

The View From Here



by Steve Williams

Restoring A Hunting Heritage

s this issue went to press, the 1997-1998 upland bird seasons held promise. Hunting was spotty last year, but a mild winter with ample moisture provided excellent nesting conditions last spring. With the right habitat and conditions, birds, especially quail, can make remarkable comebacks.

Pheasants in western Kansas, however, may be another story. You may recall an extensive article in our November/December 1996 issue by wildlife biologist Randy Rodgers. The article examined long-term pheasant declines in western Kansas. Backed by more than 30 years of survey data, biologists have identified several changes in wheat farming and other land management practices that have made the High Plains landscape less hospitable to pheasants.

The department understands that farmers must respond to technological advances and difficult economic conditions. And we are keenly aware that alternative farming methods beneficial to wildlife must be proven economically before they will be accepted. It's time to identify and demonstrate mutually beneficial practices, before we lose a portion of our hunting heritage.

Pheasant hunting is a treasured Kansas tradition, bringing family and friends together each year. It is also a vital economic boost for many small communities in western Kansas. The pheasant adapted, even thrived, in these predominantly agricultural areas. Traditionally, wheat farming provided the pheasant everything it needed. The green wheat in spring was good nesting habitat, and the fallow stubble fields grew up in broadleaf weeds through the summer, providing cover and vital insect forage for the chicks. When the weeds died in the fall, the stubble was ideal winter cover. Today, however, few stubble fields are left fallow. Stubble is either tilled for fall planting or worked or sprayed to control weeds. Few untilled areas are left, and Conservation Reserve Program lands, while providing critical winter cover, are poor for nesting and brood rearing. Research has shown that as this weedy fallow stubble declined, so did the pheasants.

To restore the pheasant hunting legacy, the department has established a Pheasant Recovery Initiative. Under the initiative, a team of experts will work to inform the public, communicate with agricultural organizations and cooperatively explore alternative farming methods that benefit both farmers and wildlife.

The research that pointed to the importance of wheat stubble also uncovered a surprising fact. Stubble cut short, even if it was left fallow, was inferior pheasant habitat compared to taller stubble. Modern, dwarf wheat varieties are designed to reduce lodging, and modern combines are powerful enough to cut the stubble just inches from the ground. Fallow stubble that has been cut 7-10 inches tall produces fewer broadleaf weeds. Research showed that stubble 15-17 inches tall had pheasant use 10 times greater than 7- to 10-inch stubble.

Ongoing research by agricultural interests is looking at whether leaving wheat stubble fallow is more economical, saving fuel, time and spraying costs. And while weeds do use moisture through the summer, they may more than make up for that loss by catching snow in the winter and reducing erosion. New equipment, such as stripper headers, may harvest grain more efficiently while leaving taller stubble. There are also efforts to examine the benefits of field borders, center pivot corner plantings, filter strips, grass terraces and CRP practices. If demonstration farms can show these efforts are economical, farmers interested in wildlife may try them, and everyone will benefit.

Pheasant Recovery Team members hope bird numbers begin to rebound this fall with favorable conditions, but good weather alone won't bring pheasants back to the High Plains. It will take a great deal of cooperation, communication and continuing research. If you are interested in learning more about Kansas pheasants or wildlifefriendly farming practices, stop by the department's display at the Kansas State Fair or call the Fisheries and Wildlife Division in Pratt, (316) 672-5911.

Stue Williams



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Back: Pedro, a peregrine flown by Master Falconer Bill Ried, sits with training dummy. Blair photographed the scene with a 55mm lens, f/11, @ 1/125 sec.









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text and photos by Mike Blair *staff photographer, Pratt*

Modern falconers practice an ancient pastime pursuing prey with raptors. Keeping and flying a falcon requires immense knowledge, time and endless dedication, but the rewards are great.



Eight hundred feet high and a quarter-mile away, Pedro waited. The tiny speck with pointed wings was nearly invisible against the bright sky, but its image wasn't lost on five mallards swimming nervously below. So dangerous was the tiny profile that the ducks stayed put in full view of an approaching man. The human raised and silently waggled his hand, and the soaring peregrine pulled closer.

It was over in 15 seconds. The man shouted, "HO!" and began running along the pond dam. The ducks took flight but stayed low, dodging through bankside willows. Above them, Pedro rolled and tucked into the deadly teardrop, characteristic of stooping falcons. There was a brief sound of wind ripping through feathers as the raptor checked its dive at nearly 200 mph, and for a moment two birds merged and separated in a cloud of floating feathers. The broken mallard dropped to earth while the falcon whistled through a tight turn and descended to claim its prize.

Bill Ried, master falconer from Oswego, ran a hundred yards through pasture grass to find his bird patiently sitting on the handsome greenhead. In a ritual honed by years of training, he traded Pedro a pen-raised quail for the larger duck. The falcon contentedly plucked and ate atop his partner's



The falconer's hood has a calming affect and may be used when transporting the bird. The disposition of Ried's falcon usually makes it unnecessary to do this during travel.

gloved fist, while Ried bagged the 46th duck taken by the pair in 55 days of hunting. This impressive statistic is heightened by the fact



Training a falcon requires time and dedication. The lure, a leather pouch containing food, is an important training tool that develops strength and hunting technique.

that Pedro is a tiercel (male), which at a weight of 23 ounces, is about one-third smaller than female peregrines normally used for duck hunting. More surprising, the spirited tiercel weighed only half as much as its prey.

This exciting spectacle was part of the rare sport of falconry in Kansas. Although Kansas falconers have grown in number from a handful to about three dozen over the past decade, the incredible time commitment required to keep and train a bird of prey discourages many would-be participants. Raptors of many kinds are used, including hawks, eagles and falcons. Large hawks and eagles are generally flown for ground quarry, while falcons are hunted for flying game. Accipiter hawks, such as the goshawk, may be flown either for ground or aerial pursuit. All forms of falconry are exciting, but nothing is more spectacular than watching a raptor connect in mid-air with dodging prey. That's why Ried, a seasoned falconer and past raptor rehabilitator, chooses to work with a peregrine, the bird historically synonymous with the sport.

Birds of prey are secured for falconry in two ways, both of which are carefully regulated by law. Wild birds may be trapped during migration, but only yearling raptors (identified by plumage patterns)

may be kept. Raptors may be purchased from breeders. Captive bred hatchlings are either attended and fed by humans, or actually raised by parent birds in a special area that minimizes human contact. Human-raised called birds are imprints, while those parentally nurtured are known as chamberraised. The latter are usually easier to work with because they tend to respect and accommodate their trainers to a greater degree than do imprints. Even so, many successful falconers, including Ried, work with imprinted birds. Untrained fledglings range in price from several hundred to several thousand dollars.

Training a falcon is a fascinating, if exhausting, task. Ried started Pedro at the age of 2-1/2 months, shortly after buying the young bird from an Oklahoma breeder. Lessons began with an exercise known as "fistjumping," designed to strengthen a weak, young flier while teaching it to fly vertically. In these lessons, Ried placed the falcon on the floor or ground, and then stood on a chair directly above it with raised fist. A tiny piece of meat held in the glove encouraged Pedro to fly straight up ten feet to land and receive the food. This exercise, not easy for a young bird, was repeated endlessly in the first few weeks of training until the falcon could make 50 back-to-back vertical jumps. Then the lessons switched to a much larger scope involving a "lure," the standard tool of falconry training.

The lure is a leather pouch containing food that is swung on a long string. The falcon is released outdoors and allowed to fly a short distance away before the lure is shown. When the bird spots the swinging food, it learns to dive and catch its meal in flight. Lure exercises help the young falcon gain coordination and learn to stoop from low altitudes without hitting the ground. To keep the falcon's interest, the trainer allows the bird to catch the lure for a bite of food only a few times each session. Lure training is successful when the bird is strong



After missing a duck, the peregrine surveys the pond. Ducks are reluctant to leave the water when a raptor is near and when flushed use trees and other obstacles to evade the raptor.

enough to make 60 passes in 15 minutes. Since the lure is associated with food early in training, it is useful throughout the life of the bird as a means of calling it from the air after an unsuccessful hunt.

By this stage of training, Pedro was a strong, agile flier, capable of hunting. But to be effective, the bird

had to learn to "ring up" to a position high overhead before the hunt commenced. To teach the falcon to climb to a suitable altitude, Ried used a large kite fitted with a downrigger to carry aloft a small piece of quail. The falcon's keen eyes could easily spot the food from the ground, and it would circle up to get it. The kite was flown up to 4,000 feet high, out of human sight. The bird would ascend and retrieve the food, then return to the ground for another try. Including rest periods, this training took nearly 3 hours each day, with a daily flight goal of 10,000 vertical feet before returning home. Strength gained by these exercises made it easy for the falcon to reach its average hunting altitude of about 1,000 feet. After several weeks, the falcon naturally rang up to hunting height whenever released.

All further training was conducted in actual hunting situations. Pedro caught a wood duck on its first hunting trip, and has steadily progressed in skill and endurance. Currently, the bird is in its third hunting season, and unlike many falcons which quit after one attempt (whether successful or not), this tireless raptor works again and again as the trainer recalls it to the lure and moves to another location. Many times, Pedro has caught several ducks in one day. Rather than quitting to eat, the falcon has developed a habit not uncommon to wild birds of prey, that of "caching" its kills. Returning to the car with its quail reward, Pedro hides the food in a crevice of the auto's interior and then perches expectantly to wait for the next assignment.

Like all falconry raptors, Pedro is maintained for hunting by a strictly -regulated feeding schedule. A



After knocking a duck from the air, Pedro descends and sits atop the quarry. Trained not to eat the ducks it catches, Pedro patiently waits for Ried to arrive and offer a snack of quail.

hawk or falcon must be weighed daily, sometimes in grams, sometimes in ounces, depending on the metabolism rate of the species involved. The bird is held at a weight that keeps it healthy, but eager to hunt. Experience has shown that Pedro burns five ounces of food each day, so this is the amount provided. When hunting time arrives, the bird is ready to fly, knowing that it will be rewarded with a meal or snack.

Using this system, Ried says that even wild-trapped redtail hawks can become "baby tame" in a matter of a few days, accepting and relying on a trainer to provide food. The hawk, which knows by experience how to hunt on its own, will accept a lifestyle that guarantees it steady meals, allowing a falconer to begin hunting the bird in as little as two weeks. Provision of food is the foundation upon which all falconry rests.

Even so, there are never guarantees that a hunting bird won't opt to leave. To help prevent escapes, and also to keep track of birds that thermal up or wander out of sight, modern falconers attach telemetry gear to the feet of their birds. Some, like Ried, attach two transmitters in case one fails. A pair of transmitters costs about \$300, but Ried believes that having a backup has saved him from losing a falcon on at least three



In hot pursuit, the peregrine attacks a gadwall flushed by Ried. Falcons often quit after a successful hunt or missed opportunity, but Pedro is conditioned to hunt all day.

occasions. The transmitters, which together weigh half an ounce, do not affect the falcon's ability to fly



Pedro often rides behind his human hunting partner, not requiring the traditional hood. When the bird spots a pond, it dances anxiously in anticipation of the hunt.

or hunt. They issue a signal which can be picked up by a hand-held receiver from as far as 15 miles. By triangulation, exact position can be established for a lost bird. When the bird becomes hungry, it is easy to catch.

