







Good To Be Home

would like to open my initial "View From Here" with a brief introduction. I'm proud to be a native Kansan, raised in Atwood, where my family has farmed the same land since 1916. After graduating from Kansas State with a degree in wildlife conservation, and a tour in Vietnam, I received a master's degree in biology from Fort Hays State. I successfully campaigned for the Kansas Legislature in 1972 and served in the House of Representatives through 1986.

In 1987, I was elected Governor, serving until 1991. I was employed as the Assistant Secretary of the Interior Department for Fish, Wildlife, and Parks from 1991-1993. I then became president of the American Sportfishing Association, serving this organization until last year.

Through these pursuits, I have worked for, and in many cases, fought for, our country's natural resources. I am excited to continue this work as KDWP Secretary. I am glad to be back home in Kansas and grateful to Governor Bill Graves for the chance to serve as Secretary. We have many challenges ahead, none more important than addressing the decline in bobwhite quail populations.

First, let's talk about "coffee shop" myths. Turkeys are not eating our quail. While turkeys are opportunistic feeders, their diet consists of insects and various seeds, from acorns to grains. There is no evidence that turkeys are pecking quail eggs or eating quail chicks.

As quail numbers have declined, deer and turkey populations have increased. But this is because of habitat changes, not the animals themselves. For instance, grassland-shrub habitats, which are ideal for quail, are transforming into woodlands. Through this process, many areas in eastern Kansas are becoming less suited for quail, while improving for deer and turkey.

We have not "overshot" the birds. Hunters harvest only a small proportion of the total bird population. Reducing the bag limit and season length would have virtually no measurable impact. Hunting pressure decreases when bird numbers are low, not the other way around.

Of course, weather plays a crucial role in annual brood production, and it has not been kind to quail in recent years. This season's population may have been the lowest since 1984. However, the long-term decline in quail populations is directly attributable to loss of habitat. The loss of habitat edge, such as hedgerows and grassy or weedy fencerows, and an increase in wildlife-unfriendly fescue and bromegrass pastures have fragmented once viable bobwhite areas. Urban sprawl has also had a hand in habitat loss. Intensive farming and ranching practices have taken their toll. Herbicide use has reduced nesting and broodrearing habitat. And thorough annual burning in parts of the Flint Hills has eliminated the preferred mosaic of burned and unburned areas, leaving little residual cover for ground-nesting birds like bobwhite.

How can Kansas turn the population around? It won't be easy. The entire strategy is too lengthy to print here, but the short answer includes education, partnerships, incentives, and funding.

A big step has been the formation of the Southeast Kansas Quail Working Group (SEK-QWG), a partnership established to improve quail habitat. The SEK-QWG includes representatives from Kansas Farm Bureau, See-Kan RC&D, Natural Resource Conservation Service, Pittsburg State University, Kansas State Extension Service, Quail Unlimited, private landowners, and the Kansas Department of Wildlife and Parks.

This working group has established incentive-based programs for habitat improvements that include replacing fescue and bromegrass with native grass, hedgerow renovation, strip disking, livestock exclusion from borders and odd areas, and better livestock management, plus many other practices.

Another important component of quail recovery involves Conservation Reserve Program (CRP) lands. CRP fields planted to tall grasses produce a buildup of litter too thick for bobwhites. Shorter species of bunch grass, like little bluestem, mixed with wildlife-friendly forbs (broad-leaved plants) should be standard for eastern Kansas CRP. Management should include strip disking, which encourages growth of annual forbs and creates firebreaks that make occasional burning safer, easier, and more acceptable to Kansas landowners.

Reversing the decline in bobwhite populations will not happen overnight. With the small amount of public land in Kansas, landowner cooperation is paramount. But we cannot expect farmers and ranchers to shoulder the full burden. Solutions must provide benefits to the landowner and must be cost-neutral or even profitable.

Natural resource issues always involve partnerships. Our department looks forward to strengthening relationships with our current partners, and forming new ones, as we confront a wide array of resource challenges. Thanks for your continued support.

For more information regarding the department's quail recovery efforts, contact the Region 5 office in Chanute at (316) 431-0380.



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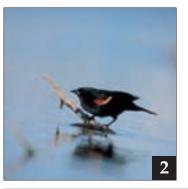
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BLACKBIRDS SINGING

text by Eugene A. Young

natural science instructor, Cowley County Community College, Arkansas City

photos by Mike Blair

Ever wondered how many birds you saw in that seemingly endless flock of blackbirds? Well "millions" wouldn't have been an exaggeration. A single winter roost can hold up to 10 million birds.

here did they all come from?" "Will they stay all year?" "Can we get diseases from them?" "Gee, they make such a racket, do they ever shut up?" Businesses complain because they leave droppings on buildings, cars, anything in their path. Feedlots complain because they eat cattle feed and can spread disease. Farmers complain because they can ravish standing sorghum fields in a matter of days. And birders often say, "I have never seen so many birds in one spot!" My kids look with bewilderment and say, "Look at all those birds! They make the sky turn black. That is

cool."

These are just a few questions, concerns, complaints, and comments I hear every year concerning the large blackbird roosts in Kansas. The interest usually starts in September and runs through March. Perhaps the best way to understand a seemingly endless accrual of blackbirds is to identify and recognize those species involved. While doing so, we can learn about their interesting life histories.

The old saying that "birds of a feather flock together" is certainly true for blackbirds. Many species join together in spectacular winter roosts that occur each year in Kansas. In flight, these flocks appear as endless waves of smoke that rise and fall on tossed blankets of air as they approach the roost. At first they number in the hundreds, then thousands, then hundreds of thousands. Ultimately, they end up in the millions — as high as 10 million birds in a single roost.

People are intrigued with the flocks, and they ask interesting questions. The first is the inevitable, "What type of birds are they, blackbirds?" I reply they are not all blackbirds, and the head scratching begins. Many of these roosts, especially in urban settings, contain black-colored birds that are not true blackbirds. But each contributes to these flocks.



THE STARLING

In urban settings, the European starling can be the most abundant species at a blackbird roost. Although starlings are generally black or dark in color, they are not related to blackbirds at all. Starlings are an introduced species from Europe. They were introduced into North America in 1890, in New York, and have since spread across the continent. They are gregarious by nature and commonly roost in cedar trees. Cedar berries have recently become one of their favorite food items. Unfortunately, these same roosts often attract the American robin. Large, dense cedar stands provide cover, warmth, many limbs for roosting, and they can also provide an enormous amount of food. In early fall, starlings frequently beat the robins to cedar berries, causing robins to move farther south and to seek another food source. Besides their presence in cities, starlings also occasionally roost with blackbirds in rural areas, usually in cattails and deciduous woodlands.

Like blackbirds, starlings leave their roost en masse in early morning, traveling up to 30 miles in search of food. This is where they become pests to the agriculture industry. Like blackbirds, they like to feed on grain. Ironically, starlings apparently first began feeding on sorghum in Kansas during the 1970s, when W. C. Royall, Jr. reported them feeding on a stand near Cheyenne Bottoms. Royall determined that the variety of sorghum (DeKalb C42Y) being eaten was highly nutritional and palatable to both livestock and granivorous birds. Royall further predicted that sorghum would become a staple of the starling's fall diet. Indeed, his words proved true.

THE BLACKBIRDS

What are true blackbirds? Technically, blackbirds form a large family known as the *lcteridae*, which also includes meadowlarks and orioles. In North America, there are 23 species of blackbirds, 13 of which regularly occur in Kansas during some part of the year. The most common species observed at a roost are the red-winged blackbird, brown-headed cowbird, common grackle, brewer's blackbird, Rusty's blackbird, great-tailed grackle, and sometimes the yellow-headed

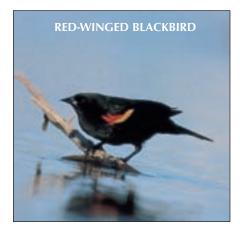


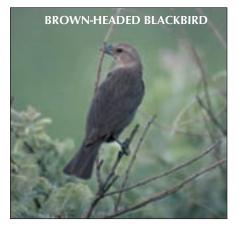
blackbird. These species commonly roost together in urban and rural settings. Sometimes in urban environments, starlings and robins join the blackbirds. Red-winged blackbirds, cowbirds, and grackles can be considered year-round residents. However, winter populations likely consist mostly of breeding birds from more northerly latitudes. Studies of banded redwings at Cheyenne Bottoms show they breed as far away as Saskatchewan and Alberta. Others winter in central Oklahoma and northern Texas.

Brewer's and Rusty's blackbirds are unique in that their breeding ranges are north and west of Kansas, but they commonly migrate through the state with some individuals remaining throughout the winter. The yellow-headed blackbird is a rare winter resident, but a

YELLOW-HEADED BLACKBIRD









common breeding resident in central and western Kansas, where it is perhaps most abundant at Cheyenne Bottoms.

WHERE DO THEY ROOST?

Throughout the state, blackbirds can be found roosting in cattail marshes and cedar groves, occasionally within deciduous woodlands and even in plum thickets. In cattails, the most common species is the red-winged blackbird, whose numbers alone can reach millions. In the 1970s, an estimated 2 to 12.5 million blackbirds roosted in cattails at Chevenne Bottoms. From 1974 through 1977, they averaged a staggering 10 million per year. At Slate Creek Wetlands in Sumner County, we have estimated over 1 million birds annually since 1987.

The droppings of blackbirds release huge amounts of energy into the wetlands in the form of nitrogen or uric acid. Wayne Hoffman estimated that up to 108 tons of fecal matter was released at Cheyenne Bottoms in one winter. This fecal matter is eventually converted into a variety of plant and animal tissues as essential nutrients. Simply, the nitrogen is used for growth and development to build amino acids and proteins, essential molecules that are the building blocks for life. This is part of what we describe in ecology as "nutrient cycling." The end result is an abundant invertebrate population the following spring. Perhaps the most important invertebrate depending on this cycle is the chironomid (midge) larva, which provides the essential food supply for the thousands of shorebirds that migrate through Cheyenne Bottoms each year.

In urban environments, where cedar groves and tall stands of deciduous trees are a favorite haunt. blackbirds, robins, and starlings can number in the millions also. At Arkansas City, the number of roosting birds has increased from hundreds of thousands in the mid-1980s to an estimated 4-6 million in the past few years. American robins used the same roost and numbered in the thousands, eventually peaking from one-quarter to 1 million during the same period. On Arkansas City's annual Christmas Bird Count, starlings averaged slightly over 2000 from 1980-1998, increasing to a peak of over 1 million in 2000.

These birds have used two primary roosting sites that consist primarily of eastern redcedar, one in the southwestern part of town and



Huge wintering blackbird flocks cause problems when they roost near human habitation. Droppings soil buildings and cars, and noise and odor are troublesome.

the other in the northern part. The southwestern roost was located in a small residential community, just west across the Arkansas River. The north roost, locally known as the Wal-Mart roost, was located near Wal-Mart, one of the City's water towers, an industrial building, and a couple of residential houses on a small ridge-top. In 1999, the blackbirds roosted at the south site and robins at the northern site. Most years though, species intermingle with the northern site being used more frequently. Recent development at the northern site has destroyed most of the roost. This will likely force the birds to the southwestern roost, or to seek suitable habitat elsewhere.

The northern roost was one of my family's favorite locations to watch sunsets. An hour or two before sundown, the birds would fly into the Wal-Mart roost from miles away. Most birds would come from the west, others from the northeast. They would fly in looking for "staging areas," usually deciduous trees around creeks, homes, and hedgerows. Here, small flocks would come in and sit, chattering away vociferously. As more small flocks assembled, the concentration grew ever larger. Eventually, thousands of birds would take flight with a thunderous roar and head toward the roost. Some of these birds would fly directly to the cedar trees in search of a prime roosting location — usually near the middle of the tree on a branch high enough to protect themselves from ground predators, and low enough to protect from aerial predators. Others would land in tall cottonwoods or hedgerows surrounding the roost before alighting in the cedars. Starlings usually congregated along nearby gravel piles where they gathered grit to help grind seeds consumed throughout the day. Wave after wave, after wave, the birds continued to gather and increase in numbers, further enhancing a blackening sky as the sun set in the west. As twilight fell, the birds shifted positions, jockeying for prime real estate. Then,



Blackbirds travel many miles in search of food, returning to the same roost each night. Large flocks can mesmerize the observer, pulsating and shifting like clouds of smoke in the wind. Some flocks number in the millions, covering tree limbs like leaves.

shortly after dark, an eerie calm settled as the birds became subdued.

My kids, Brandon and Bailey, would frequently join me to watch this spectacle and would always laugh as I tried to dodge droppings while observing and counting. Many shirts and coats had to be washed after an evening of observation, not to mention frequent trips to the car wash. However, the impressions I remember most were their smiles as the birds blackened the sky. Often, bewilderment turned to curiosity as they developed questions concerning the birds. "Are the birds related?" "How do they know where to roost?" "Do they roost in the same tree every night?" "Why do the starlings roost on the outside of the trees?" "Where did the robins and blackbirds go?"

Potential Disease

Given their numbers and proximity to man, it is reasonable to wonder if blackbirds are a health threat. Much of the current concern

about bird-borne illness is related more to birds raised for food, agriculture, or as pets, where humans can get Histoplasmosis, Clamydiosis, Salmonellosis, Campylobacteriosis, or Cryptococcosis. In other illnesses, such as the West Nile Virus (which causes encephalitis, an inflammation of the brain) and St. Louis Encephalitis Virus, the birds are actually a secondary host for the virus (after being infected by mosquitoes). The virus spreads as birds migrate. Once a mosquito feeds on an infected host, the next host fed upon is inoculated with the virus. This is what we've been witnessing along the east coast the past couple of years with the spread of the West Nile Virus from New York.

Locally, I've asked a couple of doctors whether any increases in disease and infection could be attributed to the large communal blackbird roosts in Arkansas City. None have been noticed. A check of Kansas Department of Health and Environment (KDHE) reports indicates few reportable bird-borne diseases in the state. No Kansas blackbird roost is implicated in any disease outbreaks. When I checked with Gail Hansen, Deputy State Epidemiologist with KDHE, she stated she "was unaware of any diseases associated with blackbirds in Barton, Sumner, or Cowley Counties" where large blackbird roosts have been documented the last five years.

It is possible for bird-borne illnesses to infect cattle in confined environments. An example is Coccidiosis. Often, these illnesses cause a reduction in livestock weight gain and could potentially increase mortality rates. There is also concern that human-animal interactions could allow for spread of some of these diseases to humans.

Blackbird Control: Why?

Occasionally, blackbird or other avian roosts (egrets, herons and

crows) are destroyed to "protect" humans from disease. However, it is more common to control blackbird numbers because of their impacts on agriculture. Ironically, in a weird twist of fate, blackbirds are persecuted for their unique ability to adapt to human activity at a time when many populations are being decimated by the same activities. Since blackbirds and starlings may travel 30 miles or more to obtain food, it implies that any ripening sorghum field or feeding operation within 2827 square miles of a roost has the potential to be visited by a large number of birds. Obviously, farmers and feeding operators are concerned about potential losses.

To illustrate the possible severity of the problem to livestock feeders, Charles Lee, Wildlife Extension Specialist at Kansas State University, notes "a starling will consume about one pound per month of the higher-priced portions of a cattle ration directly from a bunk." Multiplied by thousands of birds, it is possible that some feedlot operations can lose as much as "\$75,000 . . . for the year."

Additional costs can be incurred from hiring employees to clean livestock water systems that get covered with bird feces.

Certain operations around the Cheyenne Bottoms area have been able to poison blackbirds to help reduce the amount of money lost in feed and to control the potential spreading of diseases among cattle. The environmental problem may be two-fold since 1) the blackbirds eliminated from Cheyenne Bottoms can reduce the amount of beneficial nutrients made available to the wetland system, and 2) sick birds can make it back to the Bottoms only to die there.

A commonly used avicide, approved for use on starlings and blackbirds, is DRC-1339. It is used because it breaks down fairly quickly into non-toxic compounds when exposed to air and water, reducing the likely impact on non-target species. This chemical also causes little secondary poisoning to predators and scavengers that might feed on sick or dead blackbirds. However, some argue that there isn't enough data to support either of these claims, especially when dealing with secondary poisoning among predatory species like owls and hawks.

There is a research need to examine the impact that dead and dying blackbirds have at their wetland roost (or any roost). It's commonly known that waterbird carcasses can contribute to major outbreaks of botulism under certain environmental conditions. These conditions have occurred at Cheyenne Bottoms in the past. However, little data is available on blackbird interactions or mortality associated with botulism. Current studies in North Dakota are addressing those issues. So far, impacts that these practices have on

wetlands like Cheyenne Bottoms have not been fully ascertained.

Aesthetics

While there is no dispute that huge concentrations of wintering blackbirds can cause problems, there is another side of the issue. To appreciate the beauty of large blackbird roosts in Kansas is to recognize that large spectacles of animal life are becoming rare. Rather than to be deplored for their droppings and contentious odor, they should be applauded for their mere presence. Imagine what it would have been like to cross the plains with the large bison herds, or never being out of sight of prairie dogs. What about the huge flocks of Passenger Pigeons that once flew across the Midwestern sky, with millions of pigeons from horizon to horizon? These moments are gone, lost forever, except for the thoughts and accounts left behind by those fortunate enough to bear them witness. Where can you see such phenomena today? Here in the plains, but a few short months of the year!



Wintering blackbirds may be fascinating to watch, but they can be costly to cattle feeding operations and damaging to standing crops. Control measures may be needed.



Cattail Cattle

text by Charles Lee

extension specialist, Wildlife Department of Animal Science and Industry Kansas State University

photos by Mike Blair

A research project tests cattle grazing as a way to control cattails on our most popular and important wetland, Cheyenne Bottoms.

Everyone is familiar with the common cattail. The head resembles a fat cigar that, when mature, virtually explodes into thousands of tiny fruits when touched. When these fruits contact water, the seed is released and sinks, establishing a seedling if favorable temperature, moisture and light conditions exist.

A single cattail head can contain as many as 250,000 seeds, and seed counts of almost 1,000 seeds per square yard can exist. It is this prolific seedling establishment that creates problems for wetland managers. With seed viability approaching 100 percent, cattails can quickly dominate a wetland. While they do provide habitat for waterfowl and other migratory birds, when cattails completely dominate, habitat value is reduced.

Wetland managers are concerned with the increase of cattail domi-

nance across the U.S. and are always looking for control techniques. We know fire, cultivation, water level manipulation and herbicides can impact cattail growth, but not much is known about the impacts of grazing. The Kansas Department of Wildlife and Parks contacted Kansas State University and asked if we would conduct research to determine grazing's effect on cattails and what animal performance or gain could be expected. Stocking rate is one of the most dramatic factors affecting vegetative and cattle response under range conditions. With that as a beginning, we initiated a four-year investigation to look at wetland vegetation response to cattle grazing at various stocking rates.

Twelve pastures, each 27 acres, were established in Pool 3A at Cheyenne Bottoms Wildlife Area. This pool was selected because it

was small, had consistent cattail growth, and could be drained and kept dry during the summer grazing season. Fencing consisted of two high-tensile galvanized wires energized with a solar-powered fencer. Water lines were installed and tanks with floats were put in each pasture. One hundred mixedbreed steers weighing approximately 500 pounds each were stocked. Stocking rates were established at 0 percent, 20 percent, 40 percent, 60 percent, and 80 percent of previously measured available biomass. Normal rangeland stocking rates are about 25 percent of the available biomass. However, this project's intent was to negatively impact vegetation in an effort to reduce cattail dominance.

Vegetation samples were collected five times each growing season from 1999-2001. Plants were weighed, oven dried at 60 degrees



Cattails are aggressive and may dominate wetlands to the point that habitat is degraded. Control is often difficult and costly.

celsius, and re-weighed to determine moisture content. The samples were then ground in a mill to pass through a 1 mm mesh screen and then reground for particle uniformity. Content for crude protein (CP), degradable intake protein (DIP) neutral detergent fiber (NDF), acid detergent (ADF), lignin and ash were determined for each sample. Chemical analysis was done by SDK Laboratories in Hutchinson.

NDF is determined by placing the forage sample in a neutral detergent, which separates the sample into cell contents and cell water constituents. NDF is considered to be the cell wall constituents, while the cell contents are sugars, starch, lipids, organic acids, soluble proteins, and pectin. ADF is then determined by placing the NDF in an

acid detergent, which dissolves the hemicellulose and cell wall nitrogen. The remaining fraction is the ADF. As plants mature, they decrease in digestibility, protein, and nonstructural carbohydrate content and increase in cell wall constituents and lignin. Determination of ADF and NDF will indirectly reveal forage digestibility and thus are good indicators of forage quality. As the NDF in a forage increases, animals will be able to consume less forage. As the ADF increases, the forage becomes less digestible.

