



by Mike Hayden

The Fishing Has Never Been Better

Thave been fishing in Kansas for more than 50 years, including during the Flood of 1951. I've also had the pleasure of fishing on three continents and in several of the world's oceans. With all that, I honestly believe that the fishing opportunities in Kansas have never been better.

It has been one of my goals as Secretary of the Kansas Department of Wildlife and Parks (KDWP) to increase our fishing opportunities. Two programs in particular are accomplishing this: the Community Fisheries Assistance Program (CFAP), and the Fishing Impoundments and Stream Habitat program (F.I.S.H.).

CFAP was implemented in 2004, and it now includes 215 community lakes and ponds throughout the state. Using federal dollars derived from excise taxes on fishing equipment, the department has leased fishing rights to these lakes, removing fees and improving access to nearly 12,000 acres of fishing waters. To fish in participating CFAP lakes, you only need a Kansas fishing license (unless exempt). Before CFAP about 55 percent of community lakes charged anglers an access fee. Now nearly 90 percent of community waters are open to anglers at no additional cost.

Anglers have reacted enthusiastically, happy to fish close-to-home waters they may have previously avoided because of special fees. Local governments have also shown a great interest in working with KDWP to provide improved fishing opportunities.

The F.I.S.H. program, which leases private ponds and streams for public access, now has 1,200 acres of ponds and about 80 miles of private streams enrolled. F.I.S.H. was modeled after the immensely successful Walk-In Hunting Access Program, and was first introduced in 1998. F.I.S.H. waters are open to fishing only from March 1-Oct. 31.

The department also manages 24 federal reservoirs and 40 state fishing lakes. For more information about where to fish in Kansas, regulations, and to purchase your fishing license, go to www.kdwp.state.ks.us.

I caught my first Kansas walleye at Webster Reservoir in 1960. Today, walleye are common throughout Kansas and a favorite of anglers. This spring, fisheries staff received a great deal of publicity for their cutting-edge walleye hatching program. Canadian fisheries biologists

came to Kansas to work with our biologists to learn the propagation techniques. Kansas biologists and culturists produced 63 million walleye this past spring to be stocked back in Kansas waters. KDWP operates hatcheries at Meade, Milford, Pratt and Farlington. District fisheries biologists constantly work to improve fish habitat in state public waters and also work with private landowners.

The variety of fishing in Kansas — from large federal reservoirs, quiet streams in the Flint Hills, or hidden farm ponds — can satisfy anyone's preference or level of skill. And to enhance winter fishing, the department has a popular trout stocking program so anglers can enjoy a game fish usually associated with states to the east and west.

The quality of fishing in the western Kansas lakes is subject to their water levels, and KDWP is working on a number of projects to secure water levels. Two years ago an agreement was made with the Almena Irrigation District to maintain a minimum pool in Sebelius Reservoir. At Cedar Bluff Reservoir, KDWP owns more than 95 percent of the water storage rights. Though drought has lowered the water levels substantially, without the purchase of those rights, the situation would be much worse.

And while Kansas fishing has never been better, sharing the fishing experience with kids and novice anglers is essential to keeping the heritage alive. The Recreational Boating and Fishing Foundation's (RBFF) "Take Me Fishing" program is currently sponsoring "The Anglers Legacy," which emphasizes the importance of passing on the fishing experience to anyone who has never been fishing. You can find more information at www.takemefishing.org. Fishing is easy to pass on because there's no need to spend a fortune to have fun catching bluegill at a local CFAP lake or F.I.S.H. pond.

Fishing is a great way to relax and enjoy the outdoors by yourself or with a good friend, and there may not be a better family activity than fishing. It also contributes millions of dollars to the state's economy each year. I hope you enjoy fishing Kansas this year and share my passion for this great outdoor pastime. If you do, take the RBFF's challenge and pass along your passion to someone else.



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Front Cover: Velvet bucks are on the move now, making it a good time to scout. Mike Blair filmed this buck with a 600mm lens, f/5.6 @ 1/500th sec. Back: Kansas state parks are popular recreational areas during summer. Blair photographed this colorful sailor with a 600mm lens, f/11@ 1/500th sec.



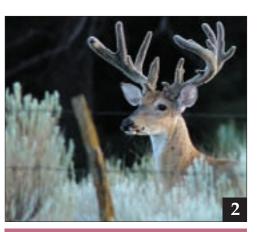
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to instill an understanding of our responsibilities to the land.



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ost of Victoria's Secrets are revealed when models hit the runway for the company's annual fashion show. Things not normally seen, get seen. The same could be said when white-tailed bucks make their July parade. For fewer spectators, an area's white-tailed mysteries are on display when the boys in velvet head for feed. Big headgear, normally veiled by dense cover

where trophies hang out, is suddenly open to view. You don't have to wonder anymore.

That's why I get serious about deer scouting in mid-summer. Mature bucks often play it solo in earlier months, growing their soft velvet racks in some secluded place with ample food and water. The antlers are easily damaged during this period, especially when the deer runs through thick brush to escape

danger. So the buck finds a good hideout, moves little, and grows his fighting weapons until they are mostly formed and hardened beneath velvet coverings. Then, he may crony up with a bachelor group and move freely in the evening feed fields with half a dozen buddies. For a month or so, big bucks will show themselves more regularly during daylight than at any other time of year. Mid-July through late



Most of an area's deer herd will move into feed well before sundown, making this an ideal time to scout. Alfalfa is a prime summer food.

August is the prime time to view the offerings of a new season.

Even so, you can't expect the oldest and wisest bucks to come easily. Weather and whimsy may reveal the true giants only once in a while, though their companions surge into the feed each evening like clockwork.

A case in point was a buck I called Moses. I first saw this non-typical monster on July 19, where he appeared out of thin air without tale, legend, or lore to precede him. I literally gasped when I saw the giant velvet rack coming through distant CRP and realized he would pass within camera range.

The super buck followed a train of younger males, one of which saw my makeshift blind in the grass and brought a trio of deer to check it out. Amazingly, Moses left them with their puzzle and hungrily entered the feed. Finally, in annoyance with the stamping and snorting that surrounded my position, he crossed the

fence again and marched up for a portrait. Looking at the 240class buck through the telephoto lens was one of my all-time best deer hunting moments.

I went night after night, but though his underlings were faithful visitors, I saw Moses only once more in the next six weeks. Then, he appeared when it was so dark I could barely see him. Other mature bucks continued to appear an hour before sundown, but Moses was a phantom. Still, the Summer Show tipped his presence.



With little disturbance during summer months, big bucks often move freely during daylight. Watch soybeans or other food crops from a distance to preview an area's trophy potential.

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Milo may attract deer for miles in late summer and early fall. Milo seed heads are eagerly sought by deer from the "milk" stage through maturity.

Scouting summer deer begins at the feed sources. This involves finding favored browse in undisturbed locations where big

bucks live. Water and nearby cover are essential, and after that, it's a matter of taste. I've found summer patterns that keyed on elm and dogwood browse, but only crop fields where weren't available. Bucks will travel long distances to eat succulent, growing crops. Where available, soybeans are often the greatest magnet in July, though alfalfa can also be a winner. As corn matures, many bucks seek the sweet, juicy kernels and ample water in irrigated fields. Later, becomes milo the biggest draw.

Forbs can also be sur-

prisingly attractive to deer. Weedy fields are sometimes hotspots for groups of summer bucks. Pigweed in a young



Pigweed grows on disturbed sites throughout summer. When succulent, this forb is particularly attractive to feeding deer. Watch for this pattern especially in summer fallow.

growth stage can be so tasty that deer will temporarily leave nearby crops to gorge on the tender plants. This is often obvious by heavy browse sign on the weeds.

I used to think that big bucks lived in irrigated cornfields during summer. Viewed from the air, weedy skips are often common in the dense corn jungle, providing ideal bedding sites and ready access to food and water. This does happen, but after years of observation, I'm surprised to learn that many bucks bed away from corn fields and visit them daily, just as they would other crops. Seeing these deer is a matter of setting up on entry trails and watching as they browse along the edges.

Since deer are relaxed and eager to feed on summer evenings, finding them is not difficult. It often begins with a windshield survey. Driving the

> back roads in likely habitat may reveal several deer hotspots within a township. From there, aerial photos can be a valuable benefit, pointing to likely bedding areas and expected travel patterns. Permission is always the next step, since most Kansas land is in private ownership. Even on WIHA properties, open access is restricted during summer months. Always ask landowners before entering private property.

> Fortunately, hot, midday conditions usually allow field scouting on foot. Deer should be

bedded in heavy shade, well away from the feed. This allows some legwork around the field edges and even on adjacent trails without leaving telltale scent. Scent quickly dissipates under a hot sun. Of course, never enter the deer's habitat if it isn't necessary. Simply watching from a hillside or a distant tree often provides ample scouting information without risking discovery.

However, sometimes a mission is warranted. I often need more detailed knowledge to set up for evening photographs at close range. Too, I may put a trail camera on a feeding pattern. Both of these require closeup scouting. Bucks traveling in cover on an entry trail are normally relaxed and intent on their meal, and therefore less likely to spot trouble. Combined with the fact that the biggest bucks are sometimes slow to show themselves, I like to photograph a hundred yards or so from the feed. Foot scouting allows me to find and ready a hiding place along the deers' route.

Hiding directly along the field edge is risky for several reasons. First, deer enter the field cautiously, alert for the slightest danger. This increases your risk of detection. Assuming animals enter and feed normally, you've still got to exit without alarming the herd. Depending on the field and adjacent habitat, this is not always possible. Once you've spooked a herd of summer whitetails on feed, the jig is up with respect to watching trophy bucks. So plan carefully any close-up scouting stands, paying attention to wind direction, noise, and line-of-sight.



Even during summer, big bucks stay in shadows and may not come out until dusk. Quality optics help gather light for the best views while scouting during low-light times.

Trail cameras can be used anywhere they can be checked without detection. This means placing them well away from expected daytime bedding areas. If a well-used buck trail enters the field, attach the camera on any existing post or tree that will not attract attention. Where possible, I always aim my trail cam-

eras toward the north to avoid lens flare at sunup or sundown, when deer are most likely to pass. Also, position the camera for a broadside view if possible, about 15 feet from the trail.

Optics are essential in scouting summer deer. Depending on the set-up, binoculars are often adequate, but spotting scopes can be



helpful in judging potential trophies. Summer bucks are accommodating, often entering feed in broad daylight, but they are most visible during the twilight period when a large objective lens helps optics gather light for the best detail. You don't need \$1,000 binoculars, but by the same token, \$15 models cannot deliver adequate resolution in poor light. Given a choice, I prefer "faster" 8x42 binoculars over 10x42 binoculars, even though the magnification is reduced.

A tripod or beanbag is helpful in steadying the optics for a sharp image. Handheld binoculars can seriously affect a view in dim light. Only when a spotting scope or binocular is fixed in place can it deliver the best scouting performance.

Learning about an area's big bucks in summer can help determine where to hunt in fall. This is especially true in timbered or riparian habitat, where a buck's home range is more restricted. If you live in such a place, the probability is high that a big buck seen in July will remain close.

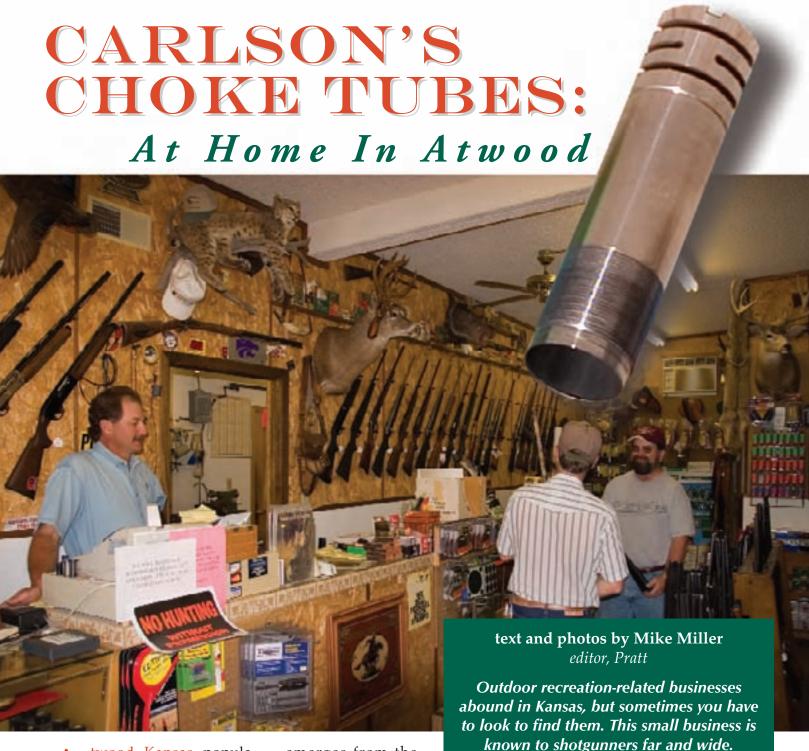
But open country deer may be more nomadic. I've filmed July busters that were never seen again that year, only to have them return the following summer. Of course, that may mean only that the biggest bucks didn't intend to be seen at other times of year, but it may also be true that some bucks move miles between summering and wintering quarters.

I believe that was true for a buck I filmed several times late last summer on a milo feeding pattern. Watching from a distance, I saw this buck travel three to four miles one way each day, returning from the feed. Once hunting season arrived, I neither saw the buck again, nor found his shed antlers anywhere along his normal route. I concluded that he simply left the area.

Even so, it gave me something to watch for this year. If "Moses," a giant whitetail, was filmed as he made his way to Pigweed.



the big bucks are going to move in the open, it will be during summer. Just knowing a bruiser is out there somewhere makes it easier to get out of bed on cold winter mornings. And who knows? You might just cross trails with a star of the Summer Show.



twood, Kansas, population 1,175, is a long way from just about anywhere. It isn't hard to find, but you need a reason to drive there because it's not on the way. If you shoot a shotgun, you have a reason: Carlson's Choke Tubes.

Turn north off I-70 at Colby, and follow Highway 25 north. Twenty-five miles later, Atwood emerges from the shortgrass prairiewheat field checker-

board. A billboard announcing Atwood as the home of Mike Hayden, Kansas' 41st governor, settles any doubt. However, finding Carlson's is a little tougher. The company's unassuming presence belies its impact on the shotgun shooting community.