From the human standpoint, falconry is a very physical sport. After months or years of training a bird, it is imperative that the trainer provide situations where the falcon can be successful. Potential quarry are reluctant to leave cover, knowing they are vulnerable only while in flight. Especially after a near-miss, ducks will often circle back to a pond and refuse to leave. A falconer must shout, throw sticks, run back and forth along the bank, or actually don a wet suit and wade or swim

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An instant after a hit from beneath, the peregrine begins to right itself as a stricken duck escapes, returning to the safety of the water. Not all hits are successful.

into cold water to flush game. It's exhausting work, but a daily part of the sport of falconry. The trainer, like the bird, must be in good shape.

Sometimes it's necessary to protect a falconry bird from wild birds of prey. Large hawks and eagles

often spot a takedown and then attack the falcon as it sits on its kill. Besides the risk of hitting power lines, this common problem poses the greatest threat to trained raptors. Ried sometimes has to sprint long distances to ward off attacking redtails which could easily kill his smaller falcon.

Due to Pedro's friendly nature and voluntary caching of food, Ried believes the bird is intelligent beyond mere instinct. Even when hungry, the falcon denies itself to continue hunting with the man — a bond not expected of fierce birds normally considered indifferent to humans. Keeping the falcon indoors as well as out, exposing it to all kinds of human activity, and even acclimating it to pets such as house cats, has produced a winged hunting companion with the personality of a good dog, rather than the normal flightiness of a bird. Ried doesn't even bother hooding the falcon, a universal practice to calm falconry raptors during transport. Pedro rides calmly atop the headrest of the driver's car seat, watching the world pass by.

But pull up to a pond, and the falcon dances with anticipation. So great are its hunting skills that only two species of Kansas ducks remain to be caught by it. Ried, who proudly mounts Pedro's quarries, hopes to finish the grand slam by taking both hooded and common mergansers next year. In addition to ducks, the falcon has distinguished itself as one of only a few tiercel peregrines to catch a Kansas prairie chicken.

Barring misfortune, Ried should enjoy hunting with Pedro for years to come. Captive peregrines have an average life span of 18 years, so his falcon is still a youngster. The man keeps a detailed journal of daily hunts, providing a rare window on the behavior of one of nature's most fascinating and elusive raptors. Meanwhile, Pedro continues to learn and improve, spelling trouble for mergansers everywhere while building the sport of Kansas falconry.



The peregrine soars 1,000 feet overhead while Ried flushes the ducks from a pond. Singling out a straggler for the strike, the raptor dives at speeds approaching 200 mph.

A Falconer's Perspective by Bill Ried

Falconry is one of the oldest sports known to man. Training a hawk or falcon is very demanding but is probably the most rewarding of all sports.

Unlike a gun, you can't store a falcon in a cabinet until you want to hunt. The bird must be flown on a regular basis - at least every other day throughout the year, except for the three-month period when feathers are replaced during molt. Training is intensive, but provides the opportunity to learn about predator and prey in a natural setting. This is something that the average person seldom gets to see. Prey species are designed to escape, so it takes a well-trained falcon to enjoy even marginal success.

When hunting with a falcon, many elements must be considered. Wind speed and direction, weather conditions, terrain, escape strategy of the quarry, and your position relative to the prey are all important. Fences and power lines pose special hazards. For ducks, the size of a marsh can impact success. It's often nearly impossible to flush ducks from big waters, unless you have help. If there are too many trees, the quarry can easily lose their attacker. It's important to consider all possibilities before turning a falcon loose. But it's a great feeling when everything works right, and your bird has a successful hunt.

Falconry is one of the most regulated sports in the U.S. A person must obtain both federal and state permits to participate in falconry. These require passing written tests and inspections of equipment and holding facilities. Licenses must be purchased, and a two-year apprenticeship must be completed under the direction of an established falconer.

In Kansas, falconers are limited to three migratory birds per day, single species or in combination. For instance, three teal, or else one snipe, one dove and one teal might be taken. Given the endurance of a falcon and the difficulty of making a kill, these limits are quite adequate. Falconers in no case may take more than the legal gun limit, so that only two geese could be taken in a single day. Falconers may utilize any normal Kansas hunting season, as well as a special extended season in early spring. Overall, the sport of falconry has essentially no effect on game populations.

Falconers are a highly dedicated group of sportsmen trying to preserve a practice that has endured since before the time of Christ. Since the majority of falconry birds are produced in captive breeding projects, falconry does not affect wild populations. In fact, falconers were instrumental in the successful re-introduction of the peregrine falcon after its decline following widespread use of the chemical DDT.

Anyone wanting more information about falconry should contact the Kansas Department of Wildlife & Parks, 512 SE 25th Avenue, Pratt, KS 67124.





Milford ECO-Meet

text and photos by Pat Silovsky information/education representative II, Milford Nature Center

High school students in northcentral Kansas compete in an outdoor competition, matching knowledge about Kansas wildlife, plants and conservation issues.



True of False. Frogs and toads use their eye muscles to help them swallow prey?

Next question. Which Kansas lizard, when overheated or stressed, squirts a few drops of blood from the corner of its eyes?

Next question. This organ, found in both reptiles and amphibians, aids in the sense of smell: a) Duvernoy's organ; b) Jacobson's organ; c) Bidder's organ; or d) Jensen's organ

Did you know the answers? These questions are a sample of those asked high school students who compete in the Milford Lake ECO-Meet at the Milford Nature Center.

The ECO-Meet began in 1991 when a Milford Lake Corps of Engineers park ranger and myself decided to revive a Corps competition from the 1970s. Joining us in our efforts was another Corps park ranger from Tuttle Creek Lake. ECO-Meet soon became a cooperative effort between our three offices. So, what is an ECO-Meet? It has evolved into an all-day event consisting of environmental competitions between participating school districts. It is designed to promote

enhance and environmental learning, but it is similar to a traditional sporting event in that competition is used as a means to achieve our goal. We decided to target high school-aged students because the majority of our educational programs are with elementary-aged students. We saw this as a chance to work with students who do not traditionally use the Nature Center or Corps lakes as an educational setting, and we hoped to encourage those who had already shown an interest in a science-related career.

Our ECO-Meet is divided into four events. Each participating team competes in a scavenger hunt, amphibian and reptile knowledge test, general wildlife knowledge test, and an interpretive presentation. Questions for these events are based only on Kansas flora and fauna. Teams are comprised of three students from a school, and each school is allowed to send two teams. An alternate for each team is also allowed to register. ECO-Meet draws its participants from an eight-county area in northcentral Kansas. Twenty-seven high schools



Wildlife biologist, Charlie Howe, works with high school students participating in the scavenger hunt competition.

from within this area are invited.

The wildlife knowledge test and the reptile and amphibian test are identifying activities set up like a college lab final. A variety of bones, furs, mounts, footprints, scat, live animals, and models with questions next to each are placed upon tables in a room. The questions may simply say "Identify" or they may ask a more involved question covering the habitat, food preferences, or other facts about the specimen. Students are required to give the complete common name but not the scientific name of an animal or plant. It isn't enough to identify an animal as a box turtle because there is more than one kind of box turtle found in Kansas. The correct answer would be "ornate box turtle" or "three-toed box turtle," depending on the question. Each team member takes the test, and a team score is given by adding the members' scores. Both of these events allow alternates a chance to compete.

The scavenger hunt is always the most popular event, even though it's probably the most difficult. Teams are given a list of items to collect from the nature trail adjacent to the Center and a time limit of 30 minutes. Most of the items are plants or parts of plants. A point is given for each item correctly identified. This is the only event in which students are allowed to use any kind of field guide. Since the area of the trail is largely prairie, students are exposed to lots of grasses — tough plants to identify even for those who have experience

The fourth event is called the interpretive event. Students dread this event because it involves speaking in front of a group of people — including judges! Teams are required to give a fiveminute oral presentation and are judged on their tech-

niques and content. Of the four events, this one has required the most refining and modification. The most recent change has been to model the format after a Project WILD activity called "Interview A



Student teams fill out test forms in the Reptiles and Amphibians portion of the competition and turn them in to staff helping with the event. Points are earned in each of the four events.

Spider."

To prepare for the ECO-Meet, schools are provided with a list of books and field guides which might be helpful, as well as a list of the common species of trees, plants, birds, fish, mammals, amphibians, and reptiles found in Kansas specifically in this region of Kansas. Most teams prepare for the meet by



Events are set up similar to college lab finals, with displays and questions about Kansas wildlife and its habitat.

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meeting after school or on weekends, and some even come out to the Nature Center before the event.

In 1994, we began offering scholarships to the winning teams. This met with great enthusiasm and gave the event more credibility. Each member of the first-place team receives a scholarship in the amount of \$100. All second-place team members receive a \$75 scholarship and all third-place team members receive a \$50 scholarship. In addition the top two individuals in the wildlife and reptile and amphibian knowledge events receive \$75 and \$50 scholarships respectively.

All scholarships are handled through the non-profit organization WILDSCAPE and can be redeemed by the student only upon enrollment in an institution of higher learning. Money to fund the scholarships has been donated by several organizations including Kansas Project WILD and Kansas Wildlife Heritage Month. Supporters of two of the scholarships on an annual basis have been the Geary County Fish and Game Association and the Riley County Fish and Game Association. Thirteen scholarships totalling more than \$900 are awarded each year. Besides the scholarships, all winners receive medals and the winning team takes home a travelling trophy to be displayed at their school for the rest of the year.

ECO-Meet has improved with age. Of course, many of the organizational and logistical problems have been solved over time, and word has gotten around that ECO-Meet is fun. It has gone from seven teams the first year to a high of 18. Volunteers and members of the Friends of Milford Nature Center and State Park donate a tremendous amount time and expertise to make ECO-Meet successful. We hope to keep expanding the competition, eventually helping other groups across the state organize their own meet. Ultimately, we want to host a statewide ECO-Meet competition. Is anybody interested? By the way, the answers to the reptile and amphibian test questions at the beginning of the article are: True, Texas horned lizard, and b. 🎲



In the most dreaded portion of the competition, teams must give a five-minute oral presentation to an audience that includes judges. In addition to scholarships, the winning team is presented with a travelling trophy to display at their school for the next year.



Teal On The Brain

by Dustin Teasley *illustrator, Pratt*

photos by Mike Blair

Why would anyone in their right mind want to get up before dawn and face mud, mosquitoes and sweltering heat? Teal. The early teal season brings waterfowlers out for the first hunt of fall, and it's a great time to introduce new hunters to waterfowling.