A more direct method to determine forage quality is to measure cattle performance. Cattle often select for a higher quality of diet than can be obtained from clipping samples. We attempted to place cattle in the pastures for 90 days of grazing, but flooding shortened that grazing period to 60 days in two of the three years. Cattle were marked with consecutive numbered eartags, individually weighed and allocated to a pasture of a given grazing intensity. Since all pastures were the same size, the number of cattle was varied. Each grazing intensity was replicated one time for a total of 10 pastures. No cattle were placed in the 0 percent grazing intensity pastures, five head were placed in the 20 percent grazing intensity pas-



Floods hampered the research project, cutting short the grazing period in two of the three years.

tures, 10 head in the 40 percent grazing intensity pastures, 15 head in the 60 percent grazing intensity pastures, and 20 head of cattle in each of the 80 percent grazing intensity pastures. These stocking rates are no graze, 5.4, 2.7, 1.8 and 1.3 acres per steer respectively.

The vegetation composition was determined by walking transects in each pasture and recording the species of plants that intersected a single point. Vegetation weight or biomass was collected by randomly tossing a 0.25 m2 quadrant five times in each pasture, identifying all plant species present within that quadrant, clipping them to a 2 inch height, and weighing the sample. Vegetation data was collected at five different times each year of the trial. Since most of the cattail communities were in discreet groups, the perimeter of each stand or colony of cattails was determined with a global positioning system at the beginning and the end of each year. These measurements gave us cattail coverage, density, and weight of the forage available.

Plants store energy as nonstructural carbohydrates in the roots. We measured this amount of storage to determine the time frame in which cattails could be most impacted by grazing. Generally we try to attack an invasive plant via chemicals or removal of above ground vegetative material when the nonstructural carbohydrates are at the lowest point. This low point appears to be related to the water levels and the beginning of annual growth. In years when the water levels were

high and cattails were slow to begin new growth, the low point was delayed until July. In years when the pool was dry early in the growing season, the low point in carbohydrates was as early as mid-May.

Vegetation diversity is important when trying to manage for multiple species of wildlife. Intensity of grazing can influence this diversity. This study shows that the number of different plants identified in the step point transects decreased in most grazing intensities throughout time and also decreased as grazing intensity increased. Another of the key results of the study showed that as grazing intensity increased, the percentage of cattail vegetation decreased. Surface covered by cattail also decreased as grazing increased and percentage of bare ground increased. A plant that seemed to increase in percentage with increased grazing pressure was bearded sprangletop, an annual grass that produces ample seeds.

Rangeland productivity is sometimes measured as pounds of dry vegetation produced per acre. This area is extremely wet, and the amount of forage available is greater than that found on nearby uplands. The wetland vegetation was about 6,000 pounds of dry material per acre. Results showed that as the trial progressed through year three, the amount of material available each year in each pasture increased up to about the heaviest stocking rate. At the 80 percent grazing intensity, the amount of biomass available decreased through time. This just shows that at some level of grazing intensity, you start to reduce biomass available in subsequent years.

Cattle performance is what a producer would be interested in prior to stocking cattle on wetland forage.

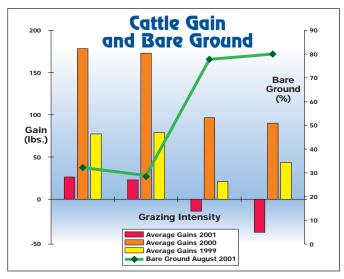
The cattle performance must be sufficient to offset the obstacles encountered in trying to graze a wetland. Remember this trial was to deliberately overstock the area in an attempt to reduce quantity and vigor of the available forage and perhaps shift botanical composition. Overstocking rangeland so that livestock

restricted to forage they would otherwise not select is a major cause for reduced gains. Depending on the year, cattle gains in pounds per day varied tremendously in this study. Long-term grazing studies show stocker cattle producers may average about 1.5 pounds per day when cattle are stocked season-long. This trial was more similar to an early intensive grazing regime than season-long stocking. Cattle were only on the wetland from 60-90 days before high water levels forced them to be moved. Cattle performance was neither consistent nor good throughout the trial. Cattle gains were greater in the lighter stocked

are



Cattail control by cattle is evident in this photo at Cheyenne Bottoms. However, trials suggest that reduced cattle weight gains limit the feasibility of this control method.



This graphic shows the relationship between grazing rates, cattle weight gains, and impact on cattail vegetation.

pastures but overall averaged only 0.72, 1.49, and 0.03 pounds per day when measured across all stocking rates. Stress caused by adverse environmental conditions will impact livestock performance. Cattle in feedlots in deep mud can have daily gains reduced as much as 25 percent. Despite attempts to keep the pool dry during the time the cattle were in grazing, wet and muddy conditions were very common.

All the data has not been analyzed, but using yearling cattle to graze wetland vegetation in an attempt to reduce cattail density and provide more bare ground is possible. Cattle will eat cattails, and in some years the average daily gain is about average. In other years, cattle performance is too poor to be considered as a viable management too. We as researchers must determine why cattle performance was poor in two of the three years and see if other methods using cattle as grazers can accomplish the goal of reducing the cattail dominance. Wetland managers must then decide if the extra challenges presented by grazing outweigh any benefits as they try to manage cattail. 📝

Special thanks to research assistants, Chad Willemsson, Devon McBride, Lucas Robison, and Justin Hersh, who endured deep mud, thick mosquitoes, and long, hot days to help gather and interpret this data.

Wildlife & Parks

Becoming An Outdoors-Woman Catching On

by Cheryl Swayne *boater education coordinator, Topeka*

Since 1994, Kansas BOW workshops have been introducing women to outdoor recreation.



Lurn my head to catch the eerie sound of coyote howls echoing across the rolling hills. It is a cloudless night. I snuggle deeper in my fleece jacket as a chilly breeze kicks up, though the chill feels good after several months of hot summer days. My steps are awkward as I wind my way toward the creek. I'm not used to chest waders but am grateful for their neoprene warmth as I reach the cold water.

The chatter from the group becomes muted as they move ahead of me. I am too busy enjoying the rustlings of the dark and watching the stars gleam to keep up. The instructor is already explaining how to bait our limb lines.

Limb Lines? What is this mystery about anyway? No mystery here, just pure adventure known as Becoming an Outdoors-Woman, or BOW. Founded in 1991 by Dr. Christine Thomas, the program is meant to provide opportunities for women to learn skills that encourage participation in hunting, fishing, and outdoor activities. Kansas Wildlife and Parks hosted its' first BOW program in 1994. The program is designed to allow women to learn outdoor skills in a non-threatening and comfortable atmosphere.

Traditionally, women had no introduction to outdoor sports

during their youth. As a result, there are few female role models in hunting and fishing. In some cases, the first time a female becomes interested in hunting or fishing is because of a boyfriend or husband. Learning from someone who does not have the teaching skills or proper equipment can be intimidating to a novice.

The BOW program offers women over the age of 18 a safe and supportive atmosphere, in addition to camaraderie, in which to learn. Even though the program caters to novice, many of the Kansas BOW participants have returned five and six years in a row. Some participants, such as Jami Vonderschmidt and Melinda Harder, became so enthused they returned as instructors.

Classes are divided into categories of hunting, fishing, and other. Participants, not familiar with shooting can learn how to shoot shotguns, rifles, bows, and muzzleloaders. For those who want to learn about hunting, there are classes in waterfowl, turkey, deer, squirrel, and upland bird hunting, just to name a few.

Aspiring anglers can start with basic fishing techniques. We also offer float tubing, flyfishing, fly tying, advanced fishing, and limb line fishing. In order to accomplish many of these outdoor activities, women need to feel comfortable outside and have a better understanding in the outdoors. Other skills taught during BOW include camping, orienteering, ATV riding, hunter education, plant identification, backpacking, stream ecology, game cooking, Dutch oven cooking, bird watching, and outdoor photography.

2002 BOW Dates

Western BOW will be held April 26-28, 2002, in Scott City. A fee of \$125 per participant includes two nights lodging, five meals, three sessions, evening programs, and use of equipment. Registration closes when we reach our capacity of 62 participants or April 12, 2002 if the limit has not been reached.

The fall BOW workshop will be held September 27-29, 2002, at Rock Springs 4-H Camp. The \$180 fee includes three nights lodging, seven meals, five sessions, evening programs, and use of equipment. A maximum of 120 participants will be accepted and all must be registered by September 6, 2002.

Registration packets can be obtained by calling (620) 672-5911 or downloaded from the web site at www.kdwp.state.ks.us.

by Jennifer Thompson

Trowing up, I was a tomboy and spent many summers Joutside roaming the woods behind my house, but I never thought of hunting. I loved the outdoors, but I always looked at hunting as something guys did. My father did some bird and deer hunting while I was growing up, but he wasn't avid. And although he taught my sisters and me how to shoot a gun, he never asked us to go hunting. It wasn't until I met my husband in 1994 that I really gave hunting a thought. His family was into hunting big-time. They always had hunting on their mind and when bird and deer seasons came around, you couldn't get them to do anything else on the weekends.

Before we were married, my husband invited me to go along and take photos while he and his dad hunted birds. It was on that trip that I first considered hunting. My husband and his dad agreed to help me learn, and I took the hunter education course later that spring

My husband bowhunts and was going to give me his old bow and buy himself a new one. We quickly found out that was the wrong way to go. There was no way his bow would fit me. He meant well, but he didn't understand about equipment needs for women. Jami Vonderschmidt, a Becoming An Outdoors-Woman workshop instructor, was kind enough to answer my questions on what type of bow to purchase. We went to an archery shop and spent a lot of time getting the right bow with the proper draw length and draw weight for me. One thing I have learned is that you must find a bow that fits you and that you can handle. Finding the right equipment will make the hunting experience more enjoyable. Shooting the bow and perfecting my shot is satisfying to me. My next step was attending

the Becoming an Outdoors-Woman Program (BOW) at Rock Springs last fall. I participated in an archery class and learned a great deal about shooting a bow accurately.

After BOW, I couldn't wait to hunt with my new bow. My husband and I went almost every weekend. I saw deer on my first hunt, but they were all too far away. Still, it was exciting. I enjoyed being outdoors surrounded by nature and wildlife. The animals I saw went about their business because they did not know I was there.

One afternoon while in my stand, I saw a six point buck. I drew my bow when it was behind a tree and waited for a good shot. I started to get buck fever and couldn't hold still. The buck came part way from behind the tree,

saw me shaking, and took off. I was disappointed, but it was a good learning experience.

On November 25, my husband and I got to our tree stands at 1 p.m. I sat for most of the afternoon without seeing a deer. I listened to the birds, squirrels, and turkeys. A slight breeze kept a chill in the air. At 4:20 p.m. I was standing and keeping my eyes peeled when I caught movement in front of my stand. It was a buck! My heart started to pound. I started to get buck fever and kept telling myself to breathe and stay calm. I didn't want to scare this deer. The buck came out and headed straight for me. It was a small eight-pointer with antlers taller than they were wide. I drew my bow when it turned quartering away, and I concentrated on my anchor point and aiming. I don't remember when the trigger tripped to release my arrow, but I remember concentrating on

aiming, and it happened. I knew the hit was good. It took me a minute or two to calm down. I was so excited I was thinking: "Yes, I got him." I was too excited to stay in my tree, so I got down and headed back to the truck. My husband told me to come get him if I got a deer, so I went to his stand. He was really excited and happy for me. He said he had not seen a deer all afternoon, so he was glad to hear I got one.

We found my buck about 100 yards into the woods. I was so proud, I was grinning ear to ear. It was a memorable day that I will never forget, and it made me a hunter for life! I thought to myself: "Hunting isn't just a guy thing".

Many people helped me get started in hunting and if it weren't for them, this first buck with my bow wouldn't have been possible! Many thanks to all who took the time to help me.



2002 FISHING FORECAST

Use this guide to find Kansas waters that hold the kind, size, and numbers of fish you want to catch.

CHANNEL CATFISH

			x .			
IMPOUNDMENT	Density Rating	Preferred Rating	Lunker Rating	Biggest Fish	Bio Rating	Acres of
	(>16")	(>24")	(>28")	(lbs.)	R	Water
RESERVOIR						
SEBELIUS	16.30	10.70	1.50	9.90	E	1500
MELVERN	16.00	1.10	0.60	8.90	G	7000
MARION	12.00	7.00	0.00	8.10	Е	6160
CLINTON	10.00	1.30	0.30	13.90	G	7000
TORONTO	8.30	2.30	0.30	8.40	G	2800
CHENEY	8.00	2.80	0.20	10.50	G	9550
GLEN ELDER	6.40	1.20	0.60	17.40	G	12586
PERRY	5.50	1.00	0.30	10.30	G	12600
WEBSTER	5.00	1.00	0.20	17.20	G	3500
ELK CITY	5.00	1.00	0.00	4.90	G	4450
CEDAR BLUFF	5.00	2.00	0.80	16.60	G	6500
BIG HILL	4.70	0.70	0.00	6.70	G	1240
MILFORD	4.50	0.50	0.30	9.40	F	16020
FALL RIVER	4.50	3.00	0.00	8.80	G	2500
KANOPOLIS	4.00	0.30	0.30	7.40	G	3550
LAKES					-	
GARNETT CL-SOUTH	57.00	0.00	0.00	9.10	G	25
OVERBROOK CL	50.00	1.00	0.00	5.60	E	8
YATES CENTER-SOUTH OWL LAKE	47.00	2.00	1.00	12.90	E	150
CARBONDALE CL - EAST	46.00	7.00	0.00	6.40	E	265
HOLTON - BANNER CREEK LAKE	40.00	5.00	1.00	15.00	G	171
MOUND CL	40.00	6.00	1.00	8.30	E	148
EUREKA CL	36.00	3.00	0.00	7.60	E	135
GRIDLEY CL	34.00	10.00	7.90	15.20	E	33
SABETHA - PONY CREEK LAKE	33.50	4.50	0.50	8.80	G	171
BUTLER SFL WOODSON SFL	33.00 32.00	9.00 3.10	0.00 3.10	7.80	E E	124 180
	30.00		1.00	9.60		
PLEASANTON WEST LAKE		5.98	0.00		E	20
LEBO CL	28.00	4.00	0100	7.50	E	70
NEW STRAWN CL	27.00	5.00	3.00		E	3
SEDAN CL-OLD	26.00	2.00	0.00	8.20	E	55
OSAGE CL	26.00	1.00	0.00	6.20	E	50
BONE CREEK LAKE	25.50	1.00	0.00	8.00	E	540
PRATT CO. LAKE	24.00	2.01	1.00	10.00	E	51
MCPHERSON SFL	21.50	0.50	0.50	7.90	E	46
SHAWNEE SFL	19.00	0.00	0.00	5.40	E	135
PLEASANTON EAST LAKE	19.00	1.01	0.00	5.40	E	127
YATES CENTER CL-NEW	18.00	4.00	3.00	19.20	E	205
OSAGE SFL	18.00	3.90	0.00	8.70	Е	140
BROWN SFL	16.00	3.00	1.00	11.20	G	62
CENTRALIA CL	15.00	10.50	2.50	10.20	G	400
OLATHE-CEDAR LAKE	13.00	1.00	0.00	5.90	G	56
CLARK SFL	13.00	1.00	0.00	5.70	Е	300
CHANUTE CL	13.00	1.00	1.00	11.20	Е	80
OLATHE-LAKE OLATHE	11.50	1.50	0.50	12.10	G	172
GRAHAM COANTELOPE LAKE	11.00	2.00	0.00	6.10	G	80
LEBO KIDS POND	11.00	3.00	0.00	5.90	G	2
WILSON SFL	11.00	0.00	0.00	5.70	G	110
GARNETT CL-NORTH	11.00	2.00	2.00	10.10	G	55
LEAVENWORTH SFL	10.50	0.00	0.00	4.60	G	175
CHASE SFL	10.00	2.00	0.00	6.90	G	109
OTTAWA SFL	10.00	2.50	0.00	7.90	G	138
CRAWFORD SFL	9.80	0.50	0.03	14.40	Е	150
BOURBON SFL	9.00	3.90	1.00	11.80	Е	103
BARBER SFL-LOWER	9.00	0.00	0.00	5.10	G	51
FORT SCOTT CL	8.50	5.50	2.50	16.60	E	350
JEFFREY ENGY-MAKE UP LK	8.00	0.50	0.00	4.90	F	125
OSAWATOMIE CL	8.00	3.00	1.00	10.60	G	21
COLUMN CHILL CL	0.00	5.00	1.00	10.00	0	21

IMPOUNDMENT	Density Rating	Preferred Rating	Lunker Rating	Biggest Fish	Bio Rating	Acres of
BESEBUOID	(>8")	(>10")	(>12")	(lbs.)	Ra	Water
RESERVOIR HILLSDALE	33.10	15.10	0.60	1.00	G	4580
MELVERN	26.70	10.20	1.02	1.10	G	7000
PERRY	16.80	4.80	0.90	2.00	F	12600
CLINTON	16.40	4.70	0.30	1.00	F	7000
POMONA	13.40	5.80	0.70	1.20	E	4000
FALL RIVER	11.10	3.00	0.40	1.80	G	2500
LACYGNE	9.80	6.70	0.40	1.00	G	260
TORONTO	9.30	5.50	0.80	2.10	G	280
MARION	7.80	47.00	0.20	0.90	F	616
BIG HILL	7.60	1.90	0.40	1.10	Е	1240
MILFORD	7.60	1.90	0.30	1.00	F	16020
KANOPOLIS	6.80	1.00	0.20	1.30	F	355
CEDAR BLUFF	6.70	3.10	0.70	1.20	F	6500
COUNCIL GROVE	6.60	27.00	1.30	1.40	G	328
SEBELIUS	6.50	6.00	1.80	1.10	F	150
LAKES	0.8.0.7	1		1.10		
HERINGTON CL-OLD	97.30	17.00	2.30	1.40	E	36
MARION CO. LAKE	81.30	79.00	6.30	1.30	E	15
OTTAWA SFL	70.80	22.80	3.40	2.20	E	13
EUREKA CL	66.80	4.50	0.00	0.50	G	13
ATCHISON CL #9 WELLINGTON-HARGIS CREEK LAKE	42.50 31.80	7.00	0.50	1.20	G G	1
GARDNER CL	29.30	3.50	0.50	0.80	F	10
CARBONDALE CL - EAST	29.00	14.50	0.50	0.90	G	26
PLAINVILLE LAKE	25.30	20.00	5.80	1.90	G	10
DLATHE-CEDAR LAKE	25.00	5.20	1.30	1.90	F	5
WICHITA-WATSON PARK LAKE	22.80	51.00	1.30	1.50	G	4
CHERRYVALE CL - TANKO	22.50	1.80	0.00	1.00	Е	1
ATCHISON CL #2	20.00	1.00	0.00	0.50	F	
MEADE STATE LAKE	17.80	1.50	0.00	0.50	G	8
SCOTT STATE LAKE	17.80	1.26	0.00	0.50	G	11
POTTAWATOMIE SFL #1	16.80	0.47	0.00	16.80	F	2
NEBO SFL	16.30	3.10	0.30	1.10	F	3
CHANUTE CL	15.00	2.50	1.00	1.00	G	8
DSAGE CL	14.50	8.00	3.50	1.10	G	5
WASHINGTON SFL	14.50	4.20	1.30	1.20	G	6
OHNSON COHERITAGE PARK LAKE	14.00	0.90	0.00	0.40	Р	2
PLEASANTON WEST LAKE	13.00	2.75	0.00	0.60	F	2
WELLINGTON CL	11.00	7.00	1.70	1.00	G	70
NEOSHO WA	10.50	7.50	3.00	1.90	G	80
BARBER SFL-LOWER	10.50	3.75	0.30	1.60	G	5
EWELL SFL MADISON CL	10.30 10.00	3.00 1.80	1.00	1.20 2.20	F G	5
YATES CENTER-SOUTH OWL LAKE	10.00	2.00	0.00	0.70	F	15
MOUND CL	9.50	8.70	1.30	1.10	г G	13
SEDGWICK COLAKE AFTON	9.50	0.50	0.30	0.70	P	24
SHERIDAN SFL	9.30	3.50	0.30	0.80	G	6
ANTHONY CL	8.50	1.00	0.00	0.60	P	15
EFFREY ENGY-MAKE UP LK (AUX.)	8.30	3.50	0.30	1.90	F	46
SEDAN CL-NEW	8.30	1.20	0.30	1.00	G	7
EMPORIA-ALEXANDER POND	8.00	0.00	0.00	0.40	Р	
LOGAN CL	7.80	7.80	2.80	1.20	F	2
DOUGLAS COLONESTAR LAKE	7.80	0.00	0.00	0.40	F	19
CLARK SFL	7.00	4.50	0.80	1.00	F	30
	6.80	1.30	0.30	0.80	F	9
GEARY SFL	0.00				_	
GEARY SFL BROWNING OXBOW MIDDLE CREEK SFL	6.80	3.70	1.30	1.40	F	

