price increase of beer in New York, according to beer wholesalers, could be attributed to the general tide of inflation. However, surveys indicate that most consumers are willing to share in the cost of recycling through slightly higher prices on some goods.

**Is it true that deposit laws create jobs?** The returnable beverage system is a labor-intensive system, as opposed to the energy-intensive throwaway beverage system. On the national level, it is estimated that over 50,000 jobs would be created.

*-Packaging magazine*

## WHIP WIND

Soil erosion is one of the most important issues facing Kansans. It is also one of the most easily overlooked. For the time being, artificial fertilizers allow us to ignore decreased fertility resulting from loss of topsoil. However, as fertilizers and other chemicals become increasing pol-

lutants of our water supplies, we will have to face the fact that our rich Kansas soils are rapidly becoming nutrient poor.

Windbreaks are essential elements of any solution to this problem, and landowners have ready assistance in establishing or re-establishing shelterbelts and woodlots. The Kansas Department of Wildlife and Parks has two programs designed to assist landowners in planting windbreaks.

The Wildlife Habitat Improvement Program (WHIP) will share the cost of tree and shrub planting. The program pays 50 percent of tree costs and the Department will plant the trees free of charge. WHIP also provides, free of charge, root plows which are used to keep shelterbelt roots from sapping field moisture.

In FY 1989, the Department planted 317,110 trees and shrubs through WHIP.

The Conservation Assistance Program (CAP) uses grant monies to stimulate enrollment in the Conservation Reserve Program (CRP). In addition to federal funds for planting windbreaks, landowners can receive CAP funds as well.

Oliver S. Owen, in his textbook, *Natural Resource Conservation*, cites statistics showing that wind erosion in the midwest is worse than in the Dirty Thirties because the pace of erosion is steady, rather than the dramatic "thunderhead" dust storms associated with that period. Programs such as WHIP and CAP can help curb this trend.

WHIP and CAP not only establish valuable wind erosion control, they promote wildlife habitat. With such programs available, landowners have the opportunity to strike a blow against the growing problem of soil erosion and to improve the value of their land at the same time.

For more information, write the Kansas Department of Wildlife and Parks, Fisheries and Wildlife Division, RR 2, Box 54A, Pratt, KS 67124. *-Shoup*

## CONSERVATION AWARDS

Each year, the Kansas Wildlife Fed-

eration (KWF) sponsors awards for outstanding environmental conservation achievements. The awards are given in a number of categories, and this year three employees of the Kansas Department of Wildlife and Parks (KDWP) received top honors.

Dr. Bill Layer, supervisor of the KDWP Environmental Services Section, was named Conservationist of the Year for his efforts in wildlife and natural resource conservation. Layer's work with wetland and riparian habitat was particularly noteworthy, and KWF cited his "tenacious pursuit of provisions for wildlife conservation in the State Water Plan, the Conservation Easement Act and the Riparian Wetland Protection Act."

Gene Brehm, video photographer for KDWP, was named Conservation Communicator of the Year. Brehm was given credit for increasing public appreciation of wildlife through his work with television and video productions such as "Cheyenne Bottoms: Jewel of the Prairie," "Kansas Wildlife: The Comeback Continues," "The Grasslands of Kansas" and "The Channel Catfish Story." These video productions, which have aired on television broadcasts statewide, are credited with "increasing awareness and bringing about a more positive attitude of the general public toward wildlife."

Steve Sorensen, Region 4 Fish and Wildlife Supervisor for KDWP, was presented the President's Award. An active member of KWF, Sorensen has served on the Education Committee for several years. He was one of the organizers of the Outdoor Adventure Camp, a week-long natural resource learning activity for Kansas youth sponsored by KWF. According to other committee members, if Sorensen hadn't stepped forward as director, the camp may never have taken place. He has served as director and one of the camp counselors for two years.

In other honors, Bob Gress, of Wichita, was named Conservation Educator of the Year; Dr. Frank Cross, a professor at Kansas University, was named Wildlife Conservationist of the Year; Ronel Finley, of Manhattan, was named Water Conservationist of the Year; and the Geary County Fish and Game Association was given the Outdoor Skills Instructor Award

as a group. -Shoup

## LOST IN THE OZONE

Volumes of information on ozone have been printed in newspapers and magazines over the past several years, and some of it can be downright confusing. Some articles refer to "good" ozone, yet others focus on "bad" ozone. If you don't read carefully, all this good/bad ozone stuff can make you feel like you are lost in the twilight zone.

The fact is, ozone is ozone. Whether it is good or bad depends on where it is. Ozone (O<sub>3</sub>) is a form of oxygen containing three oxygen atoms per molecule. Occurring naturally 10-35 miles above the earth, ozone forms a protective layer that filters out ultraviolet (UV) light from the sun. Excess UV light can cause skin cancer in people and could damage crops, forests, ocean plankton and other important ecological communities. Thus, ozone high in the earth's atmosphere is a good thing.

But there is a problem with this good thing. Ozone is a very unstable form of oxygen and easily releases its extra oxygen atom to form the more stable oxygen (O<sub>2</sub>) which we breathe. Man-made gases, particularly chlorofluorocarbons (CFCs), are rising into the upper atmosphere and robbing ozone molecules of their third oxygen atom. One CFC molecule can destroy thousands of ozone molecules. CFCs are the major ingredient in air conditioner and refrigerator coolants. They are also used to produce styrofoam containers and, in some countries, as aerosol propellants.

Scientists have now discovered two holes in the ozone layer, damage attributed to CFC pollution.

Okay. Upper atmosphere ozone is good and CFCs are bad, but what about the bad ozone, you ask? As a chemical in the air near the earth, ozone is one of our most serious pollutants. It forms when sunlight strikes other air pollutants, such as hydrocarbons and nitrogen oxides from automobile exhaust, coal-fired power plants, industrial activity, gasoline vapors, dry-cleaning materials, paints and solvents. Because weather patterns carry

these pollutants far from where they are produced, ozone levels near the earth can be high even in rural areas of Kansas.

Ozone is highly corrosive and can cause irritation of lungs, throat and eyes and worsen bronchitis, emphysema, heart disease and asthma. In plants, ozone enters the leaves and corrodes cell membranes. Summertime ozone levels in some areas are high enough to seriously reduce some crop yields. -Shoup



## CARY CREEK WOES

Channelization is a word used to describe the conversion of pristine, meandering streams into straight, lifeless ditches. One such plan in Dickinson County north and east of Woodbine appears to be near reality. The plan, which involves replacing a bridge over Cary Creek, carries a high cost — in dollars and in quality of fish and wildlife habitat.

The Kansas Department of Wildlife and Parks has sampled the stream and found many fish species not previously collected in Dickinson County. Additionally, the stream segment to be eliminated contains a diversity of habitats, from riffles to pools over 8 feet deep. These habitats contain fishes ranging from logperch, johnny darters and rare Topeka shiners to channel catfish over 12 pounds.

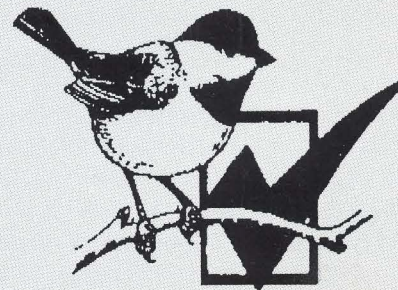
The channelization project was apparently made necessary by Federal Highway Administration funding requirements. A new bridge is needed to allow transport of farm machinery over the creek. However, as the road passes over the bridge, it

curves to follow the creek and winds its way up a steep hill.

To make the bridge visible from a distance, according to federal standards, the road needs to be straightened, taking out woodland in the process — including oak trees over 200 years old. Deep pools and riffles will be filled for the new road bed, and springs which keep the lower part of Cary Creek flowing during drought will be covered up. A new channel will be dug, straight as an arrow, through prime turkey nesting habitat, bypassing a long segment of presently meandering stream. The new channel will carry the stream directly into a sharp bend in the creek and, hence, contribute to erosion, stream siltation, and pollution downstream and in Lyon Creek.

Although most landowners in the area want the bridge, some have expressed dismay at the channelization. For many, it is difficult to understand why a new bridge can't be built at the site of the existing bridge. The existing bridge's location is not a problem for them, but it is too small for large farm machinery. However, federal funding officials state that the existing bridge is not visible from a distance although warning signs mark the area for the few drivers unfamiliar with the road. In fact, no one lives north of the bridge in the immediate area, and few vehicles cross the bridge each day.