You reach up and slap at it, trying to shut it off. You squint to focus on the time and groan. It's 4:30 a.m. You drag yourself out of bed and get dressed, trying not to wake anyone who might get another couple of hours of sleep. Fumbling with gun, decoys, coffee and the dog, you're out the door. Driving to your hunting spot in the dark, you ask yourself what possessed you.

Teal.

The answer comes from somewhere in your still -foggy head.

Teal.

As the hot months of summer slowly pass, duck hunters are antici-

pating the upcoming season. September signals the start of migration, and some of the first arrivals are teal. These fast-flying, acrobatic birds offer one of the most challenging and fun waterfowl hunting experiences.

The 1997 teal season is September 13-21, but serious teal hunters have been preparing for several weeks. Those that hunt public wildlife areas should scout just before the season to learn what areas the birds are using. I like to line up several private land spots, so I pick up a county plat map from the county extension office about a month before the season. I make copies of each page and place them in plastic sleeves in a three-ring notebook. This allows me to mark promising spots with erasable colored pencils or markers as I drive the backroads. I also mark off roads to keep from backtracking. That evening I telephone landowners to ask permission to hunt. I follow up the call with a personal contact with the landowner so they know me and my vehicle.

For teal hunting, I look for shallow, weedy waterholes such as ponds, playas, and flooded crop fields. Many public wetlands, including Cheyenne Bottoms, Jamestown, Neosho, and Marais des Cygnes wildlife areas and Quivira National Wildlife Refuge offer excellent teal hunting opportunities.

Teal are small, fast and challenging to hit. Particular attention should be given to reacquainting yourself with your shotgun. A round of sporting clays or some hand-thrown clay targets can sharpen your shooting skills prior to the season. It's also a good idea to pattern your shotgun with some of the hunting loads. Steel and bismuth shot may not pattern the same as more familiar lead loads. Number 6 or 4 steel shot are recommended for teal.

A good dog is invaluable for finding downed teal in weedy wetlands, and a little preseason preparation is necessary. It may be hot during the early teal season, and a dog that is in shape will perform much better. Go to a pond or nearby marsh and brush up on commands and hand signals.

The equipment needed is pretty simple. Teal aren't selective about the company they keep, so a dozen mallard decoys will work just fine. Calling is also simple. A few hail calls to get birds' attention and maybe a comedown call is all that's really necessary. I think most calling



The bluewing (left) can be identified by the sky-blue shoulder patch, however the greenwing (right) lacks this. Learn to distinguish teal by shape and flight characteristics.

during the early teal season is more for the hunters than the ducks.

Of the three species of teal, the bluewing and greenwing are the most common. The cinnamon teal is a rare visitor. The first teal to arrive are bluewings, since they head south at the first hint of cold weather. Greenwings soon follow, but they are more cold tolerant and are seen throughout the fall.

Identifying teal on the wing takes

some practice. Like other early migrants, teal are in the eclipse stage. They've molted, and new feathers don't show familiar colors yet, giving both sexes a drab appearance. A good bird I.D. guide is handy, but perhaps the best way to learn is to hunt with an experienced waterfowler.

Measuring only 11 inches from head to tail and weighing 12 ounces, teal are the smallest puddle



Large flights of bluewings are common early in September. The first flights of teal may come through as early as the second week of September, and it's common to see additional birds arrive ahead of cold fronts. They won't stay long, however, if the weather is cold.

ducks. If mallards and teal are in the same flock, a noticeable size difference is apparent. Teal have a rapid wingbeat and generally erratic flight paths. It's common for a flock of teal to cut and veer back and forth just above the water or vegetation, then suddenly land in your decoys.

The wings, especially on the bluewings, can help you identify teal. Bluewings feature the powderblue shoulder patch even through eclipse, and the underside of the upper wing and primaries are dark while the secondaries are lighter. The speculum is green. The bluewing's belly is tan or dark. The greenwing has no shoulder patch, but its speculum is iridescent green. The primaries on the underwing are dark. The white belly can be a distinguishing characteristic. The greenwing's neck appears shorter in flight silhouette, and it appears smaller than the bluewing.

For dedicated waterfowlers, the early teal season can't start soon enough, but it's also a perfect time to introduce new or young hunters to waterfowling and duck identification. The weather is warm and there is usually plenty of other wildlife around to hold a beginner's interest. A frigid, late-season duck hunt is no fun for an experienced waterfowler, let alone a novice, especially if the bag comes up empty.

I found this out last fall. I invited my brother, who had never hunted ducks over decoys, to come down and hunt teal during the early season. I had the perfect spot lots of teal and a short walk from the road. The 78degree, breezy morning was pleasant and full of action. When the teal quit flying, Dennis had his first limit of teal. He was hooked and is always ready for a duck hunt.

Later that Nov-

ember, however, my brother brought a friend down who had never hunted ducks. The night before the hunt, my brother and I talked duck hunting, building enthusiasm to the point that anyone would have wanted to go. The next morning, however, dawned cold and windy. The wind made the 35-



Teal are excellent eating. Soak breasts in Italian dressing, wrap with bacon and a jalapeno pepper, season to taste, then grill until medium rare –mmm, mmm.



Teal fly fast and rarely in a straight line. Be quick and make sure you swing through on the shot, or you'll come up empty.

degree temperature bone-chilling, and then it started to rain. We stuck it out until 10 a.m., when we decided we'd had enough. Although we bagged some ducks, my brother's friend vowed never to duck hunt again.

The early teal season allows hunters to refresh hunting skills, introduce new hunters to waterfowling and get the dog back in the hunting groove. It's that magical first duck hunt of the year, as the sun makes its spectacular entrance to the day, when memories of past teal hunts flood your mind. You reach for a cup of coffee and pat the dog as it shivers with excitement, and you remember why you love to hunt teal. Then without warning, a bunch of teal nearly takes your head off, buzzing the decoys like miniature fighter jets. By the time you've mounted your shotgun, the birds are gone, your coffee's spilled and the dog is looking disgusted. You laugh out loud and know that this season will be full of memories. 🎲



Understanding Quail Needs

by Christopher K. Williams *The University of Wisconsin*

photos by Mike Blair

A three-year research project compared bobwhite habitat usage and winter survival in cropland regions and rangeland regions. A s I was researching the bobwhite quail in the Flint Hills, an old rancher came up to my truck and told me that all his quail had disappeared. He recounted how many coveys used to live in his wooded streambottoms and fencerows. He seemed resigned to the fact that bobwhites might never return in such numbers. Unfortunately, many other ranchers and farmers I have talked to shared his opinions.

Annual surveys of bird populations, such as the summer Breeding Bird Surveys and winter Christmas Bird Counts, have given support to the ranchers' observation, showing significant declines of northern bobwhite numbers throughout most of the United States. In the northern fringe of their range, bobwhite numbers declined sharply in the late 1970s and have shown minimal recovery. While in the southeastern U.S., which has been considered the core of the bobwhite's geographic range, declines have been even more pronounced. Even states such as Kansas, which have appeared to maintain relatively healthy bobwhite populations, are beginning to show indications of long-term declines.

It has been easy for many to blame predators or hunters for this decline, however, most researchers and managers believe land use practices have been most responsible. Because the bobwhite has traditionally been considered to thrive in an environment with a lot of edge — areas where two habitat types come together — it has been argued that the amount of edge within agricultural and rangeland habitats can affect the bobwhite's winter population.

For example, modern farming practices have encouraged increased field size, reduction of brushy or woody habitat, and elimination of weedy fence rows. As a result, the amount and availability of food and cover during the winter is reduced. Harvested fields left as stubble with associated annual weeds provide an important overwinter source of food. But the widespread practice of fall tillage on harvested cropland can reduce the availability of waste grain in by more than 75 percent. Additionally, harvested monoculture grain fields provide little protection for foraging bobwhites, exposing birds to increased predation.

Within rangelands, many important vegetative characteristics can be changed by grazing. Because bobwhites need grasses, brush, and woody cover to prosper in rangeland, brush removal and overgrazing can reduce their numbers.

In an effort to asses whether agricultural and grazing land use could be affecting the bobwhite trends, I conducted a three-year study within both rangelands and croplands in Lyon County (in conjunction with the University of Wisconsin and the Kansas Department of Wildlife and Parks). Although a portion of the research focused on the summer breeding season survival and reproduction, my research concentrated on the over-winter habitat use and survival of bobwhites within both habitat types. To investigate these topics, we used radio-telemetry collars to follow coveys between

September and March.

In eastern Lyon County, the acreage looks like much of the Midwest: a jigsaw puzzle of agriculture, hayland and the occasional pasture, each being dissected by fencerows and successional woodlots. Yet only 20 miles to the west on the Chase County border, the native



Tiny radio transmitters allowed researchers to locate coveys and monitor their movements through the winter.

prairies of the Flint Hills emerge like the ocean lapping up on the cultivated shore of agriculture. Winter wheat and mowed hay fields slowly evaporate into the characteristic red and brown hues of big bluestem, Indiangrass and switchgrass. The only trees and brush that dare question their place in such a land are with the streambeds and homesteads.

Yet despite the obvious difference in such lands, my quail showed little distinction in their preference or avoidance of any particular habitat type between the study areas. Within the cropland study area, idle lands, composed of fencerows, tree lines, waterways and old fields, and woodlands were significantly preferred, while hayland and cropland were significantly avoided. Pasture was used equally with its availability throughout the winter. Not surprisingly, I found that over the entire winter, cropland use decreased significantly while woodland use equally increased.

Within the rangeland study area, idle land and woodland were significantly preferred, while pasture and hayland were significantly avoided. This finding corroborates previous research in Oklahoma, that found that although pasture made up 48



Using a hand-held receiver, researchers located birds and documented their use of habitats throughout the study.

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percent of the habitat, it was used by quail only 14 percent of the time. Although cropland was significantly avoided during November and March, it was used equally with its availability during September and October. This apparent preference was most likely due to the availability of grains during harvest. Over the entire winter, we found cropland use significantly decreased while idle land use equally increased. But why was there a seasonal shift from croplands to escape cover habitat? Previous researchers have confirmed the intuitive answer that this movement was caused by the seasonal loss of crop residue in conjunction with the need for cover as weather becomes increasingly severe.

Our findings on the preference of idle land and woodland generally support not only previous research but also common observation. It has been well established that idle land and woodland habitat are vital to bobwhite survival, especially during the winter. Bobwhites will



Quail in the cropland region of the study used crop fields early in the fall, but crop field use diminished as the weather became more severe.

set up "headquarters" in patches of brushy habitat where food and escape cover are available and use fencerows and thickets for travel and escape. Though it has been noted that crop residues, particu-



The rangeland portion of the study was done in the Flint Hills of western Lyon County. Winter survival of rangeland birds was below that of cropland birds.

larly corn and soybeans, are important food items for bobwhite, it has been observed that birds generally avoid open agricultural lands to inhabit the surrounding wooded ravines and fencerows that provide protection.