BLACK CRAPPIE

IMPOUNDMENT	Density Rating (>8")	Preferred Rating (>10")	Lunker Rating (>12")	Biggest Fish (lbs.)	Bio Rating	Acres of Water
RESERVOIR						
SEBELIUS	19.80	16.50	2.30	1.60	G	1500
KIRWIN	9.60	6.00	2.50	1.80	F	4000
WEBSTER	6.90	6.30	2.30	1.60	G	3500
CEDAR BLUFF	3.10	1.60	0.10	1.10	F	6500
GLEN ELDER	1.70	1.30	0.40	1.80	Р	12586
LAKES						
YATES CENTER-SOUTH OWL LAKE	52.50	4.50	0.00	0.90	G	150
BROWN SFL	23.30	2.50	0.00	0.70	G	62
GRAHAM COANTELOPE LAKE	22.70	18.30	9.00	1.40	Е	80
PLAINVILLE LAKE	16.30	6.50	0.30	1.10	G	100
LEAVENWORTH SFL	14.70	1.30	0.00	0.60	G	175
GARNETT CL-SOUTH	13.00	1.50	1.00	1.30	F	25
LEBO CL	13.00	10.00	0.50	0.90	G	70
ATCHISON CL #9	9.50	1.00	0.00	0.50	F	18
CENTRALIA CL	9.50	0.90	0.00	0.60	G	400
FORT SCOTT CL	9.10	5.00	2.00	1.70	G	350
ATCHISON SFL	8.80	3.30	0.00	0.70	F	66
LOGAN CL	8.00	6.50	0.00	0.80	F	25
BOURBON SFL	8.00	2.00	1.00	4.20	Е	103
NEBO SFL	7.80	0.30	0.00	0.70	F	38
GREENBUSH EDUCATION CENTER	6.80	0.00	0.00	0.40	F	5
BONE CREEK LAKE	6.30	1.00	0.00	0.70	Е	540
POTTAWATOMIE SFL #2	6.30	1.00	0.70	1.00	F	75
ATCHISON CL #4	6.00	1.00	0.00	0.80	F	4
GARDNER CL	5.50	1.50	0.00	0.70	Р	100
JOHNSON CO. SHAWNEE MISSION LK	5.30	1.90	0.00	0.90	F	121
HOLTON - BANNER CREEK LAKE	4.60	3.80	1.00	1.30	G	171
SHAWNEE SFL	4.50	5.00	0.50	1.10	F	135
WOODSON SFL	4.50	4.30	0.00	0.18	Р	180
CRAWFORD SFL	3.80	0.40	0.00	0.60	G	150
OSAGE SFL	3.00	1.00	1.00	0.70	Р	140
MCPHERSON SFL	2.80	0.00	0.00	0.30	Р	46
MIDDLE CREEK SFL	2.80	0.30	0.00	0.50	F	280
GMAN SFL	2.80	0.00	0.00	0.30	Е	40
PRATT CO. LAKE	2.80	0.00	0.00	0.40	Р	51
GREAT BEND-VETS PARK LAKE	2.50	1.52	0.30	1.20	G	13
THAYER CL	2.00	0.00	0.00	0.30	F	30
ATCHISON CL #2	2.00	2.00	0.50	1.10	F	3
NEOSHO SFL	1.80	0.00	0.00	0.40	F	92
BARBER SFL-LOWER	1.80	1.30	0.00	0.70	F	51

FLATHEAD CATFISH

IMPOUNDMENT	Density Rating (>16")	Preferred Rating (>24")	Lunker Rating (>28")	Biggest Fish (lbs.)	Bio Rating	Acres of Water
RESERVOIR						
WEBSTER	6.50	4.00	2.50	20.90	Е	3500
KIRWIN	3.00	3.00	3.00	18.70	G	4000
SEBELIUS	2.00	1.50	1.00	13.80	G	1500
MILFORD	1.00	0.00	0.00	4.40	F	16020
PERRY	1.00	0.75	0.80	16.80	F	12600
LAKES						
HERINGTON CL-OLD	5.00	4.00	3.00	15.40	F	367
HERINGTON CL-NEW	5.00	4.00	2.00	22.60	G	555
WASHINGTON SFL	4.00	3.00	3.00	33.70	G	65
TUTTLE CREEK RIVER POND	4.00	3.00	3.00	33.10	G	10

LARGEMOUTH BASS

IMPOUNDMENT	Density Rating (>12")	Preferred Rating (>15")	Lunker Rating (>20")	Biggest Fish (lbs.)	Bio Rating	Acres of Water
RESERVOIR						
SEBELIUS	157.10	51.30	0.50	5.20	Е	1500
WEBSTER	66.40	57.00	0.00	5.00	Е	3500
LACYGNE	62.30	37.70	3.80	8.60	Е	2600
CEDAR BLUFF	54.40	30.90	2.90	6.50	Е	6500
KIRWIN	29.90	19.50	0.00	3.40	G	4000
MELVERN	24.10	15.00	1.10	4.80	F	7000
TORONTO	22.00	13.00	1.00	5.00	Р	2800
BIG HILL	19.80	8.70	0.70	4.90	Е	1240
FALL RIVER	19.70	15.50	1.40	4.90	Р	2500
HILLSDALE	10.10	4.30	1.40	6.30	F	4580
WILSON	9.10	6.10	0.00	4.90	F	9040
EL DORADO	8.00	3.00	0.00	2.60	Р	8000
PERRY	5.40	3.30	0.20	4.80	F	12600

Wildlife & Parks

LARGEMOUTH BASS

IMPOUNDMENT	Density Rating	Preferred Rating	Rating	Biggest Fish	Bio Rating	Acres of
	(>12")	(>15")	(>20")	(lbs.)	R ¹	Water
LAKES			0.00	1.60		
OSAWATOMIE-BEAVER LAKE	206.70	3.30	0.00	1.60	F	6
SHERIDAN SFL	166.00	12.00	0.00	3.10	G	67
GRAHAM COANTELOPE LAKE	140.00		0.00	1.60	F	80
LOGAN CL	134.80	34.80	8.70	5.90	G	25
KINGMAN SFL	131.00	19.60	0.00	2.40	E	144
MOLINE OLD CL	127.30	9.10	0.00	2.20	G	68
OLATHE-CEDAR LAKE	123.80	67.30	1.00	4.90	G	56
CHANUTE CL	117.70	61.30	1.60	4.70	E	80
YATES CENTER-SOUTH OWL LAKE	111.00	41.60	0.00	5.20	G	150
LEAVENWORTH SFL	108.50	6.10	0.00	3.30	G	175
BROWN SFL	102.30	3.90	0.00	2.10	G	62
NEW STRAWN CL	97.50	25.00	0.00	3.70	E	3
NEOSHO SFL	96.50	38.60	6.10	6.30	Е	92
OSAWATOMIE CL	95.40	2.30	0.00	5.80	G	21
BUTLER SFL	94.00	68.00	5.00	6.30	Е	124
SEVERY CL	93.20	20.50	4.50	5.10	Е	5
POTTAWATOMIE SFL #2	90.00	16.00	0.00	2.50	G	75
PLEASANTON WEST LAKE	85.00	49.00	0.00	3.80	E	20
MOLINE NEW CL	84.10	17.40	0.00	4.10	E	185
PRATT CO. LAKE	82.90	17.10	0.00	3.50	Е	51
PRATT CO. LAKE	82.90	17.10	0.00	3.50	Е	51
OTTAWA SFL	80.00	57.90	8.30	7.70	G	138
SEDAN CL-OLD	76.80	14.70	4.90	6.60	E	55
GARDNER CL	76.20	44.60	4.90	5.40	G	100
OLATHE-LAKE OLATHE	74.30	51.30	0.00	5.60	G	172
OSAGE SFL	74.20	12.80	0.00	3.70	G	140
FORD SFL	73.70	63.20	0.00	5.00	G	48
WOODSON SFL	70.00	43.00	0.00	3.30	Е	180
PLAINVILLE LAKE	68.00	32.00	2.00	4.30	G	100
PLEASANTON EAST LAKE	66.00	7.30	1.90	4.90	G	127
YATES CENTER CL-NEW	65.70	30.00	0.00	3.80	E	205
ATCHISON SFL	64.50	32.00	0.90	4.20	G	66
MCPHERSON SFL	64.10	38.30	3.00	5.80	E	46
MEADE STATE LAKE	62.10	3.50	3.40	4.30	G	80
CLARK SFL	60.90	51.30	7.60	7.10	Е	300
STERLING CL	60.00	18.00	2.00	5.10	G	10
COWLEY SFL	59.00	27.00	0.00	3.90	G	84
OTTAWA SFL	58.90	26.70	8.20	7.70	Е	138
SHAWNEE SFL	58.00	6.00	0.00	1.70	G	135
MADISON CL	56.20	25.80	6.70	7.80	Е	114

SAUGER						
IMPOUNDMENT	Density Rating (>11")	Preferred Rating (>14")	Lunker Rating (>17")	Biggest Fish (lbs.)	Bio Rating	Acres of Water
RESERVOIR						
MELVERN	2.33	2.30	0.20	4.20	F	7000
PERRY	2.30	1.75	0.30	2.00	F	12600
LAKES						
HOLTON - BANNER CREEK LAKE	4.50	1.50	0.00	1.10	F	171

SAUGEYE						
IMPOUNDMENT	Density Rating (>14")	Preferred Rating (>18")	Lunker Rating (>22")	Biggest Fish (lbs.)	Bio Rating	Acres of Water
RESERVOIR						
SEBELIUS	46.50	6.50	1.00	4.20	Е	1500
KANOPOLIS	25.00	5.30	1.50	5.80	Е	3550
COUNCIL GROVE	3.80	2.60	0.50	5.40	Е	3280
TUTTLE CREEK	1.40	0.40	0.10	4.60	F	15800
MARION CO. LAKE	34.00	8.00	0.00	2.60	G	153
LAKES						
WELLINGTON CL	13.00	1.00	0.00	2.20	G	700
WASHINGTON SFL	13.00	9.00	3.00	7.20	G	65
CHASE SFL	13.00	0.00	0.00	1.30	G	109
SEDAN CL-OLD	10.00	5.00	2.00	4.30	G	55
GEARY SFL	9.50	3.00	1.50	4.20	G	97
PARSONS CL	9.00	4.00	0.00	3.30	G	980
HARVEYVILLE CL	8.00	5.00	1.00	4.30	G	25
TUTTLE CREEK RIVER POND	7.00	5.00	0.00	2.80	G	10
MIDDLE CREEK SFL	5.50	2.00	0.50	3.60	F	280
GARDNER CL	4.50	0.00	0.00	1.70	F	100
PAOLA CL	4.00	0.00	0.00	1.10	Р	220
SHERIDAN SFL	3.00	0.00	0.00	1.70	F	67

SMALLMOUTH BASS

IMPOUNDMENT	Density Rating (>11")	Preferred Rating (>14")	Lunker Rating (>17")	Biggest Fish (lbs.)	Bio Rating	Acres of Water
RESERVOIR						
BIG HILL	19.10	4.30	1.00	2.90	Е	1240
MELVERN	11.50	8.00	1.10	3.00	G	7000
CEDAR BLUFF	11.00	6.00	0.00	2.00	G	6500
WILSON	6.50	1.90	0.00	2.00	G	9040
MILFORD	4.70	2.90	0.60	2.40	G	16020
GLEN ELDER	2.60	1.70	0.30	3.70	F	12586
EL DORADO	1.00	1.00	0.00	2.10	F	8000
LAKES						
JEFFREY ENGY-MAKE UP LK	6.00	1.00	0.00	1.60	F	125
LEBO CL	4.30	0.00	0.00	0.70	F	70

SPOTTED BASS

IMPOUNDMENT	Density Rating (>11")	Preferred Rating (>14")	Lunker Rating (>17")	Biggest Fish (lbs.)	Bio Rating	Acres of Water
RESERVOIR						
CEDAR BLUFF	39.00	7.00	0.00	2.00	Е	6500
MELVERN	8.00	3.40	0.00	3.00	F	7000
SEBELIUS	7.90	6.90	1.10	2.90	F	1500
LAKES						
BOURBON SFL	54.70	7.50	1.30	3.70	Е	103
WILSON SFL	35.50	7.10	0.00	1.70	Е	110
WINFIELD CL	19.00	12.00	0.00	2.20	F	1200
CHASE SFL	18.00	8.00	0.00	1.80	F	109
EUREKA CL	12.50	7.30	1.00	3.00	F	135
COUNCIL GROVE CL	6.00	1.00	0.00	1.40	F	434

STRIPER

IMPOUNDMENT	Density Rating (>20")	Preferred Rating (>30")	Lunker Rating (>35")	Biggest Fish (lbs.)	Bio Rating	Acres of Water
RESERVOIR						
WILSON	11.00	0.00	0.00	9.10	G	9040
LAKES						
LACYGNE	0.00	0.00	0.00	1.50	F	2600
PLEASANTON EAST LAKE	0.00	0.00	0.00	2.30	F	127

WALLEYE						
IMPOUNDMENT	Density Rating (>15")	Preferred Rating (>20")	Lunker Rating (>25")	Biggest Fish (lbs.)	Bio Rating	Acres of Water
RESERVOIR						
KIRWIN	29.30	3.30	0.60	6.40	Е	4000
GLEN ELDER	23.60	6.10	0.50	9.90	F	12586
CEDAR BLUFF	13.30	1.00	0.80	9.60	F	6500
CHENEY	12.70	2.70	0.00	4.70	G	9550
WEBSTER	12.40	2.80	1.30	6.70	G	3500
EL DORADO	11.50	4.00	0.30	6.00	G	8000
MILFORD	11.50	4.00	0.70	6.70	G	16020
MARION	8.30	15.00	0.00	5.70	G	6160
HILLSDALE	8.00	3.00	1.00	9.00	G	4580
WILSON	6.30	0.60	0.00	4.40	G	9040
LOVEWELL	4.00	1.50	0.20	10.00	F	2986
LAKES						
LEBO CL	51.00	0.00	0.00	2.10	Е	70
GRIDLEY CL	23.00	0.00	0.00	1.70	Е	33
SABETHA - PONY CREEK LAKE	18.50	6.50	0.50	10.60	G	171
WYANDOTTE CO. LAKE	13.00	0.00	0.00	1.80	G	407
YATES CENTER CL-NEW	11.00	1.00	0.00	2.40	F	205
LEAVENWORTH SFL	10.50	2.00	0.00	4.10	G	175
HOLTON - BANNER CREEK LAKE	9.50	0.00	0.00	2.70	F	171
WOODSON SFL	9.00	0.00	0.00	2.30	F	180
POTTAWATOMIE SFL #2	7.00	2.00	0.00	4.10	F	75
SCOTT STATE LAKE	7.00	1.00	1.00	8.80	Е	115
SHAWNEE COLAKE SHAWNEE	6.00	0.00	0.00	1.60	F	416
JEFFREY ENGY-MAKE UP LK	5.50	0.00	0.00	1.40	F	125
WINFIELD CL	5.00	1.00	0.00	3.50	G	1200
JEFFREY ENGY-MAKE UP LK (AUX.)	5.00	3.00	1.00	7.20	F	460
SHAWNEE SFL	5.00	2.00	1.00	6.30	F	135
OSAGE SFL	5.00	2.00	0.00	5.20	F	140
HERINGTON CL-NEW	4.00	2.00	1.00	7.00	G	555
PLEASANTON EAST LAKE	3.00	0.00	0.00	1.20	G	127
FORT SCOTT CL	3.00	2.50	1.50	7.70	F	350
BOURBON SFL	3.00	3.00	0.00	4.00	F	103

WHITE BASS Density Rating (>9") Preferred Rating (>12") Lunker Rating (>15") Biggest Fish (lbs.) Acres of Water Bio IMPOUNDMENT RESERVOIR MARION 65.30 0.00 0.90 1.30 F 6160 CLINTON 42.00 24.30 2.80 2.00 G 7000 PERRY 38.80 17.50 0.00 1.40 G 12600 **BIG HILL** 38.00 2.60 1240 35.30 6.30 E FALL RIVER 34.50 16.00 10.50 2.80 E. 2500 EL DORADO 31.80 18.00 0.00 1.60 G 8000 KANOPOLIS 28.50 18.30 0.50 2.10 G 3550 12586 GLEN ELDER 22.00 14.80 0.30 1.80 G 9550 CHENEY 21.20 20.40 3.00 1.70 E TORONTO 19.30 13.70 8.00 3.10 Ε 2800 LACYGNE 18.50 15.00 0.00 1.20 G 2600 CEDAR BLUFF 16.30 12.00 2.30 2.20 6500 G MILFORD 14.20 9.50 0.50 2.00 G 16020 TUTTLE CREEK 13.30 10.70 3.70 2.80 G 15800 POMONA 10.00 3.50 0.00 1.10 G 4000 MELVERN 9.20 7.60 7.30 2.10 F 7000 KIRWIN 5.10 4.50 0.50 2.60 G 4000 2.30 2986 LOVEWELI 5.00 0.00 1.00 F HILLSDALE 4.50 1.00 0.50 2.10 Р 4580 LAKES CLARK SFL 35.50 17.00 0.00 300 1.70 Е JEFFREY ENGY-MAKE UP LK (AUX.) 35.00 460 20.00 0.00 1.10 G JEFFREY ENGY-MAKE UP LK 24.50 24.00 8.50 2.10 G 125 FORT SCOTT CL 22.00 13.00 1.00 1.90 350 G 18.50 17.00 2.10 MIDDLE CREEK SFL 1.50 G 280 400 CENTRALIA CL 14.00 0.50 0.00 0.70 F HERINGTON CL-NEW 12.00 12.00 2.00 4.00 G 555 HERINGTON CL-OLD 12.00 11.00 4.00 2.50 367 G SEDGWICK CO.-LAKE AFTON 12.00 38.00 240 0.00 1.50 Р 7.50 2.50 2.30 220 1.50 F PAOLA CL

WIPER

IMPOUNDMENT	Density Rating (>12")	Preferred Rating (>15")	Lunker Rating (>20")	Biggest Fish (lbs.)	Bio Rating	Acres of Water
RESERVOIR						
POMONA	44.50	12.30	1.50	5.50	Е	4000
WEBSTER	26.70	26.00	13.90	11.50	Е	3500
LACYGNE	25.30	7.30	5.30	10.60	Е	2600
CEDAR BLUFF	20.30	5.00	4.00	8.00	G	6500
KIRWIN	15.50	15.00	6.60	6.20	G	4000
SEBELIUS	13.30	12.50	3.60	8.70	G	1500
MILFORD	13.20	10.80	5.70	11.70	G	16020
MARION	5.30	52.00	0.80	8.20	F	6160
CHENEY	4.20	4.00	1.20	4.90	F	9550
KANOPOLIS	3.30	3.00	1.00	5.40	F	3550
LOVEWELL	2.30	2.00	0.20	9.40	F	2986
LAKES						
HERINGTON CL-NEW	95.00	2.00	0.00	2.60	G	555
GRIDLEY CL	50.00	11.00	10.00	3.60	G	33
NEW STRAWN CL	45.00	45.00	0.00	4.17	G	3
PAOLA CL	35.50	2.00	1.50	5.80	G	220
MARION CO. LAKE	35.00	32.00	7.00	4.70	Е	153
SHAWNEE COLAKE SHAWNEE	31.00	10.50	4.00	4.90	G	416
LEBO CL	28.00	6.00	0.00	2.30	Е	70
JOHNSON CO. SHAWNEE MISSION LK	19.00	4.50	1.00	6.70	G	121
GARNETT CL-SOUTH	17.00	2.00	0.00	2.40	F	25
GARNETT CL-NORTH	16.00	1.00	1.00	10.50	F	55
JEFFREY ENGY-MAKE UP LK (AUX.)	14.00	11.00	5.00	4.90	G	460
OSAGE CL	14.00	6.00	0.00	2.80	F	50
PLEASANTON EAST LAKE	13.00	6.99	0.00	2.90	G	127
PLAINVILLE LAKE	11.70	4.80	1.30	5.20	Е	100
STERLING CL	11.00	11.00	8.00	5.00	G	10
MIDDLE CREEK SFL	9.00	6.50	0.00	3.00	F	280
JOHNSON COHERITAGE PARK LAKE	9.00	0.00	0.00	1.40	Р	20
WICHITA-WATSON PARK LAKE	9.00	0.00	0.00	1.00	Р	42
LEAVENWORTH SFL	8.00	0.50	0.00	1.90	F	175
LOGAN CL	7.80	6.30	1.70	9.10	Е	25
YATES CENTER-SOUTH OWL LAKE	7.00	4.00	1.00	5.10	F	150
COLDWATER LAKE	7.00	6.00	0.00	2.10	G	250
WINFIELD CL	6.00	12.00	1.00	3.90	G	1200
OLATHE-LAKE OLATHE	5.50	5.00	1.00	4.00	Р	172
SHERIDAN SFL	4.00	4.00	0.00	2.30	F	67
WELLINGTON CL	4.00	0.00	0.00	1.20	G	700

Wildlife & Parks

Fishing Gaide To Kansas

Kansas fishing: We've come a long way, baby!

That's right. Kansas fishing isn't what it used to be. It's much more. Oh, we still have some of the best channel, flathead and blue catfishing to be found, but today Kansas anglers have great variety.