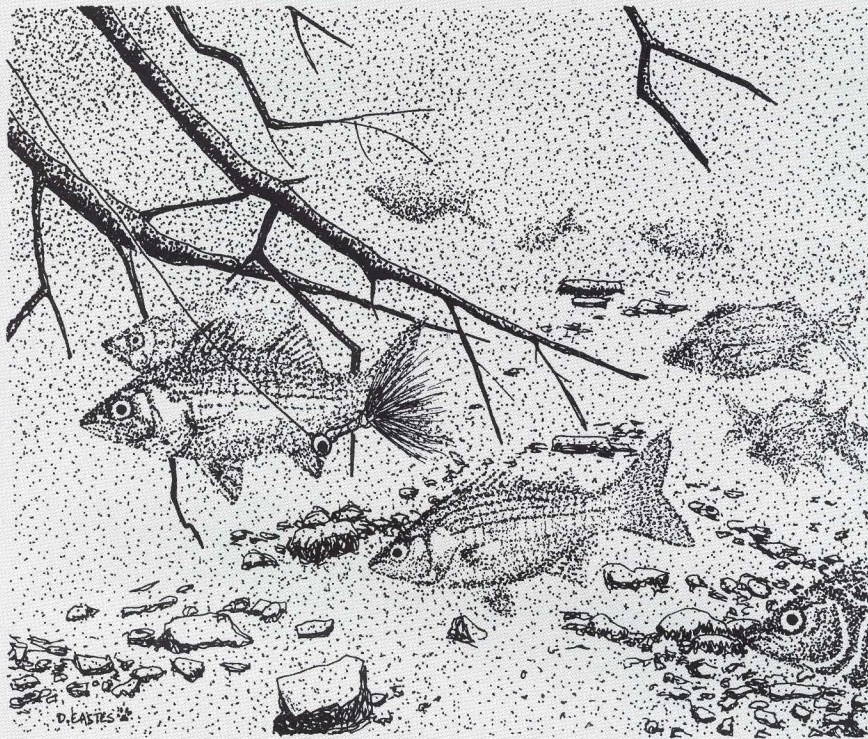
It is ironic that federal programs often pay us to destroy wildlife habitat and then pay us to protect or restore it. -Shoup



## CHECK OFF FOR WILDLIFE



# FISHING



## FISHING BUCKS

Using economic data collected by the U.S. Fish and Wildlife Service, the Sport Fishing Institute (SFI) has revealed that sport fishermen have a significant impact on both federal and state economies. Nationally, 60 million sport fishermen contribute over \$70 billion and 1.1 million jobs to the economy annually.

In Kansas, the figures are staggering. State sales tax revenue from fishing equipment in 1985 was \$7.5 million. This represents over \$185 million in retail sales. The related income tax from jobs in the fishing industry amounted to \$5.7 million. In addition to this, \$3.7 million was collected in license sales. In 1989, over \$2.5 million in matching federal funds was added to Kansas fish habitat improvement efforts. Fishing not only translates into dollars, it translates into jobs. In 1985, the fishing industry created nearly 6,500 jobs in Kansas.

Copies of this study are available from the Sport Fishing Institute, 1010 Massachusetts Ave., Suite 100, Washington, DC 20001. —*Shoup*

## MILFORD PRODUCES

The 1989 fish production season at Milford has been called the most successful in the hatchery's five-year existence. Marked improvement in water quality of the hatchery's supply lake, increases in hatchery staff, repair of the hatchery's alarm system, and accumulated knowledge of facility operations are credited with the improvement.

The biggest success of the 1989 year was the facility's channel catfish program. In past years, the facility had never produced more than 100,000 1/4-pound intermediate channel catfish. This past year, some 156,000 fish, 1/3-pound or larger, were stocked from the hatchery. Many fish averaged nearly 1/2-pound. These figures represent an increase in channel catfish production of about 200 percent. The majority of the intermediate channel catfish produced were stocked into state fishing lakes and community ponds and lakes across Kansas.

This past year also saw the first successful attempt to produce channel catfish fingerlings at Milford. Approximately

100,000 fingerlings were produced and included in culture programs. Unsuccessful attempts to produce small channel catfish had occurred during the hatchery's first production season.

Future plans for Milford include expanded use of supplemental oxygen for fish culture and the possible acquisition of Milford Reservoir water as a supplemental water source. With efforts such as these and with continued better understanding of facility operations, future production at Milford should continue to increase. —*Tommy Crawford, Milford Hatchery Manager*

## COLD WATER, SLOW FISH

Freshwater game fish such as bass, bluegill and crappie become most active when the water temperature reaches 70 degrees. The colder the water, the slower the fish. When the water temperature drops below 50, most game fish become hard to catch.

Lure presentations in cold water must be extremely slow. Fish will not move very far or very fast in cold water. Slow moving lures such as jig and pork combinations, single spin spinner baits or plastic worms should be fished patiently under such conditions. It takes very little food for a fish to exist during cold water months, and they exert very little energy during this time. —*Humminbird Release*

## NEW LENGTH LIMITS

For the past two years, an 18-inch length limit on walleye has been in effect at Lovewell Reservoir. After public discussion and concurrence by the Wildlife and Parks Commission at its January meeting, Secretary Robert L. Meinen announced an extension of walleye length limits to a number of other waters throughout the state.

Under the new order, 18-inch walleye length limits will be enforced at a number of additional reservoirs: Big Hill, Cedar Bluff, Cheney, El Dorado, Elk City, Hillsdale, La Cygne, Melvern and Pomona.

The following state fishing lakes will also enforce an 18-inch walleye length limit: Bourbon, Mined Land Wildlife Area,



Montgomery, Osage, Pottawatomie II, Shawnee, Wilson and Woodson.

In addition, 15-inch walleye length limits will be enforced at Glen Elder Reservoir and at Cowley and Lyon state fishing lakes.

The history of the 18-inch length limit on walleye began with the 1983 stocking of 12 million walleye in Lovewell. In 1985, 70 percent of this "class" was harvested — before any of them could reproduce. In 1986, the average walleye caught at Lovewell measured eight inches. Considering the popularity of the fish and the shortage of eggs for the stocking program, it was obvious that something had to be done.

Fish which have been allowed to grow to at least 18 inches will have had one year of egg production before they can be removed. Called "natural recruitment," this process allows the resident population of fish to reproduce itself, thus easing the need for stocking while at the same time increasing the numbers of large fish available to anglers.

In only its second year, the program increased both population and size of walleye in Lovewell. If this trend continues at other lakes, the new limits should succeed in improving our natural walleye fisheries and save money in the process.

—Shoup

## FOR WHAT IT'S WORTH

### FISH AND THE PRODIGAL CHILD

by J. Mark Shoup



When there are leaves to rake, a porch to paint and a garden to spade, it takes a special brand of creative effort just to go fishing. Stories born of such effort often blur the line between fantasy and reality. I leave to the reader to decide in which category the following events belong.

A couple of weeks ago, I was feeding my son, Logan (sometimes known as "Bud" or the "Little Guy"). Redbud blossoms framed the kitchen window, and I grimaced at the thought of attacking the aforementioned chores on such a beautiful day. Suddenly, Logan pointed to a bowl of bananas on the counter and said, out of the blue, "That's Daddy's fish."

Thinking I had misunderstood, I answered, "Yes, Little Guy, that's Mama's dish."

Pointing directly at the bananas but looking me straight in the eye, he repeated, nodding his head for emphasis, "That's Daddy's fish."

Up to that time, his longest sentence had been "Eat!"

Now sometimes only the parents of small children can understand what they say, and this can lead to some outlandish claims. However, there is no way in any baby's language that "banana" can come out as "fish." This kid's eaten a bunch of bananas and watched his daddy clean a lot of fish. He knows the difference.

I glanced at the fruit bowl, and for an instant, I thought I saw yellow scales bristling across one of the bananas. My son was standing in his highchair, repeating the exclamation, pleading with me. His intensity was eerie.

"Come on, Bud. I think you're through with breakfast." He hadn't touched his Cheerios, but I plucked him out of the highchair and headed for the living room. "I want your Mama to hear this. She doesn't know what she's missing."

"Want to be fishing!" he declared. I did a quick double take and rushed into the next room.

Mama was reading a book.

"Listen to this," I announced, beaming at the prodigal son cradled in my arm. My wife looked up from her book and smiled at us expectantly. Silence. Logan looked from mother to father with a coy child smile that says, *I have a secret, but I'm not going to tell*. He wasn't about to perform.

"Tell Mama what you told me, Bud. What do you want to do?" Mama waited for the performance.

Miracles often come in disguise, and I now believe that his next pronouncement was such a ruse. He looked at me,

grinned as if he'd just opened the refrigerator door without my noticing, pointed to the door and yelled, "Cabbages!"

In my mind, there's nothing funny about cabbages, but you'd think my wife had heard the best one-liner in standup history. Even the dog got up from in front of the fireplace and wagged from me to my wife, wanting in on the joke. The cat, curled in an empty chair, opened one eye. His tailed flicked a couple of times, then he went back to sleep.