There are no billboard signs, no fancy entrance drive – not even a small neon sign. Just a former county maintenance complex that's been converted into the headquarters of a family business that sells more than 80,000 shotgun choke tubes a year. That's right, 80,000-plus choke tubes – a year.

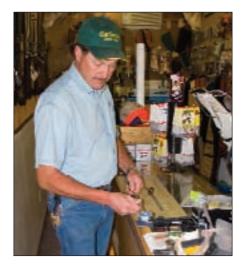
Inside Carlson's front door, Scott Carlson, his wife Debbie and son Shane are busy. Scott is a gunsmith with more than 25 years of experience. Although he trained at Trinidad State Junior College/NRA Gunsmithing School, it's in his blood. His father is a gunsmith in northeast Nebraska. Shane is the company's marketing and sales manager, and Mom works in the office ("She signs my checks," Shane boasted as he introduced her). There are only three other full-time employees, and a couple of local high school students work part time. But this family company supplies choke tubes to the likes of Cabela's, Scheels Allsport, and Mills Fleet Farm, as well as vendors all over the country. Forty-two Kansas retailers carry their choke tubes. They have dealers in Canada, Greece, England and Australia, and sales from their website www.choketube.com is increasing every year. In addition to the choke tube business, the building houses a full-service shooting and hunting retail store. Scott works behind the counter, selling new and used guns, ammo, and other accessories, when he isn't in the shop working on guns.

Scott began installing interchangeable choke tubes in the early 1980s when he worked for Wichita Arms. Until the mid-1980s, shotguns came from the factory with fixed chokes. Most hunters purchased a gun with a modified choke, which was a little tight for quail and doves and a little too open for late-season pheasants or turkeys. To shoot an open choke like an improved cylinder, or skeet, you had to buy an extra barrel or a



It's not fancy — there isn't even a "Carlson's Choke Tubes" sign — but 80,000 shotgun chokes a year come out of this unassuming, family-owned shop in Atwood.

different gun. When screw-in choke tubes hit the market, gunsmiths like Carlson became busy machining barrels to accept tubes. Carlson developed his own reaming tools and technique, and he's kept busy doing it for 20 years. After a stint with Wichita Arms, Scott went to work with Bell and Carlson in Atwood, a company that specializes in building custom composite stocks, now located in Dodge City. In 1988, Scott took over the Atwood business on his own. He soon began designing



Scott Carlson measures the inside diameter of a shotgun barrel while minding the retail store counter.

and machining his own choke tubes.

The original market was hunters, but a new shotgun game called sporting clays was sweeping the country in the mid-1980s. Sporting clays involves shooting pairs of targets in a variety of settings and distances. Sporting clay shooters became fanatics about chokes. In the early days, shooters pulled carts with several guns to give them a choice of chokes. Today, they simply switch choke tubes to give them the best chance for success, depending on the target presentation, the type of target and the distance of the shot. Many competitors shoot over and under shotguns, which gives them two choke choices on every pair and, of course, the need for more choke tubes. Recently, hunters have begun putting more emphasis in choke selection, especially when shooting non-toxic shot required for waterfowl hunting. Having the right choke for the gun, the brand and load of shell, and the type of hunting can make the difference between bagged birds

and missed birds, or worse, lost birds. The interchangeable choke has become an integral part of shotgun shooting.

Another advantage to the screw-in choke tube system is it makes one shotgun much more versatile. Today, you almost have to special order a fixed-choke gun. Just about every hunting and competition shotgun purchased today comes with a selection of screw-in chokes — one gun for all your hunting and shooting. But don't trade in your favorite old hunting gun. A skilled gunsmith like Carlson can install a screw-in choke system quickly and inexpensively (Carlson's have one-day turnaround on most jobs, and installation on a single barrel gun with three flush choke tubes is \$125). Your old 870 can now be used for quail hunting in thick cover by simply installing the skeet (SK) or improved cylinder (I/C) tube. Spooky, late-season pheasants? No problem, just take out the I/C choke and put the modified (M) or full (F) choke in. Ducks over decoys with steel shot? You



Shane Carlson stands in front of a wall full of chokes sorted, labeled and ready for distribution. The younger Carlson handles marketing and sales.

might want an I/C or you could even try a light modified (LM).

Many of the major firearm manufacturers have developed their own choke designs. So, for example, a Browning Invector Plus tube won't fit in a Beretta's barrel. Carlson's manufactures chokes to fit just about any model and brand of firearm. In fact, their catalog lists more than 90 different choke tube types and gun makers they provide chokes for.

Today, the choke tube business has evolved to more specialty applications. The Carlsons are busy designing and testing new chokes for use with many of the non-toxic shot types used in waterfowl hunting. The non-toxic shot types have different ballistic qualities, and most are harder than lead and therefore require different choke tube designs.

Another growing market is the turkey hunting choke tube. Turkey hunters generally shoot at the turkey's head while it's stationary, aiming the shotgun rather than pointing. Turkey hunters want a tight, dense pattern to ensure a clean kill, and turkeys are big birds so shot size 6 or larger is used. Carlson's produces a variety of chokes for turkey hunters. In fact, a turkey choke Scott designed for use with steel shot won a national turkey target contest in 2002. In these contests, competitors shoot at a target with a turkey head silhouette and a red-colored zone about 2 inches in diameter from 40 yards. The winner is the one



Choke tubes aren't machined at the shop, but all are measured for specifications, then laser labeled and packaged. Larry Allahman operates the shrink-wrap package machine above. Carlson's chokes are sold in the U.S., Canada, Greece, Australia, and England.

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with the most pellets in the red circle. Some of the choke tube companies sponsor shooters to use their tubes, hoping for notoriety if they win. The winner of the 2002 contest simply called Carlson's and bought the choke shortly before the competition. Consequently, the Carlson's turkey choke is well known among serious turkey hunters.

Another specialty choke tube Carlson's has been working on is called the Dead Coyote Choke. It's an extended tube developed specifically for use with Hevishot, which is a specialty nontoxic shot type developed for waterfowl hunting. While nontoxic steel shot is lighter than lead, Hevi-shot is actually heavier than lead, which means it maintains velocity and energy at longer distances than steel or even lead. These qualities make it a good candidate for predator hunters, who often use shotguns with large shot for close-range hunting. However, large pellets, especially those made of materials harder than lead, like Hevishot, generally don't pattern well through a tight choke. Carlson's has developed a tube



Scott and Shane put up a patterning target before testing a turkey choke. Carlsons encourage hunters to do their own pattern tests to learn more about the performance of their shotgun, particular chokes, and different loads and brands of shells.

that will keep 100 percent of size T pellets from a 3 1/2-inch, 12 gauge shell within a 30-inch circle at 40 yards – a lethal combination for coyotes. The Dead Coyote choke tube should be widely available by next fall.

"We're excited about the Dead Coyote choke," Scott said. "We think predator callers will really like it."

Quality is important to Carlson's. Nearly all of their tubes can be used with all shot types (the exceptions are some of

extra-full turkey chokes), even the very hard, non-toxic materials. Scott says he uses only 17-4 stainless heat treated in a 900 condition to ensure that threads won't seize under pressure from steel shot. While the tubes are no longer manufactured in the Atwood shop, all are built to Carlson's blueprints and specifications by contract machinists using materials ordered and purchased by Carlson's. Every tube is measured and inspected by hand at the Atwood shop to ensure that it meets specifications. Then the tubes are laser labeled on the outside cylinder to note the gauge, type, constriction and types of shot that may be shot through it. Extended tubes have the abbreviation of the restriction lasered into the knurled extension. Packaging is all done by hand in the shop.

"This whole wall is devoted to Cabela's," Shane said as he waved his hand toward a wall with dozens of packaged chokes neatly organized and hanging on hooks. "We want to be ready when they send an order."

All choke tube designs are



Shooting from a rest allows Scott to determine the effectiveness of the choke and load and also tells him about the gun's point of impact.

thoroughly tested before they are put on the market. And pattern testing is something Scott promotes to shooters.

"It's normal for a hunter who buys a rifle and scope to take it out and sight it in. But most shotgun shooters don't "sight in" their shotguns. They really should test their pattern with different loads and chokes to see how they perform."

Pattern testing a shotgun can tell you how well a certain choke performs, which can vary depending on the gun and the choke tube - even the brand of shell in a similar load can make a difference. Knowing how many pellets a certain load and choke keep within a 30-inch circle at a known distance will help you determine the effectiveness of that combination for specific hunting applications. You will also learn your shotgun's point of impact, which isn't always where you think it is.

The variety of choke tubes available from this small-town



Carlson's has worked extensively with Hevi-Shot, a specialty non-toxic shot that is actually heavier than lead. Their Dead Coyote choke, is designed for predator hunters who use the Dead Coyote Hevi-Shot cartridge of size T shot.

is mind-boggling. shop Carlson's provides chokes for 160 different choke families and produces 700 different individual choke tubes. The reputation of the business is based on quick turnaround on gunsmithing service, quality products and a lifetime warranty. Other products available through their catalog or website include Carry Calls predator calls, a hammer expander for handguns, choke wrenches, including a top-selling speed wrench, pattern targets and shotgun sight beads.

Why Atwood? Scott likes the rural community, and he likes to hunt and fish. The wide-open northwest Kansas landscape suits this family just fine. Both Scott and Shane proudly pointed to a bulletin board cluttered with hunter photos where a snapshot of younger sister Sydney with a 200-plus-point mule deer buck stood out. The walls of the gun shop are filled with trophy-class deer heads, all taken in Rawlins County. It's a recurring theme within this series of articles about outdoor-related Kansas businesses: Kansas is a good place to establish a business, but it's a great place to live, raise a family and enjoy the outdoors. The people, quality of life, and abundant outdoor opportunities keep these businesses here.

So it works out pretty well. The Carlsons have a successful family business and can live in a charming, rural Kansas community. And even though Atwood is a long way from just about anywhere, Carlson's Choke Tubes keep it within



Scott reams a fixed choke barrel to prepare it for screw-in chokes. Custom screw-in choke tubes can make your favorite fixed-choke shotgun much more versatile.

Hunter Education Made Fun

text and photos by J. Mark Shoup associate editor, Pratt

A new delivery of the Hunter Education course is designed to fit students' busy schedules and provides hands-on training not normally accommodated in the classroom.



Kansas Hunter Education instructors have certified more than 400,000 students. And by all accounts the program is achieving its mission. Today, hunting accidents are extremely rare, and hunting is one of the safest outdoor activities.

However, because of state and federal requirements, 10 hours of instruction are required. In many cases, this has meant long hours in classrooms over several evenings for young students. And today's youngsters have a full plate of activities that compete for their time. There was concern that the standard hunter education course was becoming a deterrent to recruiting new hunters.

That's why a new type of course is being provided. I learned about the "alternative delivery" course from statewide Hunter Education

Program coordinator, Wayne Doyle, as I was preparing for a spring class in Pratt.

"Basically, the students go through the International Hunter Education Association's online course before coming to classroom," Doyle the explained. "They bring the test from that course to the classroom and take a short pre-test to show they've actually done the online work. We spend some time in the classroom. maybe an hour or so, and then the rest of the time is spent with hands-on stuff outside."

The beauty of this approach is that it would require only one day away from home for the students, eliminating evenings that sometimes conflicted with school events. It all sounded pretty exciting, especially the inclusion of live clay target training. Doyle came up with some ideas for the day, and I helped line up instructors and

publicized the event.

The new option works like this: Several days before the class, students log on to the International Hunter Education Association's (IHEA) home website, study http://homestudy.ihea.com. Here, they are taken through information regarding hunter education, hunting safety, hunter responsibility, outdoor safety, wildlife conservation, and hunting opportunities. Each segment includes a test that must be taken until the student gets every question correct. The home-study portion of the course takes from one to six hours, depending on the student.

The final portion of our course was scheduled for a Saturday, when students met at the Pratt Gun Club with their completed online courses. They handed these in and then took a pre-test — a 15-minute, 25-question quiz. To continue

with the course, students were required to get 22 correct answers.

Following this short quiz, the students were given about an hour of classroom instruction on hunter ethics, laws, game identification, and safe firearms handling. Then the real fun began.

From 10 a.m. to 3:30 p.m. (including a lunch break), the students rotated through four hands-on learning stations featuring a Laser Shot hunting simulator, safe gun handling, field obstacles, and live shotgun fire on the range. Approximately 45 minutes were spent at each station.

After completing the stations, students returned to the clubhouse to take the same final test that all hunter education course students take.

I enlisted Mike Miller, who coordinates the agency's Pass It On program and conducts wingshooting clinics all over the state, to lead the shooting station. Monica Bickerstaff, assistant Hunter Education Program coordinator, led the safe gun handling segment. Ed Augustine, who conducts Laser Shot clinics statewide, would



After the lecture, students break into groups and spend time at four different field learning stations.



The students take a pre-test to prove they completed the online course before spending about an hour in lecture, covering major topics.

man that station, and Doyle volunteered to cover hunter ethics and field obstacles. I would welcome the students, provide an overview of the day ahead, and administer the final test.

We had 23 students, ranging in age from 11 to 57. All passed the pre-test, and Doyle reviewed material before the field portion.

The Laser Shot provided each student with several opportunities to test themselves against this computer simulator. Using real guns modified to project a laser light, they were presented video targets on a screen. Flying ducks and pheasants in natural settings provided challenging targets. Each time up, students had 30

shots of all angles, and they had to reload after every three shots by aiming at a "reload" icon on the screen and pulling the trigger. This portion of the system can be made more difficult, as well, by speeding up the flight of the birds and narrowing the pattern of the shot.

Perhaps the most instructive part of

the Laser Shot system is the shoot/don't-shoot big game section. First, the students were shown a projected image of each animal — deer, elk, and antelope — with the image cut in half to expose the vital organs. This image is presented with the animal standing at different angles to the shooter, teaching the students what positions present the best chance of a clean kill.

Following this, students took turns with a rifle and actual video footage of big game animals in the wild. Depending on the angle the animal presented, obstacles such as brush, and whether or not the shooter could see what lay beyond the target, the student had to make a decision whether to shoot. Scores were based on the decision and the placement of the shot. Points were taken away if they shot in don't-shoot situations.

At the safe gun handling station, Bickerstaff introduced the students to 12 different firearm types, including bolt, lever, and semi-automatic rifles; pump, single shot, and semi-automatic shotguns; and inline, flintlock, and caplock muzzleloaders. Students learned to identify the action and caliber or gauge of

each firearm, pick out the proper ammunition, load and unload them with dummy ammunition, and store them safely in a vehicle.