If you're an old school angler and still want to catch the whiskered fish native to our streams and rivers, you have more opportunities today than ever. Channel catfish are found in nearly every stream, river, pond, lake, and reservoir in the state. They remain one of the most popular angling species. To keep up with demand, state fish hatcheries produce millions of channel cats each year. Some are stocked into lakes as fry, but more are fed and grown to catchable size, then stocked into one of many state and community lakes around the state. Our reservoirs hold amazing numbers of channel catfish, and for the most part, the reservoir cats are overlooked by anglers fishing for other species. Fisheries biologists consider channel cats an underutilized resource in most large reservoirs.

For sheer excitement, the flathead catfish is still king. Monster flatheads weighing 60, 70 and even 80 pounds are caught each summer. Most of the truly large flatheads come from the larger rivers in the eastern half of the state, where setting limb and trot lines is a tradition.

There are 24 large reservoirs in Kansas. Most were built in the 1960s for flood control, water supply, and recreation. The reservoirs range in size from 1,200 to 16,000 surface acres, and most offer park facilities. Fishing is the number one attraction, and reservoir anglers have a variety to cast to. Depending on individual reservoir characteristics, each has its own specialty. In the northeast, reservoirs are known for producing crappie, white bass, and channel catfish. In the southeast, crappie, largemouth bass, white bass, and catfish are tops. In the central part of the state, reservoirs draw anglers looking for walleye, white bass, striped bass, wipers, and channel cats. In the west, reservoirs are known for walleye, largemouth bass, wipers, and crappie.

For those who prefer smaller waters, there are plenty to choose from. The department owns and operates more than 40 state fishing lakes. These impoundments can be as small as 50 acres or as large as 300. Some primitive facilities are available, and boating is allowed for fishing only. State fishing lakes are great places for family trips and provide good fishing for largemouth bass, crappie, and channel catfish. More than 200 small lakes are owned by communities, and these small jewels can provide outstanding angling opportunities. Local community governments may require daily or annual fees, and they may even establish creel and length limits more restrictive than state regulations, so it's a good idea to check locally before fishing.

There are more than 10,000 miles of streams and rivers in Kansas, most of which are privately owned. The three navigable rivers – the Arkansas, Missouri, and Kansas – are open to the public, although one must have permission to access the river through private land. The rest of our streams are privately owned. Many streams provide excellent channel and flathead catfishing, and those in the east and southeast may also hold spotted bass. A little research and legwork visiting with landowners could open



some great stream fishing.

More than 50,000 privately-owned farm ponds also provide outstanding fishing opportunities. Tucked away in beautiful prairie settings, these secret fishing holes are largemouth bass, crappie, bluegill, and channel cat hotspots. Permission from the landowner is needed to fish on any private water, except those waters enrolled in the department's Fish Impoundment and Stream Habitat (FISH) program.

The FISH program works like the popular Walk-In Hunting Area program. The department leases pond and stream access from private landowners and opens it to public fishing. The leases run from March through October and allow fishing only from sunrise to one half hour after sunset. Contact the KDWP office nearest you for an atlas showing the location of all FISH properties.

Other special programs include the winter trout fishing program, which provides catchable-size trout in select waters across the state from October through April. A trout permit is required of all anglers who fish for trout during the Oct. 15-Apr. 15 season. The urban channel cat program stocks catchable-sized channel catfish in select urban lakes. Find out where to fish by logging onto the department's website. Trout stocking schedules and urban channel cat program sites are listed. And check out the Fishing Forecast, which is a compilation of biologists' sampling efforts and can help you decide where to fish according to the type of fishing you prefer. For up-to-date information, look up the fishing report for the lake of your choice. Field staff update the fishing reports each week through the fishing season, reporting on fishing success, lake levels, water temperatures, and other important information.

There's no doubt that Kansas fishing has come a long way. Anglers can specialize in catfish or crappie, wipers or walleye, or better yet, they can fish for them all! Use this guide to find a lake, stream, or reservoir that fits your style. Then, hang on and have fun.



LARGEMOUTH BASS Part of a group known as the black basses, including the smallmouth and spotted basses, the largemouth grows the biggest. Common in farm ponds, the largemouth likes shallow, murky water and usually associates with structure such as weeds or submerged timber. Some of the newer reservoirs and smaller lakes with standing timber also provide good largemouth fishing. Of the black basses, the largemouth is the only one with a mouth that extends behind the eye. The world record weighed 22 pounds, 4 ounces. The Kansas record is 11 pounds, 12 ounces. **SMALLMOUTH BASS** The smallmouth is a hard-fighting sport fish native only to a few waters in the southeastern corner of Kansas. Introduced in several larger reservoirs, the smallmouth has adapted well and attracts a growing number of angler fans. Smallmouths prefer clear water and rocky structure. The mouth of the smallmouth extends to just below the eye. The world record smallmouth weighed a whopping 11 pounds, 15 ounces. The Kansas record is 6 pounds, 6 ounces.



STRIPED BASS A saltwater native, the striped bass has adapted well to freshwater existence and has prospered in several Kansas lakes. Striped bass don't reproduce in Kansas waters, however, so populations are maintained through stocking programs. Stripers are legendary for their hard fighting nature and long, drag-sizzling runs. The Kansas state record is 43 pounds, 8 ounces. The freshwater world record is 66 pounds.



SPOTTED BASS Also known as the Kentucky bass, the spotted is native to eastern Kansas streams, mainly those that flow over limestone bottoms in the Flint Hills. It resembles the largemouth in coloration, with a more pronounced horizontal blotching and spots along the belly. The spotted bass acts more like a smallmouth when caught, fighting remarkably hard. The mouth extends to just below the eye. The Kansas record weighed 4 pounds, 7 ounces, and the world record is 8 pounds, 15 ounces.



WIPER Perhaps the most aggressive fish in Kansas waters, the wiper is a cross between a white bass and a striped bass. Wipers grow fast, strike hard, and fight like no other fish. It's no wonder Kansas anglers love them. The wiper, like its striper parent, has two rows of teeth near the rear of the tongue. The white bass has a single tooth patch on its tongue. The state record wiper weighed 22 pounds. The world record wiper is listed at 23 pounds, 2 ounces.



WHITE BASS Common in nearly all Kansas' larger reservoirs, white bass are prolific and are generally found in large schools. While popular any time of the year, white bass are known for their spawning runs, which may take them miles upriver of the reservoir. Fishermen gather along the streams near the deeper pools and cast jigs and spinners for the hard fighting white. White bass are so numerous in most Kansas waters, there is no daily creel limit. The Kansas state record white bass weighed 5 pounds, 9 ounces. The world record is 6 pounds, 7 ounces.



FLATHEAD CATFISH As the name implies, this catfish has a broad, flat head with a jutting lower jaw. Also called the calico cat, the flathead is mottled brown to nearly yellow in color. Strictly predatory, the flathead is caught with live bait and occasionally lures, usually at night. The Kansas state record is also the world record. It was caught in 1998 from Elk City Reservoir and weighed 123 pounds.



BLUE CATFISH The blue catfish looks much like the channel cat, except the blue has a humped back, a longer anal fin, and grows bigger. Blues are native to several rivers in northeastern Kansas including the Kansas and Missouri. Blues are seldom caught on the concoctions used for channel cats, preferring cut or live bait. The largest blue cat on record weighed 109 pounds, 4 ounces. The Kansas record weighed 94 pounds.



WALLEYE The walleye has become a highly-sought game fish for Kansas anglers and has been stocked in most federal reservoirs and some larger state and community lakes. To help maintain these fisheries, millions of young walleye are collected and stocked each spring by department biologists and culturists. The state record weighed 13 pounds, 1 ounce. The world record is 25 pounds.



SAUGER This close cousin to the walleye loves murky water and current. Sauger are being stocked in several northeastern Kansas reservoirs where walleye haven't done well because of high flow-through and murky water conditions. Sauger are less likely than walleye to be flushed from a reservoir. Smaller than the walleye, the world record sauger weighed 8 pounds, 12 ounces. The state record is 4 pounds, 13 ounces.



BLACK BULLHEAD Smaller than the other, more sought-after catfishes, the bullhead is brown/green in color and doesn't have the forked tail like the channel cat. Common in nearly all streams, lakes and ponds, the bullhead readily bites worms and stink bait and delights youngsters learning to fish. The state record is 7 pounds, 5 ounces. The world record is 8 pounds, 15 ounces.



CHANNEL CATFISH The channel catfish is the bread and butter of Kansas fishing. Found in nearly all waters from large rivers and reservoirs to small prairie streams, good channel cat fishing is never far away. State lakes are also popular places to catch channel cats. Department hatcheries produce millions of channel cats each year. The state record channel cat weighed 34 pounds, 11 ounces. The world record is 58 pounds.



SAUGEYE The saugeye is a cross between a walleye and a sauger and is another promising hybrid. The saugeye has been successfully stocked in reservoirs where walleye populations are difficult to maintain. Similar in appearance to the parents, the saugeye will grow faster than either but probably won't get as big as the walleye. The world record saugeye weighed 15 pounds, 10 ounces. The state record weighed 5 pounds, 12 ounces.



PADDLEFISH The paddlefish is a plankton eater that resembles prehistoric fishes. Common only in two Kansas rivers – the Marais des Cygnes and the Neosho – the paddlefish is taken by fishermen during the spring spawning runs, and then only during the special snagging season. Stocking paddlefish in Oklahoma's Kaw Reservoir and in Tuttle Creek Reservoir may bring the paddle-snouted fish back to some of its former range. The largest paddlefish on modern record weighed 142 pounds, 8 ounces. The Kansas record weighed 90 pounds, 12 ounces.



WHITE CRAPPIE The white crappie is abundant across Kansas and ideally suited to the large reservoirs. Known for its prolific numbers and delicious white meat, the white crappie is one of the most popular sportfish in the state. The rich waters of northeastern Kansas reservoirs produce some of the finest fishing for slab-sided white crappie found anywhere in the U.S. The world record white weighed 5 pounds, 3 ounces. The Kansas record tipped the scales at 4 pounds, 1/4 ounce.



BLUEGILL The bluegill is one of the most common panfish in Kansas, and it provides many youngsters with their first fishing thrill. Although it doesn't grow to enormous weights, the tenacious, saucer-shaped fish makes up for size with a scrappy fight. Common in most farm ponds and smaller community and state fishing lakes, bluegill are most easily caught when they move into shallow water and begin dishing out spawning beds. The state record bluegill weighed 2 pounds, 5 ounces. The world record is 4 pounds, 12 ounces.



BLACK CRAPPIE The black crappie is not as widespread in Kansas as the white crappie. The black is more suited to clearwater and small impoundments such as farm ponds. Black crappies are distinguished by a uniform dark flecking with no visible barring as seen on the white crappie. The world record black crappie weighed 6 pounds. The Kansas record is 4 pounds, 10 ounces.



GREEN SUNFISH Although it has a larger mouth and more elongated body than the bluegill, the green sunfish has the blue tab on the gill cover and is often confused with the bluegill. Commonly referred to as perch, green sunfish are aggressive and easy to catch. However, they can easily overpopulate and become stunted in small waters. The Kansas record weighed 2 pounds, 6 ounces. The world record greenie is listed at 2 pounds, 7 ounces.



REDEAR SUNFISH The redear sunfish has been stocked into select lakes and reservoirs. Although the redear resembles the bluegill, it usually prefers deeper water and is more difficult to catch. The redear has a narrow band of red on the gill cover lobe and usually shows vertical barring. Redears are popular locally because of the challenge they provide. The state record weighed 1 pound, 11 ounces. The world record tipped the scales at 5 pounds, 4 ounces.



DRUM The freshwater drum is common in most Kansas rivers and reservoirs. Commonly considered an undesirable rough fish, the drum is predatory and will readily strike lures and baits. It is a good fighter and the white meat is fine table fare. The drum can make strange drumming or grunting noises with muscles vibrated against the swim bladder. The world record drum weighed 54 pounds, 8 ounces. The Kansas state record drum weighed 31 pounds, 4 ounces.

Region 1



Kanopolis



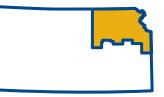


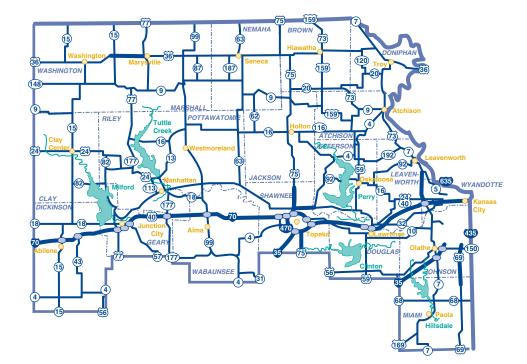
RESERVOIRS	boat ramps	boat rental	mpin	drinking wate	mp stat	0	rina	picnic areas	trailer pads	bluegill	σ	channel catil	CLAPPIE	rracheau cach	largemouth bas	44		saugeye	2	tted bas	striped bass	trout walleve	walleye white bass	5
Cedar Bluff,790 acres (cons. level), 13 miles S of I-	70	on	•K	-1 4		•			•	•	†	1		2		2			*	•	1	1	1	
Glen Eldet2,586 acres, 12 miles W of Beloit on US 24	•	•	•	•	•	•	•		•	1	1	1		2		2		-	1	*	٠	1	1	
Kanopolis3,550 acres, 33 miles SW of Salina on K-141	•		•	•	•	•	•		•	1	1	1		1		2		1			1	1	1	
Keith Sebelius (+N2r,t20m) acres, 3 miles SW of Norton	•		•	•	•	•	•		•	1	1	1		2 1		2		1	1	*		1		
Kirwin 5,080 acres, 15 miles SE of Phillipsburg	•		•				•			1	1	1		2 1								1	1	
Lovewell2,986 acres, 4 miles E, 10 miles N of Mankato	•	•	•	•		•	•			*	1	<u></u>										1	1	
Webster 3,740 acres, 8 miles W of Stockton			•	•		•	•		•	*	1	1		1					1		1	e f	1	
Wilson 9,040 acres, 8 miles N of I-70 on K-232	•	•	•	•		•	•		•	*	1	1		1					1	* '	ŧ.	1	1	
STATE FISH ING LAKES Jewel 1 57 acres, 6 miles S, 2 miles W of Mankato	•		•			_				٠		• 1	b 1			•			*			1		
Logan-75 acres, (somethindesmidhes N, 3 miRhessell lofsprings	-		•							*	٠			1			+		×		+		<u>r</u>	
Ottawa 100 acres, 5 miles N, 1 mile E of Bennington	•		•												1				-		-		+	*
Rooks- 64 acres/2 2niles S, 2 miles W of Stockton	•		•							1				1	Î				-		-			
Saline 38 acres/2 2niles N, 2 miles W of Salina	•									1	-	1	1						-		-	1		
StFrancis Sandpitscres, 1 mile W, 2 mrihesis of St.			•							1					1				-				-	
Sheridan67 acres, 11 miHowsieE of	•		•							1			2		1	1		1						•

Reg 1 Cont'	ramps	rental	drinking water	stat	electric hookup	ıa	lc areas	ning	trailer pads	ri11	nead	lel catfish	pie	flathead catfis	n sunfish	largemouth bass	ar sunfish	P.L.		smallmouth bass	ced bass ped bass		eye	e bass	
COMMU NITY LAKES	boat	boat re camping	drin)	dump	elect	marina	picnic	swimming	trail	bluegill	bullhead	channel	crappie	flat	green	large	redear	sauger	saugeye	small	spotted striped	trout	walleye	white	wiper
Antelope LaNe acres, 2 miles milles N of Morland	٠		•				٠			1	1	1	1		•	1	•		1						*
Atwood Lake45 acrasction of hyjegh205a and 36	٠						•			1	1	•	1		*	•			*					-	•
Bellevil y eL &ke 26 acres, Belleville	٠			•	٠		٠		•	1	1	1	1		•	1	1								
EllisyCiatke 100 acres, Ellis	•		•				٠			1	1	1	1		•	1			*					·	1
Keller Lake acresFrancis			•				•			1			1			*	•								
Logan Çiltake 25 acres/2 2 milles S of Logan	٠		•		٠					1			1		1	*								-	*
Plainvilloiwaship Lak@58 acres, 2 miles W of Plainville	٠		•				٠			1		1	1	1	*	•									•
Salina (Lakewood) &Laakeeres, Salina	٠		•				٠			1			1	1	•	1			*			1	1	-	*
SmokyHill Gardens acres, 10 miles S, 2 miles W of God	d1	and	•	•			٠			1		1	1			1						1			
VilHaigh Lake2 acres,yColb			•									1													
RIVER ACCESS																									
Salinkiver low-water dam at Lincoln											1	1		•	•									1	
Salinaiver, Wileservoir WildeifeCedar Creek	٠										1	•	1	1	•	1					•		1	1	
SmokyHilRiver, Kanopesesvoir WiAddafe											1	1		*										1	
SmokyHilRiver at Salina											1	•		•										1	
SolomoRiver at Beloit	•			•	٠		•			1	1	1	1	1	*	*									
SolomoRiver (north-fGikn) ElRæservoir Wildelife	•		.							1			1	1	•	1			_	1	2		1		
SolomoRiver (south-fGrkn) ElReservoir Wildeife	•		>							1			1	•	1	•				1	†		1	1	
SolomoRive¥ Low-water dam at Minneapolis	٠										1			1	*	1									
SolomoRiver (south fork) Websteareaildlife			>				•					1		1									1	1	
Big Creekaas			•				•			1		1		1	1	1						1		1	†



Region 2





RESERVOIRS	boat ramps	boat rental		drinking wate:	dump station	electric hook	marina	picnic areas	swimming	trailer pads	bluedill	bullhead	channel catfi	crappie	flathead catf:	green sunfish	largemouth ba	redear sunfis	sauger	eye	SMALLMOUTN Da		trout	walleye	white bass wiper
		д 	U	g	q	۵ ۵	E	д -	_	4			U A	U A	щ	ۍ ا		н	ω						
Clinton 7,000 acress of awrence	•	•	•	•	•	•	•	•	•	•	2		T	T	T	T	T		_			•		1	•
Hillsdald,580 acres milesW ofPaola	•		•	•	•	•		•	•	•	1		T	7	T	T	7							•	
Milford16,200 acres miles of unction ity	•	•	•	•	•	•	•	•	•	•	1		7	7	7	7	7			1	<u>}</u>	2		•	* *
Perry-11,630acres18 mileNE offopeka	•	•	•	•	•	•	•	•	•	•		'	1	1	1	1	1		*		_			⊢−−	*
Tuttl@reek-15,800acres miles of anhattan	٠		•	•	•	•	•	•	•	•	1		*	•	1	1	1			†			2		*
STATE FISHING LAKES																									
Atchison 66 acres 1/2 miles and miles of Atchison	•		•	•				•			1		1	1	*		*	*						1	
Brown — 62 acress miles and miles offiawatha	•		•					•			1		1	1	1		1	*						1	
BrowningOxbow — 1/2 mil@, 11/2 mil@ ofElwood	٠										1	1	1	1	1	1	1								*
Douglas-180 acres11/2 mileN,1 mil@ ofBaldwin	•		•	•				•			1		1	1	1	•	1								*
Geary-97 acress 1/2 miles,2 miless of unction tity	٠		•					•			1		1	1	*	•	*			1					
Leavenworth—175 acres3 milews, 1 mileN offonganoxie	٠		•	•				•			1		1	1	*	•	1	*	*	1				1	
Louisbur#jiddlecreek280 acres miles ofLouisburg	•		•					•			1		1	1	1	•	*	*		1				1	1
Miami-118 acres miles,5 miles of sawatomie	•		•					•				U	ndu	E	RR	E	100	/VA	r TC	IO 1	J /	/ 0	PER	N 2	2003
Nebo-38 acres miles,1 mile of of tolton	•							•			1		1	-	1		1								
PottawatomiNo.1-24 acres mileN of estmoreland	•		•					•			1	1	1	1		1	1								
Pottawatomikeo.2-75 acres 1/2 miles,21/2 miles of anhatta	n		•					•			1		*	•	*	•	*	*		1				*	
Shawnee-135 acres miles,7 miles ofSiverLake	•		•					•			1		*	1	1	•	*	*						*	
W ashington 65 acres miles, 3 miles of ashington	•		•					•					1	1	1	•	1			*					