"No, no, that's not what he said." I was trying to be heard above her laughter. "In the kitchen, he pointed at the bananas and said, 'That's Daddy's fish.' On the way in here, he said, 'Want to be fishing.' Didn't you, little guy? Don't you want to go fishing?" Logan was silent. My wife looked at me with a knowing gleam in her eye. I knew she didn't care if I went fishing, especially if I was going to watch Logan all day. That's why she was still smiling. But that gleam in her eye seemed to say, *Just don't try to pull my leg*.

"I'm not pulling your leg," I pleaded in defense.

"Why, nobody said you were, Honey," she answered. Did I hear a note of condescension in her voice? I don't know, but at that moment I realized that we are all born with an instinct for figures of speech. Even little guys.

"I've got a proposition for you, dear." There wasn't the slightest hesitation in my voice. Early spring sunlight was shining through the windows. I had to think quickly. "I'll take care of Logan today. You can raid the mall, maybe do a little bargain hunting."

She was speechless.

An hour later, the coast was clear. Logan and I were headed for the river. As we pulled onto a dirt path alongside the bank, my son exclaimed, "River! River!"

We settled in next to a big cottonwood, and as I threw in my line, Logan picked up a stick and threw it in, too. "Cabbages!" he repeated with absolute certainty, and I knew what he meant.

The first channel cat hit my line in five minutes, a nice two-pounder. As I landed the fish, the Little Guy hopped gleefully behind the tree, shouting, "Bananas! Bananas!"

Vindication, I thought.



# HUNTING



## BASIC BALLISTICS

No responsible deer hunter would go afield without sighting in his rifle, yet many otherwise savvy turkey hunters attempt to bag their birds with shotguns they've never pattern tested.

It's important to understand that every shotgun barrel patterns differently, even those of the same brand, gauge, choke and length — and even using identical shell components. It's not safe to assume that your shotgun will perform as desired just because another one like it does.

Pattern testing checks shotshell components as well as shotgun performance. Powder charge, shot cup, shot and shot buffering compound are major influences on shotgun performance.

Of course, none of these factors affect shot dispersal more than the shotgun's choke. Full chokes are fairly standard among turkey hunters. Modified chokes, however, are fine with steel shot. If you have the ability to change chokes, use one of these two.

Pattern testing your turkey hunting gun and loads is simple. You'll need to

find out 1) what load produces the greatest density of pellet strikes at the center of the pattern and 2) where that center is, relative to your aim point.

You can purchase commercially made patterning targets, or make your own by drawing a 30-inch circle on a piece of paper with a central aim point. It's even better if you can sketch a life-sized turkey head and neck, with the center of the head on the aim point. Step off 40 yards (some pattern testing is done at 30 yards) and fire a carefully aimed shot exactly at the aim point. Use a good solid rest.

About 70 percent of the pellets should strike within the 30 inch circle, but the pattern's center density (the number of strikes within a 10-inch centered circle) is more important. There should be no place in the center circle where a two-inch disc can be placed without covering a pellet hole. The most critical test is a count of the lethal pellet strikes inside the turkey head outline.

Most shotguns don't shoot exactly where you aim them. They tend to shoot just a little high. You may find, however,

that yours is off in another direction. You can determine this by moving a 30-inch ring around your pattern test target until it contains the maximum possible pellet strikes. You can test the placement of the dense center pattern by using a 10-inch ring in the same fashion.

The key to getting good shotgun patterning performance is to try different shotshell loads until you find one that suits you. Even identical loads assembled by different manufacturers often do not perform equally.

This process is essential to responsible turkey hunting. Neglecting it can result in missed or crippled targets and ruined hunts. -Rob Manes

## EDUCATE SLOBS

One recent fad in certain circles is bumper stickers and T-shirts sporting such slogans as "Happiness is a large gut pile" and "If it flies it dies." While these items may seem like harmless jokes to those who buy them, their messages are taken quite literally by the average nonhunter, further distorting the public's image of hunter motivations.

Anyone who reads the editorial pages of the larger newspapers in the state can tell when hunting season has opened. It seems that every isolated incidence of irresponsible "hunting" activity makes it onto these pages. Those people who do not hunt take this to be the norm for hunters. Many people never have the chance to talk to hunters about what they do and why they do it. Therefore, they see hunters through such visible images as gut piles on T-shirts. Their editorial-page viewpoint is reinforced, and they become candidates for the anti-hunting fringe.

In recent years, organizations such as bowhunting and rod and gun clubs and private conservation groups in several states have organized to combat the negative image created by slob hunters. Public/hunter education campaigns are among their activities. These conservation groups stress the fact that all true hunters abide by ethical standards. People who sport such offensive T-shirts and bumper stickers should be ostracized by all sportsmen. -Shoup



# NATURE

## WALNUT NUTS

Crashing through underbrush along a creek bank 40 miles west of Kansas City, Alan Ware hunts a rare breed: walnut trees suitable for pricey floors and furniture. Mr. Ware is a "spotter" of trees for a Kansas City, Ks., lumber company. He is one of only a few in his profession, those who hunt an increasingly scarce — and increasingly valuable — species of tree. A few trees can be worth as much as \$20,000.

Desperation is rising in sawmills because walnut, with its golden swirls and purplish feathering, has become trendy, the Yuppie wood.

A spectacled alumnus of the University of Missouri's forestry school, Mr. Ware bemoans the scarcity. "Sometimes I wonder when this will end, when there won't be any walnut left," he says. Others bemoan Mr. Ware and those like him. Says Carl Zichella, spokesman for the Sierra Club, "Cruising timber to satisfy market pressure when trees are scarce is outrageous. They could put themselves out of business, and I say good riddance."

Spotters are sometimes accused of cheating landowners out of fair prices, destroying crops to haul trees away and even "rustling" trees in the dead of night.

Walnut's considerable lore could fill a museum all its own. The ancient Greeks dedicated the walnut tree to Diana, goddess of hunting and protector of mothers at childbirth. In the 17th Century, French musketeers selected walnut for their fire-arm stocks — a preference that still prevails among U. S. shotgun and rifle makers.

The Pilgrims held their council meetings at a walnut table at Plymouth Hall. Aaron Burr composed himself over lunch at a walnut sidebar after killing Alexander Hamilton in a duel. Dolley Madison served tea on a walnut buffet to her husband and his generals while they talked strategy in the War of 1812.

American Indians used walnut husks, which hold traces of a natural sedative,

ellagic acid, to stupefy fish. In Mississippi, where that trick has lingered, a state law bars using walnuts, dynamite or gun-powder to land the catch of the day. Some woodworkers say they delay sweeping up walnut shavings because their sweet smell has such a soothing effect. *-The Wall Street Journal*

## HERD WORDS

We all know what it's like to be "off, like a herd of turtles," but how many people really know the common names of most groups of animals? In simpler times, when people lived closer to nature, names for groups of animals were common knowledge. Today, a cete (pronounced "set") of badgers is seldom a hot topic of conversation.

However, the names for groups of a single species still exist. Test your knowledge. How many of these terms do you know?

Apes	-	Shrewdness
Badgers	-	Cete
Bears	-	Sloth
Elephants	-	Herd
Foxes	-	Skulk
Geese	-	Gaggle
Giraffes	-	Corps
Hedgehogs	-	Array
Hippopotami	-	Herd
Housecats	-	Clowder
Javelina	-	Drove
Kangaroos	-	Troop
Larks	-	Exaltation
Leopards	-	Lepe
Lions	-	Pride
Otters	-	Family
Raccoons	-	Nursery
Starlings	-	Murmuration
Tigers	-	Ambush
Turkeys	-	Rafter
Wild Boar	-	Drift
Wolves	-	Route
Woodcocks	-	Fall
		<i>-Shoup</i>

## BUSY BEAVER

Although you may not have seen beavers in the wilds of Kansas, they are most certainly there, and in good numbers. They are North America's largest rodent and can be found anywhere there is a permanent body of water. Ranging in weight from 40 to 90 lbs., adult head and body length is 27 to 38 inches. Their prominent orange-colored front teeth and powerful jaws can easily fell small trees in just a few minutes. They prefer cottonwood, aspen, birch and poplars as food.

Beavers, famous for construction of dams, build the structures for several good reasons. The dams retard the flow of water and create ponds. The ponds protect the beaver from predators and make it easier to move building materials to the dams. Ponds also raise the water table, which encourages growth of nearby vegetation, some of which is favored by the beaver as food.

Beavers build lodges with at least two or more underwater entrances. In some cases, they live in bank dens, cavities excavated beneath the bank of a stream or river.