Interestingly, I found that habitat use and covey range size seem to be related. Within the cropland study area, we found that as bobwhite increased their cropland use, their covey range size increased. Within the rangeland, we found that covey ranges expanded as both cropland and pasture use increased. Additionally, as the use of idle land on the rangeland became magnified, covey range size decreased. The final result of such findings is that when the preferred resource of idle land becomes scarce, coveys enlarge their range to include the preferred escape cover.

It is well understood among researchers, farmers and hunters that a quail does not live long. Much of the recent work investigating the survival of bobwhites during the winter has found that only 15 to 21 birds out of any 100 will still be alive by the end of March. It becomes the responsibility of the remaining females to restock the population by the next fall. My quail did not fair any better. I found that over-winter survival of my bobwhites, regardless of sex or age, was 16 percent on the cropland research area and 6 percent on the rangeland area. Although my survival estimates on the cropland seem to be consistent with other states' estimates, my low survival estimates for the rangeland were simply unprecedented. In addition, I found that 72 percent of winter bobwhite mortality was due to natural predators on both study areas, however, on the cropland, 11 percent mortality was due to hunting while on the rangeland, 22 percent was due to hunting.

Because bobwhites on the rangeland had consistently lower survival, I suspect the habitat did not provide them with adequate cover for protection and escape. On the cropland, where there was a greater amount of interspersion of ideal habitat, quail maintained higher rates of survival. This is consistent with previous research that found increased edge enhanced bobwhite survival and abundance due to the increase in and proximity to escape cover. On rangeland, abundant pasture was avoided and quail were



Harvested fields left unworked provide important winter food for bobwhites. Fall tillage of crop fields, however, reduces availability of waste grain by 75 percent.

concentrated in isolated patches of woody cover. Experienced quail hunters have learned to concentrate their efforts in good quail cover. It is possible that the increased hunting mortality on rangeland was caused by hunters concentrating on the obvious islands of woody cover.

Does this information tell us why quail are declining? To some extent, yes. Researchers in Illinois have suggested that if 70 percent of a winter population is lost, the remaining females will not be able



Hunting was found to be more of a factor in the rangeland than it was in the cropland. This may be a result of the quail spending most of their time in the islands of woody cover and hunters learning to concentrate their efforts in these areas.

to replenish the population, so decline is inevitable. According to my survival information, the rangeland should therefore be decreasing faster than the cropland, but this is not occurring. Why?

Recent analysis of Rural Mail Carrier Surveys in Kansas has shown a 26-year decline in the bobwhite population statewide. Most importantly, both rangeland habitat and cropland habitat seemed to be characterized by similar rates of decline and relative abundance. So where is the missing link? It is likely during the breeding season. Although we found lower winter survival in the rangeland, the concurrent summer research found higher survival and reproduction. While on the cropland study area, where I found higher winter survival, the summer research found lower survival and reproduction. So while rangeland may be detrimental to winter populations, summer populations seem to benefit from it. It is this seasonal shift in habitat suitability that may potentially be the cause of the observed equality in trends of both habitats. Yet regardless of whether one habitat is declining faster than another, the issue still remains that bobwhite numbers are declining.

The biggest threat that I observed to winter bobwhite in Kansas was predation, the majority of which was caused by raptors. So what if anything can the rancher and farmer do to help bobwhites avoid predation? We should look back to the old lessons of habitat management that have been orated to the public ever since President Teddy Roosevelt preached the values of conservation and renewable resources.

Biologists have noted that the most productive bobwhite ranges occur where woodland, idle land, grassland, and cropland are equally interspersed. The relative quantity, quality and proximity of escape cover, roosting cover and food from these habitat types can determine the vulnerability of a winter covey. Consequently, poor habitat quality can lead to low bobwhite survival. Therefore the opportunity exists for the rancher and farmer to enhance the survival rates of bobwhite with simple habitat management. Fortunately, habitat management is a tried and true method that works. If bobwhite populations are to be stabilized or enhanced, we as researchers, hunters or landowners need to continue to promote the conservation of the land. Therefore, with careful management, it is possible for my rancher acquaintance to say that he remembered a time when there were few quail on this land, but that was all in the past.

This article presents the final results from a research project carried out by Chris Williams for a M.S. Degree in Wildlife Ecology. This work was supported by Kansas Department of Wildlife and Parks Pittman-Robertson Federal Aid in Wildlife Restoration Project W-39-R. A future article will feature options for improving quail habitat in Kansas. Additional research on quail harvest and minimum covey size will begin this fall. Roger Applegate, small game coordinator, Emporia.



Monarchs On The Move

-

text and photos by Mike Blair staff photographer, Pratt

A truly beautiful spectacle, as well as puzzling oddity, monarch butterflies migrate thousands of miles each fall. On occasion, large concentrations may gather, as they pass through Kansas on their journey south.



They come by thousands this time of year, carried on silent wings that appear too delicate for anything but short flights. Don't be fooled. These aren't nectar sippers flitting about the local landscape. They're travelers, passing as surely as ducks and geese that trace the autumn heavens, and for the same reason. Monarch butterflies float southward to survive.

Monarchs, the orange-and-black butterflies familiar to nearly everyone, are spectacular examples of insect migration. While most of their butterfly cousins deal with winter by resting as immatures in leafy shelters or cocoons, adult monarchs embark on journeys covering thousands of miles. No one knows why they make the trek, or how they find their way. Unlike flocking birds which are taught their routes by older companions, monarchs fly singly and mysteriously toward an ancient wintering area. Beginning as far north as

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Canada, the butterflies of eastern North America journey to a tiny, isolated niche in the mountains of central Mexico (monarchs west of the Rockies winter in California.) Flight speed averages about 30 miles per day, with occasional rest stops to feed on flowers. The butterflies may cruise as high as a mile above land, but usually sail along at low altitude.

Migration through Kansas occurs over several weeks, usually peaking in mid-September. Sometimes, the colorful butterflies stop en masse to rest and refuel, particularly in bad weather. These local congregations provide a hint of the awesome gathering to occur in the alpine forests of Transvolcanica, where monarchs winter on trees at a density of 4 million butterflies per acre. It's estimated that 300 million monarchs assemble on the wintering grounds, located 13,000 feet above sea level in





a place so remote that it wasn't discovered by scientists until 1975.

Strangely, the wintering monarchs live much longer than others of their kind, some reaching the astounding age of 10 months before dying. By January, all are assembled on the wintering area, where they rest for a short time before starting north again. Their springtime destinations are Texas and Louisiana. The northward migration is punctual, often arriving within a day or two of the same time each year. Here the adults mate, lay eggs and die. The ensuing larvae complete their development and head north as adult monarchs, reproducing in a hopscotch fashion until they reach the northern U.S. and Canada by late summer. Females are prolific, laying up to 400 eggs in a month. Reproductive adults do not make



the southward migration flight.

Instead, adult monarchs emerging in late summer put reproduction on hold, and feed heavily in preparation for their long journeys. Scientists don't know what triggers the homing instinct in individuals completely removed from former migrating ancestors. But whatever it is, monarchs make the long flight to reproduce the following spring in Gulf states, where the cycle is repeated.

So we watch as monarchs gracefully accent the autumn sky, knowing that as they go, they take another growing season with them. Only when they return will they bring another. It is this knowledge that keeps us watching, caught in the ebb and flow of seasons trying to understand the mysteries of migration.



BUG'S-EYE VIEW

photos by Mike Blair



ROBBER FLY

Wildlife & Parks



PRAYING MANTIS



DUNG BEETLE



TWIN-LINED SPHINX MOTH

BUCKEYE BUTTERFLY



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Edited by Mark Shoup

LOVES THE WEBSITE

Editor:

Yours is by far the most informative and enjoyable website I have ever visited for a conservation department. I recently moved to Kansas City from SW Missouri, where I grew up on the local lakes fishing and skiing. I thought I was going to go absolutely mad because I didn't know where to go to fish versus where to go to play.

Several people at work told me Hillsdale was the place to go to ski, fish, or whatever, and that I would never find a clean lake in Kansas. Since visiting your web site. I have taken people to Clinton Lake, and they had no idea such a clean lake existed in Kansas. What a great skiing lake. And Your fishing reports are unreal, in an easy to understand table, one click to where you want to go. Excellent! I can't wait to visit Milford to try to catch some of those wipers you guys are talking about. I don't feel so bad about Kansas taxes being so high anymore. Thanks a ton.

> Michael Medearis Mission

NO TURKEY, GREAT TIME

Editor:

I purchased a spring 1997 turkey tag and received a card, which I assume I needed to fill out regarding my hunting success. I promptly misplaced this card. It was the first time I've attempted to hunt/call spring turkey. I went out a dozen times but spooked the few turkeys I was able to intrigue or confuse enough to come within 50 yards of me. I fired no shots.

I hunted exclusively on public land around Clinton Reservoir and saw quite a few other turkey hunters (15). I changed the area I hunted on five occasions due to what I felt was overcrowding.

But I was quite satisfied with my

spring woodland mornings, 4 a.m. to noon, and will try again for Clinton Lake turkeys, probably in both fall and spring, unless I am jailed or ostracized from the hunting community for not filling out my card. Sorry.

By the way, why can't we take those numerous robins? There is a history, in Europe at least, of hunting and eating members of the turdus genus. Remember "Four and twenty blackbirds baked in a pie"? They were robins (in the genus turdus). Hunting robins could extend the bird hunting season and/or take pressure off other gamebirds. It couldn't possibly decimate this lawn-loving species. I understand that the federalis and the animal rightists would object enough to nip this idea in the bud, but I had to make the suggestion.

Frederic J. Gutknecht IV Lawrence

Dear Mr. Gutknecht:

I'm glad you had a good time last spring. We should get together and swap stories about the birds we didn't shoot. I know you're joking about robins, but it's interesting to note that John James Audubon, our country's most renowned birder and connoisseur of fowl, loved robin meat. (See "Issues.")

-Shoup

NO MORE NRA

Editor:

As a new subscriber to **Kansas Wildlife and Parks**, I much appreciated the excellent wildlife and landscape photography in your Jan./Feb. issue. In the March/April issue, I found more outstanding photography and some interesting articles, but then I was stunned as I saw you were using at least some of this publication to promote the agenda of the National Rifle Association.

The hunter education course, developed by the NRA, is one of its few positive projects. Hunting safety, as noted in Rick Campbell's and Alan Hulbert's article, is commendable, but when we view

letters

the NRA as a whole, its record is much less constructive.

Please consider, for instance, the NRA's unreasonable opposition to reducing the proliferation of a broad range of handguns, assault weapons, and other people-killing firearms. This organization's heavily-biased views are apparent in a survey I received from them. Evidently, the NRA will compile results from its supporters and try to influence lawmakers and others with that misleading information.

I certainly hope that the Kansas Department of Wildlife and Parks is able to completely avoid using any of its future publications to further objectives of the NRA. Whatever you can do to reduce the inclusion of the NRA in your publications will be much appreciated.

> Al Vopata Wichita

Dear Mr. Vopata:

As you say, the NRA's sponsorship of hunter education programs is commendable. It has probably saved many lives and prevented many injuries over the years, as well as promoting outdoor ethics among hunters. This is the only portion of the NRA's agenda that the department promotes, and we would be foolish not to give them credit where credit is due.