Reg 2 Cont'		_		wate:	u l	20Kl	0	ភ្ន	0	ň			fi	9 + 0 -		ha				ba	S	Ω Ω			\square
	ramps	rental			station	ğ	201	areas	, ce c	baus		_	catf:			outh ha	sunfis			Ith	bass	bass		bass	
	ram		ng.	ing	s ta	L IC	מ נ		1	H L	1 I I I	lead		ie			о Н	ы	ye	nom	ed	д	ye		
COMMU NITY LAKES	boat	boat	camping	drinking	aump	electric hook marina	Dichic	prente a. swimming	Lier+	TATTAT	bluegill	bullhead	channel	crappie	TTALITEAU	Jargemonth	redear	sauger	saugeye	smallmouth	spotted	striped	walleye	white	wiper
AlmaCityLake-80 acreg 1/2 milesE ofAlma	٠										1		1	*	1		1			*				•	\square
AntiochPark-3 acres501AntiochRd., Shawnee Mission				•							1	1	1	•	1	1	1								
Atchisofity atershedakes 90 acrestchison	•		•	•		•					1	1	*	*		1							*		
BannerCreekLake-535 acres 1/2 milew ofHolton	•		•	•		•					1		*	1						*					
BluestenMid-An NazarenePond - 2 acres39th& MurLenRd.,KC											1		1			1									
Big11-3 acres1th& Stateve.,KansasCity							•				1		•	•	1										
CedarLake-56 acr es of lathe fmedarLakePark				•			•				1	1	•	•						_					•
CentralarkLake-3 acres1534SW ClayTopeka				•			•				1		1	*						_					
CentralfatyLake-405 acre2 miles,1 mil@ ofCentralia	•		٠	•	•	•					1	•	1	2						_			*	*	<u> </u>
ClarioParkLake-4 acre\$7th& Fairlaw,Topeka											1		1	2						_					
EdgertonCityLake-5 acresEdgerton	•			•							1	•	•	*	1					_		_			
ElkhornLake-4 acresiolton	-	_			_						1		•	*		1				_	_	_			<u> </u>
FatherPadilRond-2 acresBroadway& VineHerington	-	_							_		1		•	A						_	_				
FortRilePonds-50 acresFortRiley							-				1		*	*						-	4	•			*
Friscoake-12 acres ennis Sunset Olathe				•							1		*	2						4					Щ
GardnerCityLake-100 acrest mile orGardner	•										1	•	*	*					*	-					-
GovernorsCedarCrestPond - 1 acreMaclennarPark,Topeka	-	_			-		-				1		1	*	1			$ \vdash $		_	-	_		-	-
Governors Pond East-1 acreMaclennare Topeka	-	_			-				_		1		1		-	1				_	-	_			-
GovernorsPondWest-1 acreMaclennarPark,Topeka	-	_			-		-		_		1		*					+		-	+	_		-	-
Harveyvill@ityLake_25 acrest mil@,1 mil@ ofHarveyville		_			-				-		1		*					\square	*	_	+	_	•		۰
Heringto@ityLake(new) - 555 acres 1/2 miles offeringto	-	_	•		-						1	T	*					+		-+	-	_	T	*	T
HeringtofityLake (old) - 367 acres 1/2 milesW offerington			•	•					-		1	Ť						+		-		-	-	T	۰
HeritagearkLake 20 acrest60th& Pflumm Rd.,0lathe	-										1 1 1 1	T	* *	T	-			+		-	-	_	-		T
Hiawath&ityLake-7 acrest mil& ofHiawatha HoltoxityPraigniLake-78 acrest1/2 miless,31/2 miless offolto		-	•	•		•			-		Ť		Ť	Ť.	-	1		+		-	-	-			
HomersPond-5 acrests EisenhowerJunctionity		-	-								Ť		Ť	T	1			+		-	-				
JeffregnergyCenter-125 & 450 acres miles, 3 miles of the ary	-	-									Ť		*	1		_		+		•	-	-		•	
Karlisake-1 acre501SW 6thAve., Topeka											T T		*	X	r ·	1		++		T	-	-	T	x	T
Kingstonake-8 acres151stSt. & 69 Hwy, Overlan@ark											1	•			1			H		-		-			
Kiwani\$Pond-2 acresth& HarrigClayCenter											Ŷ									_					
Lansin¢ityLake-11/4 acreseast edgeLoufsing											1	•	1	•											
Leavenworth (Jerrys) Lake-3/4 acreJerrys Parks Leavenworth											1	-		-											
Lenexa (Roses) Lake-2 acres 7th& Lackman, Lenexa											1		1			1									
Littlæke-Horton	•										1		*	1)	1	2								
Lone StarLake-195 acres mileSW ofLawrence	•		•	•		•					1	1	*	1	1		1			*					1
LakeHammond -15 acres320StubbsRD.Tecumseh		•	•								1		*		1										
LakeHenry-2 acresclintostatePark											1		*	*	1		2					1			
LakeOlathe 172 acres milew of Olathe Omennis	•	٠		•							1		•	† 1											1
Louisburgake-23 acressE edge Ofbuisburg											1	1	1	•	1										
Mahaffikarmsteadond-1 acreRidgeriew& Kansascitkd.,Olath	e						•				1		•			1				_					
MarysLake-3 acres/2 milæ ofHaskel& 31stSt.,Lawrence											1		•	1									•		
Marysill@countryClub)Lake-10 acres1 mil@ ofUS-36& 77							•				1		1	*						_					
MidAmericanNazaren@CollegBond (BluestenPond)-2 acreslath	le										1	1	•							_					
MilforStat@arkPond-2 acresMilforStat@ark							•				1		1	•	1					_					_
Missiohake-154 acrestorton	•		•	•			•		•		1		•	*		1				_					<u> </u>
NorthParkLake-3 acresNW BonnerSprings				•							1		1							_					-
OgdenCityLake-24 acresgden	-		٠		_		•				1			* 1						_	_	_			<u> </u>
OlatheasHighSchoolPond-2 acres27thSt& Pflumm,Olath											1	2	1	A						_	_	_			-
O sawatomi@ityake_21 acrest 1/2 miles, 2 miles of sawatomi			-								1	7	*	*	_					+	-	-			
PaolaCityLake (LakeMiol)= 220 acrest mile, 1 mile ofPaola	-		•								1	*	*					•		+	+	+	T	•	T
Picni&reaPond - 1/2 acreClintoStat@ark				•							1		*	*				$ \vdash $		-	-	+	-		-
PiersoParkLake 13 acres5th& DouglasKansasCity		-	•	\vdash							?	*	*					┥		+	-	-	⊢		-
Pottowatomi@ountyLake-49 acrest4 miles,1 miles of the of t	-		•								* *	1 1	Ţ	T				\vdash		+			⊢		-
RegencyParkLake-3 acres of 5151stSt. & HortonKansasCity								-			T T	T	Ť					⊢┤		+		-	\vdash		-
RichmondCitLake-21 acres mile, 11/2 miles offichmond			•								Ť		Ť	*	-			+		+			\vdash		
SabethaCityLake-100 acres milew of Sabetha	•		•								×	U		-	RR			a r		N	100) PE	N	200	103
Sabeth@onyCreek-171 acres miles of Sabetha	•										•		•	1			1						*		•
	_	_									T	A		A 1	-	1	A A	<u> </u>					<u> </u>		نه_

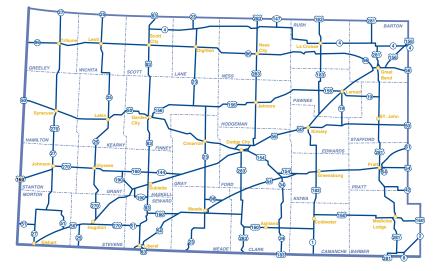
Reg 2 Cont'

Reg 2 Cont	it ramps	boat rental	camping	nking water		marina	picnic areas	swimming	trailer pads	bluegill	bullhead	channel catfi	crappie	flathead catf.			redear sunfis!	sauger	saugeye smallmonth ha		striped bass	trout	walleye	white bass wiper
COMMU NITY LAKES Cont.	boat	boa	can	dumb	ele	mar	pic	swi	tra		1.1	cha	cra	fla	gre	lar	red	sau	sau	spo	str	tro	wal	white wiper
Shawnee Lake-416 acres139 SE29thSt., Topeka	•	•	•		•		٠	•	٠	2		1	1	1		_	•		1	2	1	*	1	†
Shawnee JR2 acress sidefLakeShawnee,3139 SE29thSt, Topeka	c i						•			2		1	1	1		•								
Shawnee Missid markLake-135 acres9th& RennerRd.Shawnee Missid	01	•	•				٠	•		2		1	1			*						1		•
Shawnee MissioParkPond-1 acre79th& RennerRd,Shawnee							٠			2		1				*								
SouthLakePark-51/2 acre\$7th& Valleyiew,Overlan@ark							٠			1		1				•								
SpringCreekLake-7 acres 1/4 miles,11/2 miles ofBaldwin	•		•				٠			•	-	1	1			•								
SprindHilCtityLake—40 acres1/2 NW ofSprindHill												1	1		1	*								
Stol⊉ark—13/4 acres0verlan@ark							•					1				*								
SunflowerPark-11/2 acress milews ofDeSoto							•			*		1			*	*								
Tomahawk Parkway Ponds(3)-1 acreach,119th& Roe,Leawood							٠			1		1				*								
Troy4H Lake-5 acres1/2 mil&W offroy	•									1		1	1			*								
LakeW abaunsee-216 acres milew ofEskridge	•		•				•	•		*		1	-		1	*		ê 1	1					
W amego CityLake-1/2 acreW amego CityPark							٠			*		•			•									
Watewill@ityLake-8 acrest mile,1 mileV ofHarveyville							•			*		1	•			*								
W aterworksake-6 acressheridan Curtist,Olathe							•			*	-	•	•	•	•	*								
WestLake-6 acressagePark,Topeka							•			*		1	1		1	1								
W yandott@o.Lake-330 acres yandott@ountyPark	•	•					٠			*		1	1	1		1						*	1	
Wyandotteo.New Pond-7 acres126th& Stateve.,Kansascity	,						•			*		1				1								
RIVER ACCESS							1																	
BigBlueRiver,RockyFordDam belowTuttl@reekResevoir							•					2	1	1		*			2					1
BigBlueRiver,Tuttl@reekResevoirWildliAfrea	•		•									1	1	1	-	•			2				1	R
BigBlueRiver, Tuttl@reekSeepStream, Tuttl@reekSPRiverPdArea		•	•		•		٠	•	٠	•		1	1	1		•		1	<u></u>			•		
Delawar&iver,PerryReseroirWildliAfrea,ValleFall&)	•		•				•		•		1	*	1	1	1	•		•						†
Kansaskiver allawrence	•											1	•	1									1	†
Kansaskiver aflopeka	•											•	1	1									1	•
Kansaskiver at mouth BifgBlueRiver,Manhattan	•									1		1	1	1	•	•								
Marais d eş gnesRiver lowwater dam Øtsawatomie											-	1	1	1						1			1	•
Marias d eş gnesRiver lowater dam adttawa											-		1	1						1			1	*
MissouRiver attchison	•																	A					1	*
MissouRüver- city parkBonniphanleavenworth, and yandotte d	Ð●											1		1				ê					1	*
RepublicaRiver,MilforReservoirWildliAfrea	٠		•							•		•	1	1	*	•							1	†
RockCreekClintonReservoirN ildliafrea	٠		•									1	1		1								1	†
Wakarusaiver altudora	•	ιT										1	-	1		*							1	†
																					_			



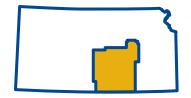






STATE FISHING LAKES	boat ramps	boat rental		ing		electric hook	picnic areas	swimming	trailer pads	bluegill	bullhead	channel catfi	crappie			redear sunfis.	sauger	smallmouth bas	spotted bass	striped bass	trout walleve	white bass	wiper
Barber-77 acrest edge offedicinhodge	•		•	•	•		•			1		•	1		*	•					1		
CimarronNationaGrasslandPsits-11 acress mileNs ofElkhart			•				•			1	1	1		•	*	ŧ.					•		
Clark-337 acres 1/2 mileSW ofKingsdown	•		•				•			1	1	۰	1	*	*		1				1		
Concannon-60 acres15 mileNE ofGardenCity	•		•				•			1	1	۰			*								
FinneyRefugePits 5 acress edge offardenCity			•				•			1		1		A	†								
Finney-110 acress miles, 3 miles, 1 miles of Kalvesta	•		•				•			1	1	•		*		R							
Goodman - 40 acres miles,21/2 miles of NessCity			•				•			1		•	1		1	•							
Hain-53 acressW ofSpearville			•				•			1	1	•		*									
Hamilton-60 acres milew, 2 milew ofSyracuse	•		•				•			1				*	†	R							
Kiowa-21 acresWW edge offreensburg	•		•	•			•			1			1			R							
Meade-80 acress miles,5 miles of Meade			•	•	•	•	•	•	•	1		1	1	Ŷ	1	P							
Scott-115 acres1 miles ofScottCity		٠	•	•	•	•	•	•	•	1	1	1	1	ŧ		•							
FordCountyLake-48 acres mileE,3 mileN ofDodgeCity			•				•	•	•	1			1		•	P					1		
COMMU NITY LAKES																							
ArkalonRecreationAntea-10 mileNE ofLiberal &mighway54			•	•				•	•	1	1					R							
BeymerSandpit-18 acres 1/2 miles offakin			•	•			•	•		1	1	1	1	A	†								
ColdwatefityLake-250 acres mile,1 mile of Coldwater			•	•	•	•	•	•	•	1		1	1	†	1								*
JetmoreCityLake-110 acres mile,5 milew ofDetmore	•		•	•		•		•	•	1		•			•	•							1
LakeCharles1 acreDodgeCityCommunityCollege										1		1			•						2		
GreatBend (VeteranBark)-13 acressreatBend	•						•			1		1	1	*	•	P	1						
MariallillsolfCoursePond-2 acresDodgeCity										1		1	1		*								
Prat€ountyLake-51 acre\$1/2 miles ofPratt			•	•			•	•	•	1		1	1		•								
ReinharLake-10 acre£ mileN,1/2 mil@ ofBison			•				•			•	1	1	1	A	R								1
StoneLake(GreatBend)-50 acresSW ofGreatBend	•						•			•	1	•	1	*	†								1
W arrenStoneMemoriaLake-2 acres2 mileE ofLaCrosse			•				•			1					†								
RIVER ACCESS																							
Ninnescakiver(south for)2 miles,1 miles ofPratt			•				•			1	1	1		†	•								
Ninnescalkiver (south for Lemon Park Pratt							•				1	1		P									





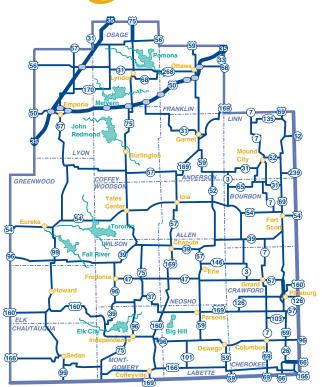


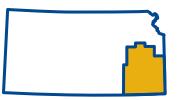
	ramps	rental		drinking wate	stat	electric hook		ic areas	swimming	trailer pads	bluegill	bullhead	channel catfi	pie	flathead catf:	n sunfish	0	ar sunfis	er	saugeye smallmonth had	and have	spotted bass striped bass		eye	e bass	г
RESERVOIRS	boat	boat	camping	drin	dump	elec	marina	picnic	SWIM	trai	blue	bull	chan	crappie	flat	green	larg	redear	sauger	saugeye	+042	spotted	trout	walleye	white	wiper
Cheney-9,550acres20 mile₩ ofW ichita	٠		•	•	•	•	•	•	•	•			1	1	1							1	-	1	1	1
CounciGrave - 3,280,1 mile of CounciGrave	٠	٠	•	•	•	•	•	•	•	•			1	1	1	1	*			P				1	1	
ElDorado-8,000 acres miles,2 miles ofElDorado	٠		•	•	•	•	•	•	•	•	1	•		1	*	*	*			1	2	*	1	1	1	
Marion-6,160 acrest mileNW of Marion	•		•	•	•	•		•	•	•	1	•		1	*		•							1	1	1
STATE FISH ING LAKES																										
Butler 124 acres milew, 1 mile offatham	٠		•	•				•			1	1	1	1		-	1	*						1		
Chase-109 acres 1/2 miles of CottonwoodFalls	٠		•					•	•		1		1	1		-	*			1	1	*		1	1	1
Cowley-84 acres13 miles ofArkansasity	•		•					•			1	1	1	1	*	*	*	*		1	! 1	*		1		
Kingman-144 acres milew ofkingman	•		•					•			1		1	1		*	1	*						1		
McPherson-46 acress miles, 21/2 miless of Canton	•		•					•			1	1	1	1		*	*	*								
COMMU NITY LAKES																										
Afton-258 acre20 mileSW of ichita	٠	٠		•	•	•		•	•	•	1	1	1	1	1	1	1			P				1		1
AnthonyCityLake-156 acres mile, 1/2 mile ofAnthony	٠		•	•	•	•		•	•	•	1		1	1		*	*			P						1
BuffalBark-12 acrescentra& MażeRd.Wichita	•										1						*									
CareyParkPond-1 acres end offutchinson				•				•			1		1	1		•	*									
_ChisholmCreekPark(CliniRond)-3 acregg9th& W oodlawn,W ichi	a			•				•					1			•	•					1				
_ChisholmCreekPark(BlandPond)-5 acregg9th& W oodlawn,W ichi	a										1		1				•									
_ChisholmCreekPark(NorthLake)-23 acress oodlawn& K96,W ichi	ta										1		1				•							1		1
CruiseLake-35 acresSE of1-35% K-96Intersectionichita											1		1				•									1
Dillo@utdoorEd.Center-3 acresNE ofHutchinson				•				•			1		1	1	•	•	1						1			
DillomPond-3 acresCentra& Maże,Wichita											1		1				1									
EagleLake-4 acresl1st& Parkwood,BelAire																	•									
HarrisoLake-1 acrel300SW ebbRd.W ichita											1		1				•									
HarveyCountyEastLake-254 acres miles ofNewton	•	•	•	•	•	•		•	•	•	•		1	1		-	1			P				1		1
HarveyCountyWestLake-15 acress milex, 3 milexs ofHalster	Ò		•	•		•		•	•	•	•		1	1	1	•	*									
HighParksLake(2)-6 acreg9500EMadisonDerby											1		1				1									
KaholaLake-405 acres11 milews, 8 milews ofEmporia	•		•	•		•		•		•	1	1		1	•	•	•				1	•		1		