Once highly sought after for its pelt, the beaver can probably be credited for man's western expansion in the United States. Humans aside, the only other predators beavers face are coyotes, domestic dogs, bobcats, lynx and mountain lions. Mink are sometimes known to prey on young beavers. Kits, born in the spring, stay in the home pond for their first two years. *-Knight-Ridder News Service*





# NOTES

## CHECKOFF TRAIL

Future visitors to the Kansas Museum of History in Topeka will have the opportunity to follow a nature trail through a tallgrass prairie and explore neighboring woodlands, thanks to a cooperative effort by the Kansas Department of Wildlife and Parks and the Kansas State Historical Society.

Funds for this project will be provided by a grant from the Chickadee Checkoff Program. The Checkoff Program raises money for general wildlife projects through donations checked off on state income tax forms.

With the assistance of Wildlife and Parks district staff, a variety of native grasses have already been established on the grounds of the museum, recreating the natural prairie of the early 19th Century.

The Kansas Museum of History is located at 6425 SW 6th Street in Topeka. *-Shoup*

## CHECKOFF UPDATE

The year 1990 will mark the tenth year of income eligibility for our Chickadee Checkoff. The amount of income received for the Kansas Nongame Wildlife Fund through the Checkoff in 1981 was \$128,178. In 1989, donations totaled \$173,394.

In 1981, there were 24,587 taxpayers who donated an average of \$5.25. However, in 1989, there were fewer taxpayers who contributed (22,436), but their average donation was \$7.73.

In 1987, we saw the largest donated amount (\$209,464) and the highest number of contributors (26,572). *-Ken Brunson, urban/nongame program coordinator*

## HABITAT CENTER

Several Kansas state agencies have helped develop a center to produce wildlife habitat across the state. The Kansas Departments of Wildlife and Parks, Corrections, and Transportation and the Kansas State Extension Forestry are

working together at the El Dorado Habitat Center. The Center is located at the Department of Correction's El Dorado Honor Camp below the El Dorado Reservoir dam.

The Center will produce tree and shrub seedlings important to Kansas wildlife species. These seedlings will be grown in cooperation with the Extension Forestry, which coordinates tree distribution in Kansas. They will be using the Habitat Center seedlings needed for wildlife habitat and windbreak plantings in Kansas.

Personnel and inmates at the Center will also collect and clean native wildflower seeds to be used in native grass reseeding projects conducted by the Department of Wildlife and Parks. The Department harvests wildflower seeds annually.

Additional items produced at the Habitat Center will include artificial nesting structures for nongame birds such as wrens, bluebirds and kestrels, and floating nesting structures for the Canada goose restoration project. Habitat equipment, such as root plows and tree planters, will also be made at the Habitat Center. *-Steve Sorenson, Region 4 fisheries and wildlife supervisor*

## KANSAS TRAIL GUIDE

The Kansas Trails Council (KTC) Board of Directors has approved plans for printing and publishing Virginia Lefferd's *An Index to Kansas Trails*.

The index contains a county by county list of hiking trails which are at least five miles long; another list of hiking trails shorter than five miles; and lists of bicycle trails, fitness and jogging trails, and horseback trails.

With these lists, any trail in the state can be located.

KTC has set the retail price of the index at \$1.95, plus \$1 postage and handling. The book can be ordered from Kansas Trails Council, Information Office, 1737 Rural Street, Emporia, KS 66801. *-Shoup*

## LITTER VOLUNTEERS

On Nov. 4, approximately 50 volunteers gathered at Cheney Wildlife Area to mount a campaign on litter, an increasingly serious problem in the area.

The group, organized by Cheney State Park Manager Jerry Schmidt, collected everything from broken glass and baby diapers to chunks of iron. Four discarded water heaters were hauled from the public wildlife area. In all, a 10-yard trash compactor was filled during the day's work.

Although the group was only able to cover approximately one-third of the wildlife area, Schmidt calls the operation a success. "My goal is to get the public involved," he said. "If we can do this a couple of times a year, I think more and more people will want to help."

KFDI radio provided free publicity for the event, and each participant received a certificate of appreciation signed by Assistant Secretary of the Department of Wildlife and Parks, Alan Wentz.

Schmidt has another cleanup planned to coincide with Earth Day, 1990, celebrations. He hopes to involve area television stations in this event. *-Shoup*

## WILDLIFE HERITAGE

In April, Kansans will celebrate the fifth anniversary of Kansas Wildlife Heritage Month (KWHM). The theme for this year's celebration is "Earth — Our Only Habitat." KWHM will coincide with the 20th anniversary of Earth Day, April 22.

As a part of the celebration, participants will converge on Capitol Hill in Topeka on April 4 for a special day of recognition. Other events and activities are being planned for Kansas Wildlife Heritage Month. For more information, write Ken Brunson, Kansas Department of Wildlife and Parks, RR 2, Box 54A, Pratt, KS 67124 or Chris Lauver, Kansas Biological Survey, 2041 Constant Ave., Lawrence, KS 66047. *-Ken Brunson*

**EARTH DAY**  
**APRIL 22nd**

# NATURE'S NOTEBOOK

by Joyce Harmon Depenbusch, Wildlife Education Coordinator

The old saying "Leaves of three, let them be," describes poison ivy, Toxicodendron radicans, Rhus radicans, or Rhus toxicodendron. This plant is a good one to be aware of and to be able to recognize easily.

## POISON IVY

Poison Ivy is a perennial (having a life cycle of more than two years), and grows as a vine or shrub. The vines can be found on the ground, climbing trees or any available object. The vine is brown covered with rootlets, and looks like a fuzzy rope. The shrub form of this plant can be a few inches to several feet tall. The leaves vary in size, shape, color, and shininess (or luster). The leaf edges may be smooth or jagged. The leaves are red or purple in early spring; shades of green in the summer; and yellow, red and orange in the

fall. From May to July, the poison ivy plant has clusters of small greenish yellow flowers. The flowers form small green berries which ripen to white.

Some bird species eat the berries. In the early 1900's, the milky juice from inside the plant was used as an indelible ink and in shoe polishes.

Urushiol is the oil in poison ivy that can irritate humans. The substance is found in all parts of the plant and remains potentially dangerous even when the plant is dead. Studies have shown that leaves stored for over five years were nearly as

toxic as fresh leaves. Touching clothing or pets that have contacted poison ivy, and breathing smoke from the burning plant can cause irritation. Some people are not sensitive to the plant, while others need to be hospitalized after contact.