-Shoup

ADVERTISING QUAIL

Editor:

I was raised on a farm in northeast Kansas, and as a boy, I shot my first quail in 1940. I have been an avid quail hunter ever since. The quail hunting in Kansas has been second to none. Now all that has changed.

I know that good hunting depends on the weather and habitat under normal conditions. It isn't normal anymore. The state of Kansas is overrun with hunters from every state from here to the Atlantic Ocean.

You said in a response to another concerned hunter that Kansas does not

advertise its wonderful hunting. However, when the three-day possession limit was changed to the four-day limit, if that isn't advertising I'd like to know what it is.

Kansas had no business increasing the limit. The only reason they did was for the revenue. What a dirty trick to play on Bob-White. Every year, the carry-over gets smaller and smaller. The big coveys are gone.

Man destroys everything. That is just what's happening to Kansas quail hunting. Please do me and every Kansas quail hunter a favor and put this in your magazine. The response will be like none you've ever heard.

> Tom Shoats Overland Park

Dear Mr. Shoats,

I appreciate and share your concern for our natural resources and the wellbeing of our wildlife. Their is no question that mankind's careless or selfish activities have caused irreparable damage to the environment. However, I have to disagree with your assessment of our quail population decline.

Quail populations have always been volatile, fluctuating wildly – mostly due to erratic nesting-season weather or habitat changes, or both, as you point out. A good indicator of this volatility is the fluctuations in annual harvest of quail.

In 1982, more than 3 million quail were harvested in Kansas. This was the highest number since 1969. But only two years later, in 1984, only 920,000 birds were harvested. This dramatic drop was caused by a drought in the fall of 1983 followed by an extremely severe winter that the birds could not survive.

By 1987, however, the harvest was back up above 2 million again. In 1991, 134,200 hunters harvested 2.4 million quail. Then in 1992, an interesting thing happened: the quail possession limit was extended from three daily bag limits to four daily bag limits, and only 121,000 hunters showed up. The harvest was 1.6 million birds - 800,000 less than the previous year when the bag limit was where you say it should have remained. In fact, the first four years of the increased possession limit yielded an average annual harvest of 1,892,000 quail. In the four years previous to the increased possession limit, the average annual quail harvest was 2,366,000 – nearly half a million more, each year, than after the limit was increased. And hunter numbers have been down, as well.

I'm sorry, but the numbers simply don't support your argument. The fact remains that habitat and weather are the primary factors controlling quail populations. And as quail numbers rise, the hunters follow.

If the numbers don't convince you, ask yourself this question: Do I have any places where bird numbers have always been good and few people get to hunt? Are the birds down in these areas? If the answers to both questions are "yes," how could non-resident hunters or an increased possession limit be the cause?

If Mother Nature will favor us with a summer and fall to match the good spring nesting conditions we had this year, maybe you can see a few more birds in your favorite spots.

-Shoup

LIKES MAG, HATES HUNT

Editor:

First, let me say I enjoyed your website very much. I would like to see more about birds (martins, song birds, migratory birds, etc.). I was very happy to read the article on page 40 (*Kansas Wildlife and Parks*, July/August 1997) by Cody Beers, stating that the number of young hunters is down. Perhaps the younger generation, by respecting the lives of wild creatures, will slow down and eventually stop this senseless slaughter of our beautiful wildlife.The pictures and most articles in your magazine are great!

> Geneva Armstrong Topeka

Dear Ms. Armstrong:

I'm glad you enjoy our magazine and are open-minded enough to continue reading, even though you don't like hunting. However, that there are fewer young hunters today is, I believe, an indication that youngsters are more divorced from wildlife and nature than ever, not more respectful. Society is more urban and televisionoriented than it is attuned to nature.

The hunters I know, on the other hand, gain knowledge about wildlife through the hunt, and through knowledge comes true respect. To call legal, controlled hunting "senseless slaughter" is to condemn all predators, of which man is just one.

For more on young people's attitudes toward hunting, and why they don't hunt as much these days, see the "Issues" section.

-Shoup

LIGHTED SIGHT PINS

Editor:

I've read where lighted sight pins can disqualify you from Pope and Young if you are using them. Also, are there any rules on cutting of branches on public land for treestand usage?

Any info will help. I do enjoy the info available on the web and in *Kansas Wildlife and Parks* magazine. Thanks.

> Dave Rubin Junction City?

Dear Mr. Rubin:

Thanks for the inquiry. We don't keep, make, or post rules for Pope and Young, but you can contact them by calling (507) 867-4144. I called them, and they confirmed that battery-operated lighted sight pins disqualify hunters for their record books.

Concerning cutting branches on public land, here's what Kansas regulation reads: prohibited acts on public land include "destruction, defacing degrading or removal of vegetation, except for non-commercial gathering of edible wild plants, wild fruits, nuts or fungi for human consumption."

If you would like further clarification, please contact your local conservation officer. [Call the Pratt Operations Office for this info.]

--Shoup


The \$195 Rabbit

On June 6, 1997, I was contacted by the Neosho County central dispatcher to assist with a disturbance in St. Paul. A Neosho County sheriff deputy and I met with a resident who reported that a subject had shot a rabbit that was in her front yard from his vehicle and then drove off.

With the information provided by the complainant, the subject was located and interviewed. He admitted to shooting the rabbit while in his vehicle and was issued citations for wanton waste and unlawful hunting.

After pleading guilty, he was fined \$195.

– Keith Rather, conservation officer, Chanute

HUNTER ED REQUIRED

Last January, I was preparing to leave for work when I received a call from a local license vendor. The store manager asked about some Texas residents who wanted to purchase licenses but had not taken a hunter eduction course. I told him that it is illegal for anyone born on or after July 1, 1957, to hunt in Kansas without taking hunter education and that it is illegal to falsify a hunting license with a phony hunter ed number.

I also told the vendor that I would be working that day.

As luck would have it, while patrolling northeast Ellsworth County that afternoon, I encountered the Texas hunting party. One hunter had a nonresident license but had falsified the hunter education number. He received a citation for hunting without hunter education and misrepresentation on a license.

Two other hunters checked out okay, and a fourth man had no shotgun. But as I was taking the first subject to town for bonding, I passed a culvert where I happened to spot a Beretta double-barrel shotgun. I stopped and picked up the shotgun. Later, the fourth man, from London, England, claimed the

BOWHUNTER EDUCATION REQUIRED

For the first time, Kansas' 12and 13-year-old archers will be allowed to bowhunt for deer, under the supervison of an adult 21 years or older. House Bill 2303, which passed the 1997 state legislative session allows this change. The bill also mandates that those interested must have passed a hunter education program plus a bowhunter education class. Those youths who feel they can pull the mandatory 45-pound draw-weight bow should make certain that classes are available in their areas.

The Kansas Department of Wildlife and Parks' Hunter Education Program classes, taught by volunteers, are available throughout the state and are normally scheduled in August and September. Bowhunter education is not as readily available because courses have not been mandatory in past years. As a result, fewer volunteer instructors are available, and classes will be much less widespread. The parents of young archers are urged to start now to find a bowhunter education class for their children to attend.

If your child is interested in attending such classes and you are unaware of any class scheduling, please call the Kansas Department of Wildlife and Parks' Pratt office at (316) 672-5911 and ask for hunter education or bowhunter education information. It is important that you call as soon as possible.

As of this writing, two September classes had been scheduled: Sept. 6, Galena – – phone (316) 421-0237; and Sept. 27, Great Bend – phone (316) 792-3289.

Qualified International Bowhunter Education Instructors are also urged to call the Pratt office if they are interested in scheduling a class.

> -Gene Brehm, videographer/ bowhunter education coordinator, Pratt

Bowhunter Education Classes are on-line at: http://www.ink.org/public/kdwp/Educatio/BowED/BowEd.html

shotgun, and I issued him two tickets: one for hunting without a license and another for not having a hunter education course.

> -Greg Salisbury, conservation officer, Salina

WOLF IN BIRD'S CLOTHING

Last November, a federal court in Chicago sentenced Tony Silva, an internationally recognized expert and outspoken protector of exotic birds, to nearly seven years in prison, without parole, for leading an international parrot smuggling conspiracy and related income tax violation.

In addition to the 82-month incarceration, U.S. District Court Judge Elaine Bucklo fined Silva \$100,000 and ordered him to perform 200 hours of community service during a three-year supervised release program following the prison term. This is one of the most severe sentences ever imposed for bird smuggling.

Also sentenced was Gila Daoud, Silva' mother. She will serve a 27-month prison term to be followed by a one-year supervised probation and 200 hours of community service.

The value of the smuggled wildlife in the conspiracy was \$1,386,900. Among the illegal shipments were substantial numbers of extremely rare hyacinth macaws, of which only 2,000-5,000 remain in the wild.

--U:S. Fish and Wildlife Service



ssues

WHY CARE ABOUT MOLD?

Current estimates put the number of species of organisms that have been given names at about 1.5 million, and the total number on Earth at well over 10 million, perhaps many more. In the fungi group alone, 69,000 species have been documented, but scientists believe that there may be as many as 1.6 million.

Twenty species of life provide almost 90 percent of the world's entire food supply, and all of the world's major crops depend on new genetic material from the wild to remain healthy and productive and to resist pests and disease. A strain of wild corn discovered in Mexico, for example, was found to be resistant to diseases decimating American crops.

Of the U.S.'s 150 top-selling prescription drugs, 79 percent originated in nature. The survival rate for the most common form of childhood leukemia has improved from a mere 4 percent in 1960 to more than 73 percent today, thanks largely to anti-cancer drugs developed from compounds discovered in wild periwinkle plants. A tiny Ecuadoran frog was recently found to secrete an alkaloid that is 500 times more powerful than morphine as a pain killer. Several compounds isolated from marine algae have proven to be more effective against mosquito larvae than commercial pesticides.

Even muddy germs appear to be important. The polymerase chain reaction (PCR), which has revolutionized diagnostic medicine, is a dramatic example of how we can benefit from species diversity at the level of the molecule. The enzyme upon which PCR relies comes from a bacteria found in boiling mud samples collected in Yellowstone National Park.

In fact, every species is a potential source of human medicine, but less than 2 percent of all described species of plants have ever been adequately screened.

Each extinction — no matter how insignificant the species may seem to be — is irreversible and takes away unique genetic codes and known or undiscovered potential for providing humans with medicine, energy, recreational values, or food.

-The Academy of Natural Sciences

Note: The Academy of Natural Sciences (ANS) publishes Know Your Environment, a series of bulletins designed to provide unbiased, factual information on some of the topics you hear so much about in the news. These monthly articles are sent free-of-charge to newspapers, magazines, environmental organizations. reporters, legislators, educators, and individuals-and are now available on the World Wide Web.