Reg 4 Cont'				wate	hook	ÖK	υ	2	υ Ω				f i		catf.	sh	ba	is		, c	n N N	ω.			
ing i com	sđ	tal		wa	station		9 1 0 9 0 0 9 0		pads	4			catfi					sunfi		ء +	bass	bass			Dass
U	ramps	ren	ng	ing	sta ric	LIC	n v v	i ng	er		ŢŢ,			i.e	ead	ns	nom		អ	The most	ed	eq		ye	Da
COMMU NITY LAKES Cont.	boat	boat rental	camping	drinking	dump stat	1) a Tec	marina	swimming	trailer		bluegill		-	crappie	flathead			redear	sauger	saugeye	spotted	striped	trout	walleye	witter
Kechi-2 acres5300N Olvier,Kechi											•		ŧ				ŧ								
KDO TEastLake-7 acreste of1-135, I-2085ersectionichita	٠										1		ŧ				*						*		
KDO TW estLake-20 acresNE off-135,I-2285ersectionichit											1		•				•								
MarionCountyLake-153 acres2 miles,2 miles ofMarion	•	•	•	•	•				•		1	*	۰	*	†	•			1	•	1			A	
McLaughlinake-2 acres/16McLaughlinst.Vallegenter											1		1				•								
MulvaneSportsComplex - 1 acrel900E111thSt.S,Mulvane											•		•				•								
Rigg&ark—1 acr#laysville				•							1		1				*								
SedgwickCountyParks-65 acre¢5 lak¢\$NW W ichita				•							*	*	*	*	†	1	1						*		
SouthLake-17 acre55thSt.S,1/2 mile of ampus HighSchoolW ichi	ta										1		*	*			1								
SterlingityLake-10 acresterling	•		•	•	•						1		A	*	†	•	*								
StoneCreekPark-2 acres odlawn& 63rdSt. Derby											1		<u>۽</u>				۰								
W atsonPark-42 acres W ichita				•							1		۰	*			•								
WellingtOnityLake#1-67 acresNE of ellington	٠			•							*	*	*	*	1	1	*								
W ellingt On ityAke#2-350 acres miles, 11/2 miles of ellingt		٠	•	•	•						*	*	*	*	1	1		*	1	•				ŧ	
W infieldityLake-1,200 acres10 mileNE of infield	٠		•	•													*				1			† 1	
W infielslandParkLake-7 acresN ofW infield																			~						
				•							1	*	۰	*	†	•		•	•						
RIVER ACCESS				•							7	7	7	7	? 1	*	7	*	*						
				•							7		₹		₹	•	7	•	•					* 1	
RIVER ACCESS	•		•	•				•			7					•	•	•	•					* 1	P
RIVER ACCESS ArkansaRiver-Kaw W ildliffrea	•			•							7		*		•	•	•	•	•					* 1	
RIVER ACCESS ArkansaRiver-Kaw Wildliffrea ArkansaRiver-3 miles, ofAlden og05Rd.	•			•									* *		* *	•		•						1	
RIVER ACCESS ArkansaRiver-Kaw Wildliffrea ArkansaRiver-3 miles, ofAlden of05Rd. ArkansaRiver-1 mile, ofAlden of05Rd.21/2 miles onAve.U	•			•									* * *		† † †									1	
RIVER ACCESS ArkansaRiver-Kaw W ildliffæa ArkansaRiver-3 mileS, ofAlden of05Rd. ArkansaRiver-1 mil6, ofAlden of05Rd.21/2 miles onAve.U ArkansaRiver- lowater dam øbxford	•			•									* * * * * *		1 1 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>										
RIVER ACCESS ArkansaRiver-Kaw W ildliffrea ArkansaRiver-3 miles, ofAlden of05Rd. ArkansaRiver-1 mile, ofAlden of05Rd.21/2 miles onAve.U ArkansaRiver- lowater dam Øtxford ArkansaRiver-1/2 mile ofRaymond on4thRd.	•										T					?									
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RIVER ACCESS Arkansaßiver-Kaw Wildliffea Arkansaßiver-3 miles, ofAlden of05Rd. Arkansaßiver-1 mile, ofAlden of05Rd.21/2 miles onAve.U Arkansaßiver-10water dam Øtxford Arkansaßiver-1/2 mile ofRaymond on4thRd. Arkansaßiver-1/2 mile ofRaymond on8thRd.1/2 miN on 4thRd.21/4 miW onAve.Q Arkansaßiver-21/4 miles ofSterling Kom6 Arkansaßiver-31/2 miles ofSterling Kom6														÷											
RIVER ACCESS Arkansaßiver-Kaw Wildliffea Arkansaßiver-3 miles, ofAlden of05 Rd. Arkansaßiver-1 mile, ofAlden of05 Rd.21/2 miles onAve.U Arkansaßiver-10water dam Øtxford Arkansaßiver-1/2 mile ofRaymond on4thRd. Arkansaßiver-1/2 mile ofRaymond on8thRd.1/2 miN on 4thRd.21/4 miW onAve.Q Arkansaßiver-21/4 miles ofSterling KM6 Arkansaßiver-31/2 miles ofSterling KM6 Arkansaßiver-21stSt.BridgeWichita														*											
RIVER ACCESS Arkansaßiver-Kaw Wildliffeea Arkansaßiver-3 mile\$, ofAlden of05Rd. Arkansaßiver-1 mil6, ofAlden of05Rd.21/2 mile@ onAve.U Arkansaßiver-10water dam @txford Arkansaßiver-1/2 mil6 ofRaymond on4thRd. Arkansaßiver-1/2 mil0 ofRaymond on8thRd.1/2 miN on 4thRd.21/4 miW onAve.Q Arkansaßiver-21/4 mile\$ ofSterling %06 Arkansaßiver-31/2 mil@ ofSterling %06 Arkansaßiver-21stSt.BridgeW ichita Arkansaßiver-Lincolfst.BridgeW ichita														*											
RIVER ACCESS Arkansaßiver-Kaw Wildliffeea Arkansaßiver-3 mile\$, ofAlden of05Rd. Arkansaßiver-1 mil6, ofAlden of05Rd.21/2 mile@ onAve.U Arkansaßiver-10water dam Øtxford Arkansaßiver-1/2 mil6 ofRaymond on4thRd. Arkansaßiver-1/2 mil0 ofRaymond on8thRd.1/2 miN on 4thRd.21/4 miW onAve.Q Arkansaßiver-21/4 mile\$ ofSterling KM6 Arkansaßiver-31/2 mile@ ofSterling KM6 Arkansaßiver-21stSt.BridgeWichita Arkansaßiver-DruryDam,51/2 mile\$ ofSouthHaven																									
RIVER ACCESS Arkansaßiver-Kaw Wildliffeea Arkansaßiver-3 mile\$, ofAlden of05Rd. Arkansaßiver-1 mil6, ofAlden of05Rd.21/2 mile@ onAve.U Arkansaßiver-10water dam Øtxford Arkansaßiver-1/2 mil6 ofRaymond on4thRd. Arkansaßiver-1/2 mil6 ofRaymond on8thRd.1/2 miN on 4thRd.21/4 miW onAve.Q Arkansaßiver-21/4 mile§ ofSterling &M6 Arkansaßiver-31/2 mile@ ofSterling &M6 Arkansaßiver-21stSt.BridgeW ichita Arkansaßiver-DruryDam,51/2 mile§ ofSouthHaven CottonwoodRiver actottonwoodFalls	•																								
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RIVER ACCESS Arkansaßiver-Kaw Wildliffeea Arkansaßiver-3 mile\$, ofAlden of05Rd. Arkansaßiver-1 mil6, ofAlden of05Rd.21/2 mile@ onAve.U Arkansaßiver-10water dam @txford Arkansaßiver-1/2 mil6 ofRaymond on4thRd. Arkansaßiver-1/2 mil6 ofRaymond on8thRd.1/2 miN on 4thRd.21/4 miW onAve.Q Arkansaßiver-21/4 mile@ ofsterling Kon6 Arkansaßiver-21/2 mile@ ofsterling Kon6 Arkansaßiver-21/2 mile@ ofsterling Kon6 Arkansaßiver-21stst.BridgeW ichita Arkansaßiver-DruryDam,51/2 mile@ ofsouthHaven CottonwoodRiver affottonwoodFalls CottonwoodRiver-MariofReseroifW ildliffeea GrouseCreek aftiverdale																									
RIVER ACCESS ArkansaBiver-Kaw Wildliffeea ArkansaBiver-3 mile\$, ofAlden of05Rd. ArkansaBiver-1 mil6, ofAlden of05Rd.21/2 mile@ onAve.U ArkansaBiver-10water dam @txford ArkansaBiver-1/2 mil6 ofRaymond on4thRd. ArkansaBiver-1/2 mil6 ofRaymond on8thRd.1/2 miN on 4thRd.21/4 miW onAve.Q ArkansaBiver-21/4 mile\$ ofSterling Ave.W,1/2 mil6 on12thRd ArkansaBiver-21/4 mile\$ ofSterling Ave.W,1/2 mil6 on12thRd ArkansaBiver-21stSt.BridgeW ichita ArkansaBiver-DruryDam,51/2 mile\$ ofSouthHaven CottonwoodRiver affottonwoodFalls CottonwoodRiver-MariofReseroitW ildliffeea GrouseCreek aftiverdale LittParkansaBiver throughichita																									



Region 5







RESERVOIRS	boat ramps	boat rental	camping	drinking wate	4	electric hook		picnic areas		trailer pads	bluegill	bullhead	channel catfi	crappie	flathead catf:	green sunfish	largemouth ba	redear sunfisi	sauger	saugeye smallmonth had	spotted bass		trout	walleye	white bass	wiper
			-	-	_	_	-	-	_			ą	Ü	Ü	чі •	5			ŵ			ά	نډ		M	M
BigHill1,240 acress 1/2 miles of Cherryale	•		•	•	•	•		•	•	•	1	7	7	7	7	*	7	*		1				1	7	
Coffego.Lake-5,100 acres miles,1 mile ofBurlington	•			•		_		•			1	•	1	2	2	*	2			1	!			1	1	2
ElkCity-4,450 acres milesW ofIndependence	•		•	•	•	•		•	•	•	1		1	2	1	*	2		1	•					•	_
FalRiver-2,500 acre£25 mileSE ofEureka	•		•	•	•	•		•	•	•	1		1	-	1	*	*				1				1	_
John Redmond — 9,400 acres2 mileNs o 1/2W ofBurlington	•	•	•	•	•	•		•	•	•			1	-	-	*			1	•				•	•	1
LaCygne-2,600 acresE ofLaCygne		•	•	•	•	•	•	•	•	•	1		•	1	•	*	•			1		1		1	1	•
Melvern-7,000 acres5 miles offopeka		•	•	٠	•	•	•	•	•	•	2		1	1	1	•	•		•	1		1		1	•	
Pomona — 4,000 acre\$25 mile\$ ofTopeka		•	•	•	•	•	•	•		•	1	1		1	1	•	•							1	1	1
Toronto-2,800 acres15 mileSW of MatesCenter			•	•	•	•		•	•	•				1	1	•	•								1	
STATE FISH ING LAKES																						_				
BigHilW ildliAfrea-133/4 acress miles of therryale			-	_	_	-	_	-		_	7		1	T		T	*	T		_	*	_			-	_
Bourbon-103 acres miles of lsmore	•		•	•	-	_	-	•	-	_	1	T	1	T		T	2	T	-		T	_		1 1		_
Crawford-150 acre9 miles, 1 mile of Girard	•		•	•	•	•	-	•	•	•	1	1	1	T	T	Ŧ	*	T		_	T	_				_
Lyon-135 acres milew, 1 mile of Reading	•		•	_		_	_	•		_	1		1	7			*	•				_		1		
Marais deşgnesWildliAfreea-1,967 acres miles ofPleasanto						_	_	_		_	•	Ŧ	Ŧ	T	T	Ŧ	*							1	7	T
MelvernRiverPond-90 acres/2 mile ofMelvernReservoir			-	•	•	•	_	•		•		U	NDO	EBI	RR	E				DOI N		-	PHEN		200	33
MinedLandWA -1,500 acresCherokeeCrawford Labette cos			•			_	_	_		_	1	7	7	7	7	*	7	7			2		*	*		_
Montgomery-105 acres miles,1 milæ ofindependence			•				-	•			2	1	1	1	*	*	*	2				_				_
Neosho-92 acres miles,1 mile ofSt.Paul	•		•	•	•			•		•	1	1	1	2		*	2	2								
NeoshoW ildliAfrea-800 acres mile ofSt.Paul	•										2	•	1	-	1	*	*									_
Osage-140 acres miles,1/2 mile of arbondale			•	٠				•			•		1	1	1	*	•	•						1	1	1
Wilson 110 acres mile,1 mile ofBuffalo	•		•					•			1		1	•		*	•				1			1	1	
W oodson-180 acres 1/2E offoronto	•		•		•			•			•	1		1		*	•	*		1				1		•

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	ramps	rental			Ŀ.			ng	р Ц	Ħ	ad		e		sun	lout		e	lout			e	bass	
		boat re				marina	picnic	swimming	trailer	egi	bullhead	channel	crappie	flathead		gen	sauger	saugeye	smallmouth	spotted	trout	walleye	te	ы
COMMU NITY LAKES	boat	boat	100	dump	ele	mar	pic	swi	tra	bluegill	bul	cha	cra	fla			sau	sau	sma	spo	trout	wal	white	wiper
AltamontCityLake-13 acres miles ofAltamont										-	1	*	•		1	•	<u>r</u>							
ArmaCityLake—1.5 acresHookiePark,Arma										-	1	1	*				<u>r</u>							
BlueMoundCityLake-19 acrest mile, 2 miles ofBlueMound										1	1	1	*		1	ŧ.	<u>è</u>							
BoneCreekLake-540 acrest milexi,2 milexi ofArma	•			•				•		1	1	*	*		*	Ê.	<u><u></u></u>		1			1		
BourbonCountyLake-106 acres mile,2 miles ofHiatville				•	•		•	•		1	1	1	*	•	•	È.	<u>ê</u>							
BronsonCityLake-25 acres21/5mileB ofBronson onEwy 54										1	1	1	-	<u>۽</u>	•	R	<u>è</u>							
Carbondal@ityLake-265 acreg miles ofCarbondale	•									•	1	•	*	ŧ	•	ł			•				•	•
CedarCreekCityLake-220 acress milews ofFt.Scott	•									1		1	*			ŧ.	<u></u>					1		
ChanuteCityLake-80 acress edge offhanute	•			•	•		•			1	1	1	*	Ŷ	•	ł				•				1
Cherryale-11 acres.4 miles of Cherryale	•						•			-		1	*	1		<u>r</u>	<u></u>							
Coffewill&tat@ark& Pfist@markLakes-10 acresCoffewille							•			•		1	*			Ŷ					1			
EmpireLake-800 acresE ofRiverton										1		1	*	•		-	<u><u></u></u>			1				
EmporiaJonesPark—3 acresEmporia			•	•			٠			•		•			1	ł								
EmporiaPeterPan Park— 3 acr es Emporia			•	•			٠			1		•			•	ŧ.	<u> </u>							
EdnaCityLake-10 acres2 milew, 1 miles ofEdna	•			•			•			1		1	-		•	R	<u></u>							
EurekaCityLake—259 acrest mileNi ofEureka	•					•	•	•		1			-	Ŷ	•	Ŷ		1		•		1		•
FortScottLake-360 acres2 miles,3 miles ofFortScott	•			•			•	٠		1	1	1		Ŷ	•	<u>r</u>	<u></u>		1	•		1	1	
FortScottCommunityCollege2 acresouthHortonSt.FortScott										1		1	-	Ŷ	•	<u>r</u>	<u></u>							
FortScottGunn ParkFernLake-2 acresWW Corner offortScott				•	•		•		•	1		1	*		•	R	<u>è</u>				1			
FortScottGunn ParkWestLake-8 acresW Corner offortScott				•	•		٠		•	1		1	*		•	R	P							
FortScott(RockCreek)Lake-75 acres mile,21/2 miles offt.Scot				•			•			1	1	1	*	ŧ	•	R	P		1				•	
FrontenaCityLakes(3)-5 acres CherokeeSt.Frontenac										1	1	1	*		•	È.	<u>è</u>							
GarnetCedarCreekLake-310 acres miles,2 miles ofGarnet	to	•		•	•		•		•		1	1	-	Ŷ		R	<u>è</u>		1	•		1		1
GarnetCityLake(north)-55 acresN edge offarnett	•			•	•		•		•	1		1	-	<u>ڳ</u>	•	R	<u>è</u>	-			1			1
GarnetCityLake(south)-10 acress edge offarnett	•			•	•		•		•	1		1	*			Ŷ					1			*
GreenbushEd.CentenLake-5 acres/4 mile of Greenbush										•		•	*		•	t i	<u></u>							
Gridle@BishopLake-33 acrest mile ofGridley							•			1		1	*		•	R	P		1				*	*
LeboLake-70 acres2 miles,1 mile offebo	•						•			1		1	*	Ŷ	•	È.	<u></u>		•		1			•
LinnCountyStripits(5)-30 acrest mile, 1 mile ofPrescott										1	1	1	-	Ŷ	•	R	<u>è</u>							
MadisonCityLake-114 acres2 miles,1/2 mil& ofMadison	•						•	٠		1		1		Ŷ	•	<u>r</u>	<u></u>					1		
Molin@ityLake-65 acre3 milew, 1/2 mil@ ofMoline	•						•			1		1	-		•	È.	<u>è</u>							
Molin@ityLake(New)—185 acress mileW ofMoline							•			1		1	*		•	<u>۽</u>	<u>è</u>							
MoundCityLake-148 acrest milew ofMoundCity							•			1	1	1	*	ŧ	•	R	<u>è</u>							
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Spring Turkey WIHA!

text by Roger Wolfe fisheries and wildlife regional supervisor, Topeka

photos by Mike Blair

The Spring Turkey WIHA is good news for turkey hunters. In just its second year, the program more than doubled the number of acres enrolled and promises great turkey hunting opportunities.

lew things are as exhilarating as listening to a wild turkey gobble on a warm spring morning. An uncommon sound in Kansas just a few years ago, the gobble is now a normal part of our natural world. As turkey populations have grown, many Kansas hunters have succumbed to the addictive nature of spring turkey hunting. For those hunters who haven't, finding a place to hunt may have been a barrier. Now, no hunter is safe from the temptations of turkey hunting. The department's Spring Turkey Walk-In Hunting Area program, a spinoff of the enormously successful and popular fall Walk-In Hunting Area program, will tempt hunters who haven't tried turkey hunting because they didn't have a place to hunt.

The fall WIHA was initiated in 1995 in a pilot area in southcentral Kansas. As WIHA expanded statewide and grew, it became popular with both hunters and landowners. More than 830,000 acres were enrolled in the fall 2001 WIHA, providing hunters easy access to private land and additional income to landowners. Hunters are not required to purchase additional permits to utilize WIHA areas because funding for the program is derived from hunting license fees and Federal Aid to Wildlife Restoration funds. The primary focus of the fall WIHA has been and will continue to be upland bird hunting opportunities.

While the program has been exceptionally successful, department staff have struggled to enroll significant acres in the eastern third of the state. To increase acres in the east, the department has tried higher lease rates in urban counties, youth-only hunting restrictions, and aggressive advertising campaigns. Still, enrollment fell short of goals. One option discussed was to add hunting opportunities so that enrolled acres could be used more. With growing turkey populations, the Spring Turkey WIHA was a natural spinoff.

A pilot program for the Spring Turkey WIHA began in 2001. The first year, leases were restricted to the eastern third of the state and a goal of 40,000 acres was set. Response was positive, and just more than 40,000 acres were enrolled. Landowners already participating in the fall WIHA were allowed to received additional payments for adding the spring turkey season to their contract options, or they could enroll for the spring turkey season only. As with the fall WIHA, hunter response was positive and very few problems were reported.

On the heels of the first year's

success, the program was expanded statewide for the 2002 spring turkey season. Areas of the state that support good turkey populations have been targeted and more than 84,000 acres have been enrolled in 53 counties. An atlas of county maps with all spring WIHA tracts marked will be distributed free to hunters in mid-March. Areas in the spring turkey WIHA program are open from April 1 through May 31 to allow some time for scouting prior to the April 10-May 19, 2002 turkey season. These areas are also open for the youth turkey season, April 5-7, 2002. Hunters can contact their nearest department office for a free atlas, which also includes regulations and guidelines for using WIHA. 🏠



Red and white signs designate Spring Turkey WIHA, as opposed to the black and white signs for the fall program.

Spring Turkey WIHA Counties and total acres enrolled

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Edited by Mark Shoup

DEER HERD LOW

Editor:

As a 13-year archery hunter from Unit 14, let me tell you the deer herd is severely low. The land I hunt is virtually void of deer, unlike years past. Trails that are normally beaten down like cow paths by fall are completely abandoned. Last season, I only saw deer on three occasions while hunting (five total, 3 yearlings, one older doe, and one mature travelling buck that was showing rut activity). I have all but given up hope of harvesting a deer this year. I know I can take a doe in January, but don't think I want to contribute to the culling of our herd.

One weekend, I hunted pheasants on WIHA ground in Russell, Wilson, Osborne, Trego, and Ness Counties. We saw very few birds (six hens, one rooster) in the first three counties. We found that the population of birds are strong in Ness and Trego. We hunted in the Utica area on private land and WIHA and saw hundreds of birds, nice change.

Thank you KDWP for the WIHA hunting ground effort; I hope it continues.

Please acknowledge that not all areas of Kansas are loaded with deer and stop the excess tag issuance where the herd is about to become extinct.

> Randy Smith Americus

Dear Mr. Smith:

I appreciate your concern for the Kansas deer herd. However, the overall deer herd is still high although local herds may be extremely depressed from their levels of 3-5 years ago. Deer are not randomly and evenly spread throughout a region. Deer numbers build and decline in discrete units based on matriarchal lineages. Doe fawns develop home ranges within or immediately around the home range of their mother. Buck fawns disperse. The female groups develop into extended matriarchal family groups.

As hunting pressure in a local area

increases, there will be local reductions and even extinctions in local populations. This was documented with repeated research studies with radio collared deer in other states.

Even in Unit 14, there are extensive areas of excessive deer numbers. The problem is that hunting at many of these areas is restricted or even prohibited.

If the deer population is too low where you hunt, then find a new location to hunt where the deer herd exceeds the landowners' tolerance for deer. Now is the time to find new areas for hunting, not to reduce your hunting effort. Deer hunters have to be the people to explain this to landowners.

Personal observation: Last December, I saw 10 deer in four groups as I drove to work one morning (two nice bucks). The next day, I saw seven deer in three groups between Strong City and Emporia (17 miles) in Unit 14. There was one trophy class buck in that group. I've also seen 18 dead deer lying along the road during the last three outings. Now is not the time to reduce deer hunting pressure.

-Lloyd B. Fox,Big Game Program coordinator, Emporia

TURKEYS VS. QUAIL

Editor:

I'm an Illinois native who moved here in 1992 and (finally) returned to hunting last year. My only regret is that I didn't learn to hunt pheasant and turkey as soon as I got here. By the way, I feel the KDWP team is getting straight A-pluses in all aspects. If not for your excellent assistance, a great magazine, a network of dedicated volunteer hunter safety instructors, and the WIHA program, my return to hunting would not be the wonderful, successful experience it is.

I haven't yet hunted quail, but this was my second pheasant season, and I hunted spring and fall turkey.

We've all heard the opinion that a growing turkey population is diminishing the quail (and now I've heard pheasant)

letters

populations through predation during and shortly after the hatch. I thought I'd read in a past issue of the **Kansas Wildlife & Parks** magazine a theory or study to the contrary. If an article exists that addresses the issue, and you can forward it to me, please do. If it was covered in the magazine, please let me know which past issue.

Thanks in advance, and "thank you" to a collective Kansas Department of Wildlife and Parks for sustained jobs well done.

> Jerome A. "J" Thompson Topeka

Dear Mr. Thompson:

I'm not aware of an article, but we have no evidence that turkeys are directly affecting either quail or pheasants. However, as habitats mature (farmland/grassland to shrubland to woodland) without appropriate disturbance – such as fire – they become more favorable for turkeys and deer and less favorable for upland birds. Many people have confused the coincidence of declining quail and increasing turkey with a causeeffect relationship when this is actually the result of gradual habitat change.