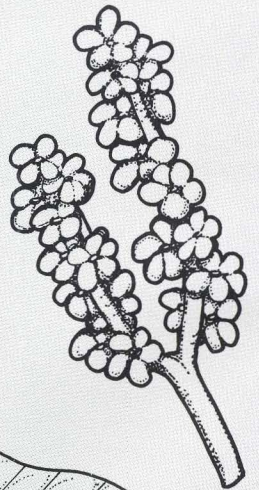
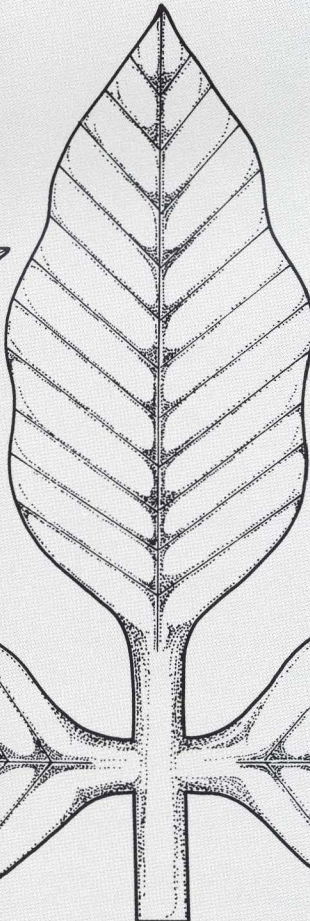
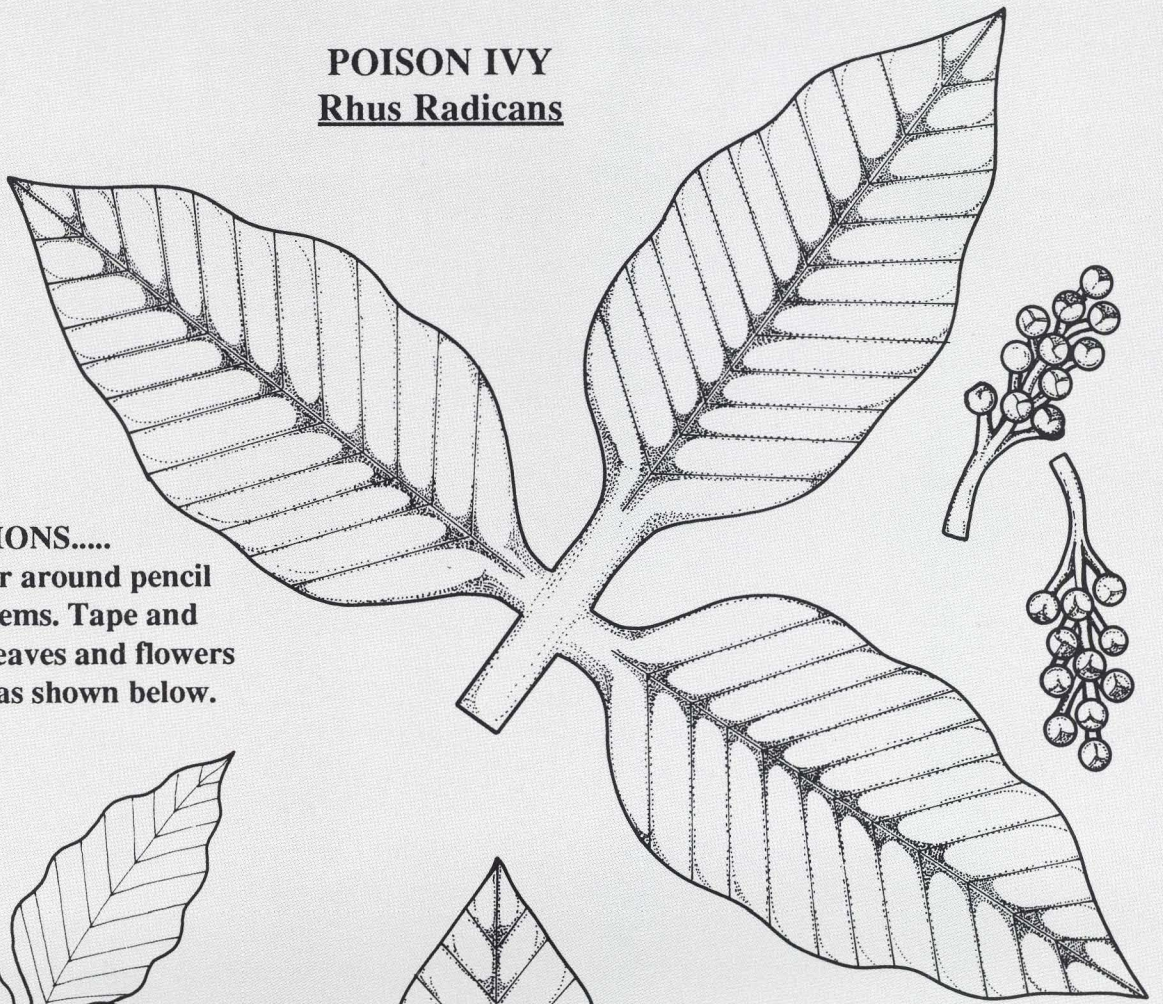
Avoiding the plant is the best method of preventing skin irritation. If contact is made, wash the area and any clothes involved thoroughly and frequently in strong soap with cool water. Caladryl lotion can help ease itching. Contact a doctor for medicine needed to treat severe cases.

You can make a model of poison ivy by following a few simple directions:

- 1) trace or make duplicate copies of the models.
- 2) color the models with crayon or marker.
- 3) reinforce the back of the model with construction paper if necessary.
- 4) fold on all dotted lines, cut on solid lines.
- 5) use glue to assemble.

**POISON IVY**  
**Rhus Radicans**

**DIRECTIONS.....**  
Roll paper around pencil  
for two stems. Tape and  
glue the leaves and flowers  
on stems as shown below.



©S.J. WITTE '89

# *Close Encounters of The Itching Kind*



“Leaves of three, let it be,” is a good lesson to remember when you’re out in the Kansas woods. Poison-ivy is common throughout the state and can cause extremely uncomfortable conditions to those who fail to identify it.

text and photos by Mike Blair  
*staff photographer*

**B**ill hadn't paid enough attention in class. As he studied the 4-foot upright woody stalk with fuzzy brown buds, he toyed with his quiz card. Fellow students on the tree identification field trip stifled grins as he puzzled over the plant, sniffing and handling it. Finally, gambling on bitternut hickory, he turned in his answer.

Bill spent the next several days at the student health clinic, eyes swollen tightly shut. The medicine cost him \$65. It was a painful lesson, but one he never forgot. The plant he missed in its winter form was poison-ivy.

Though resistance to the plant's toxin varies among individuals, poison-ivy is nothing to trifle with. Kansas has an abundance of poison-ivy, and though it's most common in woodlands, it may be found in cities as well. Even manicured lawns are not immune, since birds eat and scatter seeds wherever they go.

Many presume that poison-oak is also common in Kansas, but neither it nor poison-sumac are found in the state. Poison-ivy's several growth forms may spawn this confusion, although non-toxic Virginia creeper is also sometimes mistakenly labeled "poison-oak."

This eliminates several potentially worrisome plants, but it still doesn't change one important fact: Outdoorsmen should learn to recognize poison-ivy. This spring, many unknowing campers, hikers and turkey hunters will accidentally contact the plant . . . with excruciating consequences.



The symptoms of poison-ivy, a red rash with watery blisters, may not occur until several hours after contact and may last 10-14 days. Resistance to the toxin varies widely among individuals.



Poison-ivy can appear in several forms. In disturbed areas it may grow in dense stands of woody stalks up to 6 feet tall. In summer these thickets are best avoided since it's impossible to pass through without releasing some of the plant's toxin.





Poison-ivy produces white berries, which can be another way of identifying the plant. The toxin can be released by touching any part of the plant including leaves, berries, branches and vines.



Poison-ivy can be desirable because of the beautiful red leaves produced in the fall. These are growing from a vine.



Many wildlife species feed on poison-ivy. Birds, such as this red-bellied woodpecker, feed on the berries, and deer will browse on the leaves.

The key to avoiding poison-ivy is identification. The maxim "leaflets three, let it be" is a good one to remember, since the plant has several growth habits. It may grow as a vine on a tree, as a shrub or as a small, inconspicuous ground plant. But the trademark of poison-ivy in any form is a compound leaf with three leaflets.

Poison-ivy's scientific name is *Toxicodendron radicans*, meaning poisonous tree with aerial rootlets. In city parks, lawns or other exposed locations, it is likely to be an inconspicuous yellow-green plant, 2 to 5 inches tall.

On previously disturbed sites, such as flood zones or old fields, poison-ivy is an aggressive invader, growing in dense stands of upright, branched or unbranched woody stalks up to 6 feet tall. In summer, these form thickets best avoided, since it is impossible to pass through them without bruising leaves and releasing toxin.

In shaded forest situations, poison-ivy becomes a vine that may climb as high as 60 feet to reach sunlight and may be more than three inches thick near the base. Vines cling to trees by means of bright red or brown aerial rootlets and may be devoid of leaves for tens of feet upward. The vine form of poison-ivy may be hard to distinguish, but cutting or rubbing against vines produces toxic effects as readily as smaller plants with leaves. If in doubt, leave all vines alone.

The toxic agent in poison-ivy is an oily substance found in all parts of the plant. It is extremely poisonous and causes a painful, itching irritation on the skin. Actual contact with bruised leaves or other portions of the plant are necessary to produce a reaction. However, contact with smoke from burning leaves and vines may also be dangerous.

Symptoms of poison-ivy include red, itching welts with watery blisters and mild swelling of affected areas. The face and neck are particularly sensitive, and eyes may be swollen shut in severe cases.


Especially susceptible persons may get poison-ivy from contaminated clothing or footwear which has bruised the leaves or twigs. Remarkably, the poison remains viable on such articles for several years, unless washed thoroughly.