It's published by Environmental Associates, a group of environmentally responsible companies who first began meeting with Academy scientists to share information about the environment in 1966. The goals of Environmental Associates are to support new environmental research projects; to furnish scientific information and guidance to industry, government, and environmental organizations; to sponsor national conferences on important environmental issues; and to disseminate objective information to the public on issues of environmental concern.

Contact them at http://www.acnatsci.org/erd /ea – or write ANS, 1900 Benjamin Franklin Parkway, Philadelphia, PA 19103-1195. –Shoup

snow goose Crisis

Describing current snow goose populations as "totally out of control," Secretary of the Interior Bruce Babbit called on the conservation community to act quickly to help contain the problem.

Speaking at the Ducks Unlimited (DU) convention in Chicago last June, Babbit said, "We have an extraordinary population explosion of white geese in the U.S. and Canada. The result is enormous destruction of breeding grounds."

It is estimated that snow goose populations in the central U.S. have tripled since the 1960s. The reasons are complicated, but for the most part, this dramatic rise has to do with increased agricultural activity – and, thus, more food – on the birds' wintering and migration areas. The population explosion is more than the birds' summer breeding grounds in the Arctic can handle.

The Arctic Goose Habitat Working Group was formed in 1996 to study the problem and recommend solutions. "As a result of the snow goose population explosion, much of the fragile tundra vegetation the birds feed on is completely gone," says Bruce Batt, chairman of the working group. "It might take decades for this habitat to recover – if it can recover at all."

Snow goose numbers have continued to climb despite increased bag limits and longer seasons. Proposals to help reduce populations include allowing late-season and springtime hunting, easing restrictions on some hunting methods, increasing subsistence hunting and egg-taking by native people in the far north, providing increased hunting opportunities on public land, and further liberalizing bag and possession limits.

DU is currently producing an hour-long documentary



that takes an in-depth look at the problem. Filming is ongoing, and the show is expected to air on national television year next year. The film will also be available free for educational purposes.

- Ducks Unlimited release

TEAMING GETS BOOST

Orscheln Farm and Home Supply, one of the largest Midwest companies dealing in wildlife feed and supplies, has given its formal endorsement to the largest wildlife initiative since the 1937 Wildlife Restoration Act – Teaming With Wildlife.

The initiative comes in the form of proposed legislation that would aid nongame species such as songbirds, turtles, freshwater clams, and a myriad of other species currently with no direct funding source for conservation programs. Legislation will be introduced in the U.S. Congress this year to create a 1/2 to 5 percent excise tax on outdoor goods used in wildlife appreciation and viewing activities. Items targeted include binoculars, bird seed, field ID guides, hiking boots, and other outdoor equipment.

"People who use outdoor equipment generally appreciate and want to see wildlife." says Ken Brunson, Kansas' nongame program coordinator. "Through Teaming With Wildlife, they will get the opportunity to help contribute directly to the conservation of wildlife resources they enjoy and appreciate. Anyone who buys a pair of binoculars or other outdoor equipment will enjoy the satisfaction of knowing that a portion of their purchase moneyl helps support wildlife programs, much like hunters and anglers have done through the Sport Fish and Wildlife Restoration acts."

In addition to bird seed wildlife and supplies. Orscheln sells lawn and garden, hardware, plumbing, electrical, tires and automotive, paint, farm supplies, pet feeds and accessories, and western and work clothing. The company's endorsement of this initiative brings the number of companies and organizations supporting the legislation to about 2.000 nationally. For more information on Teaming With Wildlife, contact Brunson at the Pratt Office (316) 672-5911.

-Shoup

KIDS & HUNTING

Last issue, we ran a story from "Wyoming Wildlife News" that showed the number of young hunters on the decline. What that article didn't show was the general attitude of young people toward hunting, or why they don't hunt as much anymore. However, a 1995 Wisconsin study sheds more light on this subject than simply looking at numbers of hunters.

The study was based on random statewide telephone interviews with youths age 16 and 17. Fifty-one percent of those responding were female, and 49 percent were male. The study's results fall within a sampling error of \pm 5 percent.

Of those surveyed, 76 percent approve of legal hunting. Only 18 percent disapprove. Interestingly, even more young people – 85 percent – believe that hunting should continue as a legal activity, and 9 out of 10 agree that people should have the freedom to hunt if they choose. A variety of reasons for not hunting were given. A surprising 44 percent of nonhunting respondents indicated that they do not hunt because they haven't taken a hunter education course. Among current hunters surveyed, 32 percent said they don't hunt more because other interests take up their time; 23 percent said they have no places to hunt; and 20 percent said they have no one to go with.

When asked, "Would you be interested in going hunting in the next five years," 25 percent of the non-hunting respondents said they would like to go.

This study suggests what many in the hunting community have contended for years: that fewer numbers of young hunters has more to do with urbanization and lack of opportunity than disinterest or anti-hunting bias.

-Shoup

FOWL PLAY

According to The Bird Watcher's Digest, John James Audubon likely tasted every species of bird he observed. In a quiz reprinted from The Chat, a publica- tion of the Maryland Ornithologists' Society, a number of quotes describing the culinary quality of various birds were attributed to Audubon.

The format was a matching quiz with the admonishment, "If you get any of them right, you've got a lot of explaining to do." This is certainly true for all but the crow. As for the passenger pigeon, you'd need a time machine because it's extinct.

So here's Audubon on bird meat:

• Passenger pigeon: "The flesh is of a dark colour but affords tolerable eating."

• Whooping crane: "Its flesh was tender and juicy, of a colour resembling that of young venison."

• Pileated woodpecker: "Its flesh is tough, of a bluish tint, and smells so strongly of the worms and insects on which it generally feeds, as to be extremely unpalatable."

• American robin: "They are then [November] fat and juicy and afford excellent eating."

• American crow: "The young are tolerable food when taken a few days before the period of their leaving the nest."

• Brown pelican: "Its flesh is, in my opinion, always impure."

-Shoup



The U.S. Environmental Protection Agency (EPA) has designed a web page to introduce Community Right-to-Know issues to the general public. The page deals with current issues, including the Food Quality Protection Act and the Toxic Release Inventory. Information about ongoing issues, including lead disclosure requirements and pollution prevention, are also covered. View the site at http://www.epa.gov/epahome/r2k.htm

Right-to-know laws provide the public with government information about possible chemical exposures, thus allowing individuals to make more informed choices. There is also a fact sheet about Community Right-to-Know available from the White House at: http://www.whitehouse.gov/ CEQ/fact.html.

-EPA

hunting

SIGHT THAT RIFLE

Firearms deer season opens Dec. 3, and the most important thing all hunters must do is correctly sight in their rifles.

The first step is to make sure all scope mounting screws are tight and that the scope is correctly installed. Next, take the rifle to a safe place to shoot, a place that has a solid shooting platform 100 yards from the target, with a safe back drop. The rifle should then be bore-sighted. This can save you several rounds of ammo and allow you to sight in quickly. (If your rifle has been sighted in before, this step probably won't be needed.)

Place the firearm on the solid rest and remove the bolt (if it has a bolt action), or use a bore sighter set to look down the barrel (if it is an autoloader). Adjust the rifle on the rest until the bullseye of the target can be seen by looking through the bore or bore sighter. Without moving the rifle, look through the scope. If you see the bullseye in the crosshairs, you are correctly bore-sighted. If not, adjust the scope until the bore and scope both show the bullseye.

You are now ready to start shooting. Fire three shots and check their point of impact and group size. The point of impact should be from $1 \frac{1}{2}$ to 3 inches straight above the aiming point. If you are using a rifle such as a .270 or .30-06, the 3-inch-high spot will be the correct sighting for 250 through 275 yards, depending on the type of ammo used. Rifles chambered for shorter-range cartridges such as the .30-30 round should use the 1 1/2-inch setting. This should put the shot on the bullseve at 150 yards.

If the caliber and point of impact do not match these criteria, remove the scope caps and adjust the scope accordingly. Scope adjustments are made in clicks. Check the manual that came with the scope. Each click will equal 1/2 or 1/4 "minute" of adjustment, meaning 1/2- or 1/4-inch at 100 yards. Make adjustments that should bring the group to the correct point of impact and shoot another group of three shots. Keep making adjustments and shooting until the group is in the correct spot.

It is critical that your rest is solid and that your crosshairs are placed in exactly



HANDICAPPED HUNTING IN KANSAS

Anyone with a permanent physical disability that prevents them from hunting safely may apply for a Disability Assistance Permit. The permit allows a designated person to actually harvest game for the permit holder. (This law also applies to fishing.) For more information or applications, contact the Kansas Department of Wildlife and Parks, Law Enforcement Division, 512 SE 25th Ave., Pratt, KS 67124, (316) 672-5911.

In addition, a number of public areas in the state offer special areas for handicappedaccess hunting. In some cases, this may mean places where hunters may drive and hunt from their vehicles, with the proper permit. In other cases, it may mean a waterfowl area. **Region 1, Northwest**

Cedar Bluff WA – Deer, pheasant, rabbit; (785) 726-3212 Glen Elder WA – Deer, pheasant, waterfowl; (785) 545-3345

Lovewell WA – Deer, turkey, pheasant; (785) 753-4971

Norton WA – Deer, turkey, pheasant, rabbit, waterfowl; (785) 877-2953

Webster WA - Deer, turkey, pheasant, rabbit, waterfowl; (785) 425-6775

Wilson WA – Deer, pheasant, rabbit, quail; (785) 658-2465

Region 2, Northeast

Clinton WA – Deer, turkey, quail, rabbit, dove; (785) 887-6882 Hillsdale WA – Deer, turkey, quail, squirrel, waterfowl, dove; (913) 783-4507 Milford WA – Deer, turkey, pheasant, quail, squirrel, rabbit; (785) 461-5402 Perry WA – Deer, turkey, pheasant, quail, rabbit, squirrel, dove; (785) 945-6615 Tuttle Creek WA – Deer, turkey, pheasant, quail, dove; (785) 363-7316

Region 3, Southwest

Cheyenne Bottoms WA– Physically-challenged waterfowl blind, reservations required; (316) 793-3066

Hodgeman WA – Pheasant, deer, waterfowl, rabbit; (316) 276-8886

Meade WA – Quail, pheasant, deer, turkey, rabbit; (316) 873-2701

Pratt Sandhills WA – Upland birds, deer, turkey, rabbit, pheasant; (316) 672-6550 Region 4, Southcentral

Region 4, Southcentral

El Dorado State Park – Waterfowl; (316) 321-7180

Kanopolis WA – Deer, turkey, upland birds, squirrel, rabbit, furbearers; (316) 321-7669

Kaw WA – Deer, turkey, upland bird, squirrel, rabbit, furbearers; (316) 876-5730 **Region 5, Southeast**

Big Hill WA – Deer, turkey, small game; (316) 331-6820

Copan WA – Deer, turkey, small game; (316) 331-6820

Lyon State Fishing Lake – Deer, waterfowl, quail; (316) 699-3372

Melvern WA – Deer, waterfowl, quail, small game; phone (316) 699-3372

For more information, contact the Pratt Operations Office, (316) 672-5911.