A scattering of trees across these landscapes provides perches for hunting raptors (hawks and owls) that can negatively affect ground dwelling upland game. Increasing woodland abundance also positively benefits many mammalian predators.

-Shoup

OZARK JAYHAWK

Editor:

Just wanted you to know that your magazine is like a letter from home to this Ozark Arkie. As a former Pratt resident, I especially enjoyed this month's outdoor photos, illustrations, and articles by Dana Eastes, Mike Miller, Bob Matthews, Mark Shoup, and others. It's great to have those mental pictures of Lisa in a tree stand reading fashion magazines, Dana fishing in her new outdoor gear, three generations of guys just hanging out with the doves, and Bob's successful deer hunt on a wintry blustery day. Motivates me to get outside right now.

The terrain is different, but the best things are still outdoors: hiking or biking woodland trails, canoeing the rivers, painting in the hills, capturing outdoor surprises around every bend.

I also enjoyed seeing the report on activities. Thanks to all you and the KDWP staff for your dedication and sincere efforts to improve outdoor Kansas. I look forward to each issue.

> Joyce E. Hartmann Clinton, Arkansas

THANKS FOR THE WIHA

Please mail me a hard copy of the new Walk In Hunting Atlas. I have hunted the northcentral part of the state for several years. I was about to give up hunting Kansas because the land I had access to kept decreasing each year. With the Walk-In program, I regained some of the areas I had hunted in the past plus several other areas.

I make two trips a year to northcentral Kansas – the first week of pheasant season and the first week of January. Usually, the January hunt is the best. This past hunting season, I brought back 16 pheasants on each trip. Most of these came from your Walk-In areas. For an out of state hunter, this is the best program anywhere.

> Larry Treece Fayetteville, Arkansas

LION AT SCOTT?

Editor:

While camping near Scott Lake on Friday night, Aug. 10, 2001, we were star gazing and sitting outside near the east rim of the canyon. We startled a deer with our flashlight and noticed it walking along the ridge. It appeared agitated and made some loud noises. Its eyes reflected in the light, and we watched it move up toward the top of the canyon rim.

Then we saw another set of eyes moving across the cliff area. It moved much smoother and faster than any deer, coyote, or dog. I tracked it with my flashlight, and it looked right at me and started moving toward me. I was probably 30 feet from it when it stopped near the cabin by a tree.

Having lived in Colorado the last eight years, we keep our eyes and ears open for wildlife moving in the area. My brother was beside me with his light, and we both said, "Mountain lion!" As it crouched in the grass, it would pop its head up on occasion. I managed to keep my distance from the animal. Its head and ears were visible, and when it turned, we could see a gray-brown short coat.

This cat we believed to be a mountain lion then moved behind the cabin and was gone. Some of the ranchers and townfolk we talked to said there were reports of lions south of the park area. Whatever the case, it did make for a hair raising, interesting experience as we spent our weekend in far western Kansas. I grew up with reports of cats in Kansas, and it was always an intriguing idea to someday see one. I now believe I've have had that experience, and it was a most amazing one.

> Verlyn Regehr Denver, Colorado

RICE DUCK

Editor:

I don't know if this is the right place to ask, but last season, my son shot a duck, and when we went to clean it discovered that it had hundreds of little white parasites in its breast. I have never seen that before in a duck. Do you know what they were?

> Robert D. Wick El Dorado

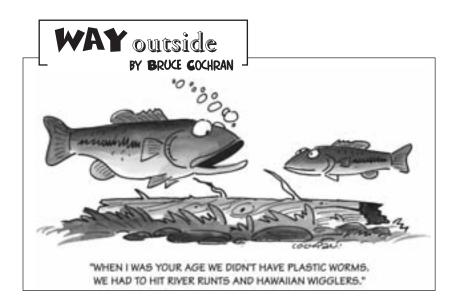
Dear Mr. Wick:

The duck you describe was infected with a protozoan parasite called *Sarcocystis rileyi*. It is found in the muscle fibers of ducks and shows up as white grubs, kernels, cysts, etc. Hunters often refer to it as "rice breast."

Ducks pick it up while feeding. It then hatches, passes through the intestinal wall, and migrates to the muscle tissue, where it multiplies and forms large colonies that have the appearance of grains of rice. These organisms do not seem to harm ducks. Also, they are hostspecific, so they cannot infect man. Parasitologists say you cannot catch it from a duck; it won't hurt you, and the ducks, if properly prepared, are good to eat.

Years ago, when most ducks were plucked, hunters seldom noticed the parasite and probably ate many of them. However, now that many hunters skin their fowl, reports of ducks with rice breast are quite common. Even though the ducks are safe to eat, most individuals, including myself, lose their appetite for the bird once they see the infection.

> -Marvin Kraft,Waterfowl Program coordinator, Emporia





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1936: MAN SHOT BY WARDEN

Before anyone gets too excited, this was the headline in the Pleasanton Observer July 2, 1936. The events described happened at Boicourt Lake long before the establishment of Marais des Cygnes Wildlife Area in the mid-1950s. Portions of the lake are now within the boundaries of the wildlife area, but most of the lake is still in private ownership.

Drought in the mid-1930s had drastically lowered Boicourt Lake and many fish – most likely carp and buffalo – were stranded as lake levels declined. Several local men, including John K. Siron, had gathered at the lake on June 29 to capture fish in the remaining shallow water.

Shortly after these men had gathered at the lake, Deputy Warden Kenneth Burkhead arrived. Burkhead observed a gig leaning against a truck parked near the group. Gigs were not a legal method of fishing in 1936, and Burkhead is reported to have said, "I guess I'll just confiscate that gig." Siron is alleged to have responded, "I don't know whether you will or not," and took several steps toward the gig. There is no indication that Burkhead intended to arrest or charge anyone.

Accounts vary as to what happened next. Friends and family of Siron reported that Burkhead fired without further provocation. Burkhead said the men started after him; he ran but was overtaken and thrown to the ground. One man had his arm around Burkhead's neck while another was beating him with a beer bottle. Burkhead was able to get a .32 revolver from his pocket and fired a single shot, striking Siron. Burkhead escaped and ran to a nearby road where he was picked up by a passing car. His account was supported by at least one of the men involved in the altercation.

The bullet passed entirely through Siron, piercing both the right kidney and liver. After emergency treatment in Pleasanton, he was rushed to Main Street Mercy in Fort Scott, where he was not expected to live. Siron rallied but later succumbed to his wound on July 6.

Burkhead was taken to Mound City, where he was treated for gashes on either side of his head that required stitches. In addition, several pieces of glass were removed from one arm. Burkhead turned himself in to the Linn County Sheriff until the matter could be investigated.

As might be expected, local sentiment was divided. The Pleasanton Observer commented, "We are sorry to learn of the shooting of our old friend Johnnie Siron at the Boicourt Lake last Monday night. It just seems to us as if any officer who would do such a thing over a few fish that would soon be fit for nothing but fertilizer ought not to be allowed to wear the official badge. Such a case is deplorable to say the least and ought not to be."

Others felt that Burkhead was doing his duty and alcohol and bad circumstances led to the shooting. Regardless, Burkhead remained in jail for his own protection.

Burkhead was later charged with murder and was tried in December of the same year. The trial resulted in a hung jury (9-3 for acquittal). Burkhead left the community and moved to Los Angeles, where he took work in a service station.

Before judging too harshly, this story should be understood in terms of the times. Wildlife and fish were considered important food resources in depression years. In addition, game wardens were poorly trained, equipped, and paid in the 1930s. Burkhead would have had to provide his own gun and carried it in his pocket. He would not have had an official vehicle and would have had limited authority compared to modern-day conservation officers.

Regardless, the story is tragic. One young man was killed, leaving a family grieving, and another was forced from his career and home.

> –Karl Karrow, manager, Marais des Cygnes Wildlife Area

Farewell To Old Friend

The Nov./Dec. issue of Kansas Wildlife and Parks magazine featured conservation officer Larry Dawson. Sadly, Larry's many years of service ended in late October when he lost his battle with cancer. Throughout his career, Larry had several duty stations. His expertise in resource law enforcement truly will be missed in Region 5, as well as throughout the state.

Keith Rather



\$5000 FINE FIRST

A week before the 2000 firearms deer season in Leavenworth County, I was dispatched to the northern part of the county by a deputy who was holding a suspected deer poacher.

I arrived on the scene, and there was a white-tailed buck with an inside antler spread of 19 inches in the back of a pickup. It was determined that the subject had shot the deer on the neighbor's property a week before the season.

The subject stated it was the largest deer he had ever seen, and he just couldn't resist. He was issued three citations: for the unlawful taking of a trophy deer, criminal hunt, and hunt deer during a closed season. He paid \$5,000 on the trophy deer, \$78 on criminal hunt, \$53 for closed season and \$54 for court costs, for a total of \$5,185.

This is the first conviction under a new state law that requires a \$5,000 fine for illegally taking a trophy deer.

-Glenn Cannizzaro, conservation officer, Tonganoxie



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JEEP CHEAP SHOT

In January, Daimler-Chrysler, maker of the popular Jeep line of vehicles, launched an advertising campaign that glorified anti-hunters and vilified hunters.

In Jeep's "Deer Hunter" commercial, a man drives a Jeep through a wooded site with two deer tied on top of the vehicle. As the Jeep drives by, hunters in camouflage are shown in the woods, in close proximity to each other and the road, admiring the man's deer. The driver of the Jeep then crosses the road to a location that shows a "No Hunting" sign. The Jeep stops, the man gets out and releases the deer that appeared to be dead. The driver tells the deer they are safe and the deer bound away. In the background, other Jeep owners are shown doing the same thing.

When contacted, Jeep officials were unwilling to acknowledge the insulting message portrayed in its commercial and said that the ad was creative and would continue to run nationally. Meanwhile, a Jeep employee reported that calls protesting the commercial were swamping its switchboard.

Sportsmen's groups were encouraged to phone or write Daimler-Chrysler or petition them online. It worked. Within a couple of weeks, one of the groups, the International Association of Hunter Education Instructors. received the following letter from Jeff Bell, vice president of Marketing Communications for Daimler Chrysler Corporation:

"Thank you for your comment regarding our 30-second Jeep Grand Cherokee television commercial. We value your opinion and appreciate your willingness to share it with us.

"As you know, outdoor

activities and communing with the environment are both basic to the DNA of the Jeep brand. That is why for many years Jeep has sponsored and supported a wide range of outdoor events and activities.

"With this in mind, we created the spot to communicate the key attributes of Jeep off road capability, ruggedness, safety and security. Because of our innate involvement with nature and outdoor activities, we felt we could use the hunting analogy in a tongue-incheek way to highlight the 'go anywhere, do anything' capability of Jeep vehicles.

"Unfortunately, we did not anticipate this story line would evoke such negative emotion among some viewers. That was never intended. Obviously we underestimated the sensitivity of this issue.

"Jeep, as the embodiment of the great outdoors, does not want to damage our relationship with any groups or



individuals who love, appreciate, and enjoy outdoor activities. Nor do we want to damage our relationship with our loyal customers or prospects who reside on either side of this issue. Therefore, because this is so emotionally charged, we will no longer continue this campaign."

-Shoup

WILLIAMS CONFIRMED

On Jan. 30, the U.S. Senate confirmed Steve Williams, former secretary of the Kansas Department of Wildlife and Parks, as director of the U.S. Fish and Wildlife Service. Williams will lead the nation's primary wildlife conservation agency with more than 7,500 employees and a 2002 budget of \$1.27 billion.

"With his extensive background in State wildlife agencies, Steve Williams brings with him the kind of experience and knowledge that will allow him to consult and work cooperatively with the States and our other partners to conserve our nation's fish and wildlife," Norton said.

"Americans care deeply about fish and wildlife," Williams said, "and I am dedicated to continuing our nation's long tradition of conservation and to assuring the future of our wildlife heritage for our children.

"I am honored to have been chosen to lead the U.S. Fish and Wildlife Service. The Service faces many challenges, but it has the great asset of a dedicated and talented staff. I look forward to strengthening our partnerships and finding common sense approaches to conservation issues."

Williams had been head of



KDWP since 1995. His former positions include deputy executive director of the Pennsylvania Game Commission from 1992-1995; assistant director for wildlife for the Massachusetts Division of Fisheries and Wildlife from 1989-1992; and a wildlife biologist specializing in research and management for whitetailed deer for the Massachusetts Division of Fisheries and Wildlife from 1985-89. He served as a graduate teaching assistant at Pennsylvania State University from 1981-85, working on wildlife habitat analysis, and also worked as a graduate teaching assistant at the University of North Dakota from 1979-81.

Williams earned a doctorate in forest resources at Pennsylvania State University, University Park; a master of science degree from the University of North Dakota at Grand Forks; and a bachelor's degree in environmental resource management, also from Pennsylvania State University.

Lady Madonna A Shooter

Last November, former best friends Madonna and Stella McCartney had a major falling out over the singer's new penchant for hunting. Rabid animal rights activist McCartney is furious, says a friend of the designing music scion, that Madonna has recently taken up pheasant hunting.

"When you're shooting, you are standing in the forest for really long periods of time, so you end up looking at the leaves and the sky and the trees," Madonna told the BBC. "You have more of a respect for the things you eat when you go through or see the process of killing them."

A friend of McCartney's says she's considering completely dropping Madonna as a friend.

"Stella recently bought a one-million-pound estate in England, and she banned hunting there and, after those comments, I wouldn't be surprised if Madonna's banned from the estate as well," said the source. "Madonna's obviously just trying to impress [hubby] Guy Ritchie with her newfound love of hunting, but she's going to lose more friends than she makes. Obviously, Madonna's fascination with yoga, inner peace, and spirituality was just another in a long line of insincere poses."

Madonna's rep had no comment.

-Trey Whitaker, Bowsite News

By law, the director of the Fish and Wildlife Service must have a scientific education as well as experience in fisheries and wildlife management.

-U.S. Fish & Wildlife Service

FIELD TRIALS OKAY

The U.S. Fish and Wildlife Service has announced that it

has withdrawn its "interim guidance for field trials" on state lands purchased, managed, or developed with funds from the Federal Aid in Wildlife and Sport Fish Restoration grant programs. The Service also announced that it will not develop any new policy specific to field trials.

After receiving comments

NO REFUGE FROM PETA

People for the Ethical Treatment of Animals (PETA) has sent a letter to U.S. Secretary of the Interior Gale Norton, as well as several state parks departments, asking that hunting, fishing, and trapping be banned on National Wildlife Refuges and in state parks.

In the message to Norton, PETA's Campaign Coordinator Dan Shannon condemns trapping, calls hunting an "inherently violent activity," and defines fishing as "hunting in the water."

Shannon also claims that President Franklin Delano Roosevelt created the first official refuges in the 1940s where it was "unlawful to hunt, trap, capture, willfully disturb, or kill any bird or wild animal." This is certainly testament to PETA's lack of respect for accuracy and truthfulness. The first National Wildlife Refuge was created 100 years ago, and hunting, fishing and trapping are protected on National Wildlife Refuges.

Similar letters were sent to the Michigan Department of Natural Resources, North Dakota Parks and Recreation Department, and Kentucky State Parks. PETA's

message to Michigan claims that hunting and fishing "promote bullying as an acceptable behavior" and should be done away with. North Dakota and Kentucky received PETA's propaganda encouraging them to ban fishing to help alleviate the pressures of encroachment, under-

funding, overcrowding, and pollution.

Sportsmen pay for wildlife and wildlife management programs in this country, to the tune of more than \$2.6 billion a year.

-Wildlife Legislative Fund of America on the interim guidance from state fish and wildlife agencies, the Service concluded that there is adequate guidance on field trial activity on land purchased, developed, or maintained with Federal Aid grants in current federal regulations and the Fish and Wildlife Service Manual.

Wildlife habitat enhancement, hunting, and fishing represent the primary purposes for which most lands were acquired, developed, or managed. The majority of field trial activity complements those purposes. However, in isolated cases, the Service believes that large field trials have contributed to habitat damage and interfered with hunting and fishing access to the lands on which they were staged.

Although the interim guidance has been withdrawn, states must still ensure that any field trial activity that takes place on federal-aidfunded land does not interfere with the primary purposes for which the land was acquired, managed, or developed.

-U.S. Fish & Wildlife Service





hunting

Turkeys &Lyme

For Kansas hunters, springtime means the big T - forturkey, one of the favorite and most exciting species to hunt. However, there is a little "t" that hunters should not ignore when going after the gobbler of one's dreams – ticks. Tick populations can be high in some areas during turkey season, and it's well-known that these parasites can cause a number of illnesses, most notably Lyme disease.

This turkey season, reduce your chances of being bitten by a tick with these few precautions:

• tuck pant legs into socks or boots and shirt into pants;

• tape the area where pants and socks meet so that ticks cannot crawl under clothing;

• spray insect repellent containing DEET (diethyl toluamide) on clothes and on exposed skin other than the face, or treat clothes (especially pants, socks, and shoes) with permethrin, which kills ticks on contact;

• wear a hat and a longsleeved shirt for added protection;

 walk in the center of trails to avoid overhanging grass and brush;

• after being outdoors, inspect clothing, turning pants and shirts inside-out, looking for ticks. A careful examination of body and clothing immediately after the hunt will allow you to find most ticks before they become attached; and

• remove clothing and wash and dry it at a high temperature.

-Shoup

Kid Day Success

North Lyon County was abuzz with youth activity last Sept. 29 when Randy and Shannon Peterson, owners of S & P Game Bird Farm and Hunting Preserve, near Reading, hosted the Fifth Annual "Take a Kid Hunting Day." This event was sponsored by the Flint Hills Chapter of the National Wild Turkey Federation and the Emporia Area Chapter of Quail Unlimited. Members of these two organizations worked side by side using a special grant provided by the Flinthills Friends of the NRA to provide the kids a fun day in the great outdoors.

Kids age 15 and younger accompanied by a parent or guardian were treated to a wild turkey hunting seminar presented by the Flint Hills Chapter of the National Wild Turkey Federation. The kids sat in wide-eyed amazement through demonstrations of turkey calling, use of camo and decoys, and proper firearms for hunting turkey. Habitat improvement, etiquette in the field, and safety were also discussed. Many thanks go to Jared McJunkin, his wife Angela, Jeremy Tiemann, Brandon Chance, Tim Sparks, Vance Ralstin, Carl Peters, and to the National Wild Turkey Federation for their presentation to the hunters of tomorrow.







Then the kids moved from woods to waters, where they participated in a lure casting contest. Winners in two age divisions were awarded brand new Zebco fishing rods and reels donated by Bluestem Farm and Ranch Supply of Emporia. Other contestants were given fishing equipment and assorted lures.

Next, the kids were exposed to the world of Sass, where David Traylor, a member of the Single Action Shooting Society, showed his expertise in cowboy action shooting. Safety and respect for handguns was one of the main topics of his demonstration.

After shooting numerous practice rounds at the air-rifle old-fashioned turkey shoot station, the participants shot for score, and the winners were awarded official Mike's Sporting Goods T-shirts.

After a visit to the archery range, the young hunters, many who had just received their hunter education certification and were being exposed to this type of activity for the first time, went to the clays shooting station where hunting safety tips were discussed. Wing shooting tips and advice were also given to the kids to prepare them for the big pheasant hunt later that afternoon.

After grabbing drinks and treats and gobbling a quick sloppy Joe sandwich provided by Shannon and Randy, the kids were guided on a controlled hunt behind bird dogs and given the chance to shoot a pheasant. The only thing bigger and more rewarding than the roosters they brought out of the fields that afternoon were the smiles on their faces.

"Take a Kid Hunting" was a National Shooting Sports Foundation and Kansas Department of Wildlife and Parks Pass It On Program event. Pass It On's slogan is, "A little of your time . . . the time of their life."

The Flint Hills Chapter of NWTF is also planning a Jake's Day event at Camp Alexander near Emporia on March 30 and a guided turkey hunt provided for the physically challenged near Council Grove later in the spring. For more information, contact, Jared McJunkin, (620) 342-8163.

-National Wild Turkey Federation

UNDER CURRENTS



by Mark Shoup

can still recall the aura of my

I

he

father's hardware store: the aroma of oiled-wood flooring; the faint, lethargic hum of fans hung from a 15-foot ceiling; the metallic crank and *ka-ching-ching-clonk* of the register as it shucked out a wooden cash drawer.

Straight out of Norman Rockwell, the hardware store was started by my great uncle, Louis Robinson, and his brother-in-law in 1916 and had changed little by the time Dad and Uncle Stan (known to me as "Unc") bought it after World War II. Bulk rope was threaded from the basement through holes in the floor and tied to iron rings. Everything, in fact from grass seed to nails to bolts - came in bulk. Banks of large drawers lined the walls, each with weighty, multiple labels such as "Gopher traps/hay hooks/ ladles."

Near the store's back door, Dad would heave the rope that powered a handoperated freight elevator to the upstairs storage level, or feather it down to the basement, depending on the product being stored. Upstairs in late winter, onion bulb bins brimmed with the scent of spring. The basement always smelled of pipethreading oil and home-made putty.