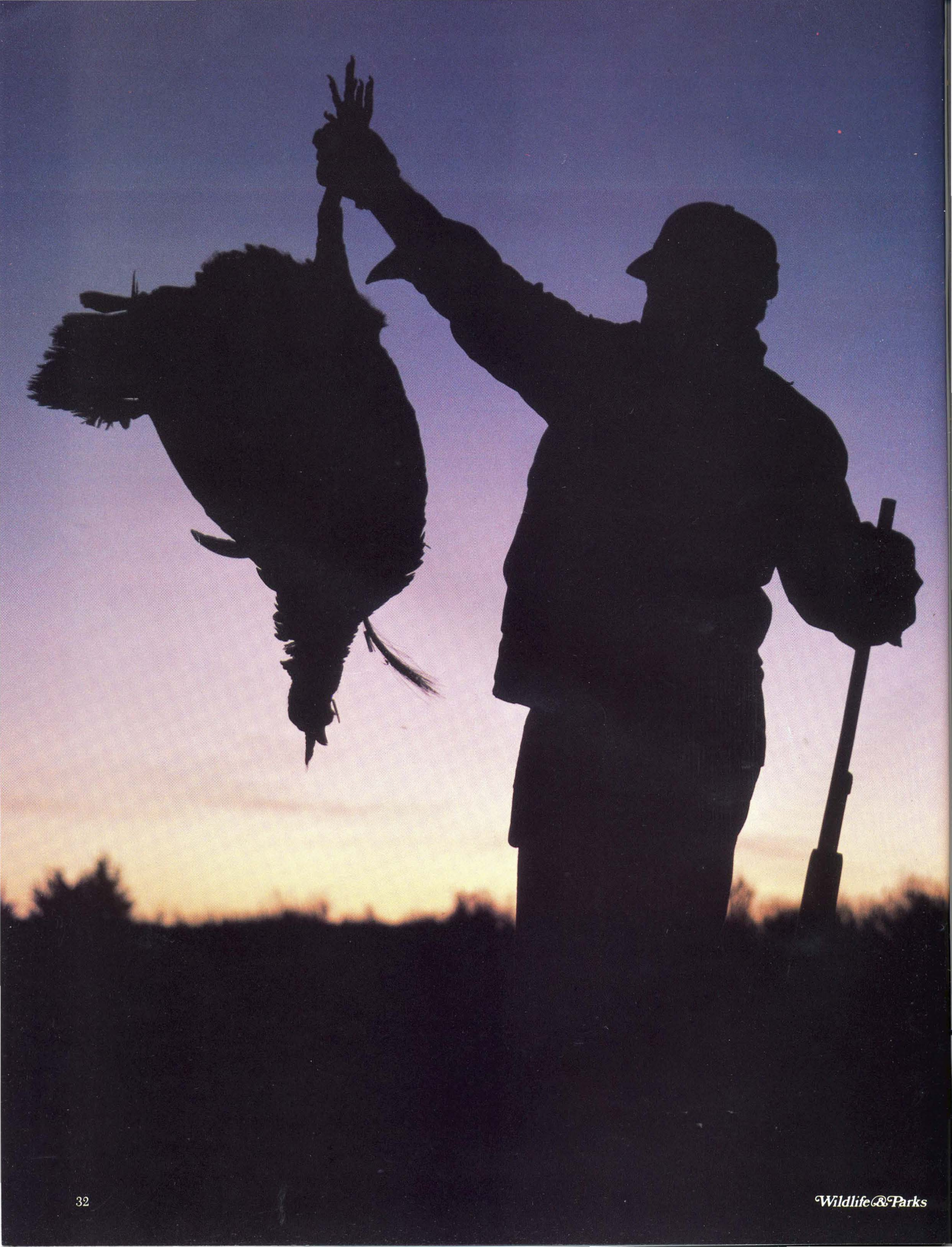
If contact with poison-ivy is suspected, wash skin carefully with soapy water. Normally the irritation does not begin until several hours after contact.

Over-the-counter medicines are available to relieve itching, but these have little curative effect on poison-ivy. The irritation usually runs its course in 10-14 days.

Except for its toxic implication to man, poison-ivy is actually a valuable woody species. The abundant white berries provide an excellent winter food for birds, and deer relish the leaves and twigs.

Poison-ivy leaves produce brilliant red and orange fall colors, making the plant especially desirable in central and western Kansas landscapes. Because of its wildlife and aesthetic values, these benefits may warrant its protection even in home landscapes.

After all, once you learn to avoid it, poison-ivy is nothing to fear. 



# Romancing The Turkey



**The 1990 spring turkey season looks exciting for Kansas hunters. Turkey numbers are growing and more permits are available than ever before.**

**by Mike Miller**  
*editor*

**photos by Mike Blair**

One of the most overlooked facets of outdoor experiences may be sound. Certain sounds in nature seem to tweak my outdoor enthusiasm to the point that I've categorized a few of the all-time great outdoor sounds. Those would include the laughing cackles of white-fronted geese, the bugle of a bull elk, the eerie call of the loon, the aggressive hooting of a barred owl and the crunching footfalls of a deer walking through dry leaves. But the gobble of a tom turkey, shatter-

ing the quiet of a calm spring morning, will always rank at the top. Nothing can build excitement like the lusty chortles of a tom as it moves toward the hunter.

As the 1990 spring turkey season approaches, I, and many Kansas turkey hunters like myself, long to hear the sound again. This year's season is open April 18 through May 6. If last year's season is any indication, the turkey woods should be full of gobbles this spring. 1989 turkey hunters enjoyed a phenomenal suc-

cess rate of 47 percent. The drought that hurt pheasant production last spring and summer probably didn't affect turkeys, especially the Rio Grande species, which inhabits most of the western two-thirds of the state.

Turkey hunters will see some changes in this year's turkey management units as a result of increasing turkey numbers. Most of the state will be included in one unit with unlimited permits available. The exception will be Unit 1 in the

southwest where turkey numbers have dropped in recent years, and Unit 2 south of Kansas City. Both areas will have limited permits available on a drawing basis. The application period for the limited units was Jan. 10-Jan. 26. Hunters can apply for a permit for the unlimited unit through the end of the season. There is also the possibility of hunters obtaining a second permit. Fifteen hundred special permits are available in the southcentral portion of the state that used to be designated as Unit 5. Those permits will be available to hunters by application through the Pratt office beginning March 1 until all permits are sold on a daily competitive basis.

Throughout the past several turkey seasons, several counties have emerged as top turkey producers. Butler County has consistently taken top honors for number of turkeys taken. It's closely followed by Barber, Commanche, Chautauqua, and Rawlins counties. But a turkey hunter certainly shouldn't limit his hunting efforts to those select counties. Most of the high harvest counties also have more hunters. Counties in the northwest portion of the state often produce the highest success rates, some even approaching the 80 percent mark. Many other counties provide excellent hunting opportunities where suitable habitat exists.

Turkeys have been trapped and transplanted throughout the reintroduction program. And the release of trapped birds has been extremely successful in spreading the birds statewide. But turkeys are prolific and mobile on their own. A flock may move several miles from winter to spring sites. It's not uncommon for flocks of up to 400 birds to winter in one particular area. When the spring breeding season rolls around, those flocks will disperse to preferred nesting areas. As the flocks increase, previously uninhabited areas will suddenly have resident turkeys.

The best way to ensure a good spring hunt is to scout in late winter and early spring. Warm temperatures in late winter will sometimes cue breeding behavior in turkeys. The mature toms will begin displaying and establishing their dominance over other male flock mates. The



younger toms and jakes will move to outlying areas.

Turkey habitat was once considered to be only wooded areas along streams and creeks. But, showing their adaptability, turkeys have moved into shelter belts, old farmsteads and wooded areas around pastures. A good way to locate late-winter turkeys is to scan the edges of winter wheat fields adjacent to wooded areas in midmorning or midafternoon. Turkeys will also feed around areas where cattle have been fed through the winter. Use binoculars and keep your distance so the birds will follow normal movement

patterns. In late afternoon, you may be able to follow the birds to the roost site, which is extremely important to spring hunting.

Once you've located a good bunch of birds, seek permission to hunt the land before you ever set foot on the place. Since turkeys have become more numerous and spread to new areas, permission to hunt them has become easier to get. A hunter who does his footwork and treats landowners with respect usually has no trouble finding a place to hunt.

Scouting isn't over, but you don't need to be in the woods again until just before the season opens. Use the



remaining winter or early spring to practice calling. The calling skills required for spring turkey hunting might be the most enjoyable part of the hunt for many hunters. And while you don't have to have competition-class ability, the more proficient you are with a call, the better your hunt will be. If you're a beginning caller, buy or rent an instructional video cassette. There are some very good ones on the market, and most explain and demonstrate methods of calling with a variety of calls. I usually carry several different types of calls for different sounds or in case one is lost or damaged.

A week or two before opening day, get back to your hunting area and finish your preseason scouting. This final scouting requires long-range scanning with binoculars and some footwork. Check the roost you located earlier. It's not uncommon for birds to roost in several different areas. Check the ground for fresh droppings and feathers. If none are found, you've got more footwork to do. If you can't locate the roost site on foot, return to the area on a calm evening. Listen for hen calls and gobbles just before dark, and if it's really still, you'll be able to hear the birds fly up from several hundred

yards. An imitation call of a barred owl or coyote howl will often elicit a gobble from toms heading for the roost.

If you've got the time, watching a roost site early in the morning can also improve your odds. Dominant toms will commonly have an area they prefer to strut in. When they leave the roost, they head straight for the strutting area. If you can locate this site, you'll greatly improve your odds for success on opening morning. If you don't locate a specific strutting site, you can still watch the birds' movements as they leave the roost. You want to locate a suitable calling area that will keep you within 50 yards or so of the turkeys' path.