–Shoup

the same spot with each shot. Sandbags, shotgun shot bags, or specially-made rifle rests will help ensure a steady shot.

The smaller the group the better, but a three-shot group measuring 2 inches is good enough for most hunting situations. If the group exceeds 2 inches, more care should be taken to gently squeeze the

Country

Living

trigger on each shot, or a change of ammo may be called for. It's always best to sight in and practice with the same ammo you plan to hunt with.

Once the rifle is sighted in and the groups are the correct size, it's time to practice. Shoot from positions you would expect to use in the field, and shoot at least two boxes of ammo (40 rounds). Many people think it is too expensive to correctly sight in and practice shooting their rifle, but it's cheaper than missing that once-in-a-lifetime buck.

> -Charlie Swank, wildlife biologist, Ellinwood

UNDER CURRENTS

selves "discussing" bedroom furniture arrangements, time frames for adding on, landscaping alternatives, toothbrush space in the medicine cabinet.

On the last return trip of the day, this discussion became so interesting that I couldn't hear my pickup radio. Then Will, my youngest, blurted out from the back seat, "You guys are acting like a couple of little children!" Humbled, Rose and I choked back the laughter, sighed in unison, and rode the rest of the way to town in peace. Otis Redding never sounded so good.

Back at the old house, I assessed our progress: boxes everywhere, not to mention some mattresses, chairs, and other items I was sure I could spare my friends.

"To heck with it," I said. "We're going to the fair." The boys would get to act like little children, no matter how late the hour, and it was Pratt County Fair's last night.

The next morning, resigned if not refreshed, we were up early. As friends are wont to do, everyone showed up on time and within three hours, the entire mess was transported from one house to another — which is the definition of a move. (The only minor glitch was a safe that some irreverently thought I should slide off into the sewage lagoon.) After pizza and refreshments, the friends quickly disappeared, which I found odd, so Rose and I relaxed most of the day. We set up a pool for the boys, and let them play.

That evening as we sat on boxes and leaned against each other just to keep from falling over, we watched a pair of quail out the living room window, pecking across our front lawn. In the sky across the road, ducks circled. All was quiet as the country air drifted sweetly in the windows. We had spent much of our physical and emotional energy on this moment, but the price was right.

by Mark Shoup

May the countryside content me. -Virail

In early August, my family and I realized a dream by moving to the country. For years, we had driven the section lines around Pratt in hopes of finding the right place at the right price. Although there were plenty of places, none fit both criteria. We had all but given up the dream, had even planned additions to our beautiful old Victorian house in town, when a 13-acre plot came to our attention, complete with a good house, barn, beautifully-manicured 3-acre lawn, and plenty of trees.

It was ideal, so we grabbed the brass ring and held on tight. Although the move promises to be all we dreamed of, the experience of moving was, well, moving.

Nothing tests one's stamina and sense of organization like moving. It's amazing how much "stuff" you collect when you stay put. When I was young and single (and had the strength and stamina for big moves), I travelled light and moved often, one being a necessity of the other, I suppose. Now that I have a few years behind the desk and a little gray behind the ears, I decide to take on an exodus. I see why Moses really needed God's help. Of course, Moses travelled light, and he had to move quickly. I had a whole week. Piece of cake, right?

It was Saturday morning, and the plan was to get everything moved but the big furniture and appliances before my friends came to help the following Saturday. I would take annual leave all the following week and be rested, ready, and waiting when they showed up.

That first Saturday, it took all day – five trips – just to move the garage. Logan and Will, ages 9 and 6, could not bear to see me make a trip to THE FARM without them. They wanted to help, after all.

(Right now they're still working on a map of the "forest" and every nook and cranny in the barn, just so I can find them easily. I'm not sure why it's taking so long.)

By Monday afternoon, the beautifullymanicured 3-acre lawn threatened the house like some creature from a 1950s sci-fi movie. It could not be conquered with my little in-town Toro. After a quick test of a few mowers in the neighborhood, which added another 50 miles on my pickup, I suddenly found myself on top of an apparent piece of Gulf-War surplus that could swath every alfalfa field in the county.

Lawn mowed and about 30 loads later – mostly the shop and some 10,000 boxes of books I've never read but will – I was feeling a bit light-headed.

To complicate matters, my long-suffering wife, Rose, was frantically writing her masters thesis prospectus. While she was prospecting, my "mine" was playing out. Luckily, she finished Tuesday night and the next day was able to devote her considerable energies to the task at hand, i.e. THE MOVE.

Unlike most couples, Rose and I never fight; we discuss. She directs and I cuss. For the most part, however, we worked in relative harmony for such a dramatic undertaking right before the start of school. By Friday night, however, the binds that tie emotions of normal human beings began to unravel. We found our-



"NATIVE" KANSAS WIPERS

In recent years, wipers (striped bass/white bass hybrids) have become one of the most popular sportfish in the Midwest. Their ferocity and size (nearing 20 pounds) make them a challenge for any angler. Because of this popularity, however, a reliable source of wiper fry for stocking in Kansas has been difficult to find. Developing an instate wiper program has not been easy, either.

The Kansas wiper program began in 1977 when the department collected striped bass females and male white bass from Kansas streams and reservoirs. Unfortunately, the males became sexually mature before the females. Field biologists tried getting eggs from female stripers in the wild but found that eggs were often not developed enough for production in the hatchery. And when biologists tried to cross white bass females with male striped bass, the fry were too small for good survival rates.

In the early 1980s, the Fisheries Section of Wildlife and Parks began looking to other states for wiper fry, but only limited numbers could be obtained. Then in 1989, the Meade Hatchery began a program to raise striped bass broodfish using established techniques for smallmouth and largemouth bass. However, the striped bass died during the winter at age three, well before the females could reach sexual maturity at age five. Luckily, out-of-state sources of wiper fry began to supply as many as 10 million fry per year in the early 1990s, depending on weather.

But as the popularity of



wipers increased, out-of-state sources became less reliable. Floods often hampered production in other states, as well.

In 1993, the striped bass broodfish program was moved to the Milford Hatchery where the winter environment could be controlled in raceways. The fish survived, and in 1996, 25 surplus three-year-old male striped bass were sent to Nebraska where they successfully fertilized white bass females and produced fry.

The biggest bonus, however, came this year. Due to a shortage of wiper fry from out-of-state sources, Milford Hatchery staff induced ovulation experimentally in fouryear-old female striped bass. The effort produced 235,000 wiper fry, which were returned to rearing ponds and will be grown to finglering size before stocking. The experience gained should be especially beneficial next year, when the fish spawn naturally at age 5.

An offshoot of this program has been the stocking of 2,500 surplus striped bass broodfish, weighing from 1 to 5 pounds, into Kansas public waters.

Currently, the captive broodfish are in good physical condition. The controlled environment combined with a special feed developed by Milford Hatchery manager Tommie Crawford seem to be agreeing with the fish. If all continues on its current course, Kansas may one day meet most of its wiper stocking requirements through our own in-state breeding program.

-Shoup

NIMROD TIPS

Most folks see good fishing as just a matter of luck, and to some extent this is true. However, a great deal of skill is required to catch fish consistently. And as with any skill, the more you fish, the better you get. The subtleties of the sport begin to reveal themselves. Here's just a few tips to help the angler pay more attention and, in the long run, catch more fish:

• Take a minute to learn exactly how much line is retrieved with one full crank

fishing

on your fishing reel. When you're vertical fishing for suspended fish, you'll know how many reel handle turns it takes to put your jig right in or just above the school of fish.

• Crankbaits can be "worked" to catch more fish. When bass are chasing shad, retrieve the plug fast and pump the rod tip to make the bait dart erratically, and you'll get frenzied strikes. When fish are turned off, retrieve the plug fast again but bounce it off rocks and timber to elicit reflex strikes.

• When using a graph or liquid crystal graph (LCG) to locate fish or structure, always have a marker buoy ready. Mark anything that looks suspicious. You can then make several more passes to better identify the object. Finding it again without a buoy can be nearly impossible.

• On clear lakes and ponds, the accurate caster will always catch more fish. If you can make long, accurate casts, putting your lure next to a stump or just off a bed of vegetation, you'll catch more fish than someone getting snagged up or spooking fish with short casts.

-Miller

CATCH-AND-RELEASE MONSTER

The National Fresh Water Fishing Hall of Fame keeps records on both kept and released fish in the U.S. A recent issue of the organization's publication The Splash sports a cover photo of a wide-eyed young angler named Jennie Gaurkee holding a 43-inch chinook salmon that she caught on Oct. 18, 1996, from the Milwaukee River in Wisconsin.

What did Jennie do with this prize? She let it go! The catch and subsequent release put Jennie in the record books for the largest catch-and-release chinook in the 12-pound line class.

-Shoup



nature

Sewer Bats

At dusk in Pittsburg, the town's elusive celebrities emerge from an underground pipe near a river, in search of dinner – mosquitoes and other pesky insects that harass humans. The gray bat, or gray myotis, is the only endangered species of bat in Kansas and is probably one of the few in the nation to make its home in a town's storm sewer system.

About 3,000 gray bats live in Pittsburg's storm sewer, a 6foot-tall underground archshaped structure made of bricks that are rough enough to sink 10 clawed toes into. The bats spend their days from April through November hanging upside down, crowded together – about 270 of them per square foot.

"Gray bats roost in caves with water," says Steve Ford, who teaches biology at Pittsburg State University. "These storm sewers are essentially caves with water."

As man-made structures go, this is an old cave, dating back to the Works Progress Administration days [in the 1930s]. The Department of Wildlife and Parks is so concerned that the sewer system might collapse or need extensive repair that it is working on a back-up plan for the bats.

One possibility is building, next to the sewer, an artificial cave that would mimic the conditions that draw the bats back every spring to have their young.

"There is a certain place in the storm sewer that has just the right temperature and humidity," says Jerry Horak, endangered species program specialist for the department. "That is where they have the young. They go to one spot every time."

Originally, the bats lived in limestone caves throughout the United States. About 1.5 million still exist in the lower Mississippi Valley, but many of their caves have been destroyed or commercialized for spelunking.

The nursery colony in Pittsburg was discovered in 1958 when Horace Hays, a mammalogist at Pittsburg State, went exploring after hearing people talk about bats near the sewer.

-Pittsburg Morning Sun



Urban WILDLIFE

The term "urban wildlife" is often used in reference to exotic species such as house sparrows, European starlings, feral pigeons, or nuisance animals like opossums and raccoons. However, there are numerous native and migratory animals that spend part or all of their lives inside city limits.

An animal's response to urbanization depends on its natural habits. In birds, for example, habitat specialists such as flycatchers, vireos, bluebirds, and warblers tend to decrease in number. These birds are typically long-distance migrants and cavity nesters that rely on complex habitats throughout their migratory routes.

Habitat generalists, however, such as mockingbirds, house wrens, mourning doves, and grackles may actually increase in the urban environment. These birds tend to be edge species, short-distance migrants that are seed-eating or omnivorous. Habitat generalists are able to find food and shelter in a variety of ways and can survive quite well in simplified urban environments.