In the field walk portion of the course, Doyle equipped each student with an unloaded firearm and talked about field gear, safe gun handling, zones of fire, and causes of accidents. He put the group of four or five in line as if they were pheasant hunting and talked about zones of fire and what is and isn't a safe shot. Each student also practiced different ways of safely crossing a fence, with other hunters and alone.

Doyle demonstrated the value of wearing hunter orange and finished the segment with range-estimation exercises.

The live-fire station was fun and instructive. Some students had never shot a gun, and many others were inexperienced shooters.

Under Miller's patient tutelage, students were taught to point, not aim; to look at the target, not the barrel; and to



Hunter Education coordinator, Wayne Doyle, taught students how to safely cross a fence.



Assistant Hunter Education coordinator, Monica Bickerstaff, provided hands-on training with a variety of firearms and action types.

take a proper stance. Targets were incoming and designed to present an easy shot at fairly close range. By the time they had completed the session, every student had broken clay targets. Most were able to hit at least one double, and every student shot plenty of shells.

Once all students had completed each session, they spent about 20-30 minutes taking the final test. They all passed, and many got 100 percent of the questions correct.

Alternative delivery is increasingly available in hunter education courses across the

state, and any course organizer may use this method. To find a course in your area, check the KDWP website or phone 620-672-5911 and ask for Hunter Education.

There comes a time when every young hunter has to take a certified hunter education course, but the alternative delivery course may have kids wanting to take it sooner rather than

later. In fact, it may even entice parents and seasoned hunters to take a refresher. I know that day, I was wishing I'd been a student and not an organizer.

Hunter Education Requirements

Anyone born on or after July 1, 1957, must successfully complete an approved course in hunter education before hunting in Kansas except that anyone 15 years old and younger may hunt without hunter education certification provided they are under direct supervision of an adult 18 or older. Hunters 12 years of age and older may hunt without adult supervision provided they possess a valid hunter education certificate and the appropriate licenses and/or permits. No one younger than 11 may be certified.

There is no minimum age to apply for and receive a big game permit, and youth younger than 16 may hunt without hunter education, if supervised by an adult.

Tiny T. Rex

Collared Lizards In Kansas

Travis W. Taggart

Associate Curator of Herpetology Sternberg Museum of Natural History

photos by Mike Blair Like miniature dinosaurs, Eastern collared lizards are fascinating reptiles common in parts of Kansas.

wew events are more impressionable than a youngster's first encounter with an Eastern collared lizard. Fortunately, it can happen to most Kansas youth just a short drive from their homes. I first came face-to-face with this lizard along the spillway at Bourbon State Fishing Lake in southeastern Kansas. As a wide-eyed second grader, it was easy for me to imagine the green reptiles as miniature T. rex, and to dream that I had entered another place — in a miniature scene from the Cretaceous of prehistoric time. They were sitting alertly on every other large rock. As I approached they would scamper for cover, occasionally lifting their front feet and running on their hind limbs with their tails elevated off the ground. I would just sit motionless — and watch and wonder, how was I going to catch one?

My father led these excursions, and each trip only heightcuriosity ened my appreciation for these unusual lizards with the over-sized heads. Usually, we were out fishing, but we always found time to flip a few rocks and chase some lizards. Looking back, it must have been entertaining for him; after demonstrating to me how to catch the reptiles, he would turn me loose, while he kept an eye on me from a distance. Eastern collared

and a large powerful head for gripping and crushing live prey. These reptiles have excellent evesight and spend much time resting on perches above the surrounding landscape. When a meal is spotted, it is run down swallowed whole. Occasionally, a moth is snatched out of the air as it flies near. The lizard then quickly returns to its rock. Collared lizards aren't picky eaters; the only two requirements for a potential meal are that it is moving and

stand sideways, high on its legs, and curl its tail around to the front, then gape open its mouth, displaying a patch of black pigment inside. It may attempt to leap towards an aggressor and occasionally give a short hiss. It's almost comical to see such a bluff from a creature so small but in the lizard's day-to-day life, it must be a beneficial behavior.

The Kansas distribution of Eastern collared lizards is interesting. Collared lizards are not evenly distributed across the state. Instead, they are typically found only in the vicinity of suitable rock outcrops. In one rare exception, a population of these lizards has made use of mammal burrows in loess bluffs in a portion of Meade County that lacks any outcroppings. Generally, the larger and flatter the rocks, the better the lizards like an area. Collared Lizards are abundant throughout the Flint Hills, the Smoky Hills along the Smoky Hill, Saline, and Solomon rivers, and in the Red Hills of southcentral and southwestern Kansas. They are also known from several locations in the eastern guarter of the state, south of the Kansas River; however these populations are typically isolated and local. A single population is known from the vicinity of Bear Creek in Stanton County along the Colorado border and is corroborated by other such lizards found in adjacent southeastern Colorado. These reptiles are absent from the more recent geologic deposits such as alluvium, dune sand, loess, and glacial drift which is the predominant land cover in much of the western half of the state and in the northeast.



The rock outcroppings, shown here in Barber County, are prime collared lizard habitat. The larger and flatter the rocks, the better lizards seem to like them.

lizards are agile and fast, which makes them hard to catch over the relatively open terrain they naturally inhabit. More important to me at the time, they bit hard, and they held on — and chewed. But I was young, and the lizards were really never in any great danger of me capturing them.

The Eastern collared lizard is a wary predator, scaly and green with long claws, a strong tail, that it fits into the lizard's mouth. These small dinosaur look-alikes eat small mammals, all manner of arthropods, other lizards and snakes, and even small birds. In turn, they are preyed upon by birds, mammals, bigger collared lizards, and snakes. Unlike most other lizard species in Kansas, the Eastern collared lizard is unable to regenerate its tail once lost. When cornered, this reptile will

Where they occur, you can see Eastern collared lizards perched atop large rocks during sunny warm days from late March to early November, when the air temperature reaches 70-90 degrees. Like all other reptiles in the state, Eastern collared lizards are coldblooded and derive the energy necessary for their metabolic processes from the external environment. There is fierce competition among male Eastern collared lizards for the best rocks to occupy. This competition is generally nonviolent, consisting of

head-bobs and push-ups; however, when two lizards similar in size meet, one may aggressively chase the other away.

Collared lizards are active during the day, and at night retire to burrows or tunnels near or under their basking rocks where they sleep. In late



The sexes are easily distinguished in collared lizards. Males are more colorful, usually green, especially during the spring breeding season when they may be bright green to blue.

October, they retire deep into these same burrows to avoid freezing temperatures and await the arrival of warmer temperatures in late March to April.

The Eastern collared lizard gets its common name from the two black rings on the neck, which resemble a collar. There

> are several species of collared lizards found throughout the southwest United States and Mexico, but ours occupies the eastern most range. The Eastern collared lizard reaches the northern limits of its range in Kansas. It can also be found southeastern in Colorado and southwestern Missouri, and south through northwestern Arkansas, Oklahoma, eastern New Mexico, and

central Texas. It is the state lizard of Oklahoma, where it is commonly referred to as the Mountain Boomer. The name is a misnomer of sorts, and coined on the misconception that these lizards were capable of producing loud, far-reaching calls. The only vocalization they are capable of is a nearly inaudible hiss when threatened.

Their scales are small and granular, giving a very fine, smooth appearance. They shed their skin, not en masse as snakes do, nor cell-by-cell as we do, but rather in rough-edged, dime-sized patches. They are large lizards, reaching nearly 14 inches in length, with the head well differentiated from the neck. In most types of reptiles, it is often difficult to determine the gender of a specific individual. Eastern collared lizards are a notable exception, especially as adults. The males are green, and during the spring courtship period, they are bright green to blue and often have large vellow



The name-sake bars are clearly visible. Collared lizards can grow to a length of 14 inches and while fleeing, they may lift their front legs and run only on their hind legs.

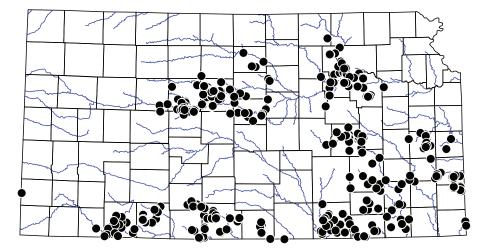
Wildlife@Parks



Easily seen during the day basking on rocks and feeding on any creature that ventures close, collared lizards retreat to dens under rocks during the night.

heads and occasionally narrow yellowish bands or spots along the sides. In contrast, the females are drab brown to gray with flecks of tan and often irregular tan bands along the sides. During late spring and early summer, mature females have several bright orange or red bands on the neck and along each side of their bodies, but otherwise retain their normal coloration. Both sexes have an irregular pattern of widelyspaced small white dots on the top of their body and tail.

Eastern collared lizards can be difficult to capture. During cool weather, they can be found snuggled up under rocks in a relatively torpid state where they are slow to move, and thus easy to pick up. However, during warm weather or sunny days, you'll often need help one person to lift a rock and another to see which nearby rock the quarry darted under. This process is repeated over and over (and typically involves lifting the same rocks several times) until someone makes a



The map above shows Eastern collared lizard locations. Populations of these lizards appear to be healthy and stable where suitable habitat exists.

successful lunge and pins the lizard against the ground. At this point, the collectors are either thankful for the leather gloves they're wearing, or wishing that they would have thought to wear them.

The collared lizard is non-venomous, and its teeth are actually quite small and of little consequence in its bite. The discomfort comes from the force of the bite, a trait evolved to crush grasshoppers but effective at pinching unprotected fingers as well. Once controlled in hand, they can be easily and safely carried by grasping them around their body just behind the head. The lizard can then be placed temporarily in a pillow case or other cloth bag for further examination or release. Actually, the only real danger associated with hunting and chasing collared lizards comes from: 1) rolling the large rocks over your own feet, 2) diving for a lizard in prickly-pear cactus, or 3) lifting a really big rock only to find that the space underneath it is home to a nest of hornets. All of this makes for great fun amidst some unusual language and much screaming.

Another catch method that may be used while the animals are active is noosing with monofilament line tied to a long thin pole. This technique requires some practice for the collector to become proficient. If you maintain that critical distance between yourself and the lizard, the reptile will allow you to slip a loop of fishing line attached to a long pole around its neck. In using this method, care must be taken to secure the lizards as quickly as possible to prevent them from thrashing around, although I have yet to

see one injured by using this technique. Back in the late 1960s, well-known herpetologist Joe Collins perfected this technique. He used an extra-long collapsible fishing pole with a small monofilament noose on the end. Collins and a companion would drive a car slowly along a rural road bordered with large rocks. After driving near a collared lizard (they are often accustomed to cars), he simply extended the pole out over the lizard, noosed the lizard, and jerked the pole until it collapsed back into the car. He would unhook the lizard, drop it in a container, and continue to cruise for lizards. Collins was legendary for his preference to collect specimens while riding in comfort whenever possible.

For most collectors, Eastern collared lizards make terrible long-term pets. Keeping them happy and healthy requires large enclosures and the ability to monitor and adjust nutrition, lighting, temperature, and humidity. Individual lizards can,



In May or June, the female will lay 1-13 leathery eggs in burrows under the rocks. Eggs hatch in about 10 weeks. A female may lay two clutches during a warm spring.

however, be kept quite satisfactorily in a terrarium for a short period of time, allowing observation. They are unlikely to eat for very long in captivity and should be released where captured after a couple of days.

Eastern collared lizards are known to live 10-15 years in captivity when properly cared for. In nature, they would seldom reach that age. Male lizards are usually sexually mature by their first spring, although they seldom get to mate due to the competition from older and larger males. Males typically reach their maximum size by age three, while smaller females will continue to grow slowly over their entire lives.

Courtship and mating takes place in the spring following emergence from winter dormancy. Depending on body size, the female will lay 1-13 round, leathery-shelled white eggs in burrows or tunnels under rocks during May and June. During a warm spring, it is not uncommon for a female to lay two clutches of eggs up to one month apart. While incubating, the nest is vigorously defended by the female. The eggs hatch approximately 10 weeks later in August and September. The 3- to 4-inch young resemble miniature adults and immediately fend for themselves.

Other than natural predators,



Young collared lizards immediately fend for themselves after hatching. These newly hatched collareds were oblivious to the sharp cactus spines.

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Eastern collared lizards have few threats in Kansas. Due to differences in general habitat preference and use, interactions with humans are relatively infrequent when compared to many other reptile species in state. There seems to be little evidence to suggest that populations have changed much in number or geographic size over the past 50 years.

While perhaps not as ornate and prickly as the Texas horned lizard, nor as unusual as the Western slender glass lizard, the sight of an Eastern collared lizard on its perch is every bit as impressive. The next time you're in a rocky area, take time to scan the tops of the largest boulders for this large lizard. Try to approach one and marvel as it aggressively bobs its head up and down in an attempt to scare you away. See just how close you can get to it, before it beats a hasty retreat beneath the boulder or inside a crevice. It's the closest thing to a T. rex that will ever run from you.



Want to see 'em?

Great public places to observe Eastern collared lizards on sunny days are Big Basin Prairie Preserve (Clark County), Bourbon State Fishing Lake and Wildlife Area, Chase State Fishing Lake and Wildlife Area, Clark Wildlife Area, Crawford State Park, Cowley State Fishing Lake, Geary State Fishing Lake and Wildlife Area, Hollister Wildlife Area, Kanopolis State Park, Meade State Park and Wildlife Area, Montgomery State Fishing Lake, and Wilson Wildlife Area.

Want to learn more?

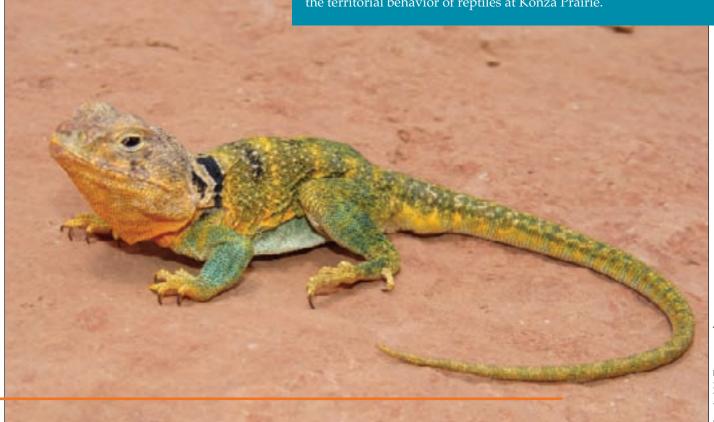
Resources for further information on Eastern collared lizards in Kansas: *Amphibians and Reptiles of Kansas*, 3rd Edition. Joseph T. and Suzanne L. Collins, 1991. University of Kansas Press, Lawrence; *Kansas Herpetofaunal Atlas*, http://www.fhsu.edu/ksfauna/herps; Kansas Herpetological Society. http://www.ku.edu/~khs; The Center for North American Herpetology, http://www.cnah.org

Fun Fact

The largest Eastern collared lizard from Kansas was a 302 mm (12 inches) male collected by Charles J. Cole on August 27, 1963, in Chase County.