In the eastern part of the state, where turkey habitat is dense woods, long range scouting may not be possible. In this case, a hunter needs to find a general area where birds are roosting by listening for gobbles and fly ups. On opening morning, the hunter moves quietly into the area before first light. Using the owl call, crow call or coyote howl, the hunter then tries to shock roosted toms into gobbling. Once a tom has gobbled from the roost, the hunter may move closer and set up to call the bird. Don't move too close; if the bird spots or hears you, he may be spooked. Do try to eliminate any obstacles between you and the tom. Being familiar with your hunting area will help. Turkeys may be reluctant to cross a creek, fence or other obstacle when approaching a call. Veteran turkey hunters from the east also prefer to call from higher ground, believing a bird will approach a call more readily from below.

As a bird approaches shotgun range, the hunter's mistakes and the bird's acute vision and hearing will most likely save it. Most hunters insist on wearing total camouflage, including gloves and headnet. Even then, your biggest enemy will be movement, especially quick movement. A hunter who tries to quickly swing his gun around to aim will usually lose. Set up so that minimal movement is required to aim and fire the gun, and if you must move, move slowly and preferably when the bird's vision is screened by brush.

The popularity of turkey hunting has grown tremendously in Kansas. And once a hunter experiences the thrill of calling in a tom, he's usually hooked for life. Because of this growing interest, and the fact that many Kansas turkey hunters are new to the sport, safety precautions are a number one consideration. Kansas experienced its first turkey hunting-related accident last spring. And, like most hunting accidents, it could have easily been prevented. One of the most unforgivable sins in hunting is shooting at a target you're not sure of, or haven't positively identified. This sin is even more ridiculous during the spring turkey season because only toms are legal to harvest. A hunter must positively identify his prey as not only a turkey, but a tom or bearded turkey. But for some reason, turkey hunters are killed or injured in other states every spring because another hunter mistook them for a turkey.

Several factors contribute to these accidents. First of all, the hunter is totally camouflaged and making sounds like a turkey. Another reason is that most turkeys are taken in relatively thick cover where vision is screened by brush and shots are usu-



Finding a roost site can be the difference in success and failure on opening morning. Locate roosts by watching flocks with binoculars, listening for fly-ups on quiet evenings or use a crow or owl call after sunset to elicit a gobble from roosted toms.



Another key to success is knowing where the turkeys go when they leave the roost. A tom will often have a preferred strutting area where it will go at sunrise. Spend some pre-season mornings watching turkeys as they leave the roost.



A hen decoy can help bring toms in. Set the decoy about 25 yards from you and use it to gauge distances. A big tom can look closer than it really is. Pattern your shells and gun to find the optimum load and effective distance.


ally close. You can take steps to protect yourself. If you're hunting on private land, find out if any other hunters have permission and communicate with them. Know where they are hunting and when. Never assume that you're the only one in the woods. Never stalk a calling hen that seems to be stuck in one position. Turkeys rarely stay put and it's likely another hunter. If you're hunting public land, or know that other hunters are present, avoid using a gobble call or use it sparingly. Carry a small pen light as you walk to your spot before light. And it's a good idea to carry a blaze orange hat or vest with you to put on when you move

through the day.

If you see an approaching hunter, never wave or try to signal your position. Yell or whistle to reveal your presence. Many accidents occur when the shooter sees a glimpse of movement such as a hand wave or head movement. Never wear hats, shirts or other garments with the colors red, light blue or black. These are the colors most prominent on a tom turkey and just the glimpse of one of these colors may cause an unthinking hunter to mistake you for a bird.

It's unsettling to think that some hunters are so desperate to kill a turkey that they will take chances by

shooting what they think is a bird. NEVER shoot at movement or color that resembles a bird. A fleeting glance at a bird in heavy cover is not enough for even the experts to identify the sex. And ABSOLUTELY NEVER shoot at sounds in the woods. As absurd as this seems, hunters have been shot at because the shooter thought he could hear a turkey walking through the brush.

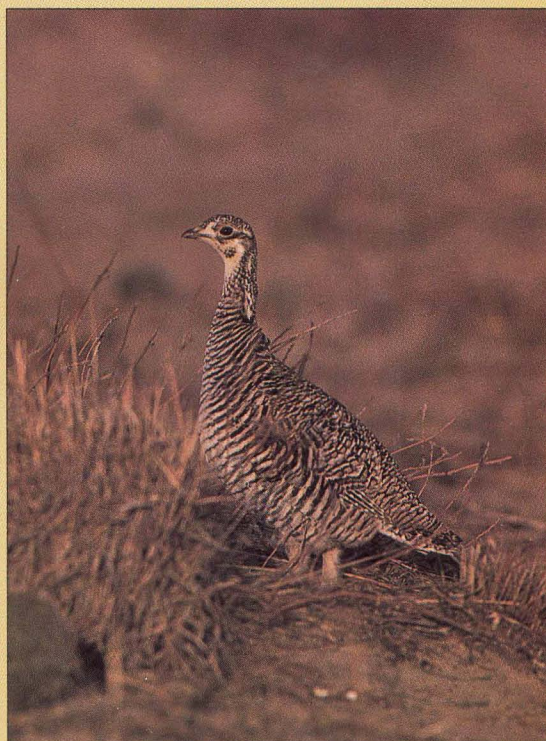
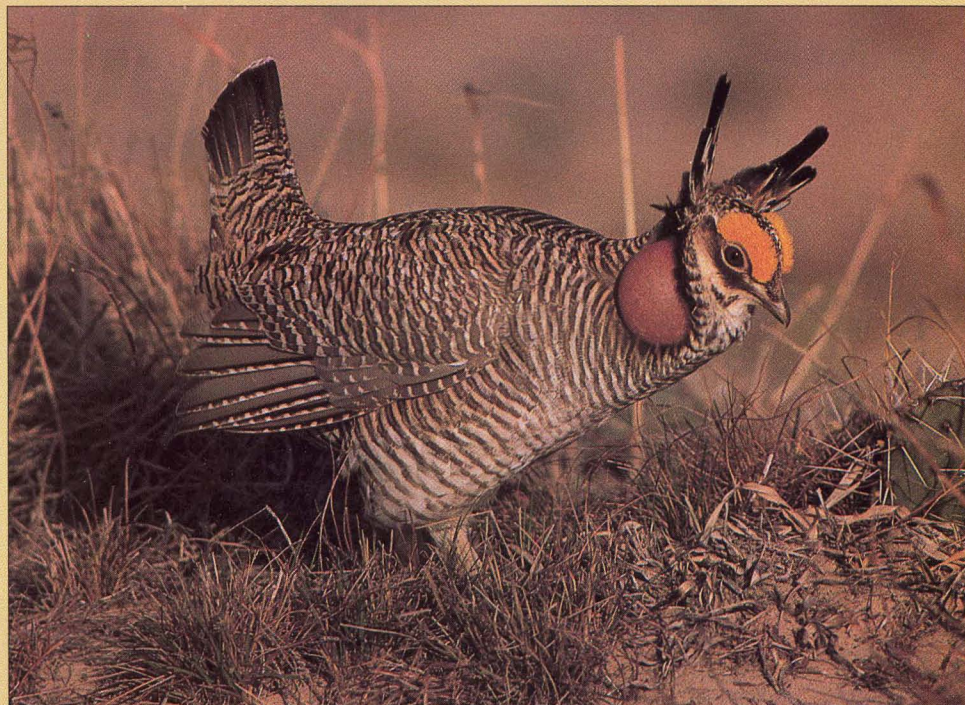
So far, Kansas turkey hunting remains extremely safe. But we know from neighboring states with higher numbers of hunters, that accidents will happen. Let's keep our record clean and enjoy another banner turkey hunting season. 

*gallery*  
by Mike Blair





The lesser prairie chicken, a cousin to the more numerous greater prairie chicken of eastern Kansas, is common in sandhill and sand-sage prairie of the southwest. Lessers are found roughly south and west of Pratt County to the Oklahoma and Colorado borders where suitable grassland habitat exists. Each spring, beginning in March, the lessers gather at traditional gobbling grounds where the males establish and defend small territories. The male birds call and display to impress females who wander through the lek to choose a mate. The fighting and elaborate display dances are truly a wonder to witness. **Opposite:** 400mm lens, f/11 at 1/125 **Right:** 400mm lens, f/11 at 1/125 **Lower left:** 400mm lens, f/5.6 at 1/500 **Lower right:** 400mm lens, f/11 at 125





# War

# ... Beneath The Waves.

text and photos by Mike Blair  
*staff photographer*



The cool water of the Missouri pond felt good on an August afternoon. My research partner and I worked our way through waist-deep water, slowly sweeping aquatic nets through the submerged vegetation. Our goal was to capture aquatic insects for University of Missouri's entomology school.