On Saturdays, I would sweep the long, narrow building – upstairs, main floor, and basement – with an oiland-sawdust floor sweep. Afterwards, I'd slip up to the main floor where a group of old men loitered, and listen to their banter. C.B. Lewis, Noel Sprier, the Nelson brothers – Earl, Charlie, and Fred – and others were the usual "customers."

I seldom spoke at these gatherings, for these were seasoned men, wise and mysterious in bearing and speech. It was man-talk, often momentous (to my ears, at least) but usually punctuated with wry humor. The subject matter ranged from football to hardware to local gossip I could not understand but found nonetheless fascinating. If, as happened on occasion, the ceiling-track ladder or the paint shaker failed to operate properly, Noel would pipe in, "John, get the big hammer!"

Whenever the talk took a somber turn, a silence – not quite awkward – would ensue, and the men would stare at the floor and nod their heads.

Then old C.B., wizened, red-faced, and terrifying, would break the spell: "Man born of woman; his time is short and full of woe!" All the men would smile knowingly, nod agreement, and I would be left to ponder this for days, certain that I had been privy to some ancient secret of manhood.

When the talk turned to hunting, however, my ears really perked up. In those days, it was mostly ducks and pheasants in westcentral Kansas, and

Robinson Hardware in Larned was the place to find out when the ducks were flying or how the pheasant crop looked. On technique, there was occasional rogue advice, too.

"John, you've got to come out to my place for pheasants this year," C.B. would say. "I'll take you out on the tractor, but remember one thing: one on the ground is worth two in the air."

Old men weren't the only ones who loved to hang out at Robinson Hardware. Up front, the Shoup brothers sold hunting and fishing stuff. Guns. Ammo. Knives. Rods. Reels. Lures. All the important things in life.

And it usually wasn't the old men who brought news of game; it was high school boys and young men, come to purchase another box of shells or dicker for a new shotgun. It was here that Jim Luft traded a prime Model 12 Winchester for a shinier new model, and I found the gun that would serve me well for more than 30 years.

By the time I was in high school, my friends and I had become the Heralds of Game News. From September through January, Saturday morning hunts would be punctuated by a trip to the store to show off game and, now, to bask in the curiosity of the old men, who seldom asked where to find game but always wanted to know who was the best shot. Either that, or they just enjoyed the debate that followed such inquiry.

Friends from those days often reminisce about the store. Farm kids remember selling furs to old Mr. Fairchild and pestering their fathers to take them into town for more shells. Others recall admiring their first gun or fishing rod for months while saving for the big purchase.

For me, however, the store was part of home, at once a repository of family and community history and a launch pad to the future. I would often return - after college, after the Army, after marriage and children - and would one day be welcomed into the circle of old men growing older, some gone now. But I always maintained a reverent distance, for with the passing years, time stood still here, and I came to recognize wisdom in the lighthearted dealings of older men and the unstated appreciation they all had for a place where things rightly clinked and chunked and rolled in harmony while outside the front window, the world charged by with the aimless urgency of light bouncing off mirrors.

The store closed forever in 1989, the same spring that I went to work for the "Fish and Game." By then, I had learned a bit of woe and certainly that time is short, and perhaps a hint of the subtler references in foolish old proverbs, which help men connect to that which we cannot fully understand.



fishing

FISH NEED MAN

fter spending a Thursday morning last October carrying buckets of healthy fish, biologist Ken McCloskey determined that Marion County Lake needs something. "It looks like we need some anglers," he said with a chuckle.

McCloskey and other Kansas Department of Wildlife and Parks researchers spent a week checking a series of traps and nets at both Marion Reservoir and Marion County Lake. It appears that both bodies of water are fishing hotspots with plenty of keepers for novice and expert fisherman alike.

Gill nets were set at several places in both lakes. They are set in the same place each year. That Thursday morning, the haul at Marion county included dozens of big crappie and a number of legal-sized walleye, wipers, and saugeye. Some fish don't survive the nets, but many others will because the sampling is taken when the water is cooler and parasites are less likely to be a problem, McCloskey explained.

Sampling has been done consistently at state and federal reservoirs since the 1970s. The sampling at the county lake is done as part of a community lake assistance program.

"It gives us a relative idea of the robustness of the populations," McCloskey said. He added that he wouldn't have specific details until he analyzes the data, but his eyes told him the fish population is fat and happy. "We used to catch this many crappie out of this lake, but they were 4 inches long and thin," he said. "Since we've started the predator program, they eat the little ones, and we see those remaining get bigger."

The traps also contained other species, from small, colorful longears to big spotted bass. The sampling at the reservoir showed, as expected, that there are no lingering effects from a white bass kill several years ago.

"The white bass are back, big time," McCloskey said. Many walleye were taken between 8 and 12 inches, good populations of wipers of various sizes, and many channel catfish. The shad population is booming, which means plenty of food for the larger fish.

-Marion County Record

Fly Tying Fool

Real Lawrence has been tying flies for more than half of his 29 years. Now he is receiving national attention for one of his creations. Lawrence's Grizzly Matuka fly was featured in a writeup in the June 2001 issue of *Fly Fish America*, a magazine for fly fishermen. The article took up two-thirds of a page.

Lawrence has tied grizzly matuka patterns in the past, but it took him three or four years to come up with this exact pattern.

"You tie something up, you never know if somebody else will like it or not," said Lawrence, who grew up in Fredonia and moved to El Dorado last year.

Lawrence's Grizzly Matuka includes a white feather taken from a chicken's neck (the grizzly). In the water, the fly gives the appearance of a minnow. That's what Lawrence was trying to capture.

"I have seen Matuka patterns. I was shooting for some that could give me the aspect of a minnow," Lawrence said. "I like the Matuka style. I like the way the feather stands up on top. It reminds me of a cat being scared because its hair stands up."

The fly is especially good for catching trout and bass, Lawrence said.

"As a minnow swims it darts up and down," Lawrence said. "You can work the fly the same way with the same color and action to it."

Lawrence knows the fly is capable of attracting fish because he has tested it out. In fact, he tests every fly he ties.

"If I just tied them and didn't fish them, I wouldn't enjoy it," Lawrence said. "I think it would get old after a while because I would get too used what I'm doing."

Lawrence ties flies on the side in addition to working a full-time job. But sometimes he gets caught up in doing what he loves and works at his desk in his bedroom all day tying flies.

Lawrence sells his creations to a number of sporting goods and fishing stores. In fact, he found out about the article in Fly Fish

America at a store in Wichita. He went there to ask if the owner would be interested in buying some of his flies. One of those he showed the owner was the grizzly matuka, which the owner said he had just seen in a magazine.

Lawrence has used hundreds of patterns over the years although nothing is written down.

"All my patterns are in my head," Lawrence said. "Ninety-nine percent of it is done from what I've picked up and what's in my head."

Lawrence began tying flies after seeing somebody do it on television when he was 14. It seemed like an interesting thing to do. He had been fishing "since I can remember," he said. Lawrence used to go fishing with his grandfather when he was a toddler. His goal is to some day make a living out of his hobby.

"My goal is to have a fly shop of my own, somewhere where there's a lot of fly fishing and trout streams," he said.

-El Dorado Times



nature

Sycamores For Soil

Sycamores are large trees easily identified by their white bark. They have been added to the Kansas Forest Service's Conservation Tree Planting Program for use in streamside or riparian buffers and as den and roost trees. Sycamores serve well in riparian zones due to their high flood tolerance and extensive root system.

While moderately tolerant to a broad range of soils, sycamores do need adequate soil moisture to grow well. This is not a tree for droughty sites. Planting this tree should be limited to the eastern half of Kansas. Fungi and lacebugs are common pests.

As well as other riparian trees, sycamores have been proven to provide aquatic and terrestrial wildlife habitat; help stabilize stream banks; increase sediment, nutrient and pesticide deposition before surface water reaches the stream; take up a high percentage of the nutrients in shallow ground water, and provide the landowner an economic return in log sales.

Low-cost trees and shrubs for riparian plantings are available through the Kansas Forest Service. You can get more information about the Conservation Tree Planting Program and the seedlings available this year by dropping by your local conservation district or extension office, or by calling the Kansas Forest Service at 1-888-740-8733.

-Kansas Forest Service

What's A Macroinvertebrate

Macroinvertebrates are defined as organisms that lack an internal skeleton and are large enough to be seen with the naked eye. They are an integral part of wetland and stream ecosystems. Examples of macroinvertebrates include mayflies, stoneflies, dragonflies, rat-tailed maggots, scuds, snails, and leeches.

These organisms may spend all or part of their lives in water; usually, their immature phases (larvae and nymphs) are spent entirely in water. Larvae do not show wing buds and are usually very different in appearance from the adult version of the insects. Nymphs generally resemble adults, but have no developed wings and are usually smaller.

A variety of environmental stresses can affect macroinvertebrate populations. Urban and/or agricultural runoff can produce conditions that some macroinvertebrates cannot tolerate. Sewage and fertilizers added to streams induce the growth of algae and bacteria that consume oxygen and make it unavailable for macroinvertebrates. Changes in land use from natural vegetation to a construction site or to poorly protected cropland may add sediment to the water. Sedimentation destroys habitats by smothering the rocky areas of the stream where macroinvertebrates live.

Some organisms depend on certain temperature patterns to regulate changes in their life cycle. Removal of trees along the bank of a river and alteration of stream velocity can alter normal water temperature patterns in the stream.

Other stresses include the introduction of alien species and stream channelization.

Water quality researchers often sample macroinvertebrate populations to monitor changes in stream conditions over time and to assess the cumulative effects of environmental stresses. Environmental degradation will likely decrease the diversity of a community by eliminating intolerant organisms and increasing the number of tolerant organisms. If the environmental stress is severe enough, species of intolerant macroinvertebrates may disappear altogether. If a sample of macroinvertebrates contains a diversity of organisms, the stream conditions are likely good.

-from the Project WET activity, "Macroinvertebrate Mayhem", 1995, The Watercourse and the Council for Environmental Education

Return of a Native

A little 5 1/2-inch fish is causing a whale of a stir since U.S. Geological Survey (USGS) scientists hauled the fish up from depths of nearly 500 feet in April. It marked the first time the deepwater sculpin, a species once abundant in Lake Ontario, had been seen in the U.S. waters of the lake in more than 50 years.

Deepwater sculpin are abundant in Lakes Huron, Michigan, and Superior. Although the fish was plentiful in Lake Ontario in the early 1900s, its populations plummeted in the 1950s, most likely because of predation on their young by alewife, a nonnative fish that invaded Lake Ontario from the Atlantic Ocean via navigation canals.

Deepwater sculpins are an important link in the offshore food chain, eating bottom dwelling invertebrates and, in turn, being eaten by lake trout, historically the lake's top predator. The capture of this fish is another indication that Lake Ontario is becoming much healthier. The numbers of two other formerly abundant native fishes — burbot and emerald shiner — are increasing in survey catches. Also, hatchery lake trout are beginning to successfully reproduce after more than a decade of failure.

All of these positive signs appear linked to a decline in the abundance of non-native alewives and a shift in their distribution to deeper water. Because the larvae of many native fishes, including larvae of the deepwater sculpin, occupy shallow water, these changes have helped reduce predation on the young of native fishes, allowing their populations to start recovering.

-waterworkswonders.org

vild urrents

notes



About five years ago, a man named Rick Wilson was driving down a Maryland highway on his way to deer hunt. Along the way, he saw a woman stopped attempting to load a deer into the trunk of her car. He stopped to help and found that the deer had been hit by a car, so she was using this opportunity to feed her hungry children. It was at this point that Rick decided there had to be a better way, and from that thought was born Farmers and Hunters Feeding the Hungry (FHFH).

FHFH is a very simple concept. Deer hunters take to the field doing what they love – hunting. When they harvest a deer, they take it to licensed participating meat processor. FHFH then pays for it to be ground into burger and distributes it to the hungry of the community.

After a couple of years of developing this program in Maryland, it was decided to bring it to the rest of the nation, and last year, a couple of volunteers brought this incredible program to Kansas.

After working closely with the Kansas Resource Conservation and Development (RC&D) and the Kansas Wildlife and Parks Department, many of the initial challenges were overcome and the go-ahead for FHFH Kansas was granted. Through discussions with Wilson in Maryland, a goal of 10 deer was decided upon for the first year of this Kansas program, knowing that the funds needed to be raised to pay for the processing.

In it's first year, the Kansas program surpassed anyone's expectations. Through the generous donations of Kansans, 180 deer were donated, processed, and distributed to the hungry of this great state. That is roughly the equivalent of 32,000 meals.

At this point, FHFH is only able to cover about a third of the state, from Kansas City to Wichita and straight up to the Nebraska border. But if funding increases, it will expand to cover the entire state. This Kansas program is run by volunteers and funded by Kansas donations, so the only way it will continue to grow is through the generosity of its citizens.

The goal for this 2002 is lofty, but achievable: FHFH Kansas hopes to receive, process, and distribute 1,000 deer. There are plenty of deer and plenty of hungry people, so the only challenge will be the funding. Just processing fees would come to about \$6,500.

To help with this amazing program, donations can be sent to FHFH, P.O. Box. 260 Strong City, KS 66869. All donations are tax deductible.

For more information, email tonyderossett@comcast.net or phone Glacial Hills RC&D at 1-866-GLACIAL.

> -Tony DeRossett, FHFH Kansas state director



The 6th Annual Missouri River Natural Resources Conference is scheduled for April 21-24 at the Marina Inn in South Sioux City, Neb. Hosted this year by the Nebraska Game and Parks Commission, the conference provides a broad perspective on Missouri River issues and serves as a forum for researchers, resource managers, citizens, and policy makers. It is an opportunity for people to learn about the river's environmental condition and share points of view on river management.

This year's conference faces the challenge of understanding the processes of a large dynamic river system. Every year, new research adds pieces to the river management puzzle not understood before. Papers, posters, and exhibits will focus on Missouri River land and water management decisions within this dynamic context and on management responses to new scientific insights and information. The keynote speakers are Brian Richter, director of The Nature Conservancy's Fresh Water Initiative, and David Galat, associate professor of ecology with the United States Geological Survey (USGS) Cooperative Research Unit at the University of Missouri. They will discuss how to blend ecosystem health with human needs and how to determine if river rehabilitation efforts are succeeding.

The annual conference highlights a unique section of the Missouri River where the 735-mile-long channelized portion begins at Sioux City. Field trips are planned to Yankton, South Dakota, to see Gavin's Point Dam on Lewis and Clark Lake, and Gavin's Point National Fish Hatchery, where the endangered pallid sturgeon is raised. Research boats will tour habitats of the endangered interior least tern and threatened piping plover on the 59-mile Missouri National Recreational River below the dam.

Another tour will visit local Lewis and Clark sites and river bends on the channelized river below Sioux City, Iowa, where habitat is being restored.

The Missouri River Natural Resources Committee and the U.S. Geological Survey's Columbia Environmental Research Center founded the conference in 1997. Additional sponsors include American Rivers, Missouri River Basin Association, National Park Service. Nebraska Game and Parks Commission, Papio-Missouri River Natural Resources District, University of South Dakota, U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, and the Winnebago Tribe of Nebraska.

For more information, visit the internet at infolink.cr.usgs.gov/events/ 02.htm, phone (573) 876-1876, or email Jeanne _Heuser@usgs.gov.

-U.S. Geological Survey

nature's notebook

by Mark Shoup



ne of the most interesting critters in Kansas is the American badger, *Taxidea taxus*. Closely related to the wolverine, it is also one of the most ferocious animals in the state although it will seldom attack unless cornered.

A squat creature, the badger is wider than tall with short, bowed legs. Its coat is shaggy and course, gray to brown with short, bushy, yellowish tail. Like Zorro, the masked man, the badger's face is dark brown or black with white cheeks, and narrow white stripe runs from above the nose and over the head. The resemblance to the masked man ends there, however. The badger's snout is flat and slightly upturned, giving it a bearish appearance.

The male is larger than the female and may be 20 to 30 inches long, 6 inches tall, and weigh more than 25 pounds. Although badgers breed in July and August, the furry but blind young are not born until March or April. They are weaned by June.

A badger den is usually a burrow about 8 to 10 inches in diameter surrounded by large mound of earth and running out of sight at about a 45-degree angle. Dens may be found in open plains and prairies, farmland, and sometimes edges of woods.

This powerful burrower usually hunts at night but is often active by day, waddling about at a clumsy trot. To cool itself off in summer, it will swim or even laze about in shallow water. Like a cat, it will bury its droppings and cleans itself frequently, swallowing loose hair licked from its coat.

During the coldest parts of the winter, the badger's metabolism may slow down to the point that it becomes "torpid," meaning that it cannot move around



much. This condition is not like hibernation, where an animal "sleeps" throughout the winter.

Like most predators, the badger is an opportunist that will eat invertebrates, birds, reptiles, and carrion. Primarily, however, badgers eat ground squirrels, pocket gophers, rats, mice, and other burrowing mammals. Although these critters are generally considered pests, the badger's burrowing can be destructive to alfalfa fields and other agricultural areas. In addition to its hunting activity, an active badger may dig a new sleeping burrow every day during the warm season.

Sometimes, the badger will simply wait in abandoned dens for potential prey looking for an easy hiding place. Occasionally a badger will dig itself into an inhabited burrow and await the occupant's return. Coyotes often lurk nearby as badgers dig for prey, waiting for the chance to steal a meal as the rodent attempts an escape.

Amazingly, the badger is not harmed by rattlesnake bites, unless struck on the nose, and often hunts these dangerous snakes.

If you've ever seen a badger, you know that this fascinating creature is a loner. Seldom will more than one be seen at a time, unless it is a mother and her young, which leave her in late summer.

Few animals dare to take on the badger. Its thick fur, loose, tough hide, and heavy neck muscles protect it as it bites, claws, and exudes a repellent musk, all the while snarling, squealing, growling, and hissing. Add to this its short, stocky build, which allows it to get underneath it's opponent, and you have the most ferocious mammal on in the Great Plains. Still, the badger will usually beat a retreat rather than fight, if it can.





Sure Sign Of Spring

Know winter's about over when the calendar turns to March, but I know it might still snow in April.You can't follow the seasons using a calendar in Kansas. And you certainly can't use the weather and temperature. I've fished from a boat in short sleeves in February, and shoveled snow from my drive a month later. Go figure.

Some folks think they can rely on Mother Nature for signs of spring — robins returning, sandhill cranes passing overhead, or redbuds blooming, but I've never had much luck. For me, winter is officially over when Lennie and I plan an outing to look for shed deer antlers.

It's a mysterious phenomenon because we've never found many shed antlers, and we're not nearly as avid as we used to be. But one day in late February or early March, one of us will blurt out that we need to go shed hunting.

"How many teams from the Big 12 will make it into the NCAA tourney?" I asked, innocently enough.

"Oh, you know KU will make it, probably Oklahoma, Missouri, and maybe even Oklahoma State," Lennie answered sincerely. "I think Texas should probably go, but you know, we should really go shed hunting this weekend."

"My thoughts exactly. We need to go before the hemlock on the riverbottom gets too tall. Never find any drops if the hemlock's up," I reply involuntarily.

I really do think it's instinctive. I don't know what triggers it — lengthening photoperiod, barometric pressure, hormone level changes. But I know it's accurate because we'll talk about shed hunting through the late winter, but we don't seriously think about going until spring is just around the corner. And if we actually choose a date, spring is here.

Years ago, we actually kept those dates. We'd drive to the river on a blustery March day and walk all the likely trails looking for lonely antlers. I think I can count on one hand the number we picked up. It didn't matter. The important thing was we were out of the house washing off the effects of cabin fever, and spring was on its way. Oh, I've found shed antlers, just not with Lennie on our sign-of-spring hunt. Once my wife accompanied me to take down my deer stand. It was a warm March afternoon, and she wanted out of the house. We walked to the stand, then on a hunch, we wandered around looking for sheds. They were everywhere. I think we picked up 12 antlers that afternoon, including two matched sets. I had trouble believing it, and Lennie didn't believe it.

"You went shed hunting without me?" he asked, his feelings hurt. "And you actually found antlers? With who? How many?"

"Lisa went with me, but we didn't plan on looking for sheds," I replied, trying to control the damage. "I needed to take my tree stand down, and we figured while we were there, we'd have a look around. It was an accident, and it doesn't really count."

"Huh," Lennie said, fading away. "I guess I'll have to go to the river by myself, or maybe Stub will go with me."

"I'll go with you to the river," I said. "When do you want to go?"

"Oh, that's alright. Besides, it's supposed to be cold and rainy this weekend."

He was right. It was cold and even sleeted that weekend. It would be several more weeks until spring arrived. And Lennie called. I knew he would.

"Whatter ya doin'?" he rattled, as I answered the phone. "Find any sheds lately?"

"Naw. I was waiting for you to call about going to the river," I answered, as I looked out the kitchen window.

I could plainly see that spring was on the way. The sky was blue, fluffy clouds drifted by, and the thermometer said 62 degrees. Lennie and I went on to discuss some new strategies for finding shed antlers, and we set a date to go.

"Alright," he concluded. "I'll swing by tomorrow about 1 and we'll go look."

I hung up and sighed contentedly. I was ready for spring. \mathbf{x}