Collared Lizard Research In Kansas

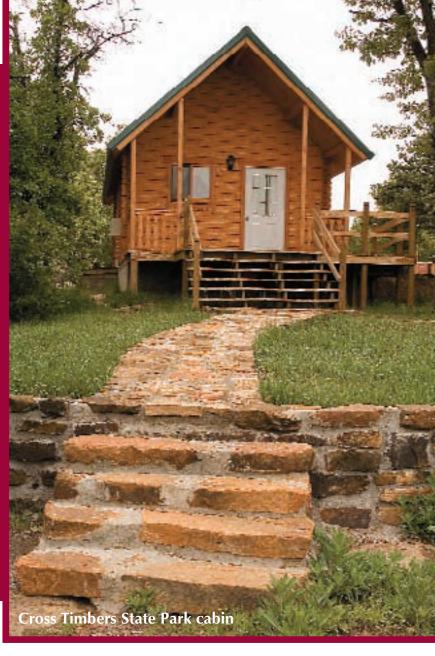
Eva Horne, assistant director of Konza Prairie, and instructor and research assistant for the Division of Biology at K-State, is studying the territorial behavior of reptiles at Konza Prairie.



Travis W. Taggart photo

STATE PARK TABLE TRoughing It"

by Kathy Pritchett administrative assistant, Pratt photos by Mike Blair



Recent additions of rental cabins at select Kansas state parks have proven popular with patrons, and there are plans to build more.

onstituents have asked for years if Kansas state parks had cabins to rent, and until fairly recently, the reply was "no." Cedar Bluff was first to change this, and their success has led to a gradual inclusion of cabins at many state parks. Today, cabin camping is available in half of Kansas' 24 state parks.

State park cabins began in 1993, when Cedar Bluff State Park enclosed a couple of old mushroom shelters into primitive cabins. These enjoyed immediate use. El Dorado State Park followed in 1997, when the park's friends group obtained a low-cost loan to add five primitive cabins at El Dorado. By 2006, five additional modern cabins and a laundry facility were added at El Dorado.

Eventually, Eisenhower and Lovewell enclosed shelters to make cabins known for their unique decor. Mamie's Cabin at Eisenhower is divided into two rooms, while the rustic cabins at Lovewell have native cottonwood paneling and trim. In 2002, the Cedar Bluff Die Hards (Friends of Cedar Bluff State Park) and the Bureau of Reclamation provided funding to update Cedar Bluff's program and construct three modern log cabins. At Cheney State Park, a benefactor provided a low-cost loan to match Land and Water Conservation funds to install seven cabins there in 2002. The Bureau of Reclamation provided funding to add a modern cabin to Webster. With the help of their

Friends Group, Prairie Dog State Park enclosed a shelter in 2004 and another in 2005. Friends group at Milford State Park provided partial matching funds to help build three modern cabins there as a Land and Water Conservation Fund project in 2004.

In 2005, the Kansas Wildscape Foundation, a conservation organization, fund-raising assisted with financing additional cabins at Tuttle Creek, Cross Timbers and Perry state parks. As these loans are retired, they will fund additional cabins. Wildscape is partnering with the Department of Wildlife and Parks, Greenbush Education,

and the Department of Corrections to build the cabins at the correctional facilities as part of an inmate-training program, eventual cabin site.

Perry and Milford, while rustic cabins can be rented at Lovewell, Prairie Dog, El Dorado, Cedar Bluff and Eisenhower. Four modern cabins are also currently under construction at Wilson State Park later this summer. The two modern cabins at Perry must be closed when the water line is in danger of freezing, so they are not available from October until spring.

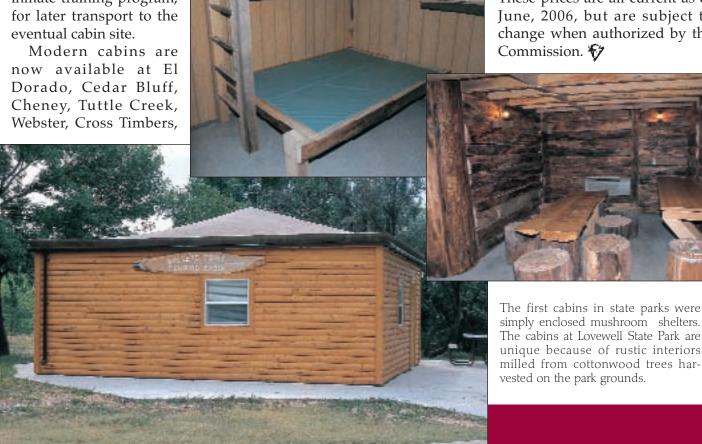
Several other parks are in the planning stages to add, while other parks continue to improve existing cabins. Perry State Park's cabins were pre-fabricated units, similar to the ones at Cheney and El Dorado. State

parks staff and inmates built the two cabins at Cross Timbers from kits. A third cabin is now under construction there as well.

In spite of new and existing constructions, demand for state park cabins continues to outstrip supply. Reservations are often made far in advance for the summer holiday season.

Cabin reservation requires a non-refundable \$10.50 fee, as well as pre-payment for the reservation period. Also required at check-in is a damage deposit of one night's rental fee. This amount is returned if cabins are left in satisfactory condition upon check-out. Weekly cabin rates are also available. To reserve cabins, call the park where you want to rent the cabins.

A summary of Kansas State Park cabins and rates follows. These prices are all current as of June, 2006, but are subject to change when authorized by the



Cedar Bluff State Park (785) 726-3212

Cedar Bluff State Park features two primitive cabins, equipped with beds, tables and chairs, solar light, charcoal grills, and a woodburning stove, which rent for \$35 per night. Also available are two modern two-bedroom cabins, equipped with beds, picnic tables, kitchens with electric stove tops, small refrigerators, bathrooms, showers, and heat and air. These cabins, one of which is ADA accessible, are reservable for \$80 per night. A similar one-bedroom modern cabin rents for \$60 per night.

Cheney State Park (316) 542-3664

Cheney State Park's seven cabins are modern, with a great view of the lake. They feature beds, table and chairs, refrigerator, microwave, bathroom with



Cabins built recently are modern units such as the one at Tuttle Creek State Park pictured above. They include kitchens and bathrooms.

shower, heat, and air conditioning. One cabin is handicapped accessible. These cabins also have a screened porch and a patio equipped with a picnic table. During the prime season (April through September), Friday, Saturday and holiday rentals are \$65 per night. Weekday and off-season rentals are \$45 per night.



The interior of one of the modern cabins includes all the comforts of home with the lake right outside the front door – for those who don't like to rough it.

Cross Timbers State Park (620) 637-2213

Cross Timbers State Park cabins sleep six adults and contain a bathroom with shower, stove, refrigerator, microwave, toaster, coffee pot, table and chairs, and a futon couch. Outside, they also offer a campfire ring with grill. One of these cabins is handicapped accessible. They rent for \$85 per night on weekends and holidays, and \$65 per night weeknights during the prime season. During the offseason, prices are \$75 for weekends and \$55 weeknights.

El Dorado State Park (316) 321-7180

El Dorado State Park offers five small sleeper cabins and two deluxe cabins in the Bluestem Point area, and three deluxe cabins in the Walnut River area. These cabins are all year-round cabins. The sleeper cabins feature a full bed/set of bunk beds, electricity/heat/air conditioner,



About half of the 24 state parks have cabins today, with many more planned for the future. Perry State Park cabins, above, were dedicated in the spring of 2005.

water hydrant-outside, table, four chairs, picnic table, and barbeque grill. These cabins rent for \$35 per night on Fridays, Saturdays and holidays, and \$30 on weekdays. The deluxe cabins offer a bedroom with full-size bed and bunk on top; living room with full-sized bed and bunk on top; kitchen with stove, refrigerator, and microwave; bathroom with shower; table and four chairs; electric/heat/air condi-

tioner; screened-in porch and barbecue grill. One of the deluxe cabins at Bluestem Point is handicapped accessible. Cabins 7, 8 and 9 have sleeping lofts that will accommodate four additional adults. Some of the five modern cabins have sleeping lofts that will accommodate additional people for sleeping. These deluxe cabins rent for \$100 per night for the ADA cabin and \$110 per night for the other deluxe cabins.



This view from the sleeping loft at a Cross Timbers cabin shows the kitchen area.

Eisenhower State Park (785) 528-4102

Eisenhower State Park offers Mamie's Cabin, with electricity, a full-size bed and bunk bed as well as a picnic table, grill, and fire ring. This ADA accessible cabin rents for \$36 per night for two adults and children. Each additional adult is \$5.00 per night.

Lovewell State Park (785) 753-4971

Lovewell State Park offers six primitive cabins. Four are single room enclosed mushroom shelters, two are larger duplex cabins. All offer rustic siding inside milled from cottonwoods native to the park as well as rustic furniture. These cabins rent for \$45 per night for 2 adults and \$5 per additional adult year-round.

Milford State Park (785) 238-3014

Milford State Park offers three modern cabins that will accommodate a family or group of four. One of the cabins is handicapped accessible. All feature bathrooms with showers, kitchenettes with refrigerators, cooktops and microwaves, a full bed and bunk beds or futon, tables and chairs, with shade shelters, barbeque grills and fire rings located outside the cabins. These rent for \$60 per night on Fridays, Saturdays and holidays and \$45 weekdays during the prime season, and \$45 for any night during the off season.



Many parks have handicapped-accessible cabins, such as this new unit at El Dorado State Park. All cabins are popular, so reservations may be necessary during the more popular times of the year. Call the park office well ahead of time to inquire about availability.

Perry State Park (785) 246-3449

Perry State Park has two cabins in the Lake View area, with two more under construction. These are modern cabins that rent for \$65 per night Fridays, Saturdays and holidays during the prime season, and \$55 in the off season. The rental rate is \$55 Sunday through Thursday in the prime season, \$45 in the off season. One of these cabins is ADA compliant; the other three have lofts. During the off-season, the cabins may be closed if there is a danger of the water line freezing.

Prairie Dog State Park (785) 877-2953

Prairie Dog State Park offers two primitive cabins, which do include heating and air conditioning as well as a refrigerator and microwave. These cabins rent for \$45.50 per night for two adults, and \$5.50 per additional adult year-round. Each cabin sleeps at least eight.

Tuttle Creek State Park (785) 539-7941

Tuttle Creek State Park cabins have a full kitchen with refrigerator, stove, microwave, and basic kitchen amenities. Cabins offer a master bedroom with full size bed and a full or queen size sofa sleeper in the living room. One cabin offers bunk beds in the living area as well. Three cabins have a loft, which is perfect for use with a sleeping bag. Each cabin has a full bathroom. Pawnee Cabin is ADA compliant. Each cabin will accommodate up to six people. Cabins are air conditioned and heated. Outside, each cabin has a concrete shelter with picnic table, fire-ring and grill. The cabins rent for \$85 per night on Fridays and Saturdays during the prime season, \$75 for Fridays and Saturdays during the off season, \$65 Sunday through Thursday for the prime season and \$55 a night for Sunday through Thursday during the off season. These rental rates are not available during the Country Stampede.

Webster State Park (785) 425-6775

Webster State Park offers one two-bedroom cabin with a kitchenette and bathroom with shower. This cabin sleeps a total of six people. This cabin rents for \$80 on Fridays, Saturdays and holidays, and \$65 during the week.

Wilson State Park (785) 658-2465

Wilson State Park should have four modern rental cabins completed for public use by late summer of 2006.

More cabin information is available on the KDWP's website at:

www.kdwp.state.ks.us/news/ state_parks/parks_with_cabins



ourning doves are one of the most widely distributed and abundant birds in North America. The mourning dove is also a popular game bird, hunted in 40 of the lower 48 states. More mourning doves are harvested than all other migratory bird species combined. In Kansas about 36,000 hunters harvest about 800,000 mourning doves per year.

Because of the importance of the mourning dove as a migratory game bird, wildlife managers require certain information from which to guide harvest management decisions. Information on dove survival and harvest rates is key to understanding the effects of annual hunting regulations on mourning dove populations. Banding is the primary tool used to obtain this information.

During the summers of 2003-2005, Kansas, along with 29 other states, participated in a three-year nationwide mourning dove banding study. The objectives of this study were to determine mourning dove harvest rates, estimate annual survival, provide information on the geographical distribution of the har-

vest, and develop and refine techniques for a future operational dove-banding program.

Banding will continue in summer 2006 and in the future. Doves are marked with metal leg bands containing a unique number and a toll-free 1-800 telephone number that hunters can use to report the band. In return, wildlife managers receive important information on the number of banded doves harvested and location and date of harvest. Since 2003, more than 95,000 doves were trapped and banded in 30 states.

In Kansas, mourning doves are captured in wire ground traps baited with millet or sunflower. Doves enter the trap through the funnels in search of the grain, but cannot get out because of the trap's design. Traps are checked regularly and trapped doves are removed and carefully examined to determine their age and sex based upon feather color and patterns of feather replacement and wear. Doves are then banded with U.S. Fish and Wildlife Service bands inscribed with unique numbers and the 1-800 telephone number and immediately released.

Last summer, more than 1,400

by Helen Hands

migratory bird biologist, Cheyenne Bottoms Wildlife Area

photos by Mike Blair

Kansas researchers banded more than 1,400 mourning doves last year to learn about harvest rates. Hunters are reminded to look for bands this fall.

mourning doves were banded in Kansas. During 2003-2005, 142 Kansas-banded doves were shot by hunters and reported to the Bird Banding Lab. About 75 percent of these doves were shot in Kansas

The hunter is a critical link in this mourning dove banding study. By checking all harvested doves for bands and reporting banded doves, you help us manage this important migratory game bird resource. Because dove bands are very small, hunters can easily overlook them. We are asking dove hunters to carefully check all doves harvested for the presence of a leg band. If you harvest a banded mourning dove, please call 1-800-327-BAND (2263) to report it. Banded birds may also be reported on the internet at http://www.pwrc.usgs.gov/bbl/ bblretry/webrec.cfm. Hunters can keep the bands and will be provided a certificate identifying the age, sex, date, and location the bird was banded. 🕏

by Mark Kumberg Pratt Fish Hatchery manager

photos by Mike Blair

As water warms in the summer, it loses its ability to hold dissolved oxygen, which is important to all aquatic life. Fish culturists monitor oxygen levels throughout the summer and take measures



Then you look at a pond or lake, you see a habitat teeming with life. Beneath the surface, a host of insects, invertebrates, and fishes live in a complex relationship. Waters can be substantially different with regard to clarity, pH, and chemical purity, but all must have one element to support higher organisms: adequate oxygen levels.