Chest waders were often worn on such excursions, but since it was a long, hot hike to the pond, we chose to wade in jeans and sneakers. This worked fine until, in the middle of the pond, a *creeping water bug* somehow found its way up my pant leg. Suddenly, stabbing pain racked my leg.

By the time I reached shore, the insect had bitten me seven times on the back of my thigh. I can now quote from memory my textbook's warning: "*Creeping water bugs* bite quite readily—and painfully—when handled."

Somewhere in the muck of that pond, a tennis shoe still remains.

Unseen beneath the surface of virtually all natural water, biting, crawling, swimming creatures lurk.



Aquatic hemipterans (true bugs) kill their prey by injecting venom through a beak. Then the body contents are sucked from the victim. Here a giant water bug eats a backswimmer.



Even predators are never safe from danger. This victim, an immature dragonfly, has fallen prey to a larger, more powerful hunter of a related dragonfly family.



Actually, danger to man is minimal; so rare was my experience that I still think nothing of wading in natural pools. Kansas swimmers have little to fear, as long as they don't invite trouble by handling aquatic residents.

Still, beneath the level of human concern, an amazing spectrum of aquatic life is engaged in constant warfare. Every step of the food chain is involved, from the smallest protozoans to the largest fish.

Nothing is entirely safe; even fish fall prey to mammalian and avian predators. But at greater risk are a pool's smaller inhabitants, particularly insects. Not only are they preyed upon by higher organisms,

many are themselves efficient predators that stalk one another through submerged jungles.

Aquatic insects are perhaps the most conspicuous life in the water, due to both size and abundance. Though protozoan species number in the tens of thousands, their one-celled nature makes them inconspicuous. Insects, large enough to easily see, number about 5,000 species in North American waters. A Kansas marsh might easily contain hundreds of aquatic insect species. By contrast, fish may add only a few dozen species to the aquatic community.

Because of this, underwater predation is most easily observed among insects. Life cycles vary; in some

**Left:** Grasping legs poised to strike, a water scorpion waits for prey to swim by. This insect can remain motionless underwater for long periods, breathing through a long air tube that protrudes above the surface. **Below:** In harm's way, a dragonfly naiad moves toward the readied jaws of an immature dobsonfly, or hellgrammite. Hellgrammites are in turn preyed upon by most fish species and are a popular bait for stream fishing.





species, adults are predators, while in others, it is the immature stages that hunt prey. Still other insects may compete as both immature and adult predators in the same niche.

Some aquatic insect predators are equipped with powerful jaws and chewing mouthparts, while others have sucking mouthparts in the form of a beak. Some are highly mobile, relying on speed to catch their prey. Others rely on camouflage and patience, waiting for victims to venture near.

Most aquatic predators are indiscriminate, attacking both vertebrate and invertebrate prey as size allows. It's not unusual for some spiders and larger insects to kill tadpoles or minnows, as well as other insects. In rare instances, several predators, attracted by the scent of blood, may mutually attack and overcome prey much larger than themselves.

Among the most ferocious aquatic insect predators are immature dragonflies, called *naiads*. Large and streamlined, with the ability for underwater jet propulsion, these keen-eyed hunters stalk their prey with



Among the most fearsome aquatic predators, predaceous diving beetles hunt beneath the waves in both adult and immature stages. The larvae, known as water tigers (**above**), prey on organisms as large as minnows. Adults usually prey on insects but are capable of killing prey as large as this tiger salamander larva (**below**).

the same efficiency as their adult forms which hunt on the wing above ponds.

*Naiads* capture their prey by means of a unique, masklike scoop bearing two moveable claws. When close enough, they shoot the scoop forward as far as one-third the length of their body, snagging their victim. The scoop holds prey fast, while they use their powerful jaws to eat the victim alive.

Another important underwater insect predator is the *predacious diving beetle*. In the immature form, this insect is known as the *water tiger*, and uses long, sicklelike, hollow jaws to suck out the body fluids of its victims. *Water tigers* are very active and do not hesitate to attack prey much larger than themselves.

Adult *predacious diving beetles* are stout-bodied and have hard exoskeletons. Their hind legs are fringed with long hairs to form excellent paddles. Jaws are short but powerful and are capable of killing large prey.

A third type of aquatic insect predator is represented by the true bugs, or *hemipterans*. These adults and larvae have sucking mouthparts, killing their prey by injecting them with venom through a beak and then sucking out the body contents.

Like *diving beetles*, *hemipterans* must carry a bubble of air with them, but can remain submerged for long periods. A common method of attack is to wait in submerged plants until prey passes overhead. Then the attacker drifts up from underneath and captures it.

War beneath the waves involves more than predation. Leeches attach themselves to vertebrate and invertebrate hosts, feeding on their blood. Water mites attack and feed on insects and larger hosts. Aquatic worms parasitize many organisms, living within their bodies. And scavenger species comb the bottom for dead or dying animals.

Beneath the mirror of a quiet pool, a silent and never-ending struggle for life is the norm. Unseen in a hidden world, thousands of organisms complete nature's scheme to fill every habitat with a vibrant community. Interdependent, aquatic creatures hunt—and are hunted—to maintain the balance demanded by natural order. ♡



## Apology to Andi

**M**y dearest Andi, second of three daughters, I know my excuses are not enough. I can't begin to explain my generation's neglect of your world. No, I don't mean our house, yard or school, I mean **WORLD**; as in earth—Mother Earth.

Ten years before your birth, I tuned in to Mother Earth. It was a fresh spring wind that cut at our faces as we trudged along the featureless shoulder of Highway 183 south of Hays. We must have seemed a curious lot, mostly young, mostly sincere and mostly idealistic about our world. Carrying poker sticks and trash bags, a dozen or so college students and faculty canvassed the road ditch for things unnatural. The preceding months had been filled with events about pollution, war and much hoopla about Earth Day 1, April 22, 1970. As we trod behind the farm truck, we dutifully collected bottles, cans and other trash. We did not know who Galord Nelson was, the founder of Earth Day, but our motivations were similar. He—older and wiser; we—energetic and concerned; partners in a noble cause to improve the world. Our meager efforts were, in fact, just that compared to the enormous pollution problems of the time. Collectively, though, the impetus from Earth Day 1 and events leading up to it had some measured impacts: the creation of the Environmental Protection Agency, the Clean Air and Clean Water acts and more.

But, you say, so what! You've just witnessed the worst oil spill tragedy ever. You saw the disastrous effects of millions of barrels of oil on the wildlife and beaches of a pristine Alaska. But Andi, we needed that oil to survive. Didn't we? Oh, the ozone problem. Well, that kind of snuck up on us. Didn't it? And you ask about global warming. I guess we've kind of bungled that one too, haven't we? Acid Rain? Hey, that wasn't my fault. Or was it? Look what our parents left us: tremendous problems from our fossil fuel love affair, the disastrous Santa Barbara Oil Spill, DDT and related pesticides that still persist in our environment.

Andi, I'm not sure why we haven't done better. I don't know what happened to the multitudes of well intentioned kids of the first Earth Day as they aged through the disco and yuppie years. Oh, I know there has been some good news, but I can see by your skeptical eyes you are not interested in any weak self glorification.

I'm sorry, but all I have are excuses. You see, like most of my 1970 compatriots, I got married, had kids and started a career. We were caught up in making a living. We had to have those dual paychecks, convenient fast food packaging, our own video player and the best pre-school. We shot off to make our bucks. Mother Earth?



We kind of forgot about her. We slowly weaned ourselves of recycling. We let our greed take over and ditched personal conservation practices. In the meantime, we have witnessed serious water depletion in parts of western Kansas, lingering pollution problems from toxic wastes and county landfills that are bursting at their fences.

Andi, no apology can make up for the neglect we have served Mother Earth over the past 20 years. You would think we could have done better, considering our ram-paging environmental hormones of the early 1970s. Admittedly, we are still in deep trouble. My generation's environmental legacy is not one to be proud of. Most of my friends and I have been too busy looking for the best buys on Nintendo and other trivial pursuits. Through all this preoccupation, we failed to provide the big bucks and important votes for a major environmental mandate.

But Andi, I make this pledge to you as I look straight into the future through your eyes. I pledge to you that you will remember this Earth Day 20 as an active participant. And that together, we will embrace those same ideals of environmental caring that once spurred thousands to start recycling projects, pass pollution and water conservation laws, and yes, even pick up trash along a thousand roads in a thousand places. And in 20 years, you and I will perhaps bring my grandchild to a similar Earth Day 40 event to celebrate major strides towards a clean and healthy world. We shall hope that never again will one generation so mindlessly neglect its environmental obligations; that Earth Day 20 will be remembered as a new awakening by all generations, bringing us together in one great cause with a completely unselfish vision for all the earth's future inhabitants. This is my pledge. ♻️