–Keep Texas Wild

Habitat Corner

The mourning dove is a highly-adaptable migratory species. It nests in trees, old buildings, and even on the ground and can be found in both urban and rural environments. For this reason, creating habitat for doves is a bit different than for some other species. Their habitat is almost everywhere. However, doves need one thing all animals do – food. A food plot in the country can attract good numbers of doves, as well as other birds. Here's a few tips on dove field management from the Georgia Department of Natural Resources:

· Brown-top millet is a good grain that doves eat readily where it is available on open ground. Brown-top millet should be planted in rows 3 feet apart at the rate of 10 pounds of seed per acre on a well-prepared seedbed. Planting should be sometime between mid-May and mid-June. For maximum seed production, it may be necessary to cultivate the stand to keep the middles as clean as possible and to produce an open feeding area. Leave about 5 acres unharvested.

• Proso millet is another very palatable grain to doves and should be planted in rows 3 feet apart at a planting rate of 6 pounds of seed per acre. Planting time would be about the same as with brown-top millet, and 5-acre fields should also be left unharvested.

• Another good bet for attracting doves [especially in Kansas] is providing summer feeding areas for the breeding population and their young. Plant a one- or twoacre field to wheat at the rate of one-half bushel per acre. This will result in a thin, sparse stand in which doves will feed in July, August, and September. The wheat should be left unharvested in this situation. This should hold a larger population of doves in these local areas.

> . –How to Have Small Game on Your Land





For the second year in a row, the Department of Wildlife and Parks will sponsor two youth waterfowl hunting days —one for the High Plains and Low Plains Early duck zones and one for the Low Plains Late Duck Zone. On these days, hunters 15 and younger may hunt outside the regular season.

Bag limits are the same as the regular season. Youths must be accompanied by an adult 18 or older, but the adult may not hunt. Both adult and youth hunter must have valid hunting licenses and possess both state and federal duck stamps, if required by law.

The following dates are reserved for youth waterfowl hunting in 1997: High Plains and Low Plains Early zones: Sept. 27.

Low Plains Late Zone: Oct. 18. -Shoup



From 1962-72, Kansas Forestry, Fish, and Game Commission staff conducted spring pheasant crowing surveys in targeted areas of the state. The survey routes were discontinued because of cost and because they were thought at the time to duplicate information collected in the rural mail carrier surveys.

Last spring, however, the Department of Wildlife and Parks brought the survey back as biologists successfully completed 52 survey routes in 69 counties from April 25 through May 15. The 20-mile routes were run beginning 45 minutes before sunrise and had to be conducted during clear, dry weather with winds below 10 mph. Stations were two miles apart. At each station, biologists got out of their vehicles, walked 10 yards, and listened carefully for two minutes, counting the number of crows they heard during the twominute period.

In future years, the exact routes and methods will be repeated, hopefully providing the department with information that will complement the mail carrier surveys and give researchers a better idea of the Kansas pheasant population trends as results are compared from year to year.





Backyard Monsters: The World of Insects is a travelling exhibit featuring giant robotic insects, collections of exotic insects from around the world, interpretive displays, and interactive learning stations. Previously, this exhibit has only been shown in large museums in large cities, but it's coming to Hutchinson.

From Sept 24-Dec. 13, the exhibit's only Kansas showing can be viewed at the Hutchinson Mall, sponsored by the Dillon Nature Center and the Reno County Museum.

This multi-million-dollar exhibit has received critical acclaim and has broken attendance records at all of its showings. Special group tours are available for experiencing Backyard Monsters by phoning the Dillon Nature Center at (316) 663-7411.

—Dillon Nature Center release



One of the Midwest's largest astronomy events will occur 75 miles south of Kansas City on Sept. 25-28. The Great Plains Star Party provides the opportunity for astronomers of all ages to educate themselves on all aspects of this hobby. Activities include lectures, local hiking and biking, evenings devoted to observing the sky, and weekend camping under the stars.

The registration fee is \$30 for adults and \$12 for children 12 and under. The registration fee includes camping and a Saturday night all-you-can-eat barbecue. For more information and registration, contact Dan Johnson at (913) 897-0235, or see the Kansas Astrophotographers and Observers Society at http://www.icstars.com/Great Plains. — Dan Johnson, Star Party chairman



note

National Wildlife Refuge Week will be Oct. 12-18 this year. Any time, however, is a great time to see a National Wildlife Refuge.

There are more than 500 national wildlife refuges in the United States. If you visit one during National Wildlife Refuge Week, you can enjoy special events, including birdwatching with experts, nature demonstrations, slide shows, and lots of wildlife.

But any time is a good time to tour or hike one of these natural treasures. In Kansas, three national wildlife refuges are available: Flint Hills, near John Redmond Reservoir in Coffey County, (316) 392-5553; Quivira, west of Hutchinson in Stafford, Rice, and Reno counties, (316) 486-2393; and Kirwin, in Phillips County, (785) 543-6673.

For information of refuges nationwide and a beautiful refuge poster, phone 1-800-344-WILD.

-Shoup



nature's notebook

by Mark Shoup

<u>The Good, The Bad, and The Uoly</u>



When you mention spiders, most folks would probably describe them only in terms of the bad and the ugly. Nothing could be further from the truth. There are many good spiders, and if you kill one, you've likely opened the door for some real pests because most spiders eat insects.

In North America, there are about 3,000 spider species. Of these, only the widows and the brown spiders are poisonous. In Kansas black widows are rare these days, but brown recluses are common. Fortunately, this shy spider prefers to stay away from people, so bites are rare.

Spiders belong to a class of animals called Arachnida, or arachnids, which also includes such "creepy crawlers" as scorpions, mites, and ticks.

Spiders come in a wide variety of shapes, sizes, and looks, from the classic, smooth-bodied orb weaver (remember Charlotte's Web?) to the hairy mygalomorphs. You've never heard of a hairy mygalomorph? Okay, this spider is more commonly

known as a tarantula in the United States. Everyone has seen movies where a sleeping person is threatened by a tarantula creeping up their arm. Of course, they always wake up in time to save themselves from certain death, right? Wrong. About 80 species of tarantula can be found in the U.S. None are poisonous although their bite can sting. In fact, these spiders are gentle enough that they are often kept as pets.

The most familiar spiders are the orb weavers, such as the common garden spider and the shamrock spider. These animals weave the beautiful webs that everyone associates with spiders. The golden silk spider's silk is the strongest natural fiber in the world and is used by South Sea Islanders for bags and





fish nets.

spiders are Jumping another common species. You might see one outdoors or in your home. These are the "cutest" of all spiders. They are small and fuzzy and come in many colors. You'll notice that these spiders seem very alert when you near them. That's because two of its eight eyes are very large, giving it some of the best vision of all spiders or insects. It can also change the color of its eyes.

Jumpings do, indeed, jump. They can jump several times their own body length to



catch prey. Before jumping, however, they secure a silk dragline to pull themselves back, if necessary.

Most spiders lay down draglines of silk that they use to pull themselves from place to place, usually up and down. And of course, many spiders use silk to trap their prey.

Not all spiders weave fancy webs. Some just use silk for egg cases or for a nursery for the young spiderlings. Others hide in silk tunnels or make trapdoors of silk.

Spiderlings release many strands of silk into the wind

> from a high perch. As the strands lengthen, the spider is lifted into the air, and many young are able to spread their numbers across the countryside and avoid over-crowding. This process is called ballooning. On fall days, these thread masses — called gossamer — can be seen floating in

the air.

Another fascinating spider fact is that they shed their "skins," called molting. Like insects, arachnids carry their skeleton on the outside because they have no bones. This is called an exoskeleton. When the spider molts, the inside layers of the skeleton are digested, leaving the outside paper-thin. The spider then raises its blood pressure and pumps its body until the outer skeleton splits, freeing the spider to grow more. If a spider has lost a leg before it molts, a new leg may replace it.

Many people have been taught to fear spiders, but they are among the most interesting creatures on earth. Take a morning or evening walk in a garden or park. Keep an eye out for one of these active, complicated little animals. Who knows? You may learn how to make a fishnet.







The Teal Guide

"TEAL! GET DOWN! "

"You sure them 'er teal?" "Pos'tive. Get ready. Don't move 'till — wait — I'm purtty sure them 'er teal."

"Look like big ducks."

"Yep. Them er big ducks — just farther away than I thought."

Shhhhhwwwish!

"Aww rats! Them were teal. Did ya see the light blue patches on their wings?"

"Yep. I thought you said they were big ducks?"

"I said they were teal, but you talked me out of it."

"I just asked a simple question. Ole Sturge told me that sneaky game wardens will wear full camo and hide in the cattails. Could be one watchin' us right now. We gotta be sure before we shoot. Ole Sturge said you can tell teal by the way they fly, dippin' and divin' and goin' real fast. He said there ain't no excuse for not knowin' what yer shootin' at."

"Well Ole Sturge ain't here is he? Heck, the way he shoots, no duck has ever been in much danger. You just let me call the shots. Hand me the coffee. And keep yer eyes peeled. Teal can be right on top of you before you know it."

Sshplassh.

"What was that?"

"Look in the decoys, you knucklehead. Teal. Landed right in front of yer nose. I thought I told you to keep yer eyes peeled. Hand me my shotgun. Wait. Let me set my coffee down. Aww, dang it. There they go."

"Sorry. I was watching what I thought was a teal way off. Turned



out to be a dragonfly. Never saw those teal 'till they landed in the decoys. Boy, they're itty bitty, aren't they?"

"Lot bigger than a dragonfly, Eagle Eye. Here, hold my shotgun. I gotta go — that coffee runs right through a guy. But be sure to keep a look out."

"DUCKS! And they're TEAL! GET DOWN! ... Oops, never mind. Just watchamacallits. Boy, they sure looked like teal."

"Them were dowitchers ya dipstick. It wouldn't have mattered much anyhow, the way you yelled TEAL at the top of yer lungs. Teal aren't the smartest duck in the world, but you can't be yellin' and screamin' like that. Thanks a lot."

"Sorry. Hey, you get scared or somethin'? Your pants are all wet, heh, heh, heh."

"Don't push yer luck buddy. Where's my shotgun?"

"I had to set it down real fast

when I saw those teal that turned out to be whatchamawitchers. It was right here. Oh, there it is — see the stock sticking out of the mud right there. You keep her oiled up pretty good — don't you?

"It's gettin kind of late. Maybe we should call it a morning."

"It's only 7:30. You said that teal might fly all morning if the wind blew. And you said you were going to teach me all about teal hunting. And you said teal hunting was fun and relaxing. It's a lot harder than I thought."

"I said a lot of things, but right now I got a splitting headache. Tell you what, I'll keep a watch out for teal while you pick up the decoys and carry them to the truck, then we'll go to town for some aspirin. Maybe I'll teach you to teal hunt another day — or maybe next year — or better yet, maybe Ole Sturge will teach you."