Oxygen is the most important parameter for life. It is essential to the metabolism of all aquatic organisms that breathe aerobically. Air contains 21 percent oxygen by volume, with the remainder being mostly nitrogen. Since oxygen is more soluble in water than nitrogen, the amount of oxygen dissolved in water from air is about 35 percent, with nitrogen making up the remainder.

Most dissolved oxygen in water comes from the atmosphere and from photosynthesis by aquatic plants. Diffusion of oxygen from air is slow unless water turbulence is present. Oxygen produced as a product of plant photosynthesis is the most important source in surface waters. Levels of oxygen at the water's surface are often high due to abundant vegetation near the surface. Less sunlight penetrates deeper water, reducing deeper aquatic vegetation and thus reducing oxygen levels at deeper strata.

Fish obtain oxygen by passing water over their blood-engorged gills where gas exchange takes place. To do this, they either swim, causing water to flow over the gill surface, or open and close the operculum if at rest. This is the trademark "gulping" motion of a stationary fish. The flow of water is opposite to the direction of blood flow through the gill filaments, which makes oxygen extraction much more efficient.

Dissolved oxygen (D.O.)

levels in water are affected by several things. One of them is water temperature. The colder the water, the more dissolved oxygen it can hold. Low dissolved oxygen levels are seldom a problem in ponds and lakes during the colder winter season. Very warm water easily loses dissolved oxygen, threatening all aquatic life it sustains.

Atmospheric pressure also affects oxygen solubility. As pressure rises, the solubility of oxygen in water increases. Therefore lakes and ponds at lower altitudes often have higher dissolved oxygen content than those at higher altitudes. A good oxygen meter factors in both temperature and pressure to measure D.O. content in water.

Oxygen depletion is the most common cause of fish kills in natural waters. Low oxygen occurs most often during periods of calm, cloudy, hot weather. Fish kills usually occur in the early morning before the sun comes up which is when D.O. levels are lowest. Since no photosynthesis takes place in the dark, and all living animals and plants are still respiring, oxygen levels are usually lowest right before sun up. Large fish are affected first, and some species are more sensitive than others.

Fish species' tolerance to low dissolved oxygen varies, but most species do well at oxygen levels above 4 parts per million (ppm.) If concentrations get down to 1 ppm, fish swim to the surface where oxygen levels are highest. At 1 ppm and lower, fish begin to die. Long term exposure to sub-lethal levels of oxygen (2-3 ppm) can stress fish to the point where they are much more susceptible to bacterial or parasitic infections. Fish will often quit feeding in this depleted range as well.

Pond oxygen problems occur mostly in the summer. When water is warm, it holds less oxygen and is more difficult to mix because of stratification. This occurs at the same time increasing temperatures cause fish metabolic and respiration rates to rise. Also, bacterial decomposition of organic matter reduces oxygen supplies in ponds dramatically. Overfeeding can cause problems due to microbial use of oxygen as the uneaten feed is broken down.

Lakes and ponds with large amounts of littoral plants, algae or phytoplankton can have a very high dissolved content during daylight hours, but low oxygen at night due to the respiration of these plants. It sometimes helps to use herbicides or algaecides to reduce the plant biomass in water. Treatment



Fish culturists use a dissolved oxygen meter to monitor hatchery ponds through the hot summer months. As the water temperature warms, DO is a growing concern.

should be done carefully, because if too many plants die at once, it compounds the dissolved oxygen problem through microbial decomposition. Usually, it's best to treat only about 25 percent of a pond at a time to avoid this problem.

Summer fish kills sometimes occur in deeper ponds that stratify. Water has unique density qualities, reaching maximum density at 39.4 degrees. During spring, water temperatures are nearly equal at all depths. Nutrients, dissolved gases, and fish wastes are equally distributed throughout the pond. As air temperatures increase into early summer, however, the surface water becomes warmer and lighter, while the cooler, denser water forms a layer underneath. This is called stratification. If a summer rain or cool period occurs, a

pond's surface water may cool enough to "turn over" or reverse the strata, bringing oxygen-deficient water to the top and killing fish in the process.

On a larger scale, reservoirs sometimes experience fish kills during fall when stratified lakes do the same thing. Temperatures of the surface water become colder than deeper waters. Then the denser surface water sinks, forcing the bottom, oxygen-devoid water to mix. Again, this oxygen problem can cause fish kills.

Even with higher dissolved oxygen levels due to low water temperature, winter kill can occur if the lake is iced over and snow covered for several weeks. Aquatic plants cannot photosynthesize to produce oxygen, but respiration still occurs which can cause a severe drop in oxygen concentration. Fortunately, this phenomenon is

not common in Kansas.

There several ways to prevent fish kills due to low oxygen content. If available, flow more water into the pond during hot summer months, especially if it stays calm and cloudy for extended periods of time. Department staff use this technique in hatchery management, drawing water from nearby streams to percolate through the ponds and provide additional dissolved oxygen.

Otherwise, a variety of commercial aerators exist. Most are too small to treat a large pond. The Pratt Fish Hatchery has a modified 6-inch pump that is hooked to the power takeoff of a tractor. The pump is backed into the water and propels two 4-inch streams of water 20-30 feet into the air, exposing small water droplets to the atmosphere. These oxygen rich droplets fall

to the surface, adding several parts per million of oxygen to the water in just a few hours. Pond volume is also mixed during the process, reducing stratification.

Many times, there won't be much that pond owners can do to prevent low oxygen fish kills without spending a lot of money. However, inexpensive oxygen meters can be purchased to help watch for potential problems. A probe dropped into the water provides an oxygen ppm readout on a scale. When this drops below 4 ppm, some actions may be helpful to prevent a kill.

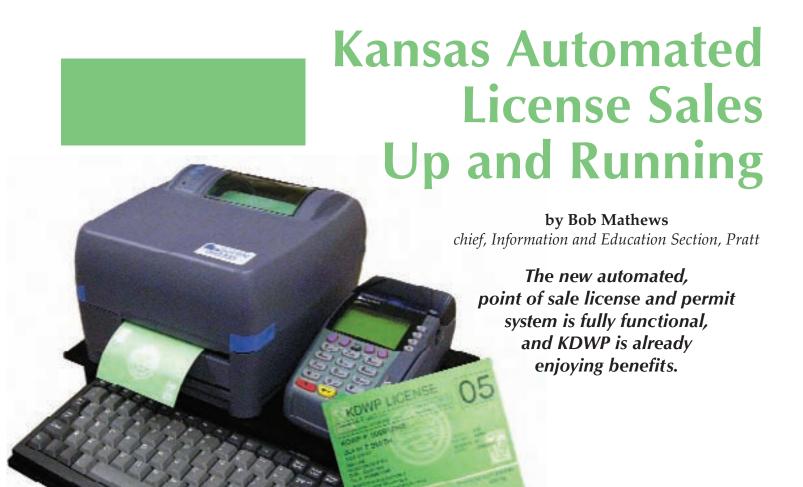
If fish are being fed, the rate should be reduced or stopped when conditions are right for low dissolved oxygen. Aquatic vegetation should be kept under control. Farm pond owners should not exceed recommended fish stocking densities – most farm ponds can support around 300 pounds of fish per acre. Eliminate run-off into ponds from fields to prevent excessive nutrients from causing algae blooms. Ponds with very heavy algae blooms can become oxygen deficient if extended periods of cloudy weather cause algae to die.

Also, expect more problems with older ponds. These usually have higher nutrient levels, lots of sludge and mud, and large amounts of algae and aquatic plants to complicate oxygen problems.

It's always disheartening for a pond owner to experience a fish kill. Many times, nothing can be done about it, but by knowing what causes low dissolved oxygen problems in water, prevention is sometimes possible.



In small ponds, a tractor-driven pump/aerator can be used to increase oxygen levels in the water. Problems usually occur during hot weather, when it's cloudy and calm, and early mornings can be especially critical.



ate one evening, near the end of the 2005 early firearms season in Unit 19, Jeff Clouser received a telephone call from a landowner. The landowner told Clouser, a KDWP natural resource officer based in Lawrence, that he had heard a rifle shot and had recorded the license plate number of a pickup truck that passed by his home a short time later.

Using the license plate information, Clouser identified the owner of the vehicle. He then consulted a 24-hour Kansas Outdoor Automated License System (KOALS) assistance desk and, within minutes, confirmed that the suspect had purchased a deer permit and one white-tailed antlerless game tag.

"When I interviewed the suspect, he admitted that he had shot the doe outside Unit 19," Clouser reported, "but when I asked if I could look at the carcass or meat, he told me that he'd already eaten it and thrown away the carcass tag he'd used to harvest it with.



"I then asked if I could look at his deer permits. He produced a resident white-tailed either sex permit and a white-tailed antlerless game tag, but neither had been detached or signed. He told me that he had purchased TWO game tags and had thrown the other away since the meat had been eaten."

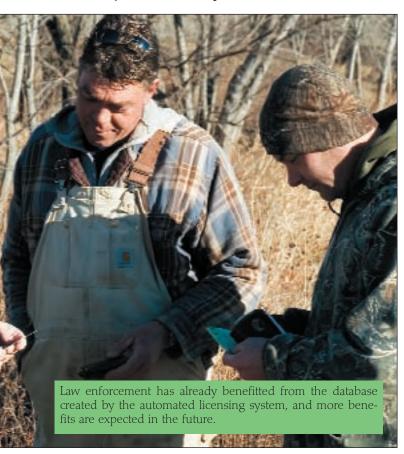
Since he already knew what deer permits and tags had been issued to the suspect, Clouser knew better.

"After I called him on it, he told me another story — the truth," Clouser said. What actually happened was that another person accompanying the suspect had taped his carcass tag to the deer while they transported it, then detached the unsigned tag once they got back to the suspect's residence.

Ultimately, the suspect was convicted for illegally transferring a tag, harvesting a deer out of season, and failure to tag. His accomplice was convicted for illegally transferring a tag.

Without the information gleaned from KOALS, Clouser probably could not have made the case. But the ability to quickly confirm what licenses, permits, and tags were purchased by the individual made Clouser's job easier. That's an important consideration for natural resource officers, each of whom patrols a district that encompasses multiple counties.

That's just one example of the benefits of the



department's automated license system. Prior to implementation of the system one year ago, all licenses and permits issued by the department were written by hand, either by a department employee or one of the hundreds of license vendors scattered across the state. Thousands of completed license and permit books were then sent to the department's licensing section at the end each year, and stored for reference and auditing purposes. It simply would not have been possible, under that system, for Clouser or any other officer to readily document what hunting privileges any individual had obtained. Natural resource officers aren't the only ones whose efficiency and effectiveness is enhanced by KOALS.

The new system vastly improved the department's ability to communicate with its customers. For many years, KDWP has annually surveyed hunters to document hunting activity, harvest information, and hunters' preferences. The automated licensing system has generated quicker and more cost-effective collection of that information, explained Tonya Urban, who oversees constituent surveys conducted by the Fisheries and Wildlife Division.

One of the department's longest-running surveys collects information from a sample of hunters every year. About 10 percent of hunting license purchasers are asked to provide information on their hunting activity and game harvested during the previous season. The process for collecting that information has improved dramatically, thanks to KOALS.

In the past, Urban said, a team of temporary employees worked for several weeks to collect names and addresses of hunting license buyers from the previous hunting season. The task required those employees to transcribe names and addresses from thousands of license books that vendors returned to the department at the end of each fiscal year, in order to generate a statistically reliable sample of hunters. Hunters selected for the random sample were mailed a survey form, and asked to complete and return the information to KDWP. There were several challenges associated with that task. Handwritten names and addresses were often illegible. The license books from which the names and addresses were extracted were not available until June each year, months after the previous hunting seasons had ended. As a result, many mailed questionnaires were returned by the

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postal service because the intended recipient had relocated to another address.

The KOALS system has changed all that. Now, Urban can quickly obtain a computer-generated list of hunter names and addresses. Those sampled receive a postcard, asking their participation of the computer of

tion in the survey and allowing them to complete the survey

online, if they prefer.
A crew of six to eight formerly assembled each year for the laborious task of collecting names and addresses from paper license books is no longer necessary; a single employee can manage the survey mailing and processing required.

"It has reduced our undeliverables (returned mail) and has made our surveys much more timely

and cost effective," Urban said.

Doug Nygren, KDWP's Fisheries Section chief, anticipates another benefit to the department in the form of increased federal aid dollars flowing into Kansas. KOALS will better quantify the total number of anglers in the state, one of the primary criteria used in determining a state's federal aid apportionment. The new system will enable the department to cross check the database to identify people who the department could not formerly claim as anglers, such as trout permit purchasers under 16 or over 65. (Kansas residents under 16 or over 65 are not required to purchase a fishing license.)

As with any change, implementation of the automated licensing system has been a challenging process. In fact, the process is still underway. KDWP Licensing Section staff continue to work closely with Central Bank and Automated License Systems, the companies contracted to set up and maintain the system in Kansas. As this is written, KDWP and the contractors are working together to finish bringing the department's entire complement of licenses, permits, and registrations into the system. Central Bank and Automated

License Systems have established similar recreational licensing systems in several other states.

One issue that has been raised by some license and permit purchasers is the requirement to collect social security numbers from those purchasers. Federal law (Title 42 of the United States Code, Section 666 a 13) requires that social security numbers be collected, to help improve the effectiveness of child support enforcement. The number is entered into the system upon the first purchase of a license or permit by an individual but, once entered in the system, the individual is assigned a unique KDWP identification number for use in all subsequent transactions. The social security number is not printed on the license, is not displayed on the vendor's screen when a new license is purchased, and is held in a secure database. The Kansas Legislature and Gov. Kathleen Sebelius approved a law this year prohibiting

persons owing back child support from buying any KDWP issuances.

All licenses, permits, and registrations issued by the department are now processed through a

centralized, secure database. Purchase of those issues is quicker and more convenient because, once a customer record is entered in the system, department offices and vendors no longer need to hand-write customer information for each issuance they sell that customer; the database contains that information, which can be easily recalled for any subsequent purchase by that customer. Customers are also able to purchase licenses and permits online, from their homes, if they choose.

The conversion to an automated licensing system is a complicated, challenging, sometimes frustrating process. But the benefits evident in just its first year of operation demonstrate that the department and its customers will be well-served by KOALS. The system allows for more timely and more focused interaction with the variety of outdoor recreationists in Kansas. And, as the department continues to search for new ways to stretch limited operating dollars, KOALS provides a powerful tool to help serve the state's natural resources — and the people who enjoy them — more efficiently and more effectively.

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The point-of-sale machines print out licenses and per-

mits on tyvek paper, listing all privileges purchased.



Send letters to the editor by e-mail to MarkJMS@wp.state.ks.us

etters

Edited by Mark Shoup

SPRING TURKEY THANKS

Editor:

I wanted to take an opportunity to thank you for your efforts to promote hunting in Kansas. I've been an avid hunter in Kansas for the last 20 years, taking advantage of every opportunity. From the time I was in my early teens, I have been extremely interested in turkey and deer hunting and was fortunate to have thousands of privately-owned acres to hunt. It wasn't until 2003 that the landowners that I had been hunting on decided to lease their ground, which left me in an awkward position; I had to start asking for permission to hunt.

I found that this wasn't a very easy task. Fortunately, I was introduced to the Walk-In Hunter Access (WIHA) program by a friend. This program gave me back the opportunity to hunt thousands of acres of land, but it was now spread across several counties. Since then, I have taken full opportunity of the WIHA program by hunting across the state in areas I probably never would have hunted in the past.

Now in my early 30s, I have a fiveyear-old son, Brennan, who has wanted to go turkey hunting with me since the first time he saw me come home with one. I decided that he would come along this year to experience the fun. We went all out, dressing him in camo from head to toe. I even supplied his first box call, which he's practiced since the day we came home with it. With a little more practice, I'm sure he'll be calling them in next season.

Finally, we were ready to hit the turkey woods. We headed down to the southeast part of the state to one of the spring turkey WIHAs for an afternoon hunt. As we walked into the tree line, I could hear the gobblers thundering down the ridge. We rushed to a large-based tree with a brush pile just to the right of us. As we sat side by side, I got my diaphragm call out, leaned over, and whispered, "We need to sit really still.



They're just over the hill and will be coming our way soon".

He responded, "I know Dad." I couldn't help but smile. With just a couple yelps and clucks on the diaphragm there was a gobbler on the way. With every following call came another thundering gobble. After every gobble, I glanced out of the corner of my eye to see Brennan smiling from ear to ear. Within 10 minutes of sitting down we could see a long-bearded turkey in full strut through the brush pile. Slowly but surely, the bird gobbled, spit, and drummed his way directly in front of us. The big tom was 10 yards away in full strut.

With a putt from my diaphragm, the tom raised his head, and with a quick hit from my 3-inch magnum, he was down. Before I could get up, Brennan was half way to the bird with his arms in the air, shouting, "We got him Dad, we got him!" This was a new and exciting experience, and I'm sure it's something he'll always remember. But for me, it was an experience of a lifetime. To see how he sat in total excitement and watched a gobbler in full strut 10 yards away without making a peep or a single movement made me as proud as any father could be.

Without the support of the Kansas

Department of Wildlife and Parks and the WIHA program, this experience may not have happened. Thank you for your continued efforts in keeping prime hunting locations available to people without access to private hunting opportunities.

> Travis and Brennan Vickery Derby

YELLOW PERCH

Editor

I would like to start off by saying how much I enjoy getting *Kansas Wildlife & Parks* magazine. I wish it was monthly.

After fishing in Minnesota and North Dakota, I have developed an interest in yellow perch. Are there any Kansas lakes with a fishable population? Has there ever been a study on how well they might do in Kansas?

I would think that they would be an excellent food source for larger prey fish. They also would be another great sportfish for anglers. It wouldn't surprise me to see them become as popular as crappie are now if introduction and supplemental stocking were tried. Has the department ever looked into the introduction of yellow perch?

Bill Boosman Overland Park

Dear Mr. Boosman:

Thanks for the kind words about our magazine. It's always good to here from the folks who appreciate what we do.

We have a fishable population of yellow perch at the new Yates Center Reservoir (205 acres). We have stocked them there now for a couple of years, and they appear to be doing fine. Kansas is on the extreme southern edge of the natural range for this species, so self-sustaining populations in our small impoundments is unlikely.

Stockings into small Missouri water bodies has not produced self-sustaining populations that I'm aware of. Yellow perch might thrive in our large reservoirs, but the competition they may create with our native species keeps us from taking that step. In their home

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range, they are a very prolific species, which can cause management problems. Nebraska is experiencing some problems with stunted yellow perch populations caused by unbalanced predatorprey relationships. Thanks again for your interest in Kansas outdoors.

-Kyle L. Austin, fisheries management coordinator, Pratt

BITING QUESTION

Editor:

My name is Tom Anderson, and I am employed as a naturalist and director of a nature center associated with the Science Museum of Minnesota. I am trying to compile a list of those critters that tend to cause concern to state park or outdoor users in Kansas. I know this is a subjective question, but could you please provide a list of eight or 10 critters (insect, arachnid, mammal, reptile, fish, etc.) that are real threats, such as mosquito, rattlesnake, brown recluse spider, yellow jacket, or coyotes.

Thank you for your cooperation.

Tom Anderson St. Paul, Minnesota Dear Mr. Anderson:

Here's my subjective list: deer tick, mosquito, chigger, wasp and bee (main concern is allergic reactions, but sting's a nuisance), brown recluse spider, rattlesnake, (primarily massasauga and prairie rattlesnakes), black widow spider, and scorpion.

There are numerous micro-organism concerns, but I've mainly dealt with macro-organisms, excepting the diseases associated with deer ticks and mosquitoes. However, there are other micro-organisms of major nuisance, if not a larger health threat to humans, including swimmer's itch (schistosome cercarial dermatitis), West Nile virus, e-coli, rabies, Rocky Mountain spotted fever, tetanus, and many other afflictions and diseases.

Additionally, poison ivy is a plant that causes much human misery and some health concern. "Tending to cause concern" is highly subject to interpretation. Many snake species, especially water snakes, tend to cause concern to outdoor users but are very innocuous and not a health threat, so misconceptions can greatly bias one's interpretation.

-Ken Brunson, wildlife diversity coordinator, Pratt





91 AND STILL HUNTING

Editor:

This picture is of my mother, Marjorie Lithgow of Mokena, Ill., who is 91 and on her second turkey hunt in Kansas with Midwest Outfitters in Linn. My Mother has always been an avid hunter, hunting everything from pheasants and waterfowl to deer and antelope. She had never turkey hunted before last year and was hooked instantly.

The bird in the photo was her biggest to date. I took the better part of three hours to finally call the bird within range, and she dropped the bird at 45 yards.

I thought you would like to see that at 91 years old, age is just a number with her. She has already booked again next year with my son and me. It is great to have three generations still enjoying the sport we all love best.

Ken Ebbens St. Paul, Minnesota-

Dear Mr. Ebbens:

Thanks for the great photo and especially the great story. Your mother is a remarkable woman. Guess we'd all love to be able to hunt at 91.

-Shoup





ties could arrive. The suspect was placed in the Clay County Jail awaiting trail May 31 for charges of attempted first-degree murder and various wildlife crimes. (The outcome of that trail had not been determined as of this writing.)

Wildlife and Parks Secretary Mike Hayden and local game warden Jeff Goeckler presented Macy with the Region 2 Law Enforcement Award for fending off his attacker and relaying critical information that eventually led to the man's arrest. The award, which normally is given to an employee of the Region 2 Law Enforcement Division, was given to Macy for his quick thinking during the attack and past efforts to deter poaching in his area by calling natural resource officers when witnessing wildlife crimes.

"This could have happened to any one of our officers who might approach a vehicle at night," said Rob Ladner, Region 2 Law Enforcement supervisor. "I think Macy handled the situation with great courage and is very deserving of this award."

-Rob Ladner,

Region 2 Law Enforcement supervisor, Topeka

POACHERS: Beware Landowners

n the evening of Dec. 1, 2004, the opening of the regular Kansas rifle season, Dan Melson, natural resource officer (NRO), Eureka; John Bills, Fall River Wildlife Area manager; and I (NRO Chris Hammerschmidt) were patrolling southwest Elk and northwest Chautauqua counties. I was busy talking to some guys who had just come out of the woods for the evening when the Chautauqua County dispatcher called for an officer to respond to shots fired in the northwest portion of that county. Melson and Bills responded to the call.

The landowner involved in the call was following the suspect vehicle and apprising the sheriff's office by cell phone of their location. Melson and Bills soon stopped the suspect truck, which contained three men. As they walked up to the truck, they noticed two untagged doe deer in the bed. The two officers immediately read the suspects their rights and separated them to begin the field interview process. During the investigation, all three suspects admitted to driving around until they found some deer to shoot at.

In addition to the two does in the pickup bed, the driver also admitted to shooting a buck, with intentions of returning after dark to retrieve it. All three deer were shot from the vehicle and on property they did not have permission to hunt. Thanks to a vigilant landowner, his plan was thwarted.

The three suspects took us to the location from which they'd shot the does, and we retrieved several pieces of evidence, including footprints, rifle shell casings, deer blood, and tire tracks. We then drove around to several different locations that the driver thought he'd remembered as the place he'd shot the buck. We were unable to locate the buck, and we began processing paperwork.

As we were finishing the paperwork, a local rancher drove up. Handing me a paper plate with a license plate number written on it, he told me that the truck we'd pulled over had been seen all afternoon, driving slowly and stopping often. Though we had the case under control at this point, it must be noted that vigilant watching by landowners such as this one and the one who'd followed our suspect's truck are often key to catching poachers.

The three men were charged with various wildlife crimes, resulting in a total of 21 citations. Fines and costs to the poachers came to nearly \$1,500 and included the loss of their guns.

-Chris Hammerschmidt, natural resource officer, Sedan

Teen Drinkers Tangefed

atural resource officers with the Kansas Department of Wildlife and Parks are targeting underage drinkers at Lyon State Fishing Lake and Melvern Reservoir. Similar operations on these areas last year netted arrests for minors possessing or consuming alcohol, as well as drugs and drug paraphernalia. Numerous cases of beer and other alcoholic beverages were seized and citations were issued.

Parents or guardians were notified and required to come to the lakes to pick up their sons and daughters. Additionally, officers arrested and charged several adults with furnishing intoxicants to minors.

Natural resource officers are conducting similar efforts in other parts of the state to keep natural areas safe and clean, and to help prevent tragedies that too often occur as a result of alcohol and drug abuse. These enforcement efforts are funded through a grant from the Kansas Department of Transportation.

> -Dave Adams. natural resource officer, Reading

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This will save time and money and help recharge the

aguifer and preserve wildlife

in the region. Once restored and buffered by native grass,

plava lakes offer ground

water recharge and prime

hunting sites for waterfowl

For more information on

these programs, contact a

local USDA Service Center

or phone KDWP Landowner

and upland birds.



LESSER PRAIRIE CHICKEN VIDEO AVAILABLE

KDWP, in association with the Lesser Prairie Chicken Interstate Working Group, recently produced a new video focusing on the lesser prairie chicken. The work was primarily a collaboration between recently-retired KDWP videographer Gene Brehm and wildlife biologist Randy Rodgers. The video outlines the issues, both positive and negative, associated with long-term conservation of the species throughout its 5-state range. It provides basic knowledge for anyone concerned with the health of the species.

The 40-minute video is available at no cost to ranchers and farmers, developers, government officials, politicians, and teachers in southwest and westcentral Kansas. It's must-see viewing for anyone whose occupation influences grasslands in the region and the future of this extraordinary bird.

Copies (DVD or VHS) may be obtained from KDWP district wildlife biologists and technicians at USDA Service Centers, from NRCS district conservationists, by phoning Randy Rodgers at 785-628-8614, or by mailing the KDWP Regional Office, P.O. Box 338, Hays, KS 67601.

-Randy Rodgers, research biologist, Hays



Incentive Program coordinator Mike Peterson at (620) 227-8609. For more information on

playa lakes, visit www.pljv.org or www.kaws.org on the internet.

-Mike Peterson, Landowner Incentive Program coordinator, Dodge City

CLAPTON HEADLINES PRO-HUNT CONCERT

n May 20, rock-and-roll legend Eric Clapton headlined a controversial seven-hour concert supporting the Countryside Alliance in its fight to lift the ban on fox hunting in the UK. The "Tears In Heaven" hitmaker, who is a keen game shooter, joined fellow rockers Bryan Ferry, Pink Floyd's Roger Waters and Nick Mason, Roger Daltrey of The Who, and Genesis guitarist Mike Rutherford at the gig at Highclere Castle in Berkshire.

"Eric supports the Alliance's pursuit to scrap the ban on the basis that he doesn't agree with the state's interference with people's private pursuits," a Clapton spokesperson said.

The ban on fox hunting was imposed by the British government in February, and the concert faced opposition from animal rights activists.

-Bullet Points

PROMOTING PLAYAS

Playa lakes, sometimes referred to as buffalo wallows or lagoons, are naturally-occurring depressions in western Kansas and other parts of the Great Plains. Many landowners often see them as wet spots that flood crops from year to year, often producing little or no yield.

Yet playas are invaluable to landowners, as well as wildlife and the larger human community on the Great Plains. More than 95 percent of water pumped from the Ogallala Aquifer is used for irrigation, making it the driving force behind agriculture economies in western Kansas. Research has shown that playa lakes are the primary source of recharge to the aquifer throughout this six-state area. The United States Geological Service has found that water recharge into the aquifer underneath a playa is about 3 inches per year, whereas upland recharge is only .003 to .03 inches.

There are approximately 60,000 playas in Texas, New Mexico, Oklahoma, Colorado, Kansas, and Nebraska, averaging 17 acres in size and representing more than 1 million acres of land that can be restored or protected. This results in considerable ground water recharge.

The U.S. Department of Agriculture (USDA) has created a new program that aims to restore and conserve these small, isolated wetlands in western and central Kansas. This program is the Wetland Restoration, Non-floodplain Initiative (CP23A).

In addition to this program, KDWP also developed a new program to make enrollment in the USDA program more attractive. KDWP's Playa Lake Signup Incentive Program or (PLSIP) offers an additional one-time payment of \$15 per acre for those landowners who enroll in the USDA program.

Once playas are enrolled, farmers will no longer have to worry about farming them.

BEARS AND DEADBEATS

DWP supported a bill in the 2006 Kansas State Legislature regulating ownership of lions, tiger, leopards, jaguars, cheetahs, mountain lions, bears and related hybrids, and nonnative venomous snakes.

The bill passed and was signed by Gov. Sebelius on April 17. It requires owners of such animals to meet USDA regulations and register with their local animal control authority. The law also requires that all such animals be kept in a cage and kept from direct contact with another person. Owners must also carry at least \$250,000 in liability insurance or bonding.

Another law was signed by the governor on May 23. This new law makes it illegal for people owing back child support to purchase KDWP issuances, including any license, permit, stamp, tag, or any other KDWP issuance.

-Shoup

Jamestown Grant

acies has pooled their resources to conserve 1,397 acres on and around the Jamestown Wildlife Area in Cloud County. More than \$2 million in partner funds will be matched with nearly \$1 million in North American Wetland Conservation Act (NAWCA) funds to support wetland restoration, enhancement, and acquisition.

The first priority of this project is to restore wetland quality and function to Gun Club Marsh and Game Keeper Marsh. These two large wetlands are overgrown with cattails and need renovations to existing water control structures to improve water management capabilities. Once restoration is complete, KDWP will manage water levels and provide dependable food resources for migrating waterfowl. Seed producing plants preferred by waterfowl will be planted, and upland areas adjacent to the wetlands will be planted to native grasses to promote waterfowl nesting.

Marsh Creek runs through



Jamestown Wildlife Area and is a focal point of this conservation project. The project will improve watershed hydrology and restore stream flow to Marsh Creek, and subsequently to the Republican River. This will ensure sufficient water is available to meet the demands of the municipal area, irrigation, and wildlife and fish populations.

The project will also incorporate numerous small marshes and oxbow lakes along Marsh Creek above Jamestown Wildlife Area, expanding the boundaries of the wildlife area and protecting wetlands in the floodplain of Marsh Creek.

Jamestown Wildlife Area is an important migration stopover in the Central Flyway, providing a critical link between waterfowl breeding grounds in the Prairie Pothole Region of the northcentral U.S. and southcentral Canada and wintering grounds along the Mississippi River and the Texas-Louisiana Gulf Coast.

Partners in this conservation effort include Ducks Unlimited, KDWP, Pheasants Forever, The Nature Conservancy, Westar Energy, the Kansas Alliance for Wetlands and Streams, and the USDA Natural Resources Conservation Service. Species that will benefit directly include numerous ducks, shorebirds, wading birds, raptors, and songbirds.

-Ducks Unlimited

Scholastic Clay Targets

hotgun sports are gaining popularity among male and female youth. One of the most successful promotions of the sport is the Scholastic Clay Target Program (SCTP), the National Shooting Sports Foundation's (NSSF) national shooting league, active in more than 35 states with nearly 7,000 participants.

State championship shoots will continue through August. By the end of summer, national champion teams will be crowned in trap, skeet, and sporting clays. Winners will receive scholarships, trophies, and more.

"SCTP is experiencing phenomenal growth nationwide," said Zach Snow, who coordinates the program for NSSF. "Last year alone, we saw more than 50 percent increase in participation, not to mention 84 percent increase in female competitors."

SCTP skeet and sporting clays national championships will be held in Rush, N.Y., in July, and the SCTP national trap championships are slated for Sparta, Ill., in August. To qualify for these national events, youngsters are competing in SCTP events all over the country. For more information, go to www.nssf.org/sctp/ on the internet

-Bullet Points



Wildlife & Parks



hunting

Take a Kid Hunting

About half of U.S. hunters live in states where parents – not politicians – decide when their sons and daughters are ready for big-game hunting. These family-friendly hunting states are at record number, and many other states are inching their way toward such freedom, creating more opportunities to introduce youngsters to the rewards and values of America's traditional outdoor lifestyle.

Two years ago, Kansas law was changed to allow youth of any age to hunt big game — and any other game — without having first taken a hunter education course, provided they are under the direct supervision of an adult. Still, many parents wonder, "What's the best way to start (or strengthen) our own family's hunting tradition?"

HERE ARE SOME TIPS:

- instill safety, etiquette and ethics;
- keep it fun by not getting too serious or competitive;
- make a conscious effort to explain and demonstrate step-by-step what newcomers should do;
- recognize small accomplishments, such as going on that first hunt, bagging that first bird, or providing an evening meal of game;
- correct mistakes gently without condemnation;
- help youngsters notice things around them, such as bird calls, sounds of a rushing stream, and signs of wildlife;
- · make sure equipment is the right size and weight; and
- prepare for that first hunt by finding a place that provides a good chance to take game.

To learn more about national efforts to expand family hunting opportunities, a program called Families Afield, visit www.nssf.org.

-Shoup

DOWN TIME FOR HUNTERS?

or boaters and anglers, late summer is heaven, but with daylight savings time and pleasant September evenings ahead, hunters can entertain themselves and hone their skills at the same time.

For archery deer hunters, this is an excellent time to practice. The weather is still hot, and many people are involved in other summer activities, often leaving ranges relatively uncrowded. This is an active time, however, for sporting clay, skeet, and trap shooters involved in competition while honing their shotgun skills.

Late summer is also a good time to scout for deer as they begin to establish their fall travel patterns. (See "Summer Show," Page 28.)

But preparation for the hunt is not all that's available to the eager hunter who can't wait for upland bird or late migrant season to open. Dove season opens Sept. 1. Both rabbit and squirrel seasons are open, and the latter can offer some of the most interesting hunting around. Many squirrel hunters prefer this time, when trees are in full

foliage, and the hunter must rely on all his senses as he quietly stalks the woods. Squirrel calls can also work well this time of year.

Most outdoorsmen and women think of warm seasons as fishing time, but if you're not an avid angler, or if you just want to get into fall and winter activities a bit early, your options are many. Take advantage of them.

-Shoup

YOUTH FOR CONSERVATION

heasants Forever (PF) has selected 19 youngsters from around the country to form the first conservation-oriented National Youth Leadership Council. The council's participants, all ages 10 to 16, will serve as advisors and spokespeople for their age group on issues related to the outdoors, conservation, hunting, and PF. The 19 new National Youth Leadership Council members includes Clare Perry, 16, of Leoti. Perry was nominated by the Ringneck Renegades Kansas PF Chapter.

Participants in the council will be asked to offer ideas for the PF youth

magazine, *Upland Tales*, as well as content suggestions for the PF website. Participants will also discuss outdoor youth activities and youth-related initiatives for PF chapters and the national headquarters.

According to research, today's youth are spending half as much time in the outdoors as their parents did as children. In fact, for every 10 hunters, there are only seven youth ready to replace them. People who don't hunt as youth are less likely to hunt as adults. Instead of participating in outdoor activities like hunting, fishing, camping, and hiking, today's youth are averaging more than 30 hours a week on video games, computers, and television.

Youth 10-16 may join PF as youth members, called Ringnecks. A Ringnecks membership comes with a year's subscription to *Upland Tales* magazine (four issues), a Ringnecks membership card, and an invitation to a local PF chapter banquet. To sign up, phone 877-773-2070 toll free or log onto the PF website, www.PheasantsForever.org. Ringnecks membership is \$15 annually.

-Pheasant Forever News

UNDER CURRENTS



When I was 15, I took a Boy Scout canoe trip to Canada. The local scout leader, Jim Manning, had arranged the trip and, knowing my love for the outdoors, made a special effort to persuade Dad that it would be worth the money.

All I could think about were idyllic lakes and pike as big as your arm. Having had considerable experience camping, I imagined tromping through the woods, fishing, and relaxing on a warm sand bank. It would be great.

So just after my 9th-grade year, 27 teenage boys boarded a bus with Jim and two other scout leaders, bound for Ely, Minnesota, home of Charles L. Sommers Wilderness Canoe Base. It was here that we were given basic canoe classes before diving into the Canadian wilderness.

At departure, we were divided into three groups of four canoes — three kids to a canoe plus a guide's canoe in each group. The groups each had a different destination, but our guide, Dave Wolfe, was senior among them, and he was determined that we would paddle and portage 75 miles one way to "Guides Island" — where the guides played when the kids were gone — and back in 10 days.

The first day was as I had imagined; the weather was warm but not hot, the surrounding hills lush, and the water so clear and clean that you thrust your tin cup over the side of the canoe for a drink. That day was a short one, having started in mid-morning and stopped early, so the new recruits could catch our breath. It was a lovely campsite, and I swam across the lake to tall cliff for a little diving, then swam back.

The next day, reality set it in; it began to rain as we left camp, the sun barely rising. The temperature had dropped 20 degrees, and we paddled hard just to stay

warm. While paddling stern, I hunched forward, pulling my poncho over my forehead to avoid spray from my bow mate's paddle. It was an exercise in futility.

Most of our miles were covered on water, but there were plenty of portages – rough, rocky land crossings where we had to carry all our gear. We rotated our burdens, which included a 50-pound food pack, a camp pack (tent and cooking gear), and the canoe. We scouts had 75-pound aluminum canoes, but Dave's was wood, probably 125 pounds. He would be the first to land at portage, pull on his personal pack, throw the canoe on his shoulders, and run the portages, which ranged from one-quarter mile to nearly two miles.

By the third day, we were wet and slippery and cold. Instead of stopping for lunch, we ate large hunks of soda bread, called bannock, that we made each evening. If we lagged, Dave would turn, circle his haggard crew, and yell, "Are we having fun yet?" Assuming the question rhetorical, we'd pick up our pace as he stroked ahead of us.

We had little time for fishing these first few days. Occasionally, the clouds would break, and we'd find ourselves gliding through a channel filled with lily pads on one side and 100-foot cliffs bearing ancient Indian petroglyphs on the other. The end of the fourth, day, however, found us floating into Guides Island under clear skies.

We spent the evening exploring the island and dropped onto our sleeping bags like sacks of flower.

The next glorious day was ours, all ours. We lay around, explored, swam, canoed, fished – whatever we wanted. I fished. We caught several pike and a few walleye. The lake was like glass, and as my mates and I cast here and there, a

banshee-like scream echoed across the lake. Dave was a couple hundred yards from us, fishing from his canoe and just hooping and hollering. We paddled over and found the normally stoic guide laughing like a kid at Christmas. He had hooked a very large fish — a 40-inch muskie that literally leaped into his canoe as he fought it. We would eat well that night.

There were other "eventful" moments throughout the trip. A group of boys camped on a hill to enjoy the view but spent most of the night sliding down in their sleep, climbing back up, and sliding back down. One boy threw a log on the fire, only to have it kick a heavy ember into the sleeping bag of another, catching it on fire. Crews reported streams of water gushing through tents in the middle of the night.

One of my best friends, whom I will politely not name, slipped as he was stepping out of his canoe with a food pack on his back. As he floundered in the water like an upside-down turtle on land, his guide looked at him curiously and deadpanned, "You know, that bread will just get moldy if it gets wet."

This same friend dropped a pike in his canoe before he could remove the hook, and it flew out of the fish's mouth and embedded itself in the pants of a canoe mate, who immediately leapt to his feet and began dancing a jig. Miraculously, the canoe stayed upright.

After a day's rest, we began the trip back to base camp, our heads higher and our backs stronger. Drizzle fell, but our spirits rose. Back at base, we spent an hour going from shower to sauna and back, just to remove the grime from our pores.

The only artifact that remains from that trip is my paddle, neatly identified by three strings I wrapped around its shaft, so I could tell it from others'. It bears a Charles L. Sommers Wilderness Canoe Base decal in the middle of the flat.

I look at this occasionally, a reminder of a distant time when I grasped a bit of suffering and how to handle it, even take pride in it; the difference between camping and roughing it; and a glimpse of the difference between boy's play and a man's.

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BLDGComments Invited

The Kansas Department of Wildlife and Parks is conducting a series of public meetings on several recommended fishing regulation changes. Among those recommendations is a proposal to develop a program to accommodate weigh-in bass tournament participants.

The recommendations feature a variety of provisions aimed at protecting the state's bass resource, dispersing tournament bass fishing pressure to more lakes, and generating more information to help biologists better manage bass.

To post a comment on the blog, go to www.kdwp.blogspot.com. A link to more details on the committee's recommendations is also available at this site.

-Mathews

Nets Count Lost Fish

During the 2005 irrigation season, the Kansas Department of Wildlife and Parks (KDWP) and the Bureau of Reclamation (BOR) placed two fyke nets (large hoop nets that act as funnels to trap fish) mounted directly in the Courtland Canal below the dam where water is taken from Lovewell Reservoir for irrigation releases. The nets were placed to estimate the number of fish lost to irrigation.

The irrigation season began on June 20 and continued through August 23.

Tournaments

Although the bulk of fishing tournaments in Kansas occur in June, July and August still provide plenty of fishing tournament action. The following tournaments are scheduled for these late-summer months:

- July 8 Bass Anglers of Central Kansas Fishing Club Bass Tournament at Woodson State Fishing Lake;
- July 15-16 Denver Bassmasters Bass Tournament at Sebelius Reservoir;
- July 22-23 U.S. Cats Catfish tournament at Tuttle Creek Reservoir;
- August 5-6 Liberal Bassmasters Fishing Tournament at Clark State Fishing Lake;
- August 12 Catfish Fishing Tournament at Glen Elder State Park;
- August 12-13 Boothill Bass Club Bass Tournament at Clark State Fishing Lake.



Snoup

Sampling occurred throughout the irrigation season and during different segments of the day. Fifteen nighttime and seven daytime samples were collected. Each of these placements was 12 hours long, and biologists believe they were able to collect all of the fish pulled from the reservoir during these periods.

A total of 665,535 young-of-the-year and 90 adult fish were collected, representing 16 species. Gizzard shad dominated the young-of-the-year catch throughout the irrigation season, accounting for 76.6 percent of all fish collected. Freshwater drum accounted for 14.8 percent, crappie 7.9 percent, white bass 0.4 percent, and walleye 0.1 percent. Only 90 adult fish were col-

lected during the entire irrigation season.

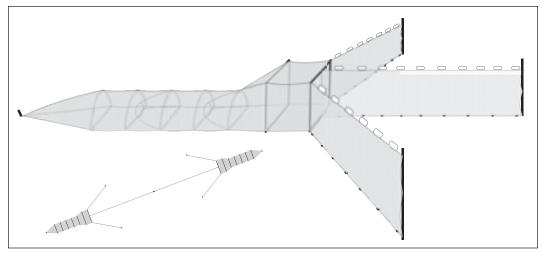
An estimated 4.1 million gizzard shad were pulled from the reservoir during the entire irrigation season. Other estimates include 839,446 freshwater drum, 486,898 crappie, 22,325 white bass, 5,667 walleye, and 3,283 channel catfish. Approximately 12 percent of the fish pulled into the Courtland canal were captured in the sampling nets.

Based on previously reported data on densities and lengths of fish on Lovewell Reservoir, an estimate of the total number of young-of-the-year fish was produced. This led to the conclusion that approximately 50 percent of young-of-the-year gizzard shad, 90 percent of

young-of-the-year white bass, and 95 percent of young-of-the-year crappie were pulled from the reservoir during the irrigation season.

A second sampling effort will take place during the 2006 irrigation season. The data collected during these samples will help determine if any action should be taken in the future.

-D. Scott Waters, district fisheries biologist, Beloit



Wildlife&Parks



POLAR BEAR-GRIZZLY HYBRID

Idaho hunter Jim Martell was polar bear hunting on Banks Island in Canada's Northwest Territories in mid-April when he got his game. Wildlife officials seized the prize after the hunt, however, when they noticed that its white fur was mottled with brown patches, and its eyes were set inside thin circles of black skin, like a grizzly bear's. A humped back, dished face, and long claws also were features of a grizzly bear.

Subsequent DNA analysis confirmed that the bear was a cross between the two breeds, the first ever discovered in the wild. The Northwest Territories Environment and Natural Resources Department returned the bear to Martell. Officials said that though interaction between the two species is not typical, grizzlies have been showing up in the region in small numbers in recent years. The drive to breed and the inability to find another grizzly bear may have led the grizzly to mate with the polar bear, biologists speculate. Though there is no established name for this cross, locals have been calling it a "pizzly" and a "grolar" bear.

-Bullet Points

ELK TO BE SHOT

National parks generally ban all hunting, but an escalating elk population in Colorado's Rocky Mountain National Park has led to a plan for park employees or contractors to shoot 200-700 elk during the first four years of an elk management plan. After that, another 25-150 would be killed annually for 16 years.

The goal is to reduce the current elk population of 3,000 to 1,200-1,700. Biologists say the elk have overgrazed, hurting other animals — and plants — because of habitat loss.

This has been a problem in the Estes Park area for several years, with elk commonly roaming through residential areas, grazing on grass, shrubs, and newlyplanted trees. The problem has arisen because no hunting is allowed in the park.

-Shoup

KANSAS BLUEBIRDS

The eastern bluebird, with its brilliant blue and rust colors and melodic song, is a bird appreciated and enjoyed by all who get the chance to see or hear it. Unfortunately, many people have never seen a bluebird in the wild.

Once abundant in Kansas, the number of these cavity nesting birds began to decline in the 1950s. This decline resulted from a loss of natural nesting holes, increased pesticide use, and competition with the introduced house sparrow and European starling.

Bluebird trails consist of 10 or more boxes mounted on fence posts or pipes. Boxes should not be placed in heavily-wooded areas. Boxes should be placed 100 yards or more apart because bluebirds are territorial. By constructing bluebird trails, civic organizations, youth groups, and individuals can assist in efforts to help bluebird populations recover. Nest boxes provide bluebirds with nesting cavities and also

give people a chance to remove the nests of undesirable competitors.

Bluebirds are not a typical backyard species, and seldom nest near homes or buildings.

Bluebirds arrive in Kansas in late February and early March. Houses should be 4 to 6 feet above the ground. Check the boxes at least once a week from April through August to remove undesirable nests. Plans for building bluebird boxes may be found on the KDWP websites — www.kdwp.state.ks.us — under sitemap/wildlife diversity/Kansas bluebirds.

Thanks to groups placing bluebird boxes in Kansas over the past 20 years, the birds are on the comeback.

-Ken Brunson, wildlife diversity coordinator, Pratt

HOW MANY FROGS?

Everyone has heard of the bullfrog, but how many other Kansas frogs can you name? Many native Kansans would be surprised to learn that the Sunflower state boasts 13 species of frogs. In addition to the bullfrog, these include boreal chorus, chorus, crawfish, green, leopard, northern cricket, pickerel, plains leopard, southern leopard, spotted chorus, Strecker's chorus, and western chorus frogs. As their names suggest, most of these frogs "sing," creating a symphony during summer nights.

In addition, Kansas is also home to seven toad species. Toads, too, are great singers, adding more rhythm to Kansas evenings.

-Shoup





AFFINITY CARD

Anyone who wants to contribute to our state parks or fish and wildlife conservation in Kansas should get KDWP's affinity card. When a new applicant is approved, KDWP receives a signup fee from UMB Bank. This fee is donated to the program the applicant designates to support. Applicants may choose to support parks, hunting, fishing, boating, or watchable wildlife at the time they apply.

The program will generate long-term support from every card issued because a percentage of what each card holder spends is returned to that selected department program monthly. In addition, the applicant earns affinity points that can be redeemed for KDWP issues.

Applications for the KDWP Visa® Platinum credit card are available at KDWP offices. Applications may also be made on the internet at www.kdwp.state.ks.us. Just click "KDWP Info" on our home page, and then click "KDWP Visa Card" on the left-hand column of the page.

.-Shoup

WATERFOWL MANAGEMENT MILESTONE

The historic creation of a continental waterfowl conservation strategy based on cooperation among nations, organizations, individuals, and industry celebrated its 20th year of success on May 14. The North American Waterfowl Management Plan was signed by the U.S. and Canada to reverse the decline of waterfowl populations and wetland habitat. In 1994, Mexico joined the partnership.

"In the last 20 years, joint ventures have invested \$4.5 billion to conserve 15.7 million acres of waterfowl habitat," said Dale Hall, the director of the U.S. Fish and Wildlife Service. "These partnerships are the model for how diverse agencies, organizations, landowners, companies, and scientists can work together for wildlife conservation

-Bullet Points



WINGSHOOTING CLINICS

For those groups interested in providing wingshooting instruction, the Kansas Department of Wildlife and Parks' (KDWP) "Pass It On" program provides a certified instructor, youth shotguns, targets, and shotgun shells free of charge. Learning to shoot flying targets with a shotgun can help young and novice hunters enjoy their hunting experiences more and make them more successful in the field.

Wingshooting classes are designed for groups of up to 20 young and novice shooters, boys and girls. One-day or half-

day clinics can be conducted. Instructors are National Rifle Association and National Sporting Clays Association certified. Although there is no age requirement, youngsters 10 or older usually have the strength and coordination necessary to handle a shotgun. Completion of a certified hunter education course is also recommended although not required.

Groups and organizations interested in hosting a beginning wingshooting clinic for youth or novice shooters should contact Mike Miller at 620-672-5911. Planning and scheduling requires at least two weeks notice.

-Miller



nature's notebook

by Mark Shoup



nyone who has explored Kansas lakes, ponds, streams, or marshes in summer is familiar the deep bellow of the bullfrog. And it's easy to see how this largest of all Kansas frogs got it's name: bulls are big, and so is the bullfrog, and the bullfrog's call sounds very much like a bellowing bull. While the sound is music the ears of Kansas outdoor lovers, anyone who has never heard the sound before may come unglued the first time one of these large amphibians bursts into song nearby.

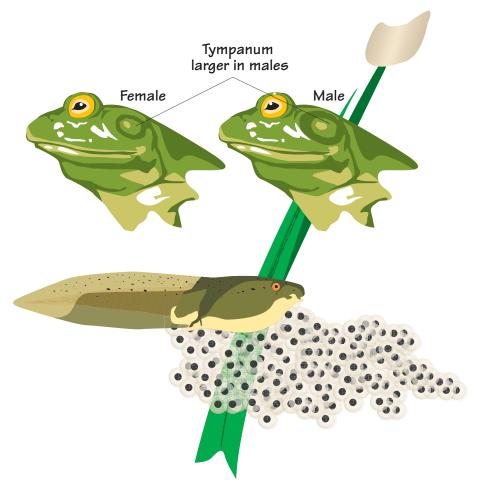
North American bullfrogs (Rana catesbeiana) can be found just about everywhere in the U.S. and southern Canada, from Nova Scotia to central Florida, from the east coast to the Rockies. They have also been introduced as far west as California.

Bullfrogs prefer warm, still, shallow waters but can be found along the edges of almost any pond, no matter how deep. Even steep-banked tailwater pits harbor bullfrogs.

The bullfrog can weigh more than 1 pound and measure 18 inches in length. Their long, powerful legs enable them to jump several feet, an attribute exploited in Mark Twain's famous short story,

"The Celebrated Jumping Frog of Calaveras County." Because of their size and flavor, bullfrog legs are highly prized table fare. The bullfrog season in Kansas runs July 1-Oct. 31. Bullfrog "hunters" (actually a fishing license is required to take them, if you are 16 years or older) creep through Kansas waters at night, flashlight in hand. The flashlight blinds the frogs, making it possible to approach and catch them by hand, net, or gig.





colors varying across the animal's body. You can tell the sex of an adult bullfrog by looking at it's ear, called the "tympanum." The tympanum is a round circle on the side of the head near the eye. In males, it is much larger than the eye. In females, the ear is the same size or smaller than the eye.

In summer, the female lays as many as 20,000 eggs in the water, and the male fertilizes them. Tadpoles emerge from the floating egg mass in about four days. The tadpoles have gills and a tail, which eventually disappear as the legs begin to grow. Bullfrog tadpoles are huge compared to other frogs. The body is about the size of a pigeon egg, and tail

and all, the tadpole will measure about 3 inches. Unlike many other tadpoles, bull-frog tadpoles may take one to three years to transform from tadpole into adult stage.

Bullfrogs are long-lived amphibians. Their lives average seven to nine years in the wild. One captive bullfrog lived 16 years. Bullfrogs bury in the mud to hibernate during winter.

Bullfrogs are ferocious predators, sitting stock-still until almost any critter they can swallow comes by. Then they lash out with a flash of the tongue or leap on their hapless prey, which may include birds, mammals, amphibians, reptiles, fish, snakes, insects, terrestrial worms, and aquatic crustaceans.

The bullfrog is not, however, at the top of the food chain. Great blue herons, egrets, kingfishers, turtles, water snakes, large fish, and raccoons are among the animals that prey on bullfrogs.

Bullfrogs live just about everywhere water can be found in Kansas. This summer, spend an evening or two just listening to their chorus as it ebbs and flows throughout the night. Better yet, get a cloth sack and a flashlight, and you can put dinner on the table.



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Backlash

by Mike Miller

Angling Pioneer

Fishing lure companies scramble to announce a "hot new" lure each year. And they're much more concerned with catching fishermen than fish. Most new lures are really just modifications of old designs. What usually happens is that an angler uses an old lure in a new way and catches more fish. Then lure companies scramble to put out the old lure in a new package with a new name, "specially designed" for the new technique.

For example, years ago we fished a pre-rigged plastic worm before the Mann's Jelly Worm and the Texas rig came to southcentral Kansas. The pre-rigged job had a little spinner and a couple of hooks connected by monofilament that ran through the worm body. Rarely if ever did this rig run straight. It usually twisted and turned as you retrieved it. And it worked. Then came the Texas rigging technique which was weedless, but it did run through the water without twisting, which we thought was good. Now there are pre-rigged worms and "wacky" worms meant to twist on retrieve. And anglers are purposely rigging worms so they twist and spin.

Years ago Lennie invented a technique that has only recently been promoted. There are even special jigs on the market designed specifically for Lennie's technique. However, until now, Lennie never got any credit.

The "new" technique is called swimming a jig, which is different from the way a jig is normally fished. Jigs are usually fished in a slow rise and fall method, usually near the bottom. Fish eat the jig thinking it's a crawdad or injured baitfish. But the new technique is called "swimming" and it's actually just a smooth retrieve, with some subtle up and down motion. It's the rave now, and lure companies are marketing "swimming" jigs.

Shoot, Lennie was using the swimming technique to catch bass years ago – and it worked! I was inclined to believe those fish were accidents, but there was no doubt, Lennie was "swimming" his jig. However, Lennie didn't devise it to catch more fish.

It all started when Lennie decided to quit dipping tobacco. As laid back as Lennie may appear, especially on a hot Saturday afternoon, he's relatively nervous. Nicotine calms his nerves. However, one spring he got on a health kick – he exercised, dieted and quit chewing. I'm not sure what got into him.

But even with the exercise regimen, Lennie was beside

himself without nicotine, and he had to channel that nervous energy. He took up jig tying. Lennie molded his own jig heads, painted them, put eyes on them and tied marabou and chenille on them. Soon, Lennie had jigs running out his ears. He had boxes full of jigs, jigs hanging from the basement rafters, and he gave lots of jigs away.

He even got pretty good at tying them. But the real test for a tier is to catch fish on his creations, so Lennie started using his hand-tied jigs when we bass fished. I stubbornly kept casting my traditional bass jig and trailer, and I kept working it the way I always had. But Lennie started outfishing me. After several trips, I gave in and started using one of Lennie's hand-tied jigs. He still outfished me.

So I broke down and began watching him and asking questions.

"Where are those fish hitting?" I asked. "How deep? Were you near any brush? They hit it on the fall. Right?"

Lennie just grunted and pointed right below his feet with his elbow without taking his hands from his rod or missing a cast. He wasn't going to give away too much information. I tried everything, and he kept catching fish. Finally on the way home one evening, he confided.

"Almost every fish I caught was within two feet of the bank. And they all hit as I was reeling the jig in pretty fast. Kind of "swimming" it over these flooded willow branches. I didn't want to lose one of my favorite handmade jigs, so I was keeping it over the brush. It worked, so I kept doing it."

"You've got drawers full of those jigs, and you'll tie five more tonight. What do you mean you were afraid of losing it? And why didn't you tell me how you were fishing?" I said incredulously.

"Well," Lennie sighed. "I get kind of attached to these jigs when I tie them. I hate snagging up. And I didn't tell you because I thoroughly enjoyed outfishing you. I guess without any vices, irritating you kind of became my new hobby."

We didn't fish much more that summer because it got too hot. And then Lennie started chewing again, so he gave up jig tying. To tell you the truth, I kind of forgot about the whole thing. But then I was watching a fishing show and the host was talking about the hot new technique of "swimming" jigs to catch everything from bass to muskies. I smiled and thought about Lennie being ahead of his time.

